The road to improvement: governance indicators and socio-economic outcomes

A PFMConnect Study Report by David Fellows & John Leonardo

1. Introduction

In this study we look across a series of governance and outcome evaluation systems to assess the evidence for consistency within and between the two.

The main intention is to understand the extent to which progress in one field mirrors progress in others and consider what this may suggest about the drivers of the relationships observed, identifying any areas requiring further research.

Our work is based on the World Bank Governance Indicators (WBGIs) and a set of key Socio-economic Outcome Indicators (SEOIs) derived from the World Health Organisation (WHO) & United Nations Development Programme (UNDP) data sets. Data for 2004 (2005 for Health) and 2021 was derived from the 176 countries for which all necessary data was available. This is intended to provide a reasonable timespan and data sample for

such an exercise. The one exception to this approach is in Table 5 (examining the relationship between female & male Expected Years of Schooling and GNIpc) where data from only 163 of the 176 counties is available.

Technical Note

Regression analysis is used throughout this study to determine the closeness of fit between the data being compared. For this we use Pearson coefficients (shown in the tables below) and r^2 values. Given that we are interrogating data based on social behaviour we take a 'satisfactory' r^2 value as being of between 0.4 and 0.5. This range is equivalent to Pearson coefficients of approximately 0.64 and 0.72. We therefore regard Pearson coefficients above 0.72 as 'good' and below 0.64 as 'unsatisfactory'. All the correlations in this study exhibit P values < 5%. The results are coloured in the tables below, as follows: [redacted]; [redacted]; [redacted]; and [redacted].

2. World Bank Governance Indicators (WBGIs)

The WBGIs have 6 aspects: Voice and Accountability; Political Stability and absence of violence/terrorism; Government Effectiveness; Regulatory Quality; Rule of Law; and Control of Corruption (abbreviated in the tables below). In Tables 1 & 2 we examine the internal consistency of these data sets for the two chosen points in time (2004 and 2021).

Table 1: Correlations between WBGIs using 2004 data						
	V&A	Pol Stab	Govt Eff	Reg Qual	R of L	C of C
V&A	1.000	.673	.847	.862	.874	.822
Pol Stab	.673	1.000	.683	.684	.792	.753
Govt Eff	.847	.683	1.000	.936	.936	.936
Reg Qual	.862	.684	.936	1.000	.920	.891
R of L	.874	.792	.936	.920	1.000	.945
C of C	.822	.753	.936	.891	.945	1.000

Table 2: Correlations between WBGIs using 2021 data						
	V&A	Pol Stab	Govt Eff	Reg Qual	R of L	C of C
V&A	1.000	.724	.686	.739	.785	.772
Pol Stab	.724	1.000	.734	.703	.799	.764
Govt Eff	.686	.734	1.000	.937	.935	.903
Reg Qual	.739	.703	.937	1.000	.928	.887
R of L	.785	.799	.935	.928	1.000	.938
C of C	.772	.764	.903	.887	.938	1.000

All elements of the WBGIs correlate well internally across the data sets for both periods. For 2004 data (Table1) Political Stability achieved the lowest performance with 'satisfactory' correlations across three variables (Voice and Accountability, Government Effectiveness; Regulatory Quality). For 2021 (Table 2) Political Stability had just one 'satisfactory' result (Regulatory Quality) with another 'satisfactory' result being obtained between Voice and Accountability and Government Effectiveness. All other results for both periods were 'good'.

3. WHO and UNDP Socio-Economic Outcome Indicators (SEOIs)

The five key SEOIs chosen for this exercise cover a wide spectrum of personal and community development activities:

Health; Human Development[1]; Life Expectancy; Expected Years of Schooling; and Gross National Income per capita. The Health indicator is compiled by the World Health Organisation and the others by the United Nations Development Programme. In Tables 3 & 4 we examine the internal consistency of these data sets for the two chosen points in time (2004 and 2021).

Table 3: Correlations between key outcome indicators using 2004 data

	Health*	HDI	Life Exp	Exp Yrs Sch	GNIpc
Health*	1.000	.938	.873	.880	.670
HDI	.938	1.000	.907	.918	.739
Life Exp	.873	.907	1.000	.776	.637
Est Yrs Sch	.880	.918	.776	1.000	.587
GNIpc	.670	.739	.637	.587	1.000

*Health data for 2005, the nearest year available

Table 4: Correlations between key outcome indicators using 2021 data

	Health	HDI	Life Exp	Exp Yrs Sch	GNIpc
Health*	1.000	.926	.862	.835	.737
HDI	.926	1.000	.906	.900	.828
Life Exp	.862	.906	1.000	.789	.764
Est Yrs Sch	.835	.900	.789	1.000	.694
GNIpc	.737	.828	.764	.694	1.000

Each of the SEOIs correlate well internally across the two data sets for both periods. For 2004/5 (Table 3) GNIpc was rated ‘unsatisfactory’ against Expected Years of Schooling and ‘satisfactory’ against Health and Life Expectancy although in 2021 (Table 4) this performance improved to ‘satisfactory’ for Expected Years of Schooling and ‘good’ for Health and Life Expectancy. All other results for both periods were ‘good’.

4. Focus on female and male years of schooling

There is much work that we could do at both a broad and granular level with respect to both WBGI and SEOIs but for the moment we have chosen to examine the relationship between Expected Years of Schooling for females and males (EYS(f)/EYS(m)) and Gross National Income per capita for females and males (GNIpc(f)/GNIpc(m)) for 2004 and 2021 (Table 5). In doing this we use the same UNDP data source as for the material in section 3 above.

Table 5: Correlations between Estimated Years of Schooling and GNI per capita

	2004		2021	
	EYS(f)	EYS(m)	EYS(f)	EYS(m)
GNIpc(f)	.674	----------	.717	----------
GNIpc(m)	----------	.600	----------	.701

Table 5 includes only 163 of the 176 countries used in the other tables as data for the remaining 13 countries is unavailable for these indicators

A recent IMF Blog stresses the importance of female participation in the labour market to improve the economic output of emerging and developing economies. Table 5 demonstrates that female schooling correlates well with female income generation. The lower correlation values for males could indicate that there are more diverse routes for males into economic activity making education a slightly more important route for the earning power of women although the male correlation improved from unsatisfactory to satisfactory between the two study periods, seemingly indicating an increased relevance of education to male earning capacity.

5. Examining the relationship between WBGIs and Outcomes

We next examined the relationships between WBGIs and SEOIs by correlating the WBGIs from section 2 and the SEOIs from section 3.

Table 6: Correlations between WBGIs & key outcome indicators using 2004 data

WBGIs	Health*	HDI	Life Exp	Exp Yrs Sch	GNIpc
V&A	.669	.681	.600	.653	.523
Pol Stab	.537	.576	.493	.555	.533
Gov Eff	.782	.811	.718	.739	.753
Reg Qual	.767	.791	.693	.714	.730
R of L	.723	.765	.686	.704	.702
C of C	.734	.752	.659	.704	.737

*Health data for 2005, the nearest year available

Table 7: Correlations between WBGIs & key outcome indicators using 2021 data

WBGIs	Health	HDI	Life Exp	Exp Yrs Sch	GNIpc
V&A	.509	.583	.529	.587	.496
Pol Stab	.546	.631	.568	.569	.561
Gov Eff	.738	.828	.771	.730	.825
Reg Qual	.716	.811	.733	.735	.826
R of L	.653	.770	.717	.695	.789
C of C	.632	.725	.677	.670	.771

The analysis in Tables 6 & 7 demonstrates that four of the WBGIs (Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption – termed here the 'key' WBGIs) correlate well with all the SEOIs included in this study for both the 2004/5 and 2021 data sets. For 2004/5 fourteen of these 'key WBGI' correlations are 'good' and six are

‘satisfactory’. For 2021 fifteen of these correlations are ‘good’ and five are ‘satisfactory’. Government Effectiveness is ‘good’ across all five SEOIs for both years. Political Stability appears at first sight to be the most consistently problematic across the two sets of correlations although all its correlations for the 2021 data set show improved Pearson coefficients for 2021 and one is borderline unsatisfactory. Voice and Accountability declines from three satisfactory and two unsatisfactory results for 2004/5 to five unsatisfactory results in 2021

6. The World Justice Programme – an approach to analysing performance standards

The World Justice Project, Rule of Law Index provides an accessible level of analysis of key governance characteristics (eg: absence of judicial corruption; accessibility and affordability of civil redress; effective criminal investigations) that assists consideration of their potential contribution to service improvement. The Rule of Law Index is not unique but it is impressive exemplar for the presentation of governance data.

The addition of organisational efficiency indicators within this framework could prove useful.

7. Discussion

Evidence from the internal analysis of World Bank Governance Indicators (Tables 1 & 2) and SEOIs (Tables 3 & 4) suggests that when one indicator from either of these data sets is executed well then the whole data set tends to be executed well and vice versa. The exception to this is the relationship between Expected Years of Schooling and GNI per capita in the 2004 data set (Table 3), although the 2021 result proves 'satisfactory' (Table 4).

'Key WBGIs' are mostly concerned with administrative and policy development tasks usually requiring broadly similar skill sets. Experiences in this field can be shared through regular contact in business meetings and client department project work.

Socio-economic activities are highly diverse in comparison to the tasks represented by the WBGIs. These activities are often highly customer-facing and require input from staff having many different backgrounds who do not often collaborate or even meet one another across service boundaries. The possibility of common levels of good or poor performance between socio-economic activities seems remote unless good standards of service performance are compared and developed across Government. The prevalence of satisfactory and good correlations amongst this data set seems particularly worthy of further consideration

The results of cross correlations between the 'key WBGIs' and the 'SEOIs' suggest that the 'key WBGIs' represent those activities that seem the most likely contributors to good socio-economic performance. In comparison, the WBGI 'outliers' (Voice & Accountability and Political Stability), although clearly preferable characteristics in their own right when realised to a high standard, do not seem to offer a consistent

influence on good socio-economic public service delivery.

It could be argued that rather than the WBGIs driving the SEOIs, these data sets are driven by common factors such as national wealth, strength of democracy, uniformity of income distribution within the population or the quality of leadership at administrative or political level. So far we have established no such links and direct national leadership impact on a multitude of service delivery points seems improbable.

We note that the World Justice Project, Rule of Law Index offers an analytical format that could be applied to both governance and service performance. It could help equip individuals, community groups and governments to improve service outcomes at various levels.

Finally, female secondary education has many advantages but the particular advantage this study seems to suggest is that the education of females improves the wealth they generate. This result offers clear support for the economic arguments in favour of female education.

8. Conclusions

The outcomes from this study suggest that:

- WBGIs and SEOIs each have strong internal consistency of performance. From this it could be inferred that well

organised administrations are likely to be well organised at a general level rather than as a series of independent activities. The issue is more remarkable in terms of SEOIs given that WBGIs could be regarded as mainly dependent on similar skill sets whereas this seems less likely in the case of SEOIs.

- The degree of compatibility between the four ‘key’ WBGIs and the SEOIs used in this study suggest that the ‘key’ governance indicators tend to influence the quality of service outcomes. Good governance, therefore, would seem to improve the quality of services, poor governance having an opposite effect.

- Our findings suggest that national leaders should consider the improvement of governance as a contribution to the improvement of service outcomes. The World Justice Project, Rule of Law Index provides an analytical format that could help in this process.

- The correspondence between female Expected Years of Schooling and female GNIpc provides powerful support for female education on economic grounds alone, confirming opinions already expressed by others.

PFMConnect is a public financial management consultancy with a particular interest in the use of digital communication to support learning and sharing expertise amongst the international development community.

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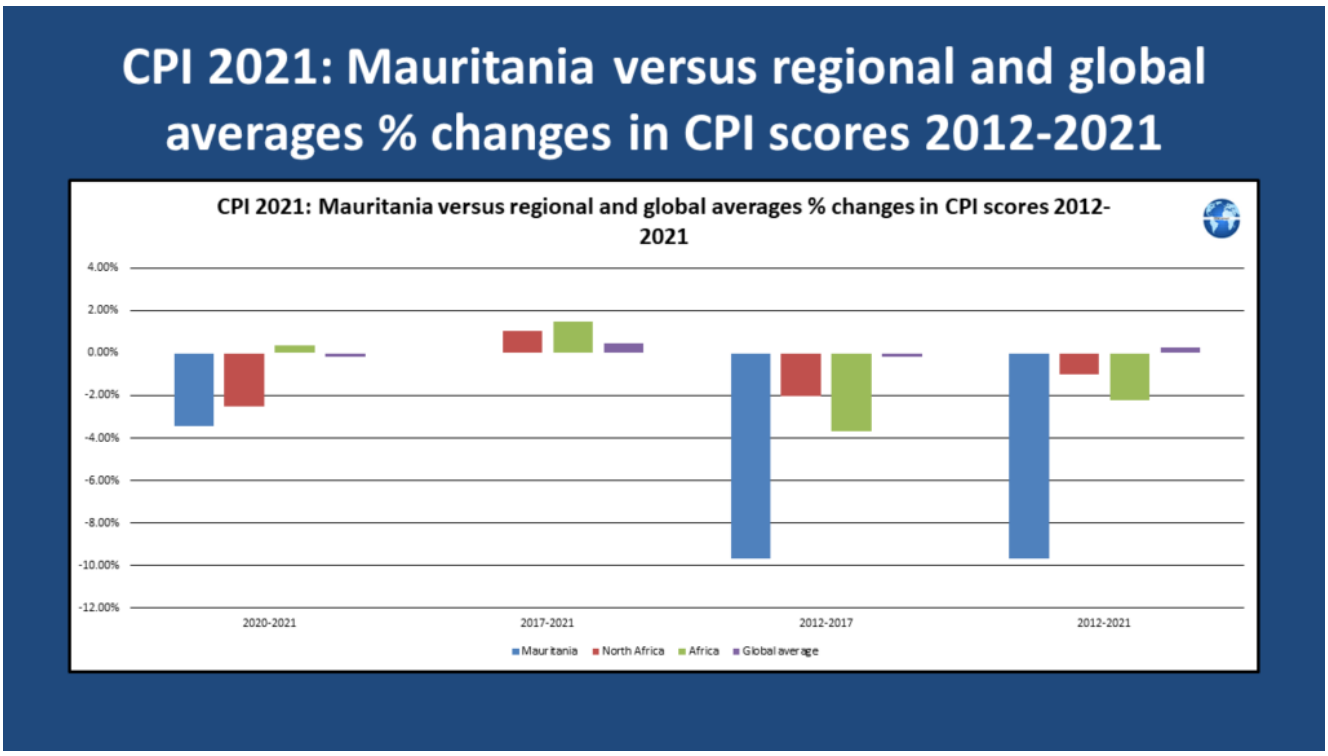
[1] The Human Development (HDI) subset used in this study is a composite index developed by the UNDP that consists of: Life Expectancy, Expected Years of Schooling, GNIpc (all show separately here) plus Estimated Mean Years of Schooling.

Corruption in Mauritania in

2021

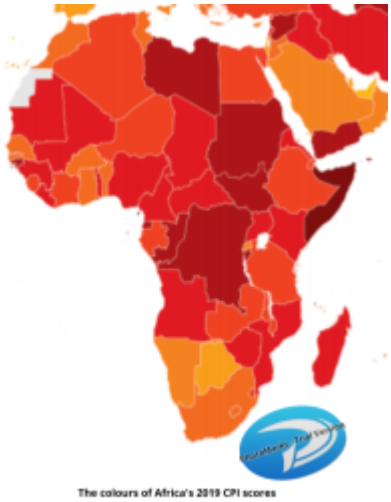


Corruption was a serious problem in public administration in Mauritania during 2021 and the government rarely held officials accountable or prosecuted them for abuses according to the US State Department's 2021 report on human rights practices in Mauritania, published on 12 April 2022.

The US State Department notes there were reports government officials used their power to obtain personal favours, such as unauthorized exemption from taxes, special grants of land, and preferential treatment during bidding on government projects.

Corruption was most pervasive in government procurement but was also common in the distribution of official documents, fishing and mining licenses, land distribution, as well as in bank loans and tax payments.

Corruption and social media correlation outcomes in Africa



Does social media usage have any impact on country corruption levels? We have investigated the relationship between corruption and social media usage in Africa at a country level and present our findings below.

Methodology

Transparency International's 2019 CPI scores published in January 2020 are taken to represent the measure of corruption in Africa.

The social media activity at a country level is taken as the subscriber numbers provided for Facebook by Internet World Stats at www.internetworldstats.com as at 31st December 2019 and for Twitter by We Are Social as quoted in their 'Digital 2020' publication.

The Africa Population numbers are mid-year 2020 estimates taken from the United Nations Population Division published by Internet World Stats at www.internetworldstats.com.

Facebook data was available for 54 African countries in the CPI index but Twitter data was only available for 52 of those countries. These 52 countries were taken as our starting point.

We then removed from the list of 52 countries the 4 countries with distinctly higher corruption levels than the remainder as they did not offer results consistent with the remaining states which we consider to reflect the disruptive effect of very high corruption levels on social and economic behaviour. This leaves a sample of 48 countries.

Statistical robustness

The sample of 48 countries provides a confidence level of 95%. The margin of error is 5%.

Statistical Method	Facebook Results	Twitter Results
Pearson	0.657	0.699

Spearman	0.672	0.625

Conclusion

The above results are relatively robust from a statistical perspective. These demonstrate that, for the data used in our two samples, a strong relationship exists between 2019 CPI scores and per capita penetration levels of country Facebook and Twitter subscribers. This implies that the greater the level of public intercourse via social media the lower the level of corruption in the country concerned.

Developing Systems to Combat Corruption

Posted by David Fellows[1]

Introducing the concept of “objective data”

In March 2018, we republished a short note on the use of objective data to combat corruption [2]. The piece highlighted statistical techniques being used in western countries to identify corruption by correlating unorthodox procurement practices with aberrant supplier behaviour established from factually based ‘objective’ administrative data. It was suggested that less complex approaches to the analysis of ‘objective’ data could be used to indicate the need for further forensic examination of officials, suppliers, and politicians. The emphasis was on finding workable approaches for developing countries that were compatible with the available resources.

The term ‘objective’ data refers to factual information derived from official government records. It represents data on transactions, activity schedules, and personal information, recorded through established processes, that give the information credibility. This contrasts with ‘subjective’ data which is often based on opinions or experience that is poorly evidenced and of limited application, as is the case with corruption perception surveys.

Frequent use of objective data

Objective data is checked and compared in dozens of administrative processes which can produce anomalies that may indicate the presence of corruption. For example, invoices are checked against orders and goods received notes or contract certificates, or payroll submissions are checked against timesheets. In addition, national bodies charged with the oversight of public administration – such as supreme audit institutions and public procurement commissions – are

routinely engaged in the examination of objective data which can also lead to the identification of corruption.

Such findings are then included in published reports that may be used to identify process deficiencies or potentially to prosecute cases of fraud and corruption. These oversight functions can be particularly effective when they are invested with independence from government, extensive powers of enquiry, transparency of reporting, and due consideration of findings.

Developing objective administrative data systems

Apart from routine scrutiny provided by administrative processes and oversight arrangements, programs of administrative reform provide excellent opportunities for the development of systems that incorporate the automatic validation and cross-referencing of administrative data to help identify patterns of corrupt activity.

Such arrangements are straightforward, well known, and remarkably simple to put into effect but in practice they are rarely complete or well executed. Too often there is a lack of expectation that good administration will have a beneficial effect. This places a premium on those who hold relevant managerial roles, requiring them to value high standards of administrative practice; exercise oversight responsibilities courageously, insightfully and in partnership with others as necessary; and ensure that reform opportunities are used to best effect. Well prepared and committed management is a prerequisite to any well-intentioned anti-corruption initiative.

Objective administrative data applications

Some examples of objective administrative data and its use to combat corruption are included in an Appendix available here.

The use of objective data could also be developed in other ways. For example:

1. Countries could prepare anti-corruption strategies that include the use and development of objective data and staff training. Such strategies should be accompanied by operational guidance. Anti-corruption strategies and related material are often referred to as being part of the standard anti-corruption armoury but are rarely made available. In practice, however, few of these documents have been produced to a reasonable standard anywhere in the developing world, and perhaps it is time to redress this omission.
2. Additionally, collaboration between states, perhaps on a regional basis, could be helpful in developing techniques for interrogating data, preparing anti-corruption strategies, sharing knowledge of corrupt practices, and building operational cooperation between countries
3. Consideration should also be given by multilateral agencies and regional representative bodies to the development of an international systems assessment schema (akin to PEFA methodology[3]) that would indicate the efficacy and shortcomings of individual administrative systems for the purposes of combatting corruption.

This article is written with government administration in mind, but similar considerations apply to local governments and state-owned enterprises.

[1] Director, PFMConnect. The author thanks John Leonardo for his helpful comments.

[2] This blog was first published at http://blog-pfm.imf.org/pfmblog/2018/03/how-useful-are-perc

eption-indices-of-corruption-to-developing-countries.html

[3] See https://pefa.org/sites/default/files/PEFA%20Framework_English.pdf