

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 SE0Is 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 SE0Is by correlating the WBGIs from section 2 and the SE0Is from section 3.

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

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 SE0Is included in this study for both the 2004/5 and 2021 data sets. For 2004/5 fourteen of these ‘key WBI’ 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 SE0Is 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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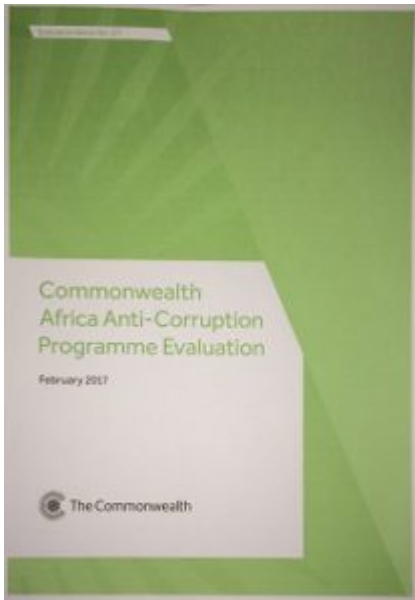
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[\[1\]](#) The Human Development (HDI) subset used in this study is a composite index developed by the UNDP that consists of: Life Expectancy, Expected Years of Schooling, GNIpc (all show separately here) plus Estimated Mean Years of Schooling.

Commonwealth Africa Anti-

Corruption Evaluation

Programme



Background

Last year the Commonwealth Secretariat commissioned PFMConnect Ltd to undertake an independent evaluation of its Africa Anti-Corruption Programme.

Stakeholders consulted

Views were obtained through discussions with officials from Commonwealth Africa countries, the Commonwealth Africa Anti-Corruption Centre in Botswana (<http://www.thecaacc.org/>) and at the Secretariat in London (<http://thecommonwealth.org/>). Online interviews were held with others that there was not time to visit. In addition, past participants of the Africa Anti-Corruption Centre capacity-building programmes were asked to complete an online survey giving their impressions of the training they had received, including its subsequent effectiveness back in the workplace.

Future programme development

Those interviewed produced an array of interesting ideas for the future development of the Commonwealth's Africa Anti-Corruption Programme and attested to the value of the training offered. The evaluation report can be obtained [here](#).

Amongst other things, the evaluation report suggests that anti-corruption agencies in Commonwealth Africa could be even more effective in their work if they formed a broader alliance with other national governance units possibly including auditors, procurement authorities, competition agencies and financial system administrators. Greater use of digital technology is advocated in support of regional collaboration and training. Proposals are also made for extending such support elsewhere within the Commonwealth with priority being given to smaller states.

The Commonwealth Secretariat is now considering the report with its various stakeholders before decisions are taken about the best way to develop the Commonwealth's anti-corruption agenda.

International Development and the Challenge of Public Sector Corruption

By David Fellows, John Leonardo and Cornelia Körtrl[1]



Revelations in the Panama Papers released earlier this month have focused international attention on the hidden financial structures that facilitate the transfer of assets obtained through both legal and criminal means to offshore tax havens. In a recent [report](#), the research organization Global Financial Integrity suggests that illicit financial flows from developing countries have reached the staggering sum of \$1 trillion a year.

Is corruption in developing countries of any legitimate concern to the West? The U.N. Economic Commission for Africa in its recent [African Governance Report IV](#) implicates the West when it suggests that “the role of private sector actors in fuelling corruption ... should not be ignored.” Yet Western nations are increasingly expected to act as trading partners to developing countries. They must also be accountable to their electorates for obtaining value from their aid expenditure.

Corruption concerns the use of public position to gain private advantage, such as wealth, power, or status. In the public sector, corruption can take on many forms, ranging from the misappropriation of funds to extortion and the abuse of patronage. We provide further examples [here](#). It can reduce state revenues, increase state expenditures, diminish economic development, and impair the capacity of public services. It can also hamper the transition from aid as project-funding to aid as direct budget support. Corruption can undermine nationhood by destroying confidence in public administration

and the political process, impoverishing communities and denying opportunity.

At the most recent OECD's Anti-Bribery Ministerial Meeting, the president of the International Federation of Accountants stressed the importance of strengthening public financial management (PFM) systems to combat corruption in the public sector. PFM includes budget preparation, internal control, internal audit, procurement, monitoring and reporting arrangements, and external audit^[2].

In this short piece we offer evidence that corruption hampers government effectiveness, including the quality of public services, and economic prosperity. While serious corruption exists in both developed and developing countries, it is developing countries that can least afford the very significant cost and the collateral damage. We suggest that good PFM can help control corruption and we set out our thoughts on how this beneficial effect can be achieved.

Two sides to corruption

Worryingly, networks of corruption can normalize corrupt behaviour and offer mutual protection to those involved. In an insightful report on Indonesia in 2003^[3] the World Bank stresses the importance of organisational environment over salary level and suggests that political corruption usually requires the active complicity of civil servants. The international Anti-Corruption Resource Centre, U4, [has developed a useful account of the personal and social considerations in play](#). For instance, the risk of detection and consequent penalties can be equally relevant considerations: when the risk of detection is low, corruption may thrive even in situations with significant penalties. Contrarily, corruption may be high with high risk of detection but low penalties. Similarly, Khan^[4] argues that the underlying distribution of power between actors is essential

to understand corruption in a particular context. Clearly, anti-corruption reforms must address the specific drivers of corruption in the national context.

Various international agencies have sought to discourage the provision of bribes by foreign nationals. [The UN Convention against Corruption](#) attempts to discourage corruption by making the payment of bribes abroad a criminal offense prosecutable in the home countries of foreign nationals. The OECD Anti-Bribery Convention takes a similar approach.

The empirical connection

We have examined the consequences of corruption and the impact on PFM performance from a statistical perspective in several ways. We summarise our conclusions in this section (all correlations are significant at a 99% confidence level except where otherwise stated). We also illustrate here the [chain of events](#) implicit in the data.

Firstly, we have correlated control of corruption (capturing perceptions of the extent to which public power is exercised for private gain) and government effectiveness (including the quality of public services) for 184 countries using data from the World Bank's 2013 Worldwide Governance Indicators, together with World Bank 2013 per capita income data and Rand Corporation's Trace (bribery) Matrix risk scores for these countries (see Table 1).

Table 1: Corruption Correlations		
Corruption measure	WGI Government Effectiveness	GDP/head
WGI Control of Corruption	Significant correlation	Significant correlation

Trace (bribery) Matrix ^[5]	Significant inverse correlation	Significant inverse correlation
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Indicators of corruption are highly subjective and therefore of questionable validity. Nevertheless we note the similarity of the significant relationships achieved from the two different indicators of corruption and hence believe in the validity of the relationships.

We also correlated some recent measures of PFM performance with measures of corruption and government effectiveness for 39 developing countries for which Public Expenditure and Financial Accountability (PEFA) assessments^[6] were made available during the past three years from 2013 to 2015 (see Table 2).

This second set of correlations is more problematic. PEFA indicators are not designed to isolate activities that are most indicative of corruption and recent PEFA results together with government effectiveness, control of corruption and Trace risk scores were only available for thirty-nine countries. Despite this hindrance and the inherent weakness in the corruption data mentioned above we find some significant statistical relationships amongst the indicators that cover activities most vulnerable to corruption or concerned with its detection. This seems to suggest that PFM, or at least some aspects of PFM, is relevant to combatting corruption and securing government effectiveness.

Table 2: PFM Correlations to Corruption and Government Effectiveness			
PFM quality assessed using PEFA Performance Indicators	Control of Corruption	Trace Risk Index	Government Effectiveness

Degree of integration & reconciliation between personal records and payroll data	Significant Correlation	No significant correlation	Significant Correlation
Effectiveness of internal controls for non-salaried expenditure	No significant correlation	Significant Correlation	Significant Correlation
Frequency and distribution of internal audit reports	Significant correlation*	Significant Correlation	Significant Correlation

**This correlation is significant at a 95% confidence interval.*

The general inference we take from this exercise is that good PFM practice is likely to be beneficial to the advancement of good public service delivery and economic performance in developing countries.

Effective PFM reforms to combat corruption

Endemic corruption should be confronted through location-specific action prioritized on three factors: national detriment, effectiveness of the measures proposed, and capacity of the administration to effect the proposals.

Reform proposals should be designed to cover key weaknesses but avoid technical complexity that cannot be sustained. For instance, does the state have a sufficiently robust communications network and the necessary information and communications technology skills available to enable public sector organisations to undertake their purchasing from private sector suppliers using internet-based systems; or, are manual system improvements coupled with greater transparency in awarding contracts preferable, at least in the short term? Next, financial regulations need to be coherent and simplified where necessary. They should be more exacting in areas of high

risk and high value.

Internal audit often requires improved capacity and must have reporting access to the most senior government official. External audit reports should have full public disclosure and external auditors should have access to public accounts committees that are informed by independent expert support.

The public must be made aware of the service standards they can expect and have access to effective complaints mechanisms in order to ensure value for money. Also, business and professional associations must be encouraged to voice concerns about corruption and poor financial practices.

Transparency of policy decisions and of financial performance is imperative through government information systems, among which government websites are increasingly important. But free media reporting and comment are essential to securing all such reforms.

Wider supportive activities

Perhaps some of the most important PFM reform activities are not of a strictly financial nature. Senior officials and politicians must demonstrate exemplary leadership, civil service watchdogs should underpin standards of conduct and should be invested with investigatory powers, codes of conduct should be adopted as a condition of employment, recruitment must be made on merit, appraisal and disciplinary processes must be robust, and there must be adequate standards of induction and in-service training.

Judicial systems must be freed from corruption and political interference, and consideration should be given to establishing special courts for corruption.

Opportunities for corruption can be reduced by avoiding personal contact through the use of online service delivery (where feasible) and by eliminating unnecessary bureaucracy.

Transferring services of a commercial nature from public to private sector providers should be considered, although this requires careful implementation and continuing regulation in some cases.

The role of development partners

International development partners, particularly the large aid organizations, are well positioned to establish appropriate incentive frameworks, identify opportunities, and adopt the necessary long-term perspective required for PFM reforms. These situations are not suitable for pre-packaged solutions. Rather, the frameworks should include actively managed, locally focused programs requiring collaboration between governments and development partners to track progress and drive change, with ownership of the programs vested in client states.

Development partner funding for reform activities should be linked to the attainment of specific milestones previously agreed with governments and released in tranches as agreed reforms are realized. Such improvements are beginning to gain ground and must be complemented by effective advocacy for transparency in financial matters and press freedom.

Conclusion

The level of corruption in developing countries, including the use of tax havens for sheltering the proceeds of top tier corruption, has become a current issue. In addition, corrupt environments threaten trade relations with developing countries and the criminalization of bribery in the home countries of foreign nationals, although an essential development, adds to the deterrent effect for foreign-based businesses.

Economist Gabriel Zucman [estimates](#) that over 30 percent of all Africa's financial wealth is stored in tax havens, of which it may be assumed that a substantial proportion goes untaxed. The

conclusion drawn from this is that even if the poor pay their fair share in taxes, the world's wealthiest often do not. Reforms of tax law and administration are clearly required as part of the PFM reform agenda.

The eradication of endemic corruption is an enormous challenge for developing countries. PFM reform has much to offer, but international development partners need to do more to support collaborative change processes and plan for the long haul.

[\[1\]](#) David Fellows and John Leonardo are Principals and Cornelia Körtrl is an Associate of PFMConnect. Their work covers development projects in Africa, Asia, and the Pacific Islands.

[\[2\]](#) A wide-ranging discussion of PFM practice is well beyond the confines of this article. We refer only to practices that are particularly relevant to the control of corruption. See Stephen Peterson 'Public Finance and Economic Growth in Developing Countries: Lessons from Ethiopia's reforms' for a thought-provoking and very readable commentary on the challenges facing those who would design financial systems for developing countries.

[\[3\]](#) World Bank: Combating Corruption in Indonesia *Enhancing Accountability for Development* 2003

[\[4\]](#) Mushtaq Khan understands corruption as a 'type of illegal rent seeking' ([Khan, 2006. State weakness in developing countries and strategies of institutional reform – Operational Implications for Anti-Corruption Policy and A case-study of Tanzania, p.9](#)). For a complete understanding of his theory on rent-seeking see Khan, M. and Jomo, K.S. (eds) (2000). *Rents, Rent-Seeking and Economic Development: Theory and Evidence in Asia*. Cambridge: Cambridge University Press.

[\[5\]](#) The Trace Matrix assesses the risk of encountering business bribery in a particular country; higher scores imply higher risk of encountering bribery expectations (for more

information see [here](#)). A discussion of the [methodology](#) employed to determine the correlations presented in Tables 1 (and 2) is available here.

[6] For the PEFA system and its findings see www.pefa.org

Corruption Correlations

Corruption Correlations

Our blog “International Development and the Challenge of Public Sector Corruption” discusses the results of our examination of correlations for the control of corruption and government effectiveness and public financial management (PFM) performance.

Corruption and Government Effectiveness

Correlations were calculated for the relationships between the control of corruption (capturing perceptions of the extent to which public power is exercised for private gain) and government effectiveness (including the quality of public services) for 184 countries using data from the World Bank’s 2013 Worldwide Governance Indicators (WGI), together with World Bank 2013 per capita income data and Rand Corporation’s Trace (bribery) Matrix risk scores for these countries.

The Trace (bribery) Matrix risk scores have an inverse relationship with corruption control levels i.e. low Trace Matrix risk scores indicate relatively favourable levels of control over corruption whilst high Trace Matrix risk scores indicate relatively poor control over corruption. Strong relationships between WGI control over corruption /government effectiveness scores and Trace Matrix risk scores will result

in relatively high negative correlation values.

Results were prepared for the total sample of 184 countries as well as the halves and quartiles of the sample.

Corruption and Public Financial Management

Correlations were calculated for the relationships between some measures of PFM performance and the measures of corruption and government effectiveness for the 39 developing countries for which Public Expenditure and Financial Accountability (PEFA) assessments were made available during the past three years from 2013 to 2015. The respective PFM performance measures used are performance indicators prescribed in the PEFA methodology applicable in 2011 comprising the [initial 2005 indicator set](#) and [subsequent amendments](#).

Results were also prepared for this sample of 39 countries as well as the halves and quartiles of the sample.

Correlations download

The correlations are presented in a spreadsheet that can be downloaded [here](#).