

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

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 (SE0Is)

The five key SE0Is 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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[\[1\]](#) 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.

An open letter to the PM as

he crafts his general election agenda



Rishi Sunak

By David Fellows

In this open letter the author proposes an election agenda dominated by levelling-up, NHS and Zero-Carbon met from a programme of public spending reductions. He sees a need for this to be explained by an honest evaluation of the challenges facing Government.

Dear Rishi,

It seems to me that the coming general election must be regarded as the start of a new era: post financial crisis, post Brexit, post Covid, post supply chain disruption, post outbreak of the Ukraine war, post inflation explosion, post Corbyn & Johnson. This clearly requires a courageous agenda as we approach a somewhat more stable (excluding Ukraine) yet challenging domestic and international landscape.

Your new Government must be ambitious, rigorous and transparent in constructing the way forward. We require a Government pro innovation, productivity and regional opportunity; pro personal responsibility and smaller state; pro advice above regulation; and more communicative about [problems and possibilities](#). This challenging requirement plays to your technocratic strengths – embrace it, speak up and move quickly.

So far as the middle-class millenarian campaigners are concerned, the more level-headed majority want a government that can stand up to them where it counts.

Internationally the way forward must include increased national resilience and partnership development where this is mutually beneficial. Sooner or later, this will include improved relations with the EU and US, accepting that marginal improvements may be all there are available right now without offering unreasonable concessions. In this respect the decision to rejoin Horizon is a mystery to me, it has not been properly explained and the terms are bewildering. You must do better.

We need a narrative that embraces all this and gives us confidence for the future.

Levelling-up encapsulates the lack of tangible concern by the political class over past decades. There is a yawning deficit in economic opportunity in the regions compared to that in the Greater South East. People in the regions need feasible solutions that address this through a substantial [programme of investment and collaboration](#) involving development tax incentives, training, innovative technologies and

infrastructure. The current political mindset is far too London-centric as [my analysis of then Levelling Up White Paper](#) demonstrated. This cannot continue. If you do not understand the insistent need for leveling-up, a phrase invented by BJ but a concept long embedded in the regional DNA, then frankly you are adrift.

If the levelling-up ambition is ever to succeed in practice then staunch and continuous Government leadership is essential. Local government and other local institutions will never have the heft to lead a real revolution although they are clearly vital ingredients. Collaboration between major public sector organisations is limited by the determination of all parties to retain discretion over important matters for which they are held responsible. Metropolitan authorities have limited powers leaving their leadership role hanging by a thread.

Constant [cries from industry](#) to allow local politicians to take charge are immediately followed by demands for action on issues for which Government holds the key. Any intention of real change requires continuously active ministerial involvement to build the regional offering and demands true collaboration between players, including greater cooperation and shared learning within the business sector together with more rigorous thinking about the shortcomings of public and private sector relationships hitherto.

The Government's failure to give due support to regional development over decades has almost by default put enormous emphasis on London and the quality of life of ordinary Londoners has suffered. Housing provision has been disastrous. Inner London, with some exceptions, has been demonstrably failed by the public sector. Levelling up is the first step in

redressing this unhelpful London bias allowing the quality of life throughout the country to be improved step by step.

Looking at other issues, the NHS is simply too monolithic while internal communication and coordination can be appalling. It now requires the challenge of an alternative model based on universal healthcare principles. I suggest a dual system of state and private provision with the latter largely funded through an insurance system, as [I have previously advocated](#). The state would then be one option within a diverse provider model that would develop through operational experience and user demand. Basic personal coverage within the system would be mandatory and personal taxation would reflect the choices made.

Zero carbon timescales are unrealistic and becoming detrimental to everyday decision-taking. The cost of electric vehicles, shortage of charging points, deficiencies of national grid infrastructure and power generation now require firm deadlines to be translated into softer and longer timescales. Further technological breakthroughs and comprehensive cost analysis will determine the nature of the initial net-zero platform. At this stage options for power generation and end-user technology need further work if abortive costs, perhaps crippling burdens, are to be avoided at state and personal level. Locally-determined ULEZ charging zones are part of an emerging left wing economic disruption narrative and should be prohibited. Only Government-enacted regulatory and penalty systems should be permitted.

The limited extent of house building is an injustice to younger people of child-bearing age, a threat to the country's economy and destructive to local communities that do so much heavy lifting that otherwise falls on an overburdened state.

With this in mind, local authority discretion to refuse planning permission for housing must be reduced, the scope for building on greenbelt land must be increased and the land bank practices of major developers must be scrutinised and reformed as necessary. It is no good observing the preferences of the traditional voting base if the result is national destruction. Some hard truths need to be told. This may lose the support of some but gain respect and possibly support elsewhere.

Whether political leaders are gregarious, eloquent or rich (none could be said to be of limited means), I suggest that in the coming election it matters less to the electorate than their integrity, their willingness to engage openly with the electorate on key issues, the quality of their team and, crucially, what they seem able and willing to deliver for the individual voter and the country at large. Not every voter will forensically examine these issues but many will and their conclusions will filter through.

With this in mind, why not bring the levelling-up agenda back into the Cabinet Office with you accepting personal responsibility for vision, oversight and cohesion. It would be a major commitment but as the election approaches it would signal that you put fairness of opportunity and a shared national prosperity at the heart of your mission. Having made my case for the levelling-up perhaps I can go one step further and suggest that where there is deemed to be an overwhelming case for technological research and development based in the Greater South East then this should be linked with institutions and businesses in the regions.

Also commit to social imperatives that are not on substantial fiscal support, particularly private sector house-building and the inclusion of the private health sector as a full partner

in the NHS family.

On the international stage, trade and security must be clearly at the forefront. Perhaps international development, outside the bounds of humanitarian aid, could be targeted mainly at existing and potential trading partners in the developing world with support centred around in-country governance arrangements and partnership development involving UK businesses and technological institutions (even catapults). I am not suggesting that some of this does not happen already but that it could be a much more prominent focus of the development offer.

Any substantial programme of public investment in economic growth must be financed in the short term by increased public service efficiency and the elimination of ineffective service provision leading subsequently to self-funding through increased tax revenues. Hard choices are clearly required for both initial service reductions and investment priorities.

The next election will find many issues vying for attention. A selective offer delivered with straightforward honesty is now required that demonstrates your vision and for our future prosperity. Clarity about key roles in developing the future vision could be helpful too.

Regards, DF

PS: I'm always creating to-do lists and perhaps I could offer a few thoughts in this vein

Levelling-up and self-reliance:

- Demand substantial contributions from regional universities, technology institutes and catapults – of a scale and ambition to make a significant difference
- Devolve Govt departments much more extensively
- Support development of new technology to facilitate greater productivity for domestic industries eg: agriculture; product design, testing and development; digital technology
- Employ tax incentives to encourage investment in regional development hubs for new product development and productivity improvements
- Commit ministerial support to facilitate institutional cohesion at regional level

Public spending:

- Set 3 year targets for departmental cost reductions
- Reduce services that lack value; improve administrative efficiency; and reduce regulations, making it harder for ministers to create them (none of this is ever done well)
- Seek advice from the NAO. Hold departments responsible.

National health services:

- Announce the intention to develop a twin track (public/private sector) universal National Health Service with the private component being largely insurance-based including the option of providing both private medical schools and university hospitals

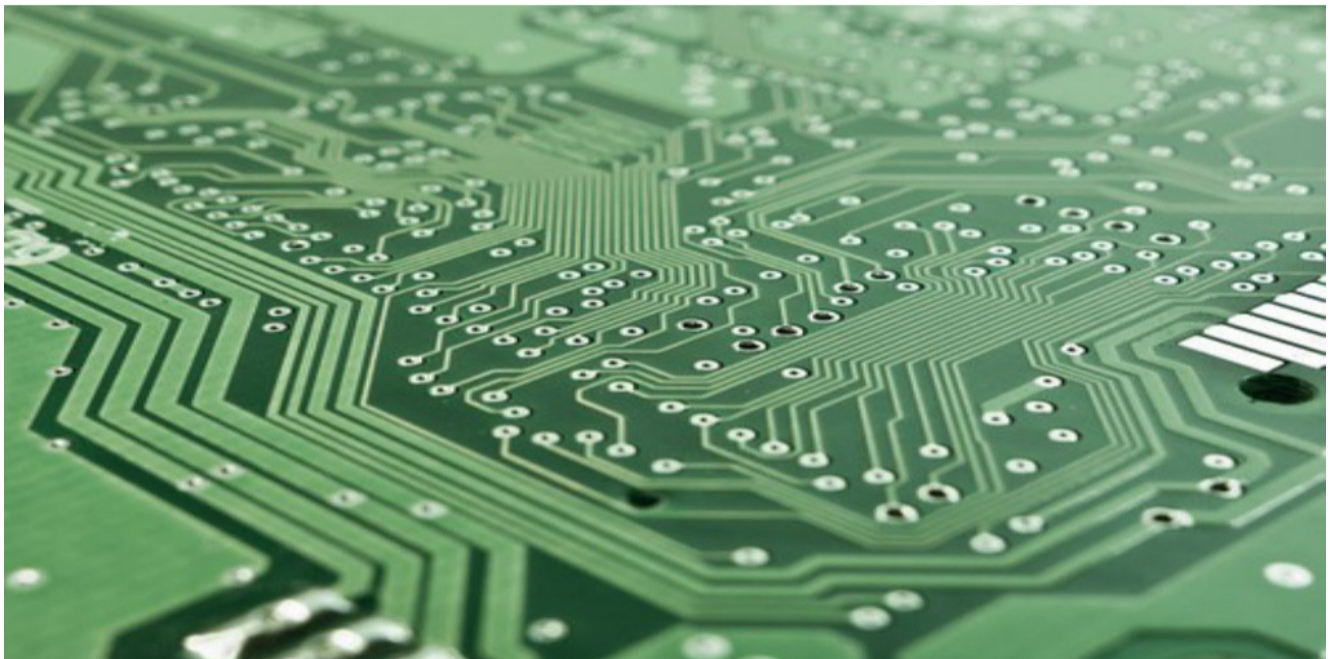
- Allow cross-contracting for service delivery between public and private sectors
- Allow private sector to adopt a variety of configurations for primary and secondary care.
- Call for outline proposals from public and prospective private sector partners
- Design a supportive tax allowance package for those wishing to take the private health option
- Learn from others

Carbon reduction:

- Scrap all net zero deadlines and replace with more realistic targets for key proposals
- Monitor and evaluate the emergence of innovations worldwide, encourage domestic innovation, stimulate the creation of viable net zero industries and support them

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Using Digital Technology to Improve Sustainable Development Goal (SDG) Delivery



by David Fellows and Glyn Evans[\[1\]](#)

The SDGs

The United Nation's [SDGs](#) present an array of complex social, engineering, medical, scientific and managerial challenges for member states set in different contexts and mostly requiring very significant investment, organisational capacity and community involvement. Nations have made commitments to this agenda and it is accepted as guiding the key purposes of international development work worldwide. It is a hugely ambitious enterprise yet we suggest that current development work could be more successful.

The need for a powerful learning system

At a general level perhaps the greatest challenge is the creation of a learning system that is powerful enough to develop and distribute relevant knowledge and an understanding of how that knowledge can be best applied in the very different circumstances that exist across the world. As SDG performance criteria are finalised and adopted a [report by ESCAP](#) makes it clear just how difficult it is going to be to make a real difference.

We are not suggesting a great deal of organisation to create this necessary learning system. We propose a loose system of networking between experts based on digital communication. This would enable advice to be made available to community-based projects with greater levels of expertise being made available to the development of major programmes and projects.

It would also facilitate feedback on project progress and performance. The use of digital technology would also improve the public information base and support public engagement.

Learning system features

The basis of this networking would be a digital communication system that would be largely self-driven by those in the field and a support network that will evolve around them. Key aspects of this digital communication system are illustrated below.

At national and local level:

- *Provide feedback on progress made at local level within the country*
- *Request the public to identify key factors to be taken into account when designing SDG initiatives*
- *Seek feedback on the regulations required to support SDG initiatives*
- *Engage in shared learning (perhaps amongst scattered populations) between ordinary people who are trying to cope with SDG challenges on limited resources*

At regional level:

- *Undertake shared research programmes*
- *Share experiences of adapting recognised approaches to particular circumstances*

- *Improve monitoring techniques*
- *Share monitoring and advisory services*
- *Encourage the development of problem-solving support networks*
- *Undertake peer reviews of projects and governance arrangements*

At international level:

- *Build worldwide expertise to address fundamental scientific, engineering, economic, social and implementation challenges*
- *Identify and promote successful strategies and initiatives*
- *Recognise issues for which effective solutions remain elusive*
- *Create networks capable of addressing significant and urgent challenges*
- *Develop modeling tools to help design solutions*

Supporting technology would include:

- *Websites including chat rooms, website messaging, on-line data monitoring and online questionnaires*
- *Video-conferencing for expert dialogue and advisory sessions*
- *Cloud-stored databases and shared document development*
- *Email for public interactions(newsletters), dispatch of documents, technical & administrative correspondence and technical update circulars*
- *Learning management systems to support training*

*programmes that
develop skills and expertise*

- *Application software to assist the gathering of performance data including the collection of data from administrative sources (ESCAP Report *ibid*: page x)*
- *Text messaging and social media for public dialogue*
- *Massive open online courses to raise general awareness*

In general such a system would require relatively unsophisticated technology dependent only on fairly low level digital communication. Expert dialogue would tend to benefit from good connectivity at reasonable bandwidth to support video conferencing although this is not absolutely essential. Proprietary software is readily available for most of these applications although bespoke monitoring, modelling and assessment tools could be created as the approach gained traction.

Examples from around the world

Our blog '[An International eCollaboration Route to Public Service Reform](#)'

(also published by the Australian National University's [DEVPOLICYBLOG](#) in July 2017) considers the diverse power of digital communication technologies. Examples of this technology used in ways relevant to this proposition are, as follows:

1. An example of 'Shared Learning' is set out in the UNESCO publication [Digital Services for Education in Africa](#). UNICEF has reported that in Vietnam 40% of children in rural areas

used the internet for educational purposes, rising to 62% in urban areas.

2. Communities of practice have already been established in [Canada](#) for green climate purposes

3. Social media has been used by PFMConnect for the past three years to raise public awareness on public financial management and governance topics reaching significant numbers of people in more than 50 countries.

Conclusion

This is not a system requiring heavy oversight and regulation. We seek cultural change to the way programmes and projects are developed. A more inclusive approach at expert and community level could be usefully supported by major development agencies and could become a requirement on contractors. For instance, these proposals could help the Green Climate Fund which appears to be heavily engaged in process issues at the expense of shared innovation.

Is it time to experiment with change?

End note

We should be pleased to discuss the ideas in this piece with those who believe that they may have relevance to their situation.

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Digital Government in Developing Countries



Posted by David Fellows and Glyn Evans [\[1\]](#)

With the aid of development partners, developing countries are making commitments to maximise the use of digital technology. The ICT industry is right behind them. In these reforms, digital technology is being represented as the principal transformative medium of government. But to think of “Digital Government” as necessarily transformative, almost an end in itself, is misguided. Governments should be primarily concerned to provide their services and engage with electorates in the most cost-effective way. Digital technology may or may not have a role in that process.

Here are some of the fields in which digital technology has demonstrated that it has a potential role to play in developing countries:

- Transparency and public engagement
- Basic public service delivery in the fields of health and education
- Public safety and security
- The collection of tax and non-tax revenues
- The management of population growth in urban areas
- The sustainability and development of rural communities
- Skill shortages throughout the economy
- Economic diversification
- Measures to combat corruption
- Resilience to natural disasters

We do not accept, however, that the answer to any of these challenges is necessarily a massive investment in digital technology, say a ‘digital city’ or a fully integrated expenditure, revenues and payments system.

Many developing countries are not well positioned to make

sustainable progress with digital technology in huge multi-faceted programmes requiring vast initial expenditure. This form of development may do little more than provide substantial fee income for international consultancies and software developers. Once the consultants are gone and system design faults surface, client needs change or in-house staff are poached by others, then the facilities that promised so much may become more of a hindrance than an advantage.

Things may not even get that far. Without governments having sufficient staff with the necessary technical skills, digital systems may never be properly configured and the client may be left with a partially implemented system. Nevertheless, it is surprising how many such projects are specified and funded. Problematic factors are sometimes acknowledged without being fully taken into account.

We suggest that an evolutionary approach to digitally-enabled reform offers a more realistic way forward. The process should start with an analysis of the operational imperatives for improvement. This requires the following ten-point strategy:

1. A clear vision for future service delivery and the developing relationship between citizens and the government
2. A thorough assessment of internal resources (skills, knowledge, staffing commitments and budgets) required to support the implementation of reform and new ways of working
3. An overhaul of management philosophy and governance arrangements
4. The identification of mechanisms to address relevant gaps in capacity including improvements in the recruitment and training of in-house staff and

encouragement of local firms to upgrade their ICT capacity incrementally to support public service digital applications (multinational collaboration for the [professional development of public servants](#) and the [improvement of governance and working practices](#) are addressed in previous blogs)

5. An examination of the various options by which change can be achieved
6. A robust approach to investment appraisal
7. An assertion of priorities based on sound information and analysis
8. A clear strategy to deliver project sustainability (including security)
9. The identification of the benefits sought and how such benefits are to be achieved, and
10. A relentless focus on benefits realization accompanied by the modification of working methods to rectify performance shortfalls.

This approach is based on our past work, which we can illustrate with examples of two completed major projects, as well as our experience in developing countries.

The first example in Knowsley, one of the UK's most deprived areas, was one of the world's first "smart city" projects, started in 1997. It featured public information systems, electronic application forms, payment facilities, public feedback on quality of service, schoolwork support, an interactive liveability learning application for mentally challenged young adults, digital enablement schemes and public availability of PCs in libraries and community centres.

The second project in Birmingham, the UK's largest metropolitan municipality was probably the largest digitally-

enabled change programme ever undertaken in a European city. It included the digitisation of procurement, HR (including performance management) and accounting practices, providing managers with accurate, real-time information, and digitising customer contact and the fulfilment management of customer requests, resulting in customer satisfaction improving by 20 percentage points. The entire change programme realised revenue savings of £100 million a year.

These examples suggest that it is possible to make significant reductions in the risk to both funders and recipients of digital-enabled developments by:

- Preparing an organisational readiness analysis and development strategy as set out above
- Establishing the necessary roles and finding the right people to fill those roles
- Monitoring and evaluating progress, and
- Responding with operational modifications as necessary to achieve the desired outcomes, and as technological advances offer fresh opportunities.

Some developments will not necessarily require state financial or operational support. Private sector encouragement may be sufficient. For example, physical planning that offers confidence to developers or infrastructure standards that support the public use of digital technology.

In our view, a challenging reform agenda demands a flexible approach, cool judgement and realistic timescales. Those in positions of responsibility should take steps to avoid being found friendless and trapped by the expectations and largesse heaped upon them.

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