

**WHY DOES GOOD GOVERNANCE
NEGATIVELY CORRELATE WITH
ECONOMIC GROWTH? –
A focus on the Caribbean SIDS**

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Layout of the presentation

The presentation is organised in six sections as follows:

1. Introduction
2. The Caribbean SIDS: Background
3. Brief literature review on matters relating to good governance and growth
4. Political, economic and social governance and their relationship to GDP per capita
5. Political, economic and social governance and their relationship with economic growth
6. A deeper look the governance/growth relationship
7. Concluding remarks
8. References

1. Introduction

Objectives of the presentation

The presentation assesses the state of governance in the Caribbean Small Island Developing States (C-SIDS) by comparing these states among themselves, with other SIDS, and with the rest of the world, utilising three indicators relating to political, economic and social governance. The three indicators used in this study are:

- (i) **Political governance:** using the Rule of Law indicator of the Worldwide Governance Indicators;
- (ii) **Economic governance:** using the Macroeconomic Stability sub-index of the Economic Resilience Index; and
- (iii) **Social governance:** using the non-income component of the Human Development Index.

Indicators used in the presentation

The titles of the second and third indices do not directly refer to governance, but they are strongly influenced by economic and social policy, which are themselves associated with economic and social governance.

It will be shown that the three governance indicators are positively correlated with GDP per capita but negatively correlated with GDP growth.

This presentation attempts to give an explanation for this.

2. The Caribbean SIDS: Background

The Caribbean island states (C-SIDS)

The thirteen Caribbean Small States (C-SIDS) covered in this study include:

- **Five high-income economies (HIE)** namely: Antigua & Barbuda, Barbados, Bahamas, St Kitts & Nevis and Trinidad/Tobago;
- **Seven upper-middle-income economics (UMIE)**, namely: Belize, Dominica, Grenada, Jamaica, St Lucia, St Vincent & Grenadines and Suriname; and
- **One lower-middle-income economy**, namely Guyana

Main differences among the C-SIDS

The **GDP per capita** of the C-SIDS in 2014 differed considerably with the Bahamas and Barbados registering the highest and Guyana, Belize, Suriname and Jamaica the lowest per capita income.

The **growth patterns** also differed among the C-SIDS. The fastest growing countries between 2009 and 2013 were Guyana, Suriname and Belize which have a relatively low GDP per capita, suggesting a negative correlation between these two variables. This matter will be discussed below.

The C-SIDS also differ in their **economic structure**, with Belize, Guyana, Suriname, and Trinidad and Tobago together produce oil/gas, minerals and agricultural goods. The other C-SIDS are mainly service-based economies, highly dependent on tourism and financial services.

Main similarities among the C-SIDS

A characteristic of the C-SIDS is their high debt/GDP ratio. Ten of the 13 C-SIDS had a gross debt ratio which was about or exceeded 60% in recent years, with Grenada, Jamaica and St Kitts/Nevis topping the list with a debt ratio of about 100% or over as can be seen from Figure 3.

Yet, another characteristic is their negative current account balance. Almost all the C-SIDS registered negative current account balance as an average over the 4 years between 2009 and 2013, as can be seen from Figure 4, which expresses the current account balance as a percentage of GDP. The only exceptions were Suriname and Trinidad and Tobago.

Main similarities among the C-SIDS

According to Briguglio (2014), economic vulnerability is associated with four indicators namely trade openness, export concentration, dependence on strategic imports and proneness to natural disasters, the four of which are relatively high in the C-SIDS, as shown in Figure 5, 6, 7 and 8.

These realities render most C-SIDS as very highly exposed to external shocks. According to Briguglio (2014) C-SIDS are amongst the most economically vulnerable countries in the world.

The C-SIDS: some relevant data

Figure 1: Population (thousands) (2013)

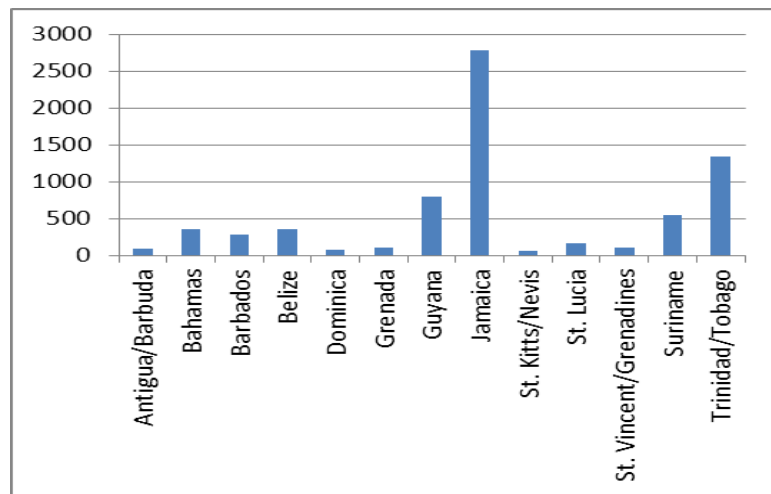


Figure 2: GDP per Capita (US\$) (2013)

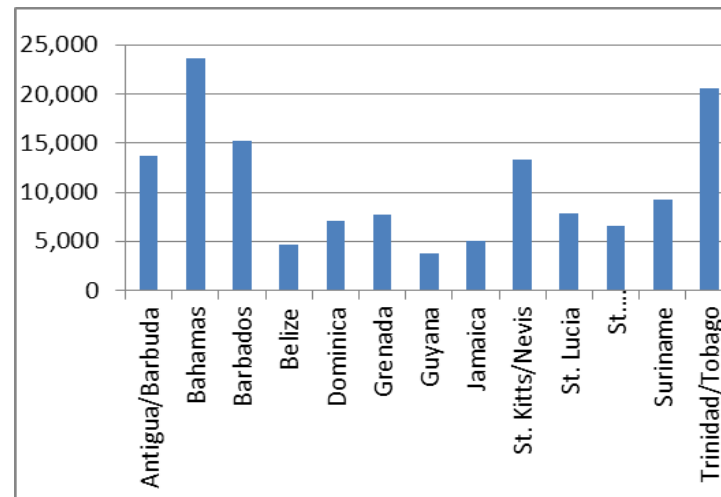


Figure 3: Gross Debt /GDP (%) (2009-13)

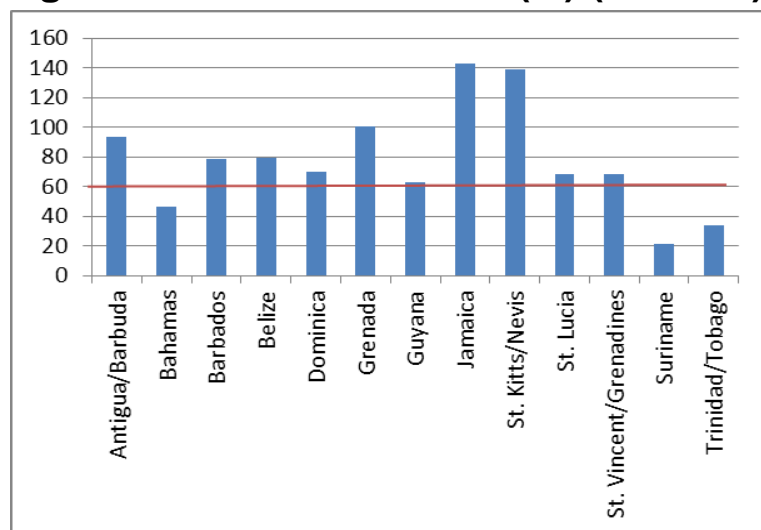
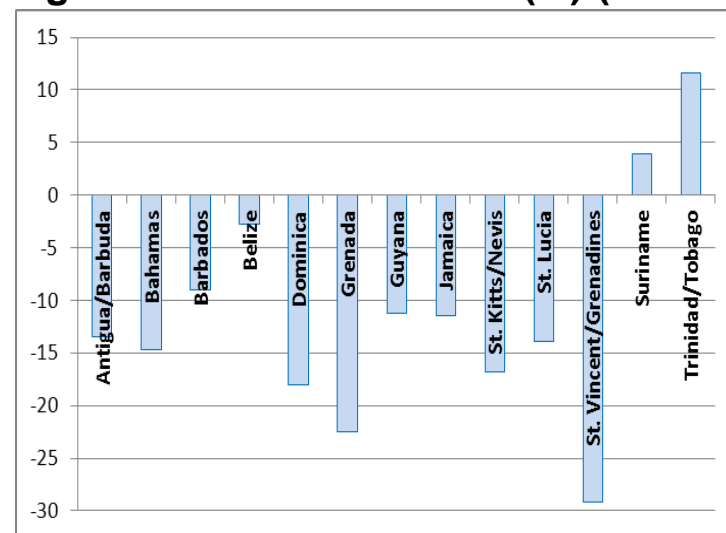


Figure 4: Cur Acc Bal/GDP (%) (2009-13)



The C-SIDS: some relevant data

Figure 5: Trade Openness (%) (2010-2013)

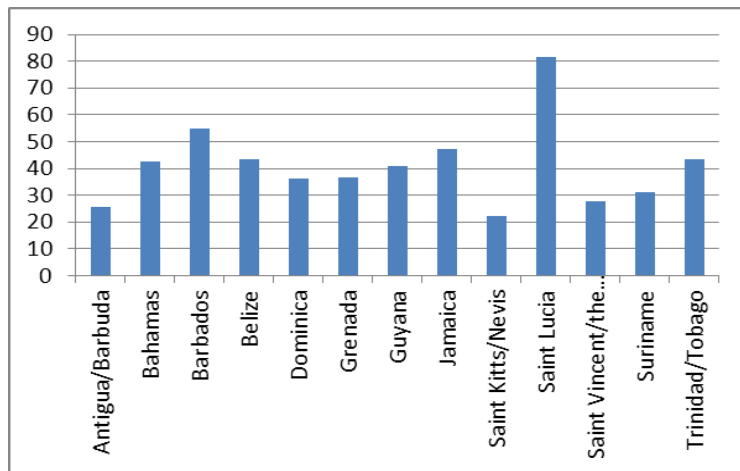


Figure 6: Export Concentration (2010-2013)

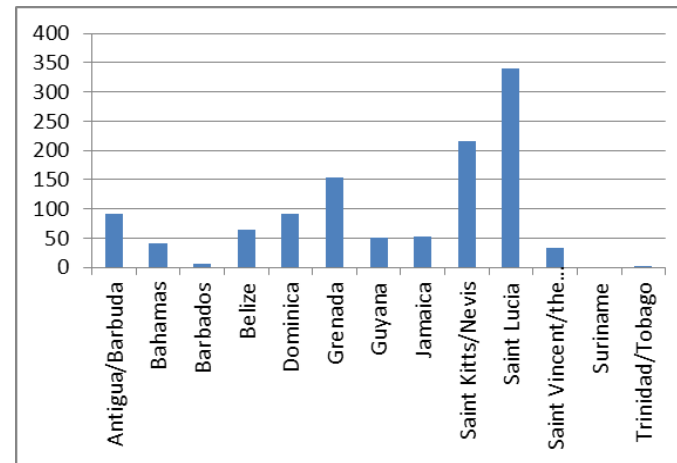


Figure 7: Dependence on Strategic Imports (%) (2010-2013)

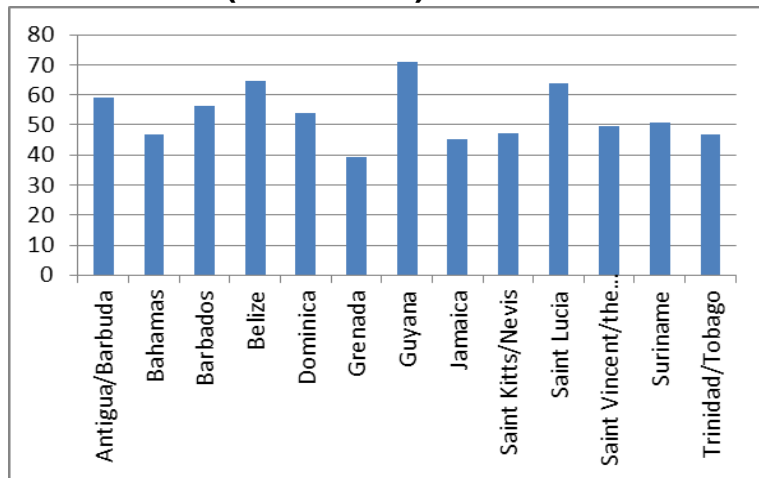
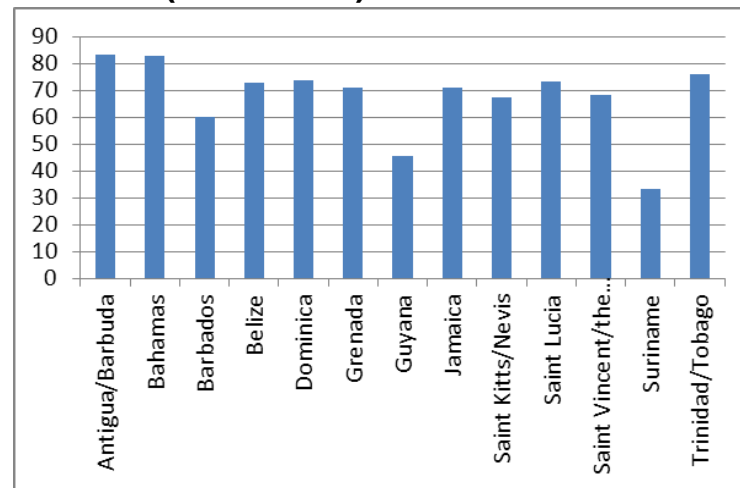


Figure 8: Natural disaster proneness (% GDP) (1980-2013)



3. Brief Literature Review

Political, Economic and Social Dimensions

The word Governance often refers to the administrative and decision-making processes relating to states, corporations, and other organisations, but in this study the term is used with reference to states, and is therefore associated with public administration (for the various definitions of governance see World Bank, 2002).

A definition of governance proposed by the Commission of the European Communities (2006), underlines the importance of defining governance in such a way as to take account of its political, economic and social dimensions. This is the approach adopted in the present presentation.

No single definition of governance

Kaufman et al. (2010) state that although the concept of governance is widely discussed among policymakers and scholars, there is as yet no strong consensus around a single definition of governance or institutional quality.

The authors state that in specific areas of governance such as the rule of law, there are extensive debates among scholars over “thin” versus “thick” definitions, where the former focus narrowly on whether existing rules and laws are enforced, while the latter assigns more importance to the justice of the content of the laws.

Market-enhancement and growth enhancement

Khan (2007) distinguished between **market-enhancing** versus **growth-enhancing** types of governance, associating market-enhancing governance with a liberal economic stance that facilitates the operation of the market mechanism and reduces transaction costs.

Khan linked the growth-enhancing form of governance with the leadership role government aimed at overcoming market failures, promoting investment, particularly in infrastructure, in resources use and in technological development.

Khan argued that these two forms of governance may not mutually exclusive.

Governance and institutions

In some strands of the literature, governance is closely associated with institutions, since these are essential for enforcing property rights and putting in place legal/administrative systems (Rodrik, 2008, Brown, 2010).

The basic argument in this context is that weak institutions may directly hamper effective economic, social and political management and, in addition, may inhibit economic growth due to various factors, including lack of investment attraction.

Governance and corruption

Corruption features prominently in many studies on Governance. Some studies indicate that corruption is extensive in developing countries (Svensson, 2005). Corruption may be beneficial to the persons who bribe and those bribed, but it creates various economic downsides, including additional costs to firms and negative effects on the provision of goods and services by the government (Olken & Pande, 2011).

Corruption also generates an atmosphere of uncertainty and dishonesty. Some studies (e.g., Huntington, 1968) suggest that corruption can be beneficial, when governments are autocratic and remain in power by hook or by crook. However, as Easterly (2006) argued, claims that corruption “greases the wheels” of growth simply do not stand up to empirical scrutiny.

Governance and GDP per capita are related

The relationship between good governance indicators and GDP per capita of countries, is generally found to be positive with a high degree of correlation between the two variables, as confirmed in the present study. This relationship is also found in more rigorous and complicated studies on this issue, notably in Kaufman and Kraay (2002).

There is however some debate about the direction of causality. Kaufman and Kraay (2002) show that per capita income and the quality of governance are strongly positively correlated across countries. They find a strong positive causal effect running from better governance to higher per capita income, and a weak and even negative causal effect running in the opposite direction from per capita income to governance.

Growth and the advantage of backwardness

Many studies do not find positive correlation between governance and economic growth. It is often observed that the best politically governed countries (e.g. Western Europe) are growing at a much slower rate than the not-so-well governed countries of Asia and Africa.

Intuitively, one should think that economically backward countries can grow faster than advanced countries as the former countries can copy and adopt readily available technologies invented by countries that developed earlier. This catching-up technological laggards has been termed the “advantage of backwardness” by Gerschenkron (1952).

Growth and the Convergence Theory

Theoretically it can also be argued that economically backward countries can grow faster than economically advanced countries due to the fact that in the former countries capital may be associated with better returns than is the case with the latter countries.

According to the so-called Solow-Swan convergence theory, based on neo-classical predictions, poorer countries will eventually catch up with richer countries over time, mainly because poorer countries have a smaller capital stock, associated with a higher marginal productivity.

Governance and growth : direction of causation

In spite of this, several publications associate good governance, and the necessary institutions for this, with growth. A substantial body of literature consider good governance as a precondition for growth (Kaufmann, 2005; Reynolds, 1983), and similarly with regard to governance institutions (Acemoglu et al., 2005; North, 1990; Aron, 2000; Commission on Growth and Development, 2008).

The direction of causation of economic growth and governance is also a matter of debate, with some authors arguing that growth comes first and governance and the accompanying institutions later (e.g. Durlauf et al., 2005; Glaeser et al., 2004).

Is there a link between Governance & growth?

The link between economic growth and governance has been questioned by Kurtz and Schrank (2007) who doubt whether such a connection exists and query whether the data used to measure governance as well as the methods used to estimate such a relationships are good enough.

Rodrik (2008) argues that there are many countries that are growing rapidly despite poor governance to render suspect any general claim to the contrary and governance is generally not a prerequisite for getting growth going. Rodrik also opines that as a rule, broad governance reform is neither necessary nor sufficient for growth, and therefore a broad governance agenda rarely deserves priority as part of a growth strategy, except in rare instances where “weak governance is specifically identified as a generic area of binding constraints”.

Contradictory signals

The literature on the effect of good governance on economic growth therefore sends contradictory signals, with some authors, notably Kaufman and Kraay (2002) arguing strongly in favour the connection and others, such as Rodrik (2008) and Kurts and Schrank (2007) arguing that there is no evidence that such a connection exists.

Rodrik (2008) argues, there is **no** strong econometric evidence that relates standard governance criteria to growth.

Governance in the Caribbean Region

Brown (2010) noted that the situation in the C-SIDS is often romanticised, accompanied by pictures of white beaches, but the reality on the ground is different and characterised by a number of governance weaknesses including organizational structures that are hierarchical, bureaucratic, inflexible, with paternalistic leadership at both political and bureaucratic levels.

The author identified what he calls six binding constraints, some of which are inherent or domestically induced, which adversely affect institutional development that are needed for good governance.

Six binding governance constraints

- (a) government is all-pervasive in both social and economic spheres;
- (b) per capita cost of public administration and social and economic infrastructure is higher than in larger economies due to the indivisibility problem;
- (c) weak tax base and an over-reliance on border revenues leading to chronic fiscal vulnerability;
- (d) general capital constraints leading to high debt levels;
- (e) limited pool of skilled human resources to perform the vital roles of the public service and a lack of depth in specialization; and
- (f) proneness to external shocks – including natural disasters.

According to Brown 2010, these constraints lead to weak governance.

Competitiveness problems in C-SIDS

Some authors refer to the lack of competitiveness in the Caribbean small states, and attribute this to deep-rooted governance problems, leading to macro-economic imbalances (Acevedo et al., 2013). The weak performance in international trade has translated into high current account deficits, large indebtedness vis-à-vis the rest of the world, and more generally unsustainable external positions.

The authors indicate that the external current accounts of the tourism-based countries have deteriorated consistently since the early to mid-1990s mostly due to weak public finances. They further show that the public sector in the Caribbean accounts for about a third of the external imbalance, and is the largest contributor to the deficit.

Governance and competitiveness problems

Acevedo et al. (2013) also argue that while many of the cost disadvantages are structural, some are associated with weak governance and are policy driven. Such policies lead to high labour costs due to a high degree of unionization, high electricity costs reflecting sector inefficiencies and monopoly powers of providers, trade protectionism through tariffs and non-price restrictions, high cost of credit brought about by, inter alia, lengthy credit recovery processes due to judicial procedures, and in some countries overvaluation of the domestic currency.

Acevedo et al. also acknowledge that many C-SIDS attempted to reduce the debt problem by debt restructuring, but argue that lack of comprehensive economic reforms have limited the positive effects of such debt restructuring.

Fiscal deficit and weak governance

In view of these weaknesses of the C-SIDS, Shafik (2013), in a speech during the 2013 High-Level Caribbean Forum, explained that the IMF recommends fiscal adjustment . She stated that these countries must “do what it takes to raise growth” by improving their business environment and boost investor confidence so as to encourage private sector investment.

Shafik argued that the overall governance framework is critical, and the C-SIDS must therefore strengthen technical capacities, laws and institutions to improve governance, arguing that research has linked higher public debt in small states with weak governance.

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Some economic weaknesses are self-inflicted

Grenade (2012) identifies external factors that undermine effective governance in the C-SIDS, including high exposure to external shocks, proneness to natural hazards, economies of scale limitations, a narrow production base and diversification constraints.

However she also identifies self-inflicted weaknesses in governance of the C-SIDS including limited private sector capacity, inadequate human resources, insufficient institutional capacity, limited infrastructural development and high public debt.

The author refers to other factors that weaken governance in the C-SIDS by generating instability and insecurity, including the growth narco-trafficking, other organised crime and corruption.

Regional governance in the Caribbean

Referring to regional governance, Grenade (2012) contended that this is an imperative for the Caribbean. She argues that when CARICOM was established in 1973, its original objectives were economic integration, functional co-operation and foreign policy co-ordination.

Although many positive developments were registered as a result of regional cooperation, the author argues that there are major challenges that need to be addressed. The fact that CARICOM is a community of independent sovereign states, foreign policy harmonisation was often not possible, limiting the attainment of the regional potential in many economic aspects. She also argues that the adversarial political culture within member states does not lend itself to co-operation among political elites, and regional integration is thus held hostage to narrow partisan interests.

4. Governance and GDP Per Capita

Correlation of governance with GDP per capita

In this section, we shall examine the relationship between the three governance indicators and GDP per capita.

It will be shown that all three indicators are positively correlated with GDP per capita, suggesting that there is a tendency for the most prosperous and economically advanced countries to have the highest level of good governance.

The governance scores of the P-SIDS will be compared:

- (a) between the C-SIDS themselves ($n = 13$);
- (b) with other SIDS ($n = 28$); and
- (c) with their income comparators ($n=183$ countries)

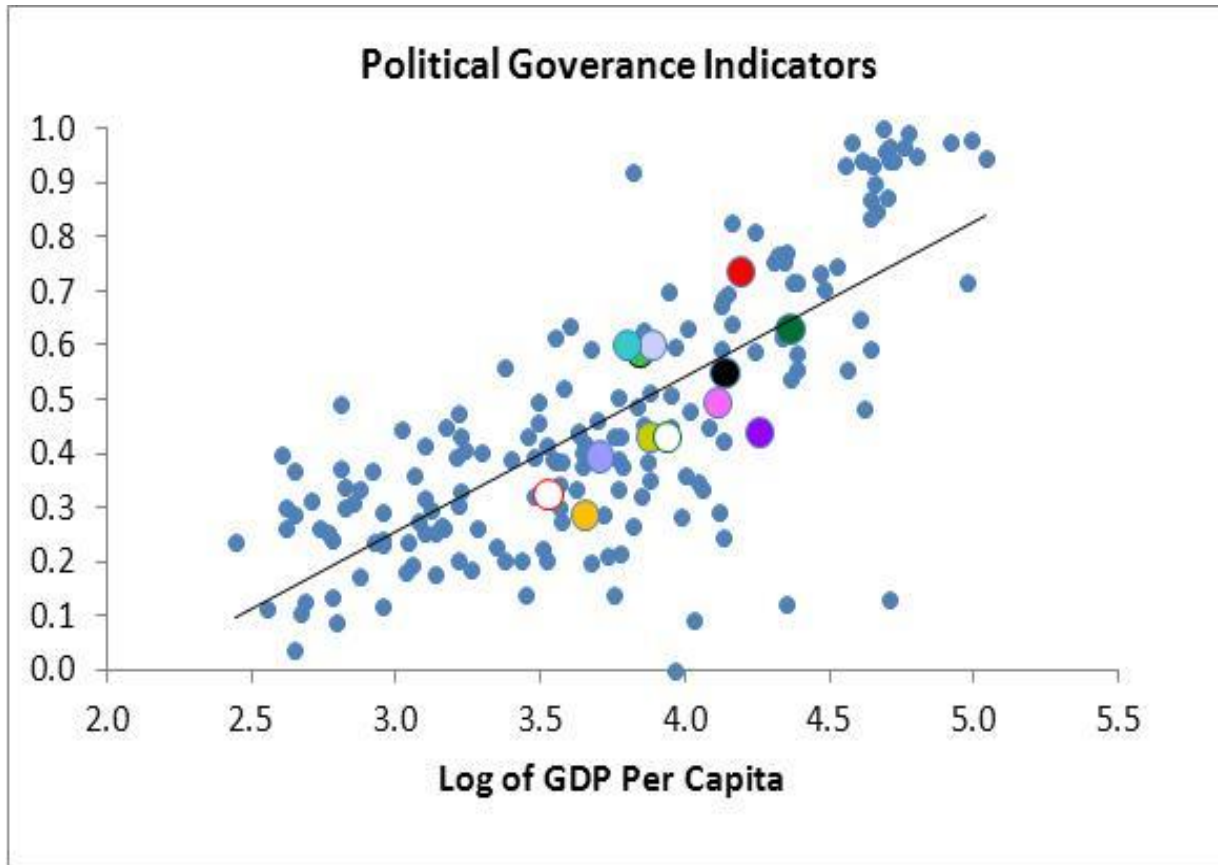
Political governance (PG) and GDP per capita

In this study, political governance is measured by the **Rule of Law** indicator of the Worldwide Governance Indicators (**WGI**) .

The WGI has six dimensions of governance, namely (1) voice & accountability (2) political stability & absence of violence (3) government effectiveness (4) regulatory quality (5) rule of law (6) control of corruption. For a detailed description of the methodology see Kaufmann et al. (2010).

This study utilises the 2013 version of the WGI (World Bank, 2014). The scores range from 2.5 (the best) to -2.5 (the worst). The scores were rescaled using the Max-Min formula so that the values range from 0 to 1.

PG of C-SIDS & income comparator (IC) countries



Higher than IC

- Barbados
- Dominica
- St Lucia
- St V & G

About Same as IC

- Bahamas
- Ant & Barb

Lower than IC

- Jamaica
- St K & N
- Grenada
- Suriname
- Belize
- Guyana
- T & T

The index that measures political governance is the 2013 Rule of Law indicator of the Worldwide Governance Indicators available at <http://info.worldbank.org/governance/wgi/index.aspx#home> .

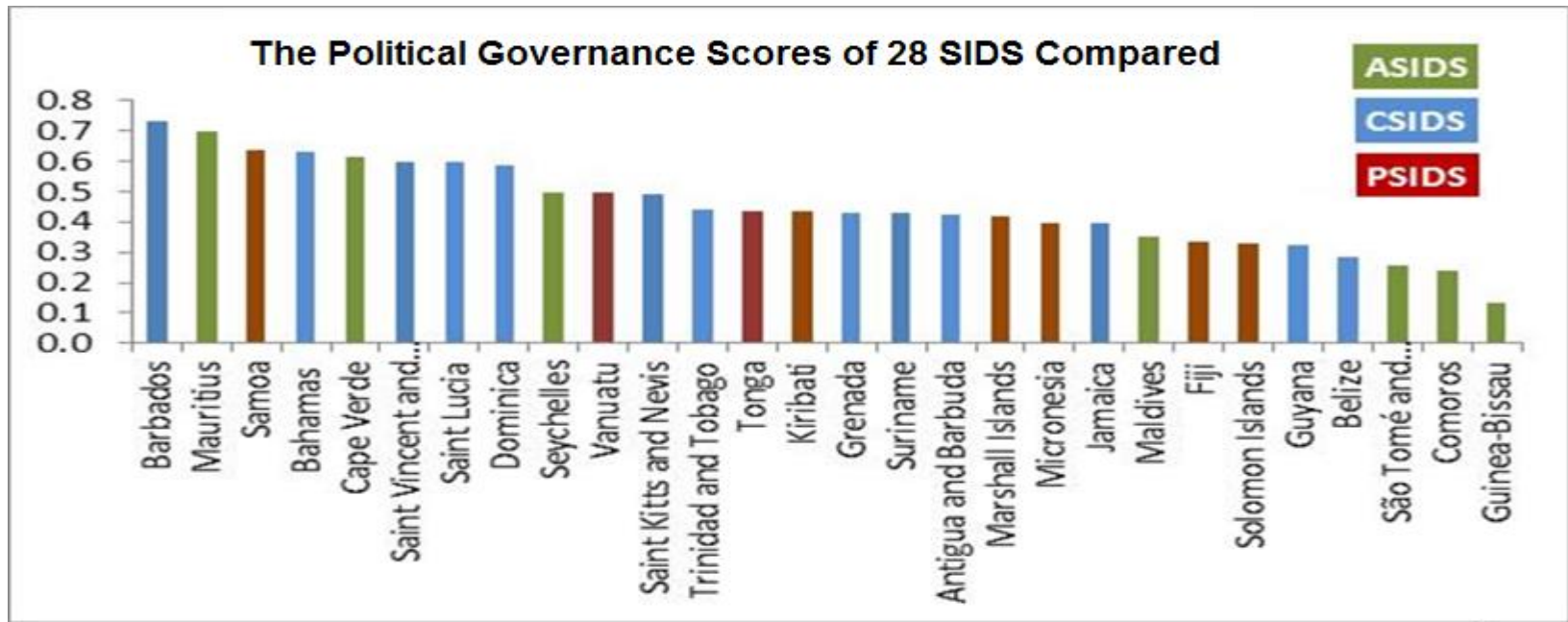
4. The Indicator Scores: (a) Political Governance Scores

P-SIDS political governance compared

Countries	PG Score
Average Caribbean SIDS	0.490
Average Pacific SIDS	0.435
Average Africa and Indian Ocean SIDS	0.398
Average 28 SIDS	0.451
OECD countries	0.812
High-income-countries' average	0.703
Upper-middle-income countries' average	0.420
Lower-middle-income countries' average	0.339
Low-income countries' average	0.250

It can be seen that the average political governance score of the C-SIDS is higher than the average for all SIDS and also higher than the average of all country income groups with the exception of the average for high-income economies.

Political governance of all SIDS



When all SIDS are considered individually, Barbados and the Bahamas received the best political governance scores among C-SIDS while Jamaica, Guyana and Belize received relatively low scores.

A-SIDS = Africa and Indian Ocean small island states.

C-SIDS = Caribbean small island states

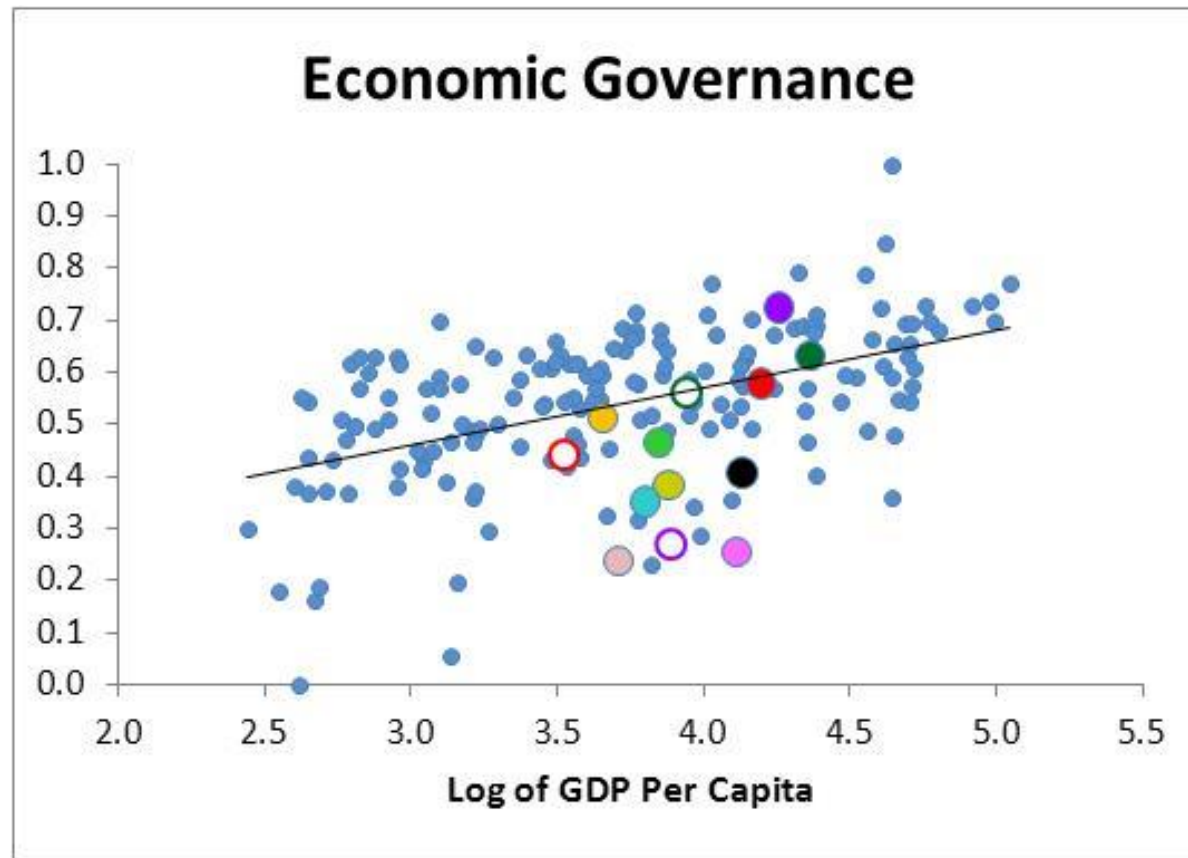
P-SIDS = Pacific small island states

Economic governance (EG) and GDP per capita

Economic governance is measured by the macroeconomic stability component of the Economic Resilience Index (**STB**), which was developed in Briguglio et al. (2009) and was recently updated in Briguglio (2014). This index contains three sub-indicators, namely (a) inflation (measured by the GDP deflator) , (b) debt as a ratio of GDP and (c) current account imbalances as a ratio to GDP.

These indicators were chosen because they are considered to be policy induced and thus closely related to economic governance. A detailed description of the method used to construct the STB is given in Briguglio (2014). The data was sourced from the IMF World Economic Outlook database and the three sub-indices were rescaled Max-Min formula and averaged using equal weights.

EG of C-SIDS & income comparator (IC) countries



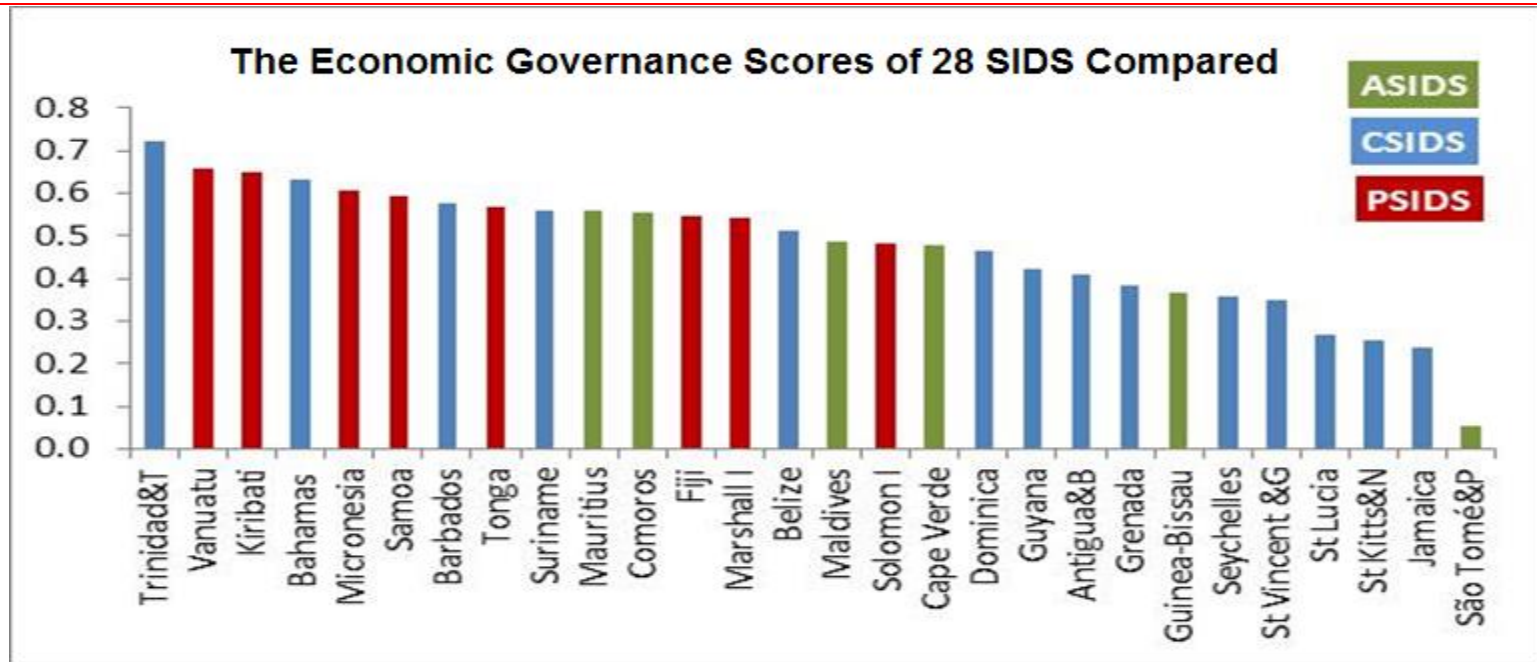
The index that measures economic governance is the Macroeconomic Stability Index, (STB) which is a component of the Economic Resilience Index. Source: Briguglio (2014)

P-SIDS economic governance (EG) compared

Countries	EG Score
Average C-SIDS	0.446
Average P-SIDS	0.582
Average A-SIDS	0.408
Average 28 SIDS	0.476
OECD countries	0.619
High-income-countries' average	0.614
Upper-middle-income countries' average	0.539
Lower-middle-income countries' average	0.506
Low-income countries' average	0.446

It can be seen that the average economic governance score of the C-SIDS is lower than the average for all SIDS taken together and comparable to low-income countries, possibly due to the relatively high debt ratios in C-SIDS.

Economic governance of all SIDS



When all SIDS are considered individually, Trinidad and Tobago received the best economic governance score among C-SIDS while St Lucia, St Kitts & Nevis and Jamaica received relatively low scores.

A-SIDS = Africa and Indian Ocean small island states.

C-SIDS = Caribbean small island states

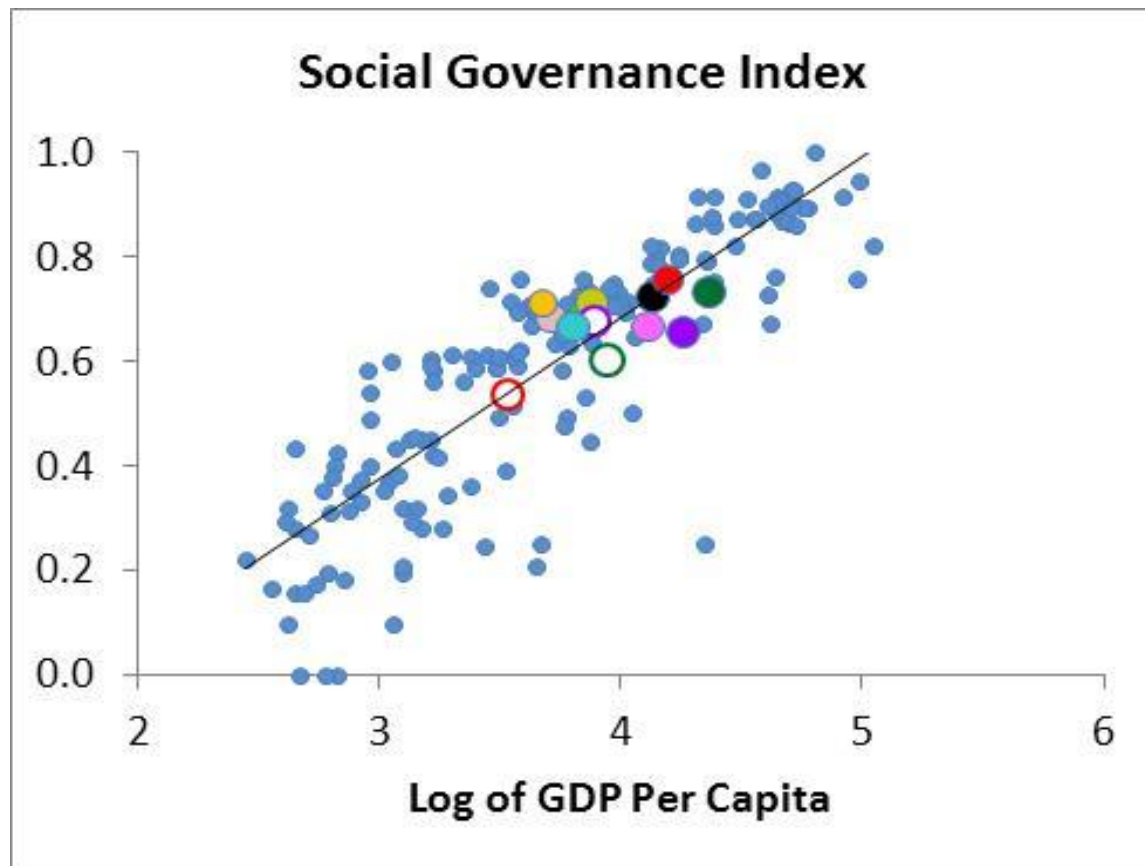
P-SIDS = Pacific small island states

Social governance (SG) and GDP per capita

Social governance is measured by the non-income components of the Human Development Index (HDI), namely health (measured by life expectancy), education (measured by the average of years of schooling and expected years of schooling). These two components are thought to be policy-induced and closely related to social governance. The data is sourced from UNDP (2014).

The non-income HDI (**NYH**) was measured by assigning a weight of 50% to the health component and 25% to each of the educational components (the same procedure used by the HDI compilers). The scores were rescaled using the Max-Min formula so that the values range from 0 to 1.

SG of C-SIDS & income comparator (IC) countries



Higher the IC

- Jamaica
- Dominica
- Belize
- Grenada
- St V & G

About Same as IC

- Ant & Barb
- Barbados
- St Lucia
- Guyana

Lower then IC

- St K & N
- Bahamas
- Suriname
- T & T

The index that measures social governance is the Non-Income components of the Human Development Index available at :

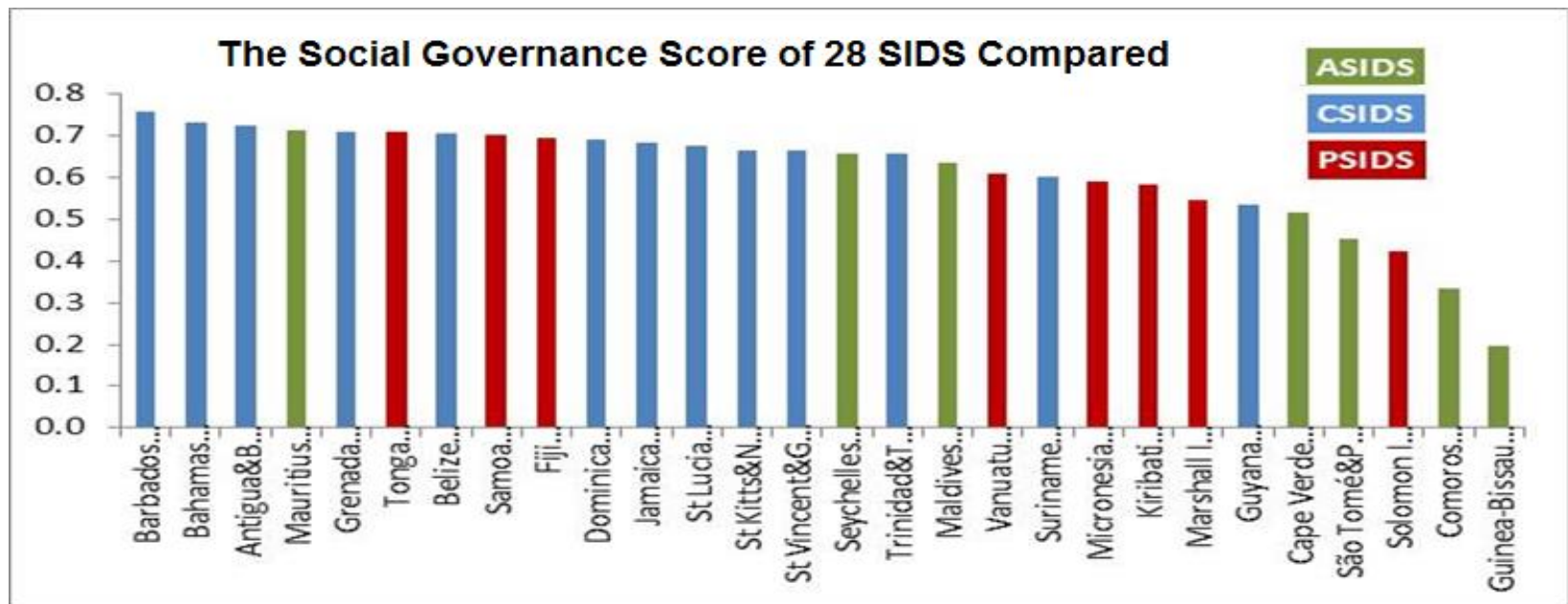
http://hdr.undp.org/sites/default/files/hdr14_statisticaltables.xls

P-SIDS social governance compared

Countries	SG Score
Average C-SIDS	0.678
Average P-SIDS	0.608
Average A-SIDS	0.501
Average 28 SIDS	0.614
OECD countries	0.882
High-income-countries' average	0.815
Upper-middle-income countries' average	0.654
Lower-middle-income countries' average	0.486
Low-income countries' average	0.258

It can be seen that the average social governance score of the C-SIDS is higher than the average for all other country groups except for that of high-income countries.

Social governance in all SIDS



When all SIDS are considered individually, Barbados, the Bahamas and Antigua & Barbuda received the best social governance scores among all SIDS while Suriname and Guyana received relatively low scores.

A-SIDS = Africa and Indian Ocean small island states.

C-SIDS = Caribbean small island states

P-SIDS = Pacific small island states

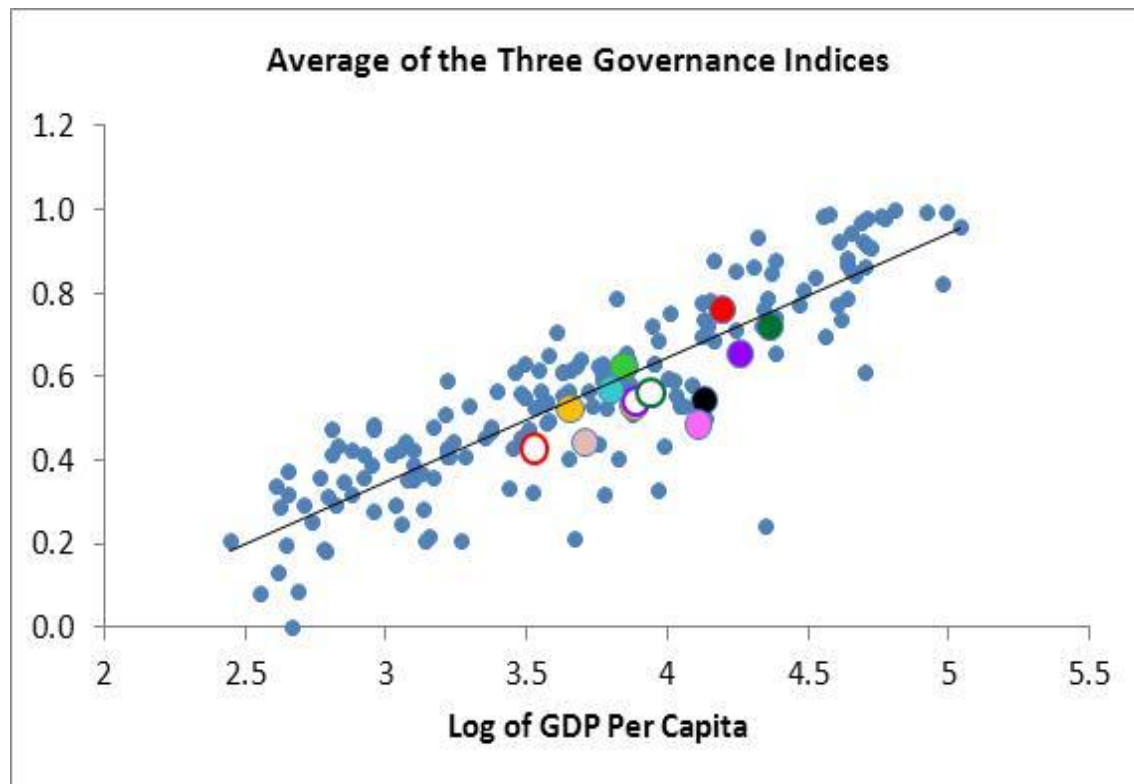
4. The Indicator Scores: (c) Social Governance Scores

The average score of the three indices

The indicators relating to political, economic and social governance were averaged and rescaled to render them suitable for taking their average.

The results are shown in the next three slides

Overall score of C-SIDS & income comparator countries



Higher the IC

● Barbados

● Dominica

About Same as IC

● Bahamas

● Belize

● St V & G

Lower then IC

● Ant & Barb

● Grenada

○ Guyana

○ St Lucia

● Jamaica

○ Suriname

● T & T

● St K & N

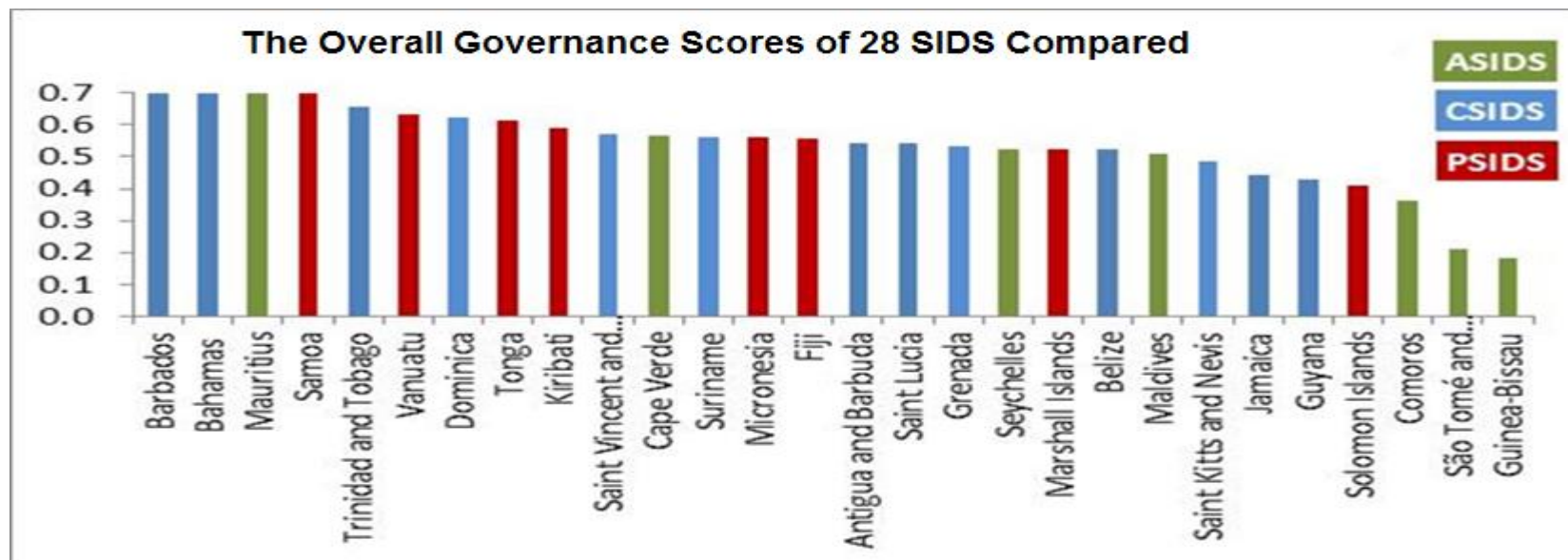
This is the average of the three indicators presented above, averaged and rescaled using the Max-Min formula.

Overall governance scores (average of 3 indicators)

Countries	AG Score
Average C-SIDS	0.569
Average P-SIDS	0.574
Average A-SIDS	0.439
Average 28 SIDS	0.538
OECD countries	0.865
High-income-countries' average	0.788
Upper-middle-income countries' average	0.568
Lower-middle-income countries' average	0.449
Low-income countries' average	0.290

It can be seen that the overall governance score of the C-SIDS is lower than that of the P-SIDS but higher than that of the A-SIDS. It is comparable to the average of the Upper-middle income countries.

Overall governance scores (average of 3 indicators)



When all SIDS are considered individually, Barbados and the Bahamas received the best overall governance score, while St Kitts & Nevis, Jamaica and Guyana received relatively low scores.

A-SIDS = Africa and Indian Ocean small island states.

C-SIDS = Caribbean small island states

P-SIDS = Pacific small island states

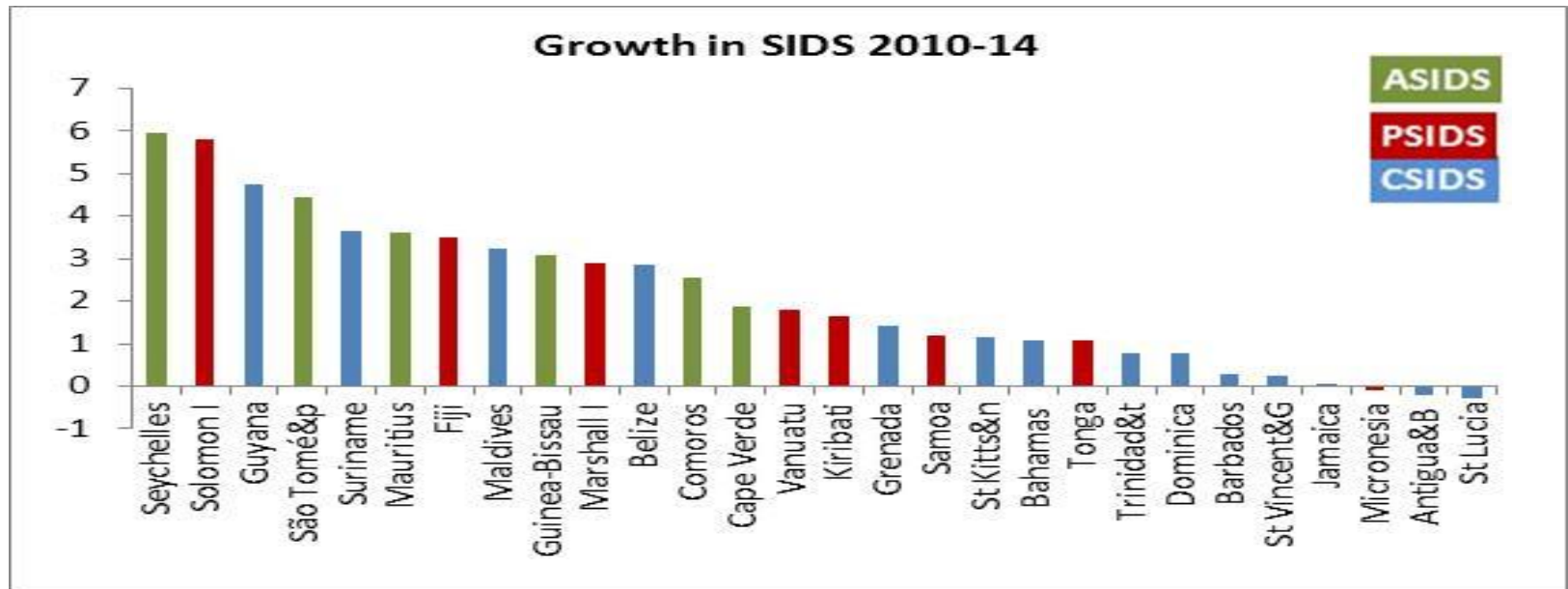
5. Governance and GDP Growth Rates

Negative correlation of governance with growth

It will be shown that all three governance indicators used in this study are negatively correlated with economic growth globally.

This tendency is also generally applicable to all SIDS and to the C-SIDS, although there are many exceptions.

SIDS' economic growth compared



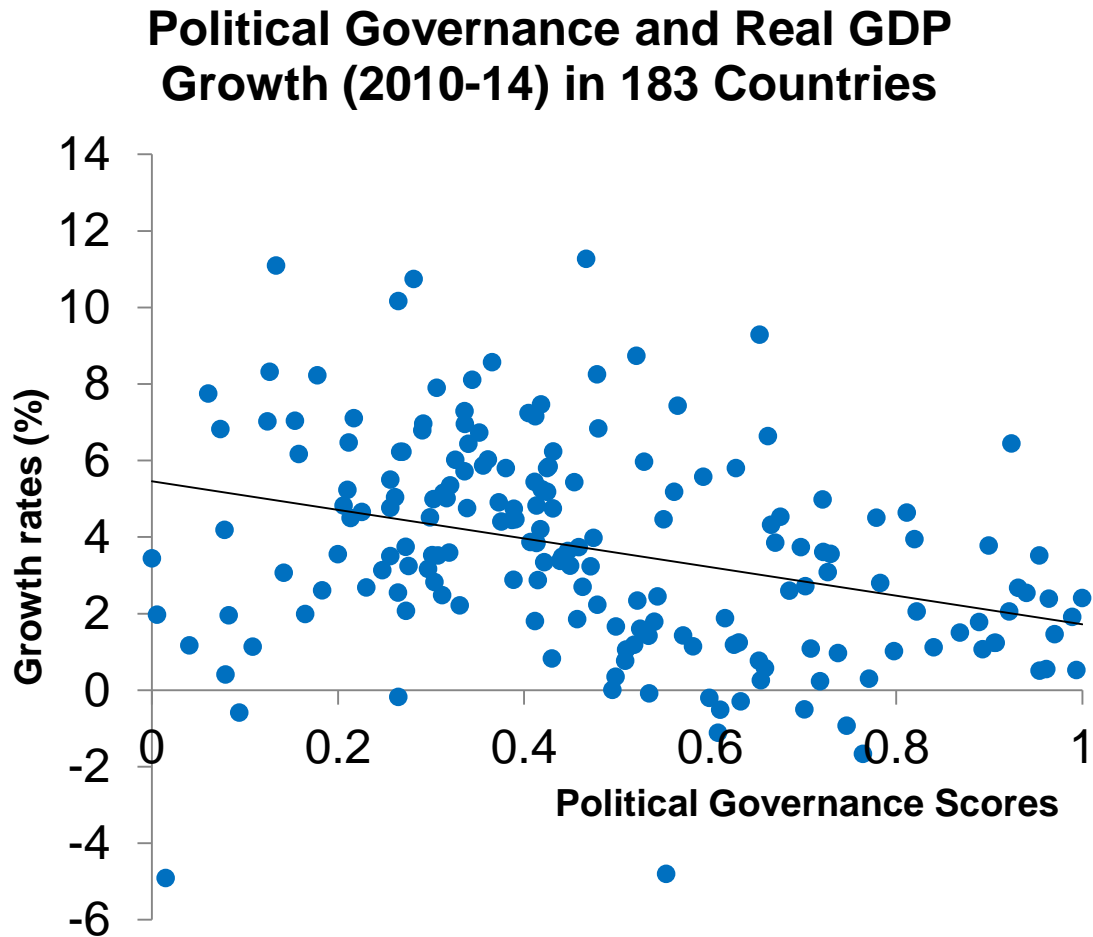
It can be seen that Guyana and Suriname which received very low governance score among C-SIDS are the fastest growing in the region.

A-SIDS = Africa and Indian Ocean small island states.

C-SIDS = Caribbean small island states

P-SIDS = Pacific small island states

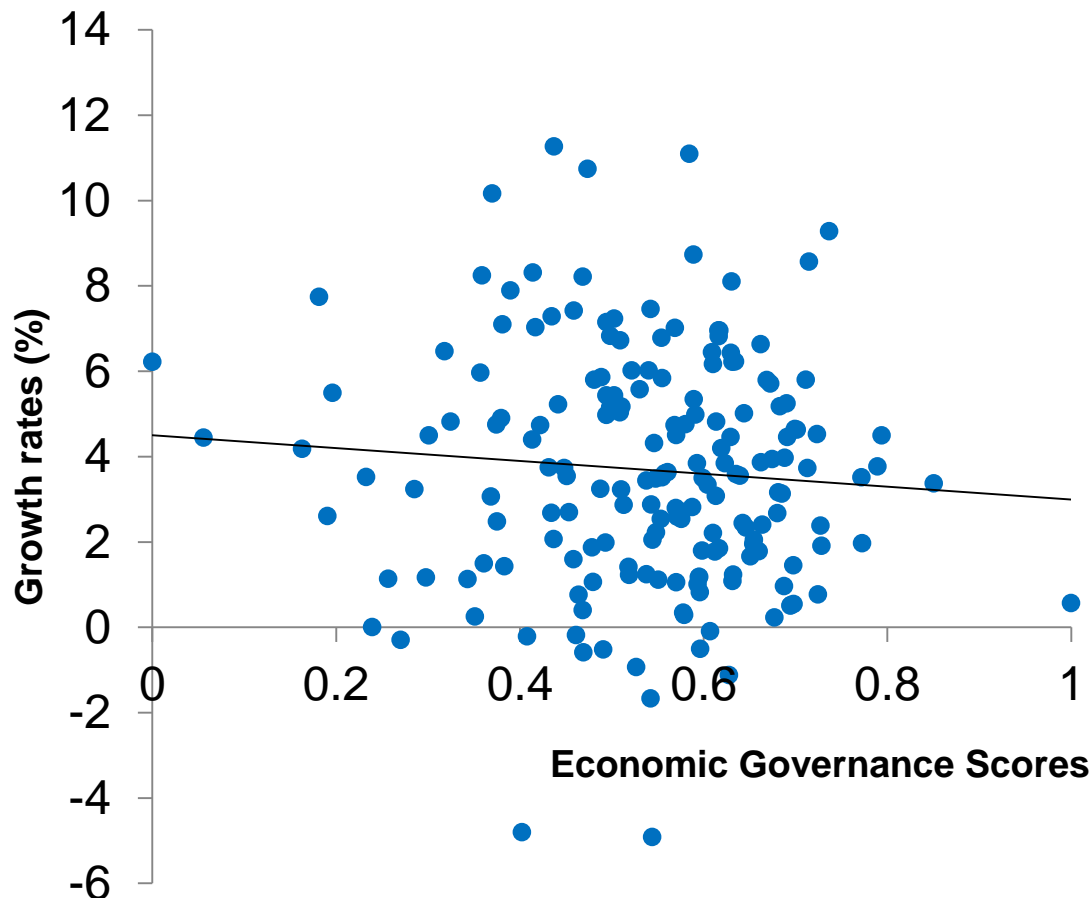
Political governance scores and real GDP growth



It can be seen that the political governance index is negatively correlated with real GDP growth (2010-2014).

Economic governance scores and real GDP growth

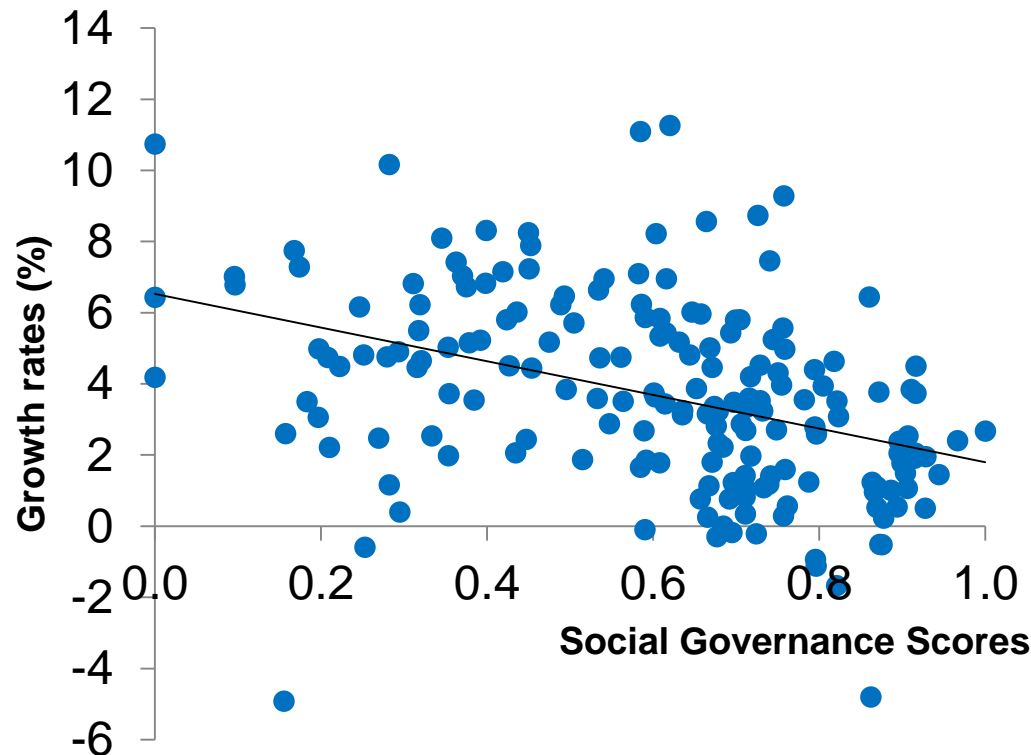
Economic Governance and Real GDP Growth (2010-14) in 183 Countries



It can be seen that the economic governance index is negatively correlated with real GDP growth (2010-2014).

Social governance scores and real GDP growth

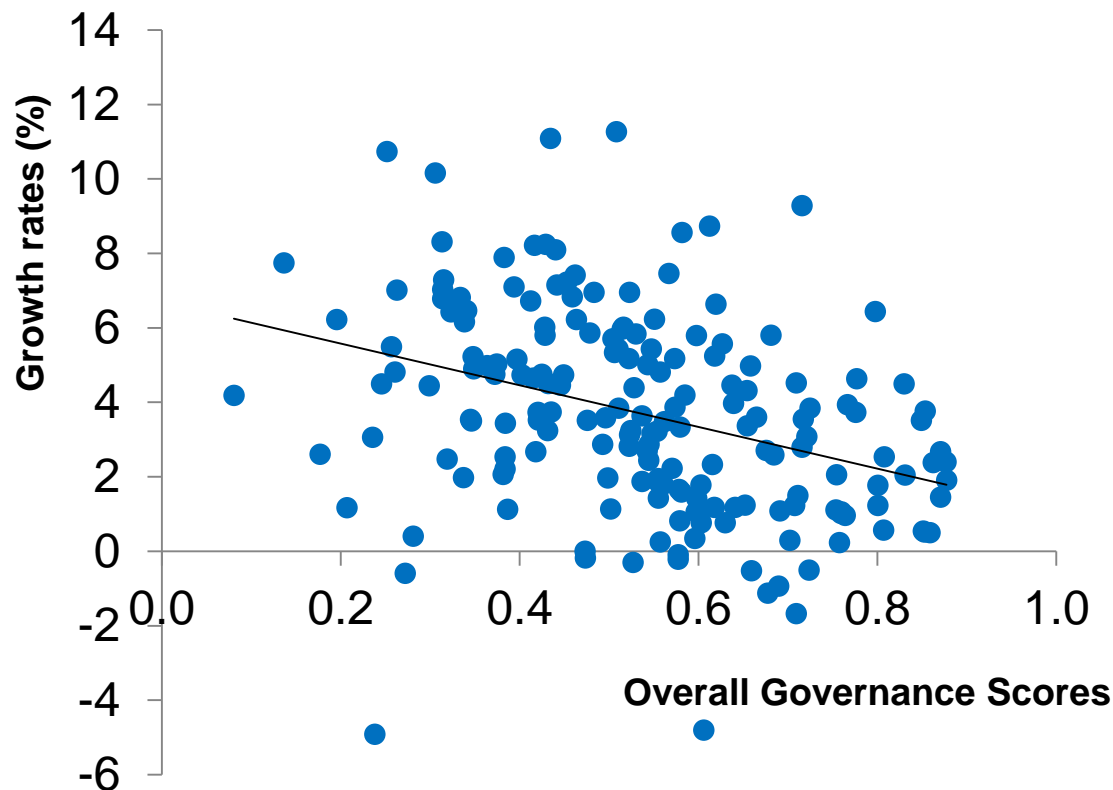
Social Governance and Real GDP Growth (2010-14)



It can be seen that the social governance index is negatively correlated to real GDP growth (2010-2014)

Three governance scores and real GDP growth

Overall Governance Scores and Real GDP Growth: 183 Countries (2010-14)



It can be seen that the average of the three governance indicators is negatively correlated with real GDP growth (2010-2014)

Average growth rates of groups of countries

Countries	Growth
Average C-SIDS	1.3
Average P-SIDS	2.2
Average A-SIDS	3.5
Average 28 SIDS	2.1
OECD countries	1.6
High-income-countries' average	2.7
Upper-middle-income countries' average	3.8
Lower-middle-income countries' average	4.6
Low-income countries' average	5.1

It can be seen that the growth rate of the Caribbean SIDS taken together, was lower than all other country groups. Interestingly, as can be seen from the lower half of the table, the average growth rates of country groups increase as the average income per capita of country group decreases.

6. Comparing Changes with Changes

Why are growth and governance negatively correlated?

In this section we try to answer the question as to why governance scores and economic growth seem to be negatively correlated with each other.

As has been shown above in this study, a simple correlation between economic growth and governance indicators suggest that indeed the slowest growing countries tend to have the highest governance scores. However this does not mean that good governance is bad for growth. We argue in this paper that the equation should compare like with like, that is changes in real GDP should be compared with changes in governance, **and not with its levels.**

Diminishing marginal governance effect

The hypothesis can then be stated as follows:

improvement in governance leads to improvement in real GDP (i.e. to economic growth).

The reason for this is that it is likely to be easier for a low-income country to improve its GDP per capita and its governance level from a relatively low starting point.

In other words, a given governance improvement effort would have a higher effect in a low-income & poorly-governed country than in a high-income & well-governed one. This possibility may be termed as “**diminishing marginal governance effect**”.

Diminishing marginal governance improvement

A related argument is that it is likely that governance is easier to improve in a country with a low level of governance and therefore has considerable room for improvement, compared to a country with a high level of good governance, which has reached or almost reached a good governance peak.

Thus there may be a well-governed economy like Germany registering very low rates of economic growth, and a not-so-well governed economies, like the Philippines and China, registering high rates of economic growth, *ceteris paribus*.

Testing a growth-governance equation...1

To test the assumption that economic growth is related to changes in governance, we specify a simple growth equation as follows:

$$\Delta GDP_i = f(\Delta GVN_i, GPC_i, \text{Log } P_i)$$

Where:

ΔGDP_i = GDP growth in real terms during a given period in country i.

ΔGVN_i = changes in governance during the same period in country i.

GPC_i is GDP per capita in country i.

$\text{Log } P_i$ = Log of the population size in country i.

Testing a growth-governance equation...2

In this exercise, ΔGDP is measured by percentage changes in GDP in real terms averaged over the years 2010 to 2014 (that is the period following the global financial crisis).

GDP per capita (GPC) is included in the equation as a proxy for the stage of development of a country, in order to allow for the possibility that low income countries would tend to grow at a faster rate than higher income countries in line with the so-called convergence and catch-up theories. The sign of the coefficient on GPC is therefore expected to be negative. GDP per capita is measured in US dollars.

The variables and the data

Changes in governance are measured in terms of the Rule of Law dimension of the Worldwide Governance Indicators (WGI) between 2010 and 2014. This index was chosen because of its implications for political governance, as it has a wide coverage of countries and also because it was produced by and large consistently during each year of the period under consideration.

The variable ΔGVN is expected to have a coefficient with a positive sign, capturing the effects of governance improvements on economic growth.

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The variables and the data

The population variable was introduced in the equation to allow for the various constraints faced by small states, including their high exposure to external shocks and their limited ability to reap the benefits of economies of scale (Briguglio, 2014). The sign of the coefficient on this variable is expected to be positive. It is measured in logs to allow for the possibility that a country twice the size of another is less than twice advantaged in terms of growth.

The GDP and population data was sourced from the IMF World Economic Outlook Database (IMF, 2014) and the Governance data was sourced from World Bank (2014).

The results of the regression analysis

The equation was applied for 183 countries, and the regression results indicate that the coefficients were statistically significant, as shown by the t-statistics (in *Italic* below the estimated coefficients):

$$\Delta \text{GDP}_i = 1.07 - 0.04 \text{ GPC}_i + 13.31 \Delta \text{GVN}_i + 0.85 \text{ LogP}_i$$

-3.5 *2.8* *3.6*

$$R^2 = 0.17; \quad N=183$$

Tests of multicollinearity and heteroscedasticity indicated that the regression did not suffer from these problems. The correlation coefficient is somewhat low.

The results of the regression analysis

The correlation coefficient improved considerably when a dummy variable (D) was introduced to capture the effect of the austerity programme which 5 euro-area countries were obliged to follow during the growth period under consideration. These are Cyprus, Ireland, Greece, Portugal and Spain. These results are shown below:

$$\Delta \text{GDP}_i = 1.06 - 0.03 \text{GPC}_i + 11.48 \Delta \text{GVN}_i + 0.87 \text{LogP}_i - 4.91 \text{D}_i$$

-3.12.53.84.1

$R^2 = 0.28;$ $N=183$

7. Concluding remarks

Good governance and economic well-being

The indicators presented above, show first and foremost that good governance scores, be they political, economic or social, are correlated with GDP per capita. This would seem to suggest that good governance is associated with economic prosperity.

This conclusion, also often found in the literature, supports intuitive thinking, given that good governance is likely to mean responsive administration, better institutional set-ups and more efficient utilisation of resources.

Improvements in governance is conducive to growth

The governance indicator considered in this study seem to be negatively correlated with economic growth.

This should not be interpreted as an indication that good governance is undesirable for growth, and that it should not, therefore, be pursued. On the contrary, the fact that good governance and economic prosperity are correlated, in that the best governed countries tend to enjoy the highest standard of living, can be seen as a sign that well-governed countries do reap benefits in the form of high income per capita, albeit this may have occurred over a long period of time.

Possibility of mis-specified equation

The negative correlation between good governance and economic growth would seem to contradict a commonly held view that growth and good governance go hand-in-hand.

It has been argued in this presentation, that an equation correlating governance levels and real GDP growth is likely to be misspecified. It has been further argued that the relationship is likely to be between changes (and not levels) of governance and GDP growth.

Improvement in governance leads to economic growth

The basic contention of this study is that an improvement in governance is likely to improve the chances of economic growth, other things remaining constant.

Thus if we take two countries, A and B, which are in the same level of development and with the same level of governance, it is assumed that country A would register a higher growth rate compared to country B during a given period, if country A improves its governance while country B does not, or if country A improves its governance more than country B does.

Diminishing marginal governance effect

Additionally if country A is less developed than country B, a given governance improvement effort is likely to have a higher affect on growth in country A, given that there is a higher possibility for growth in the economically backward country. As already explained this has been termed “diminishing marginal governance effect”.

The interesting results produced in this study, namely that improvements (as against levels) in political governance have a positive statistically significant effect on economic growth, given the stage of development, can be considered as an added piece of evidence that it pays to improve governance.

Low-income countries tend to grow faster

Many low-income countries registered relatively high growth rates during the recent decade, even though they tend to have inferior governance structures when compared to richer countries. This, as has been seen, was also a tendency found among C-SIDS.

Basing on the regression results of the present study one could argue that even though some C-SIDS have relatively low governance scores, the improvements in their governance over time may be one reason why these countries achieved relatively high growth rates, *ceteris paribus*.

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The End
Thank you for your attention