

Practical Tools and Approaches to Inform Analysis in Spending Reviews

**Spending Reviews— Strengthening Fiscal Governance in
the Western Balkans**

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Massimo Mastruzzi, Senior Economist, World Bank EMFTX

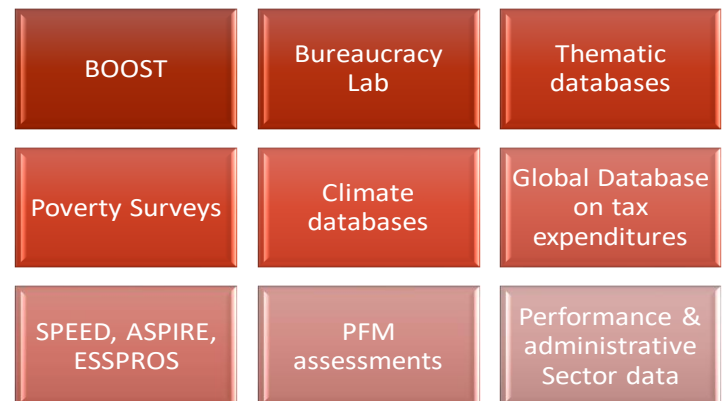
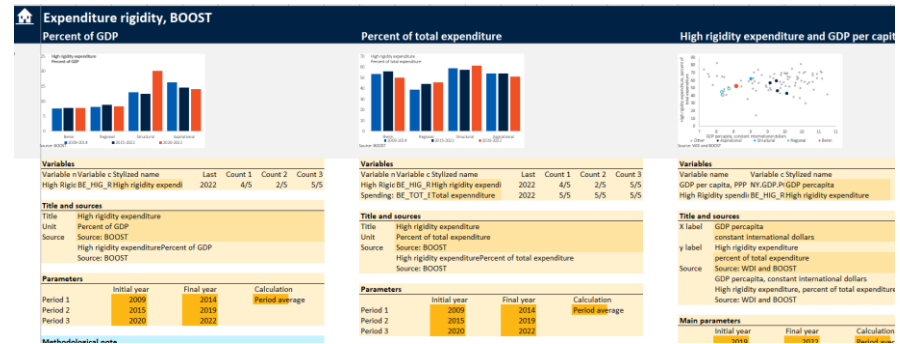
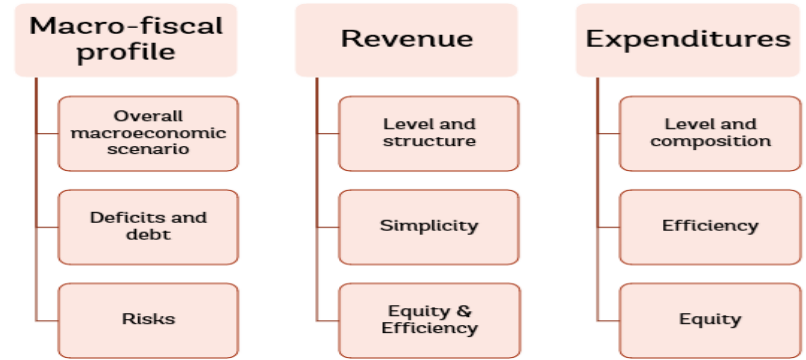
Several Elements of Spending Reviews are Embedded in the World Bank's Core Diagnostic Instrument

➤ **Public Finance Reviews (PFRs) are the Bank core diagnostics to engage clients on Public Finance issues**

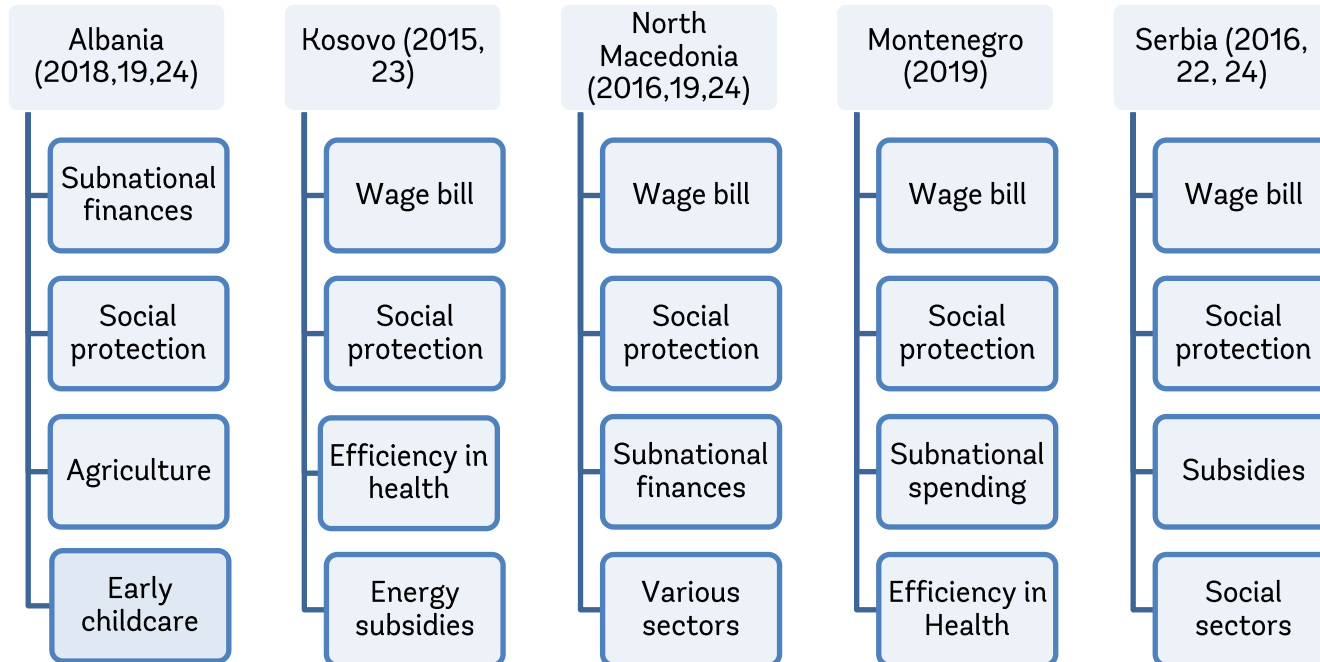
➤ **PFRs often carry important elements of spending reviews**

➤ **Several Analytical Tools Have Been Created to Help Streamline Expenditure Analysis in PFRs**

➤ **Similarly, there is a growing number of efforts to make fiscal (and non fiscal) data accessible**



Many PFRs implemented in Western Balkans explored ways to make spending more efficient, equitable, and effective...

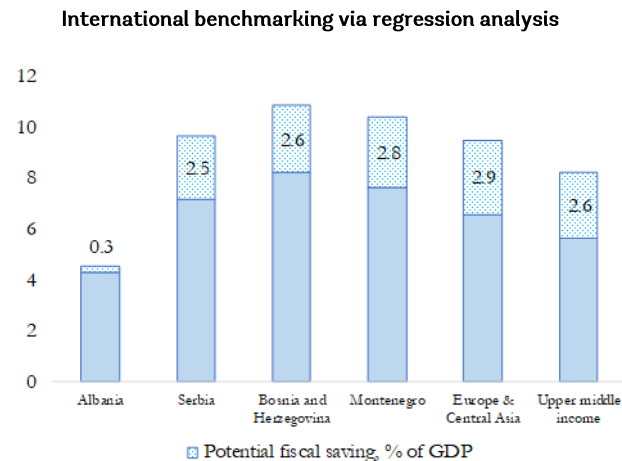
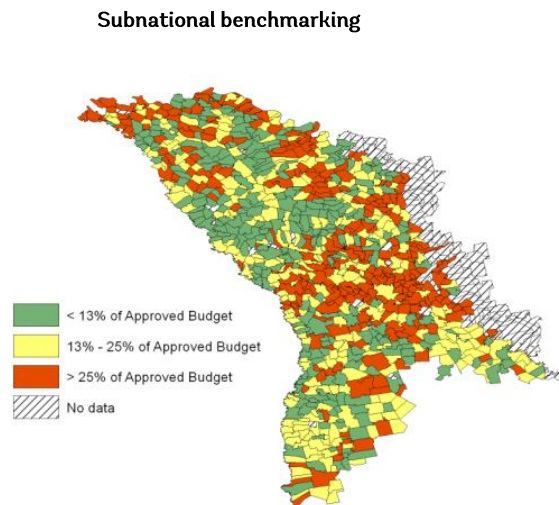
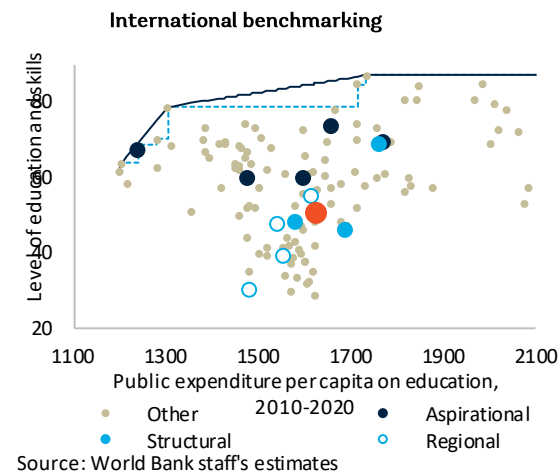
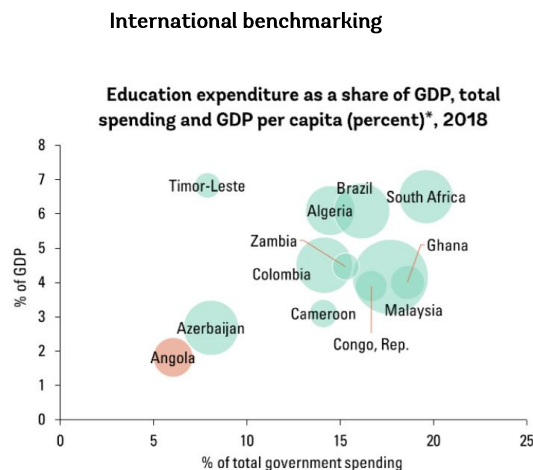


Montenegro 2019 PFR identified savings of almost 12% of GDP

Table 7. Estimated Fiscal Savings, Percent of GDP

Policy area	Short term savings	Medium term cumulative savings
Public wage bill	0.5% with basic wage harmonization	2% of GDP through staff downsizing
Health	Improving efficiency and funds allocation from pharmaceuticals and hospitals to primary care	
Pensions		1% of GDP
Social benefits	1% of GDP through means-testing mother benefits	Eliminate error of inclusion
Local government	Improving efficiency and clear arrears	
Public investment	1% of GDP	3% of GDP
Public procurement	0.5% of GDP	
Tax revenues	0.5% of GDP through collection and excises	2% of GDP through rationalizing exemptions

Benchmarking various dimensions of spending quality can help identify opportunities for better calibration and rationalization of expenditure policy

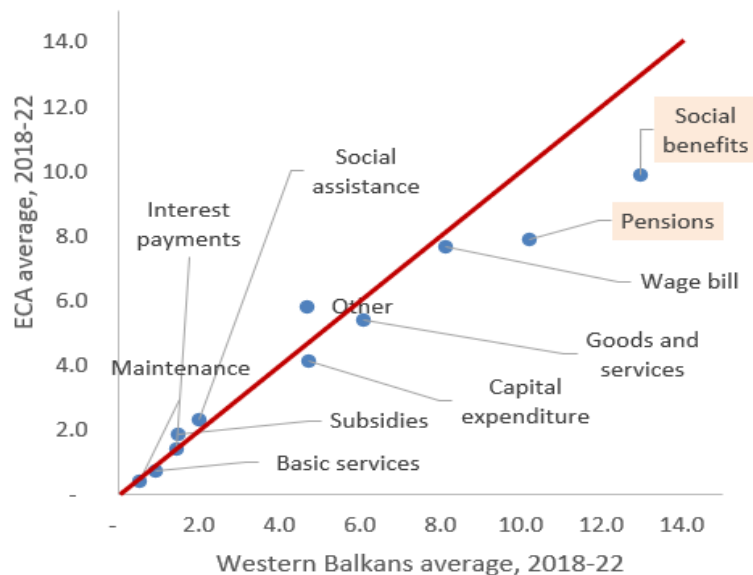


Tools have been developed to streamline these types of analysis!

Benchmarking analysis helps reveal opportunities to improve expenditure policy calibration in terms of size and composition...

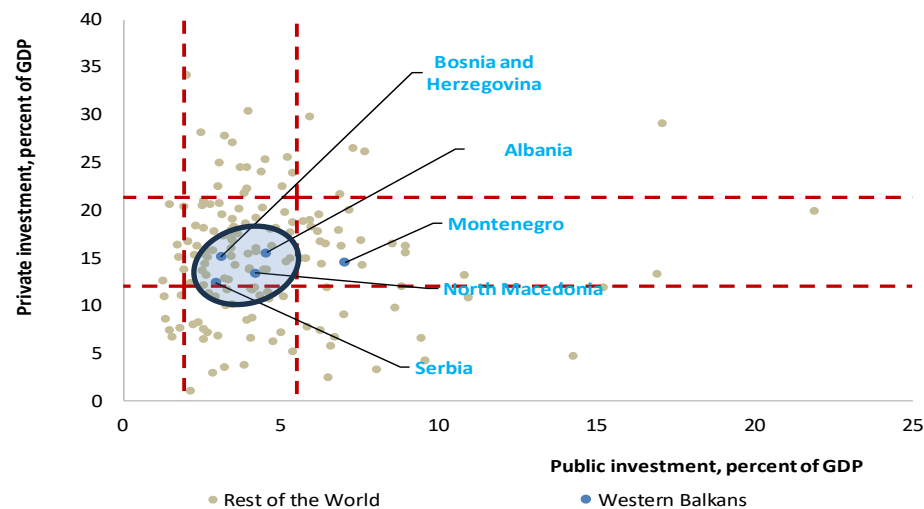
- Modest levels of private and public sector investments that may constrain growth and economic convergence with EU going forward
- There is scope to rationalize spending on **social benefits** as Western Balkans allocate significantly more on this category compared to regional peers on average

General government spending by major economic headlines in WB and ECA, 2018-22 % of GDP

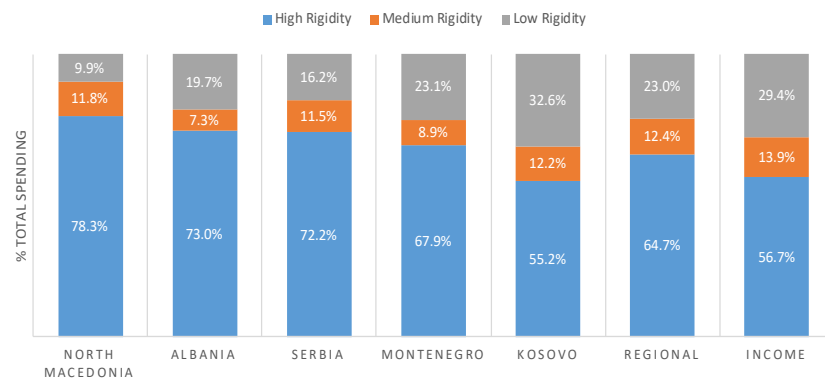


Source: BOOST; IMF GFS data.

Public and private investments in Western Balkans and Rest of the World

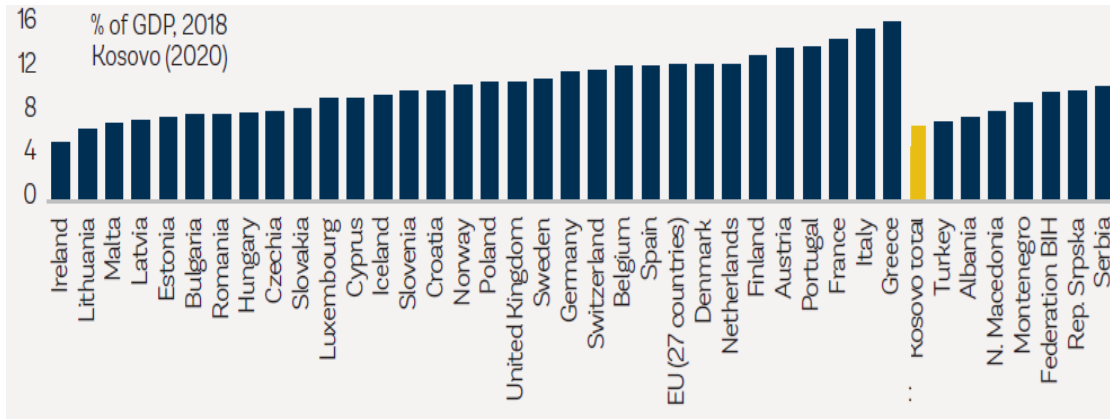


Budget Rigidity in most Western Balkans are among the highest in the world

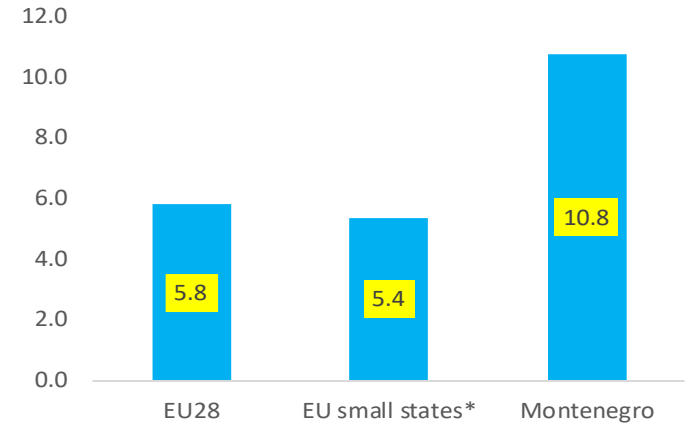


Benchmarking analysis also reveals room to improve expenditure policy calibration in terms of size and composition...

... Kosovo's **spending in pensions** is the lowest in the region given the absence of a fully established social security system.

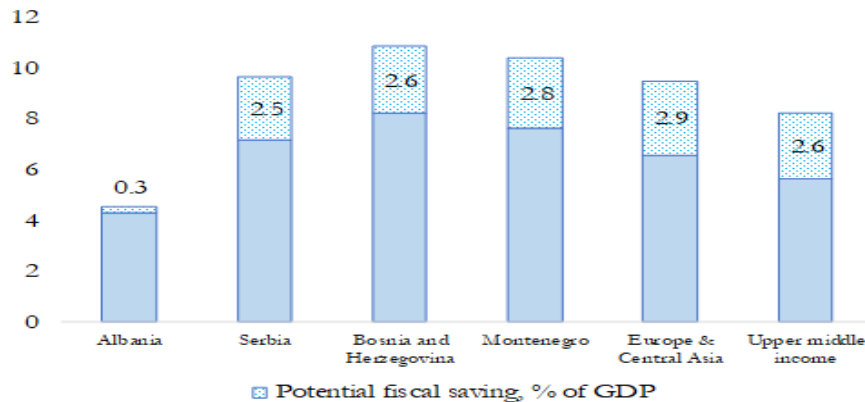


In **Montenegro**, spending on general public services is double that of the EU28 and EU small states,



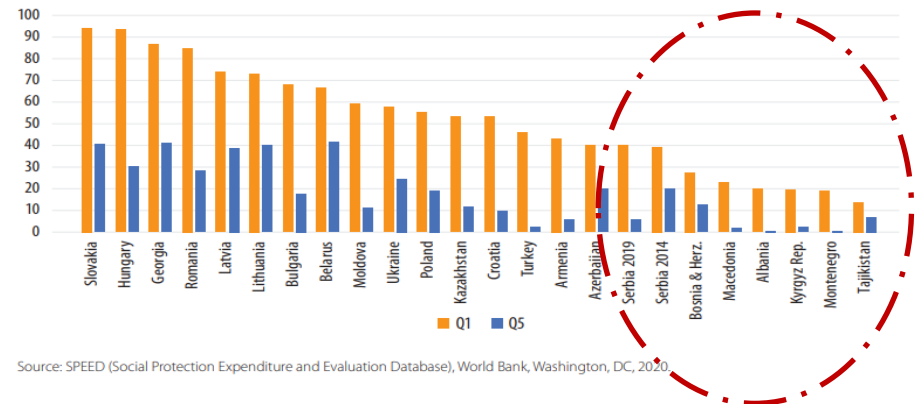
Source: Montenegro PER 2019.

Public sector wage bill is well above estimated structural levels in most countries in the region



Source: World Bank calculations

There is scope to improve **targeting of social assistance** across the region by prioritizing means-tested programs in the budget



Source: SPEED (Social Protection Expenditure and Evaluation Database), World Bank, Washington, DC, 2020.

Source: Serbia PER 2022.

Tools and Approaches for Examining Redistributive Impact of Public Spending

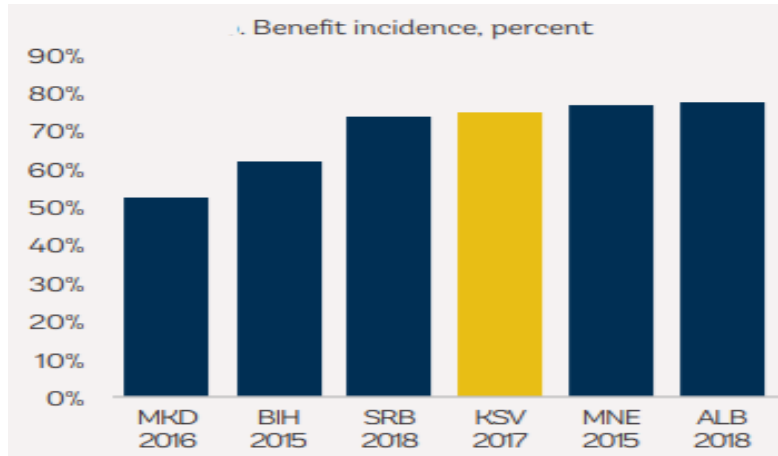
There are Several Standard Indicators that are Used to Assess the Quality of Social Protection Spending

Definitions of the main indicators used to assess social protection programs
Adequacy: Share of beneficiaries' welfare (consumption or income) covered by benefits (on average).
Beneficiary/benefit incidence: How much of the program resources are directed to each group/ segment along the income distribution of the population. Sometimes used interchangeably with "targeting".
Coverage: Percent of population or a given population group participating in the program
Benefit-cost ratio: The poverty gap reduction, in monetary units, for each unit spent on the social program.
Exclusion errors: Errors that occur when individuals or families from the intended target group do not receive benefits from the program.
Inclusion errors: Errors that occur when individuals or families not belonging to the target group receive benefits from the program

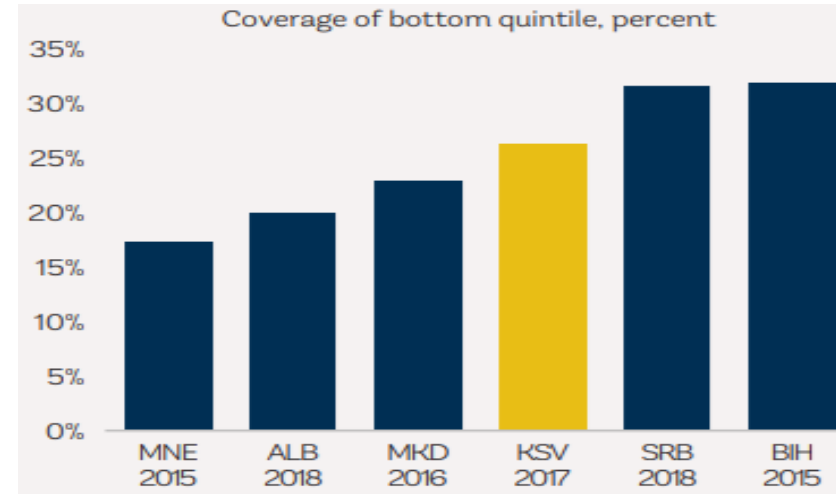
And many tools, techniques and datasets that can help!

There are many platforms that help assess and benchmark pro-poor orientation of public spending

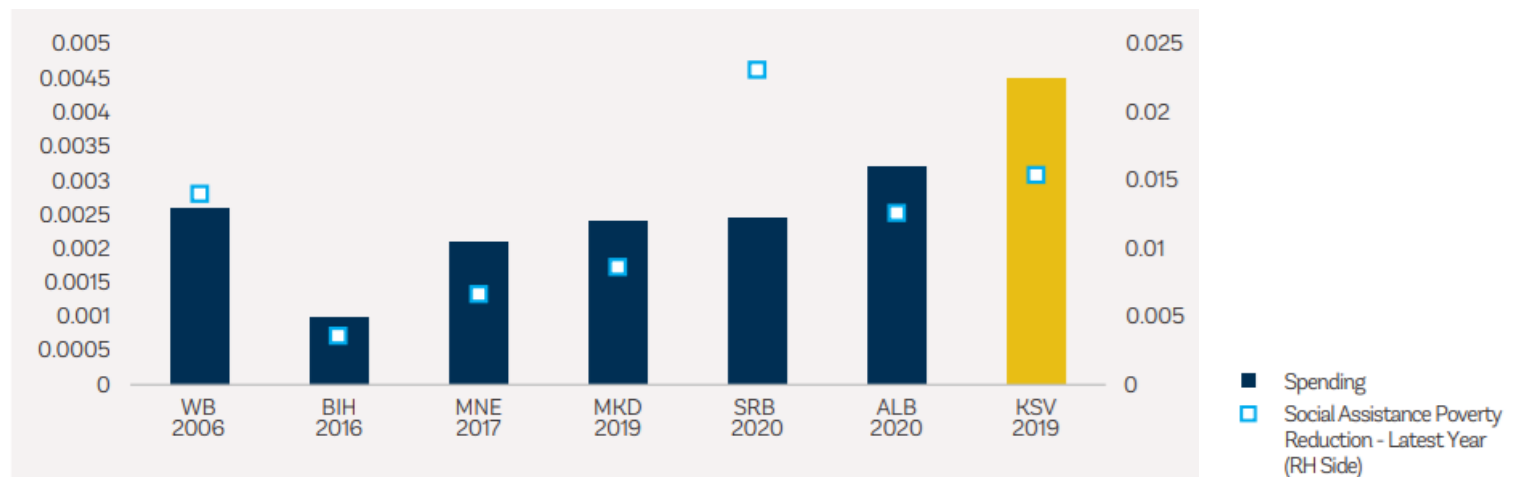
Benefit incidence of social assistance



Coverage of social assistance can be improved

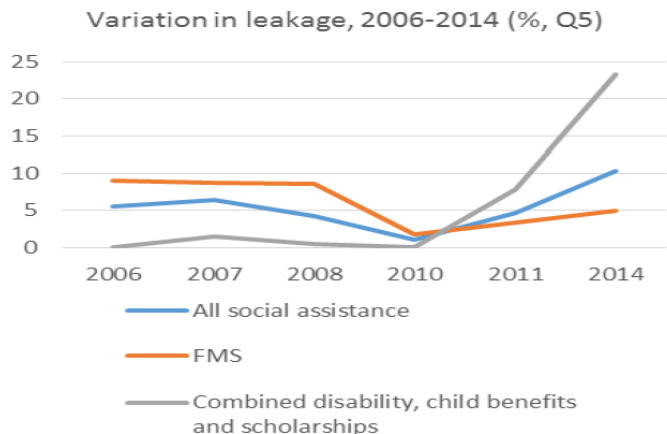


Spending on social assistance and impact on Poverty reduction

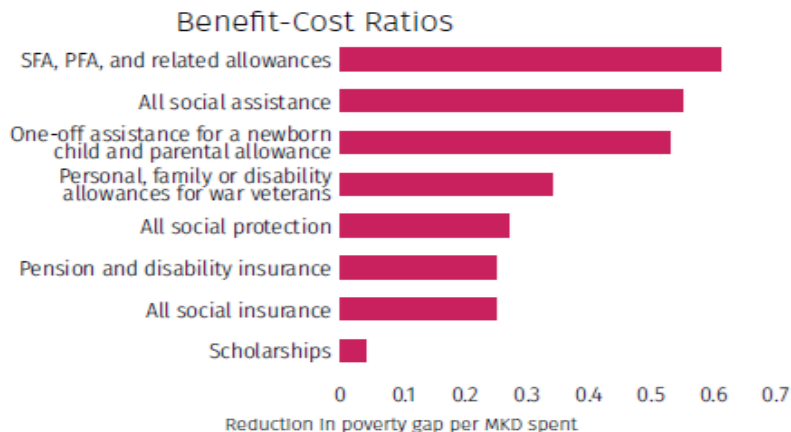


But it is important to drill down further – some examples from recent analysis in the region

High inclusion errors (Montenegro 2019 PFR)

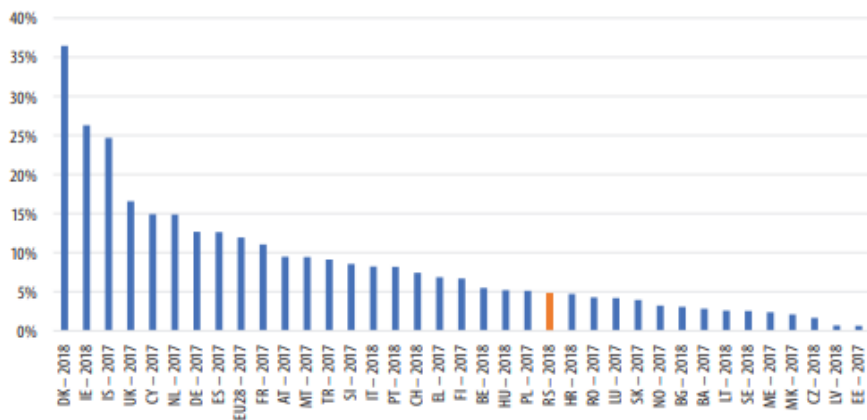


Impact of social assistance differs substantially (North Macedonia 2019 PFR)

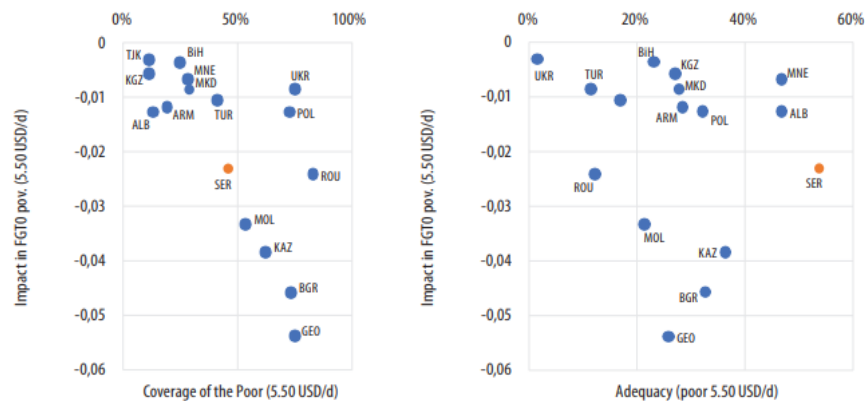


Source: HBS data and World Bank staff estimates.

The region spends very little on **means-tested social protection programs** with implications for poverty reduction



Source: European System of Integrated Social Protection Statistics (ESSPROS), accessed on 21 August 2020.*

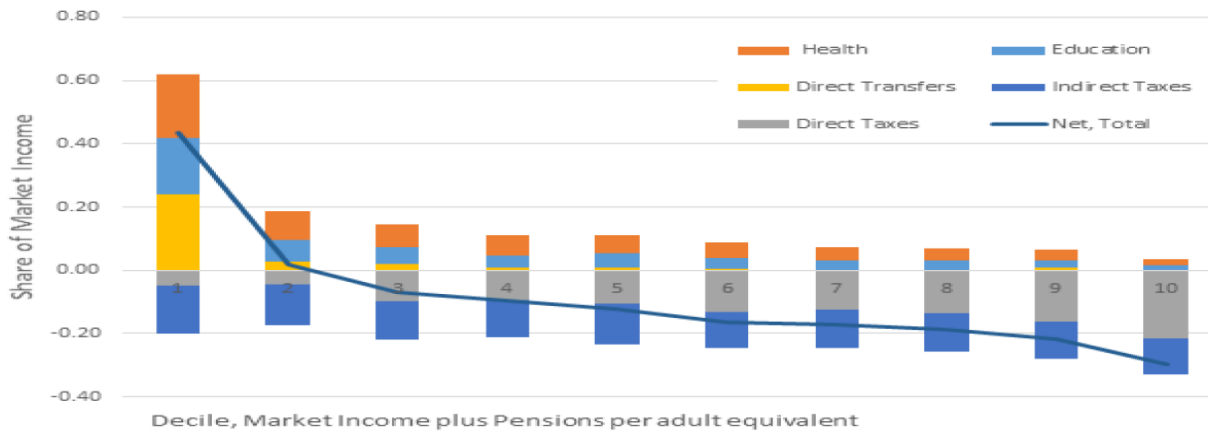


Note: Adequacy is calculated as the average value of the transfers over the total welfare of the beneficiaries. The poverty line of 5.50 USD/day was used to allow for international comparison.

Source: SPEED (Social Protection Expenditure and Evaluation Database), World Bank, Washington, DC, 2020.

Commitment to Equity (CEQ) analysis can provide further insights into the progressivity of fiscal policy stance

CEQ methodology enables efforts to improve the overall progressivity of fiscal policies



By helping assess the incidence of combined tax and expenditure policies (Montenegro 2019 PFR)

Gini Coefficient for Each Income Concept Compared Across CEQ Countries

	Market Income (1)	Net Market Income (2)	Disposable Income (3)	Post-fiscal Income (4)	Final Income (5)
		(2) = (1)-Direct Taxes	(3) = (2)+Cash Transfers	(4) = (3)-Indirect Taxes	(5) = (4)+In-Kind Transfers
Ethiopia (2011)	0.323	0.316	0.305	0.302	0.299
Indonesia (2012)	0.394	0.394	0.390	0.391	0.368
Armenia (2011)	0.403	0.393	0.373	0.374	0.357
El Salvador (2011)	0.440	0.436	0.430	0.429	0.404
Uruguay (2009)	0.492	0.478	0.457	0.459	0.393
Georgia (2013)	0.494	0.479	0.410	0.428	0.389
Bolivia (2009)	0.503	0.503	0.493	0.503	0.446
Peru (2009)	0.504	0.498	0.494	0.492	0.466
Costa Rica (2010)	0.508	0.500	0.489	0.486	0.393
Mexico (2010)	0.511	0.497	0.488	0.481	0.429
Guatemala (2010)	0.551	0.550	0.546	0.551	0.523
Brazil (2009)	0.579	0.565	0.544	0.546	0.439
South Africa (2010)	0.771	0.750	0.694	0.695	0.596

By enabling cross country comparability (Georgia PER)

Tools, analytical perspectives and techniques to undertake efficiency analysis



Efficiency is typically defined as achieving a desired output or outcome at lowest unit cost



There are obvious challenges to undertake consistent and universally applicable measurements



However progress has been done in this area to benchmark efficiency scores as useful entry point for further monitoring...



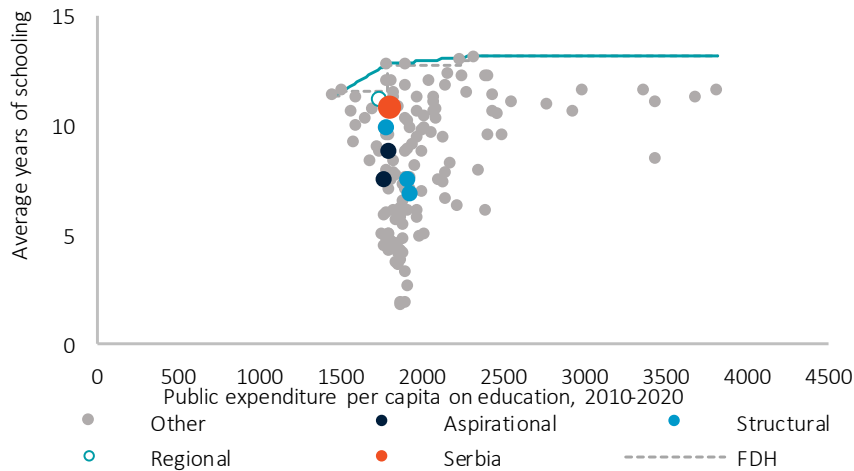
Similarly, tools and approaches can help with deep dives in select sectors and types of spending



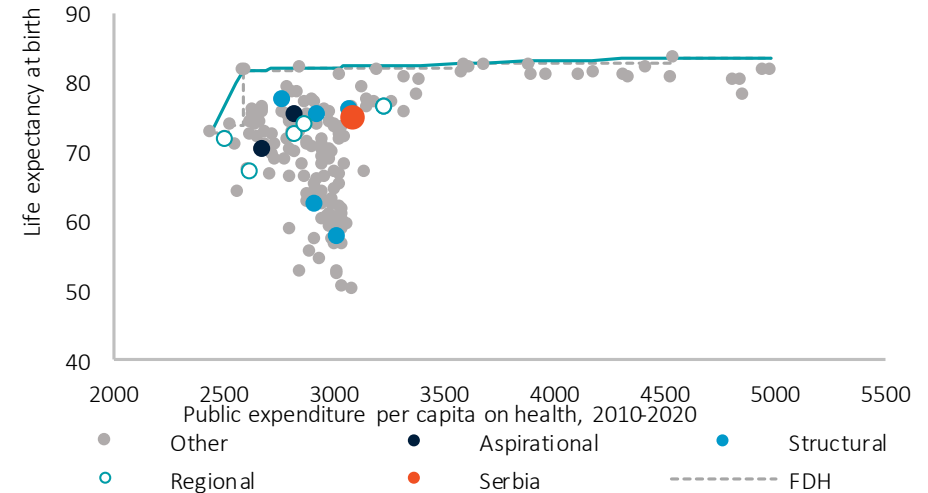
Efficiency and effectiveness considerations can often intersect (optimization)

Benchmarking efficiency in public spending is a useful entry point to identify areas in need of further monitoring...

Efficiency scores have been calculated for multiple sectors for over 180 countries over a range of techniques & indicators

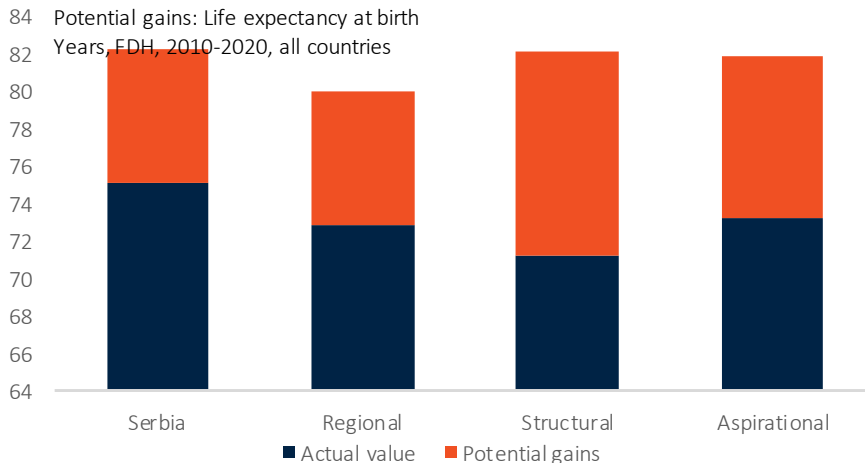


Source: World Bank staff's estimates

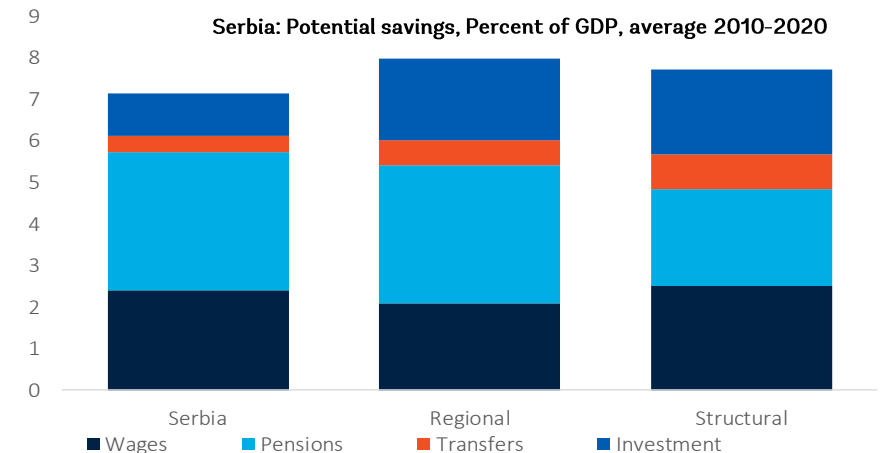


Source: World Bank staff's estimates

Efficiency Savings and development gains from efficiency improvement can be estimated using econometric analysis



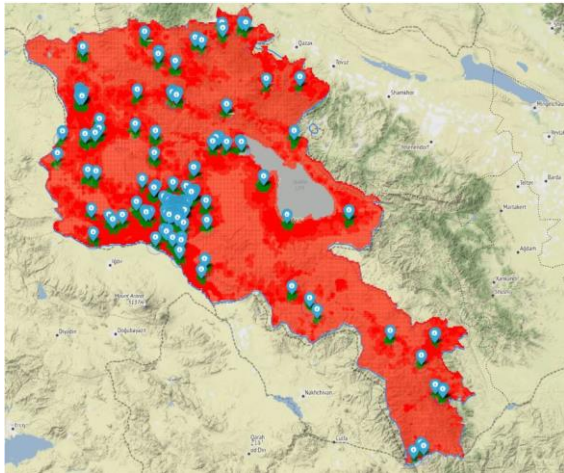
Source: World Bank staff's estimates



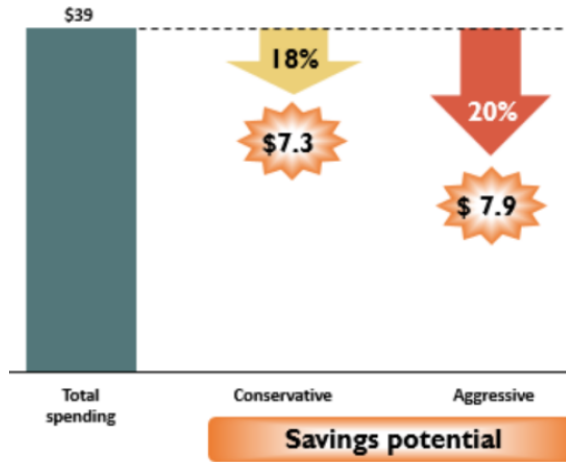
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..as entry point for further deep dives

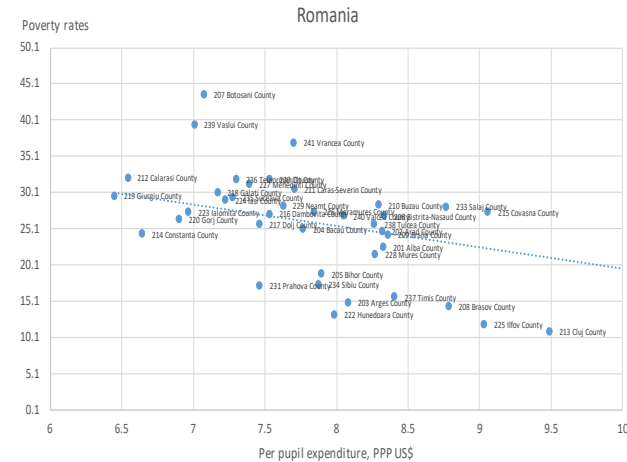
Spatial Analysis for capex



Efficiency savings in Procurement

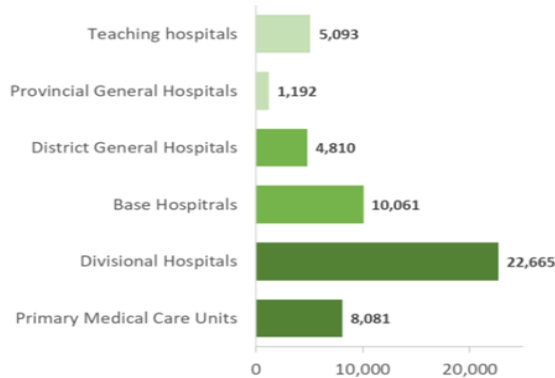
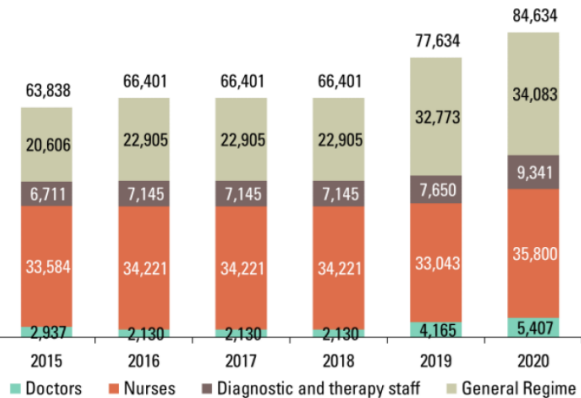


Subnational Analysis

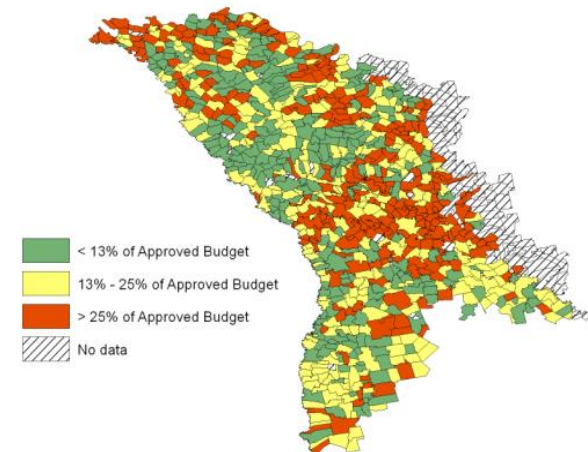


Wage and employment dynamics in specific sectors

Health staffs (number)



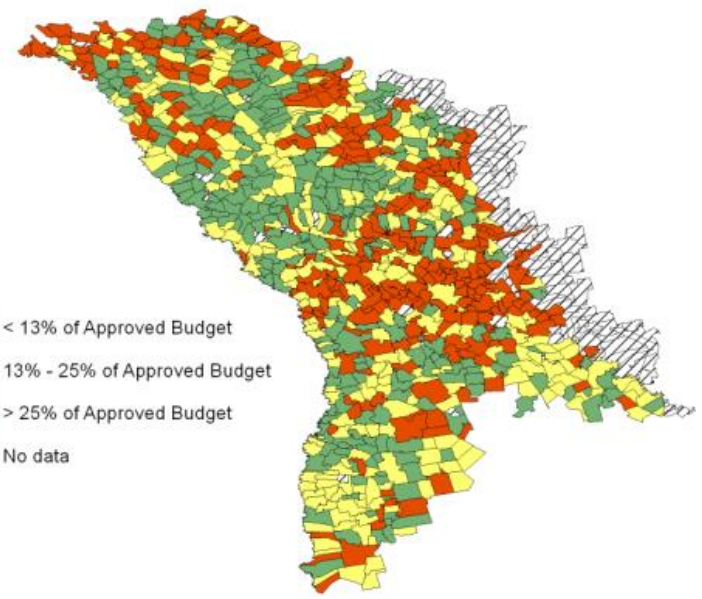
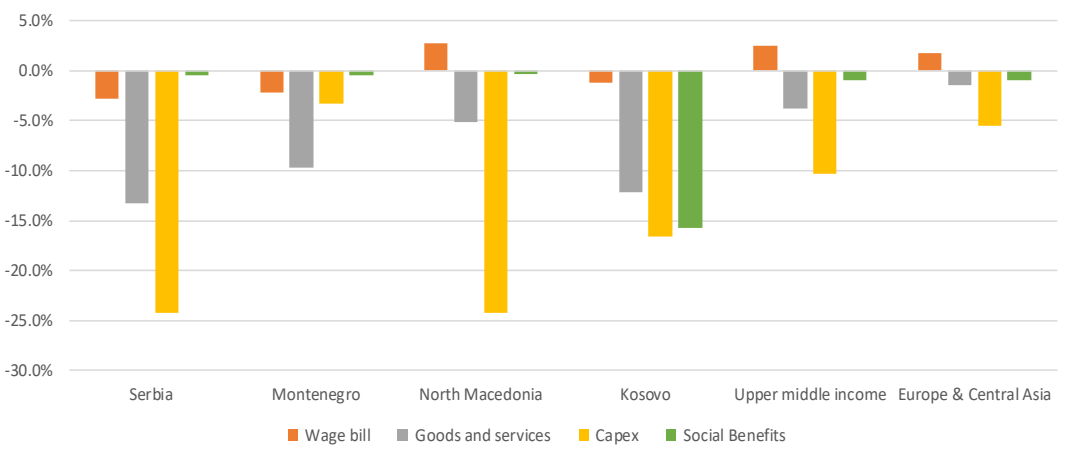
Budget credibility



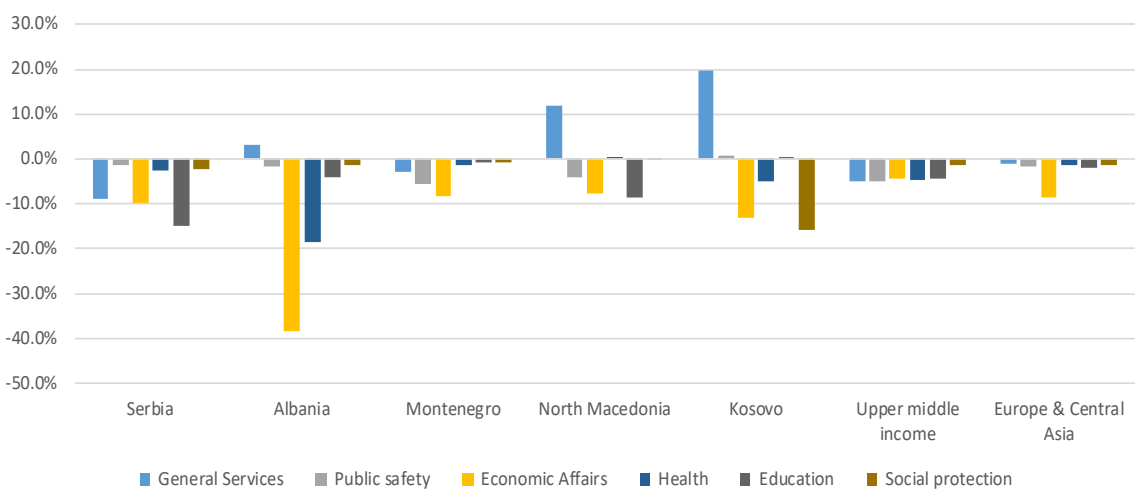
Examining execution rates to assess budget credibility

Important to go beyond overall aggregate to mask potential disparities

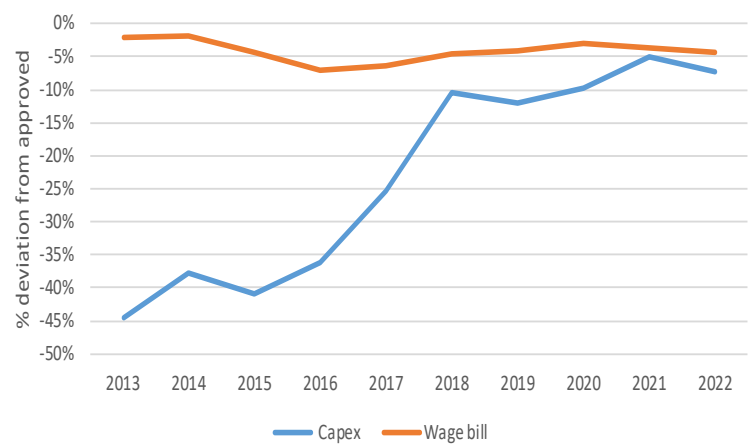
Benchmarked Budget Credibility, key economic



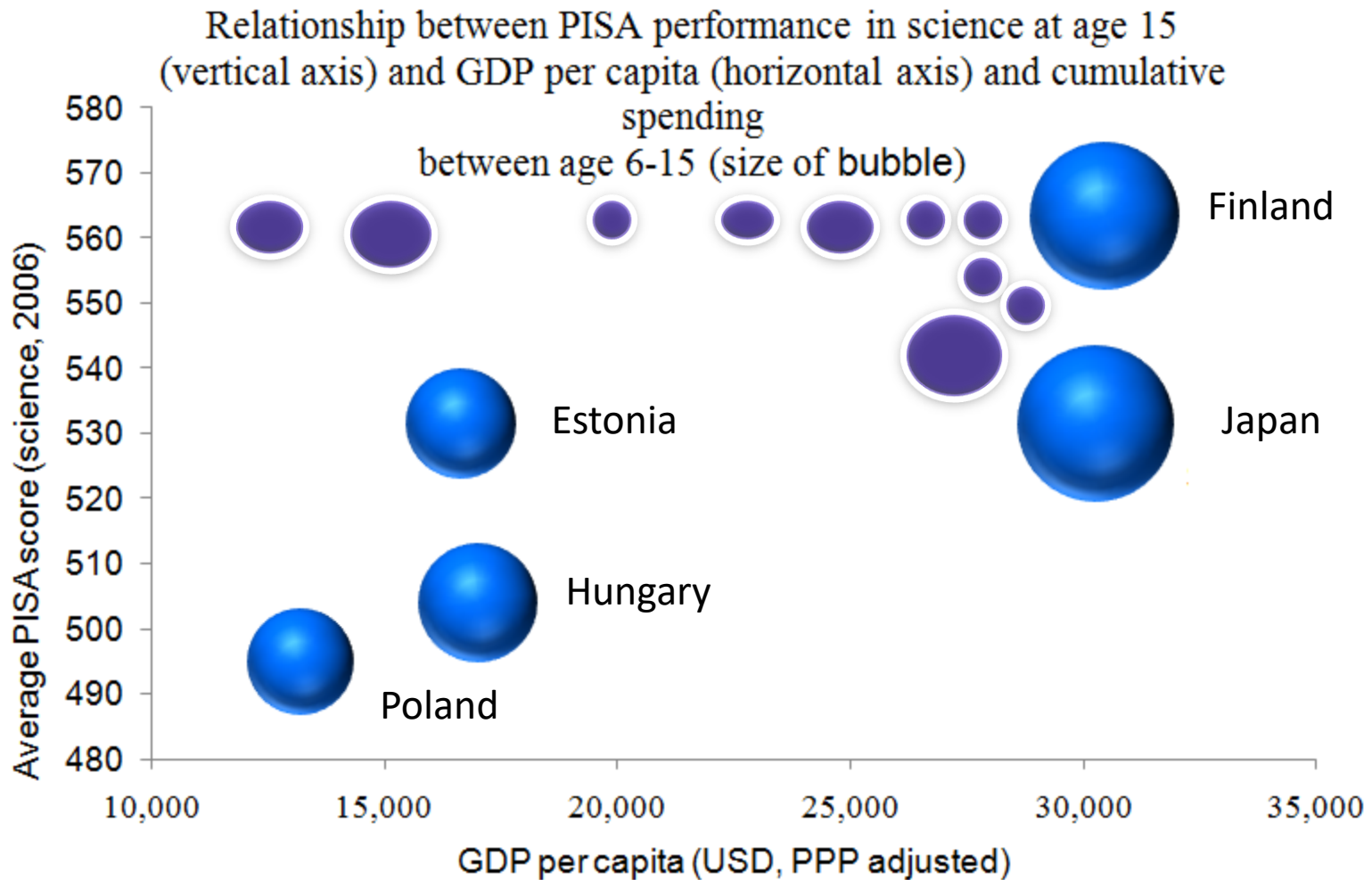
Benchmarked Budget Credibility, key functions



Budget deviation over time, wage bill vs. capital, Serbia

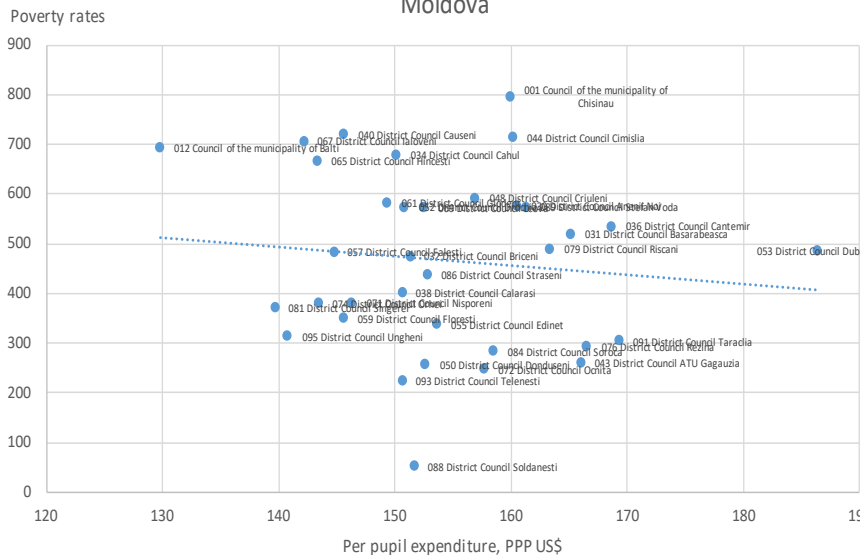


Regional disparities often constitute one of the greatest (and least examined) sources of inefficiency

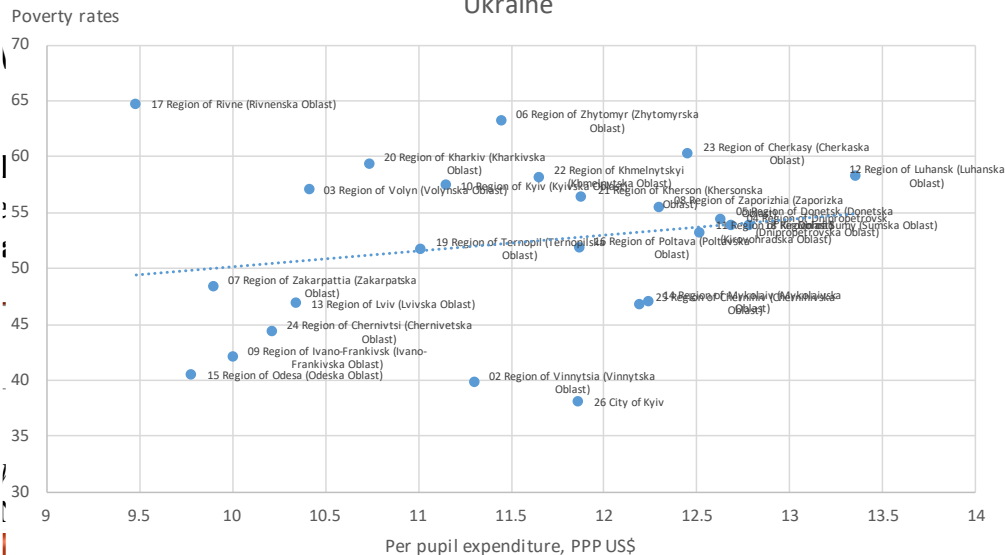


There is ground to improve the alignment of resource allocations with needs in Eastern Europe....

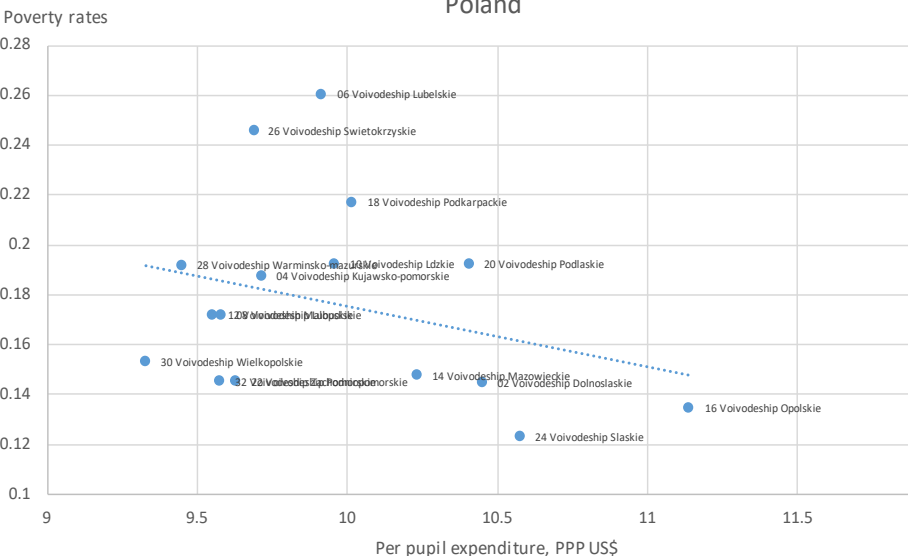
Moldova



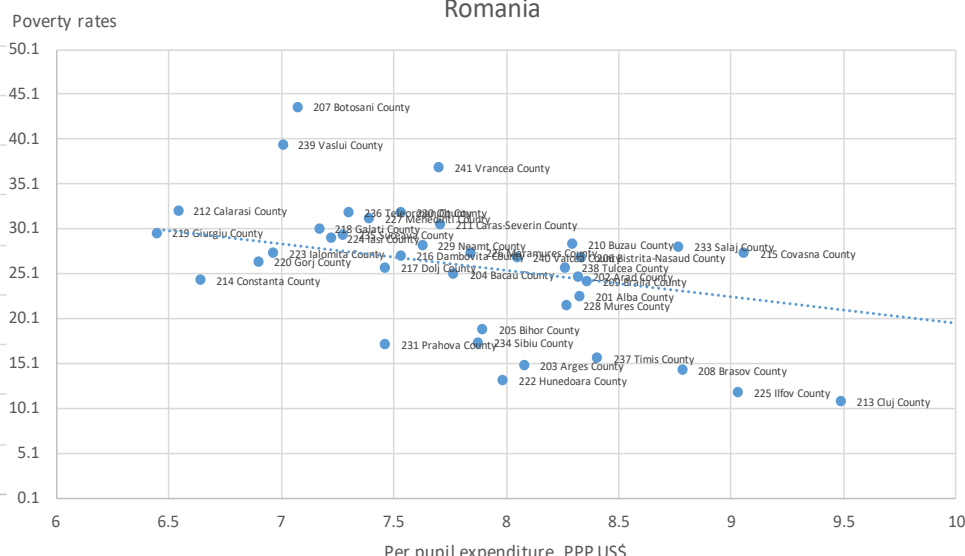
Ukraine



Poland



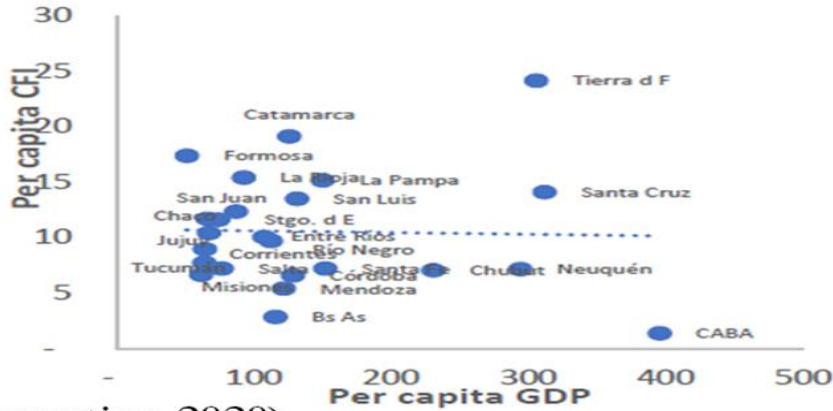
Romania



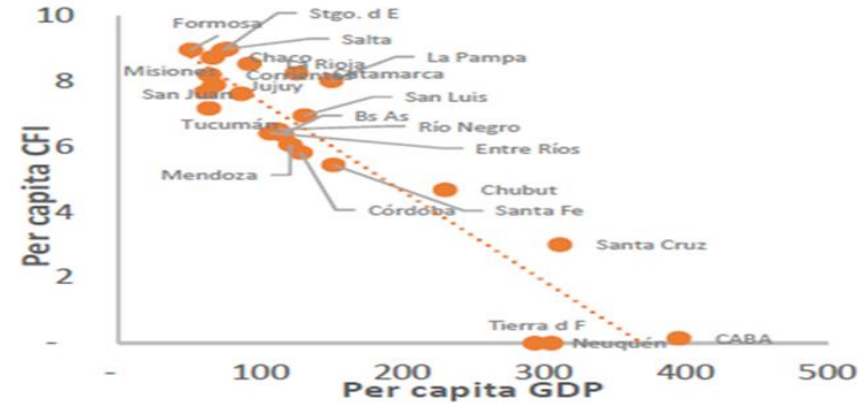
There is ground to improve the alignment of resource allocations with needs in Eastern Europe.....

...Or analyzing the design of equalization grants..

Application: Impact of current and proposed system based on fiscal gap methodology

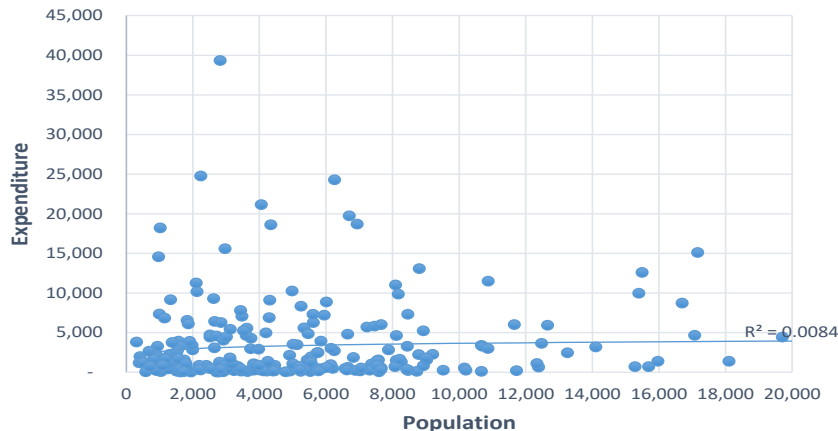


(Argentina 2020)

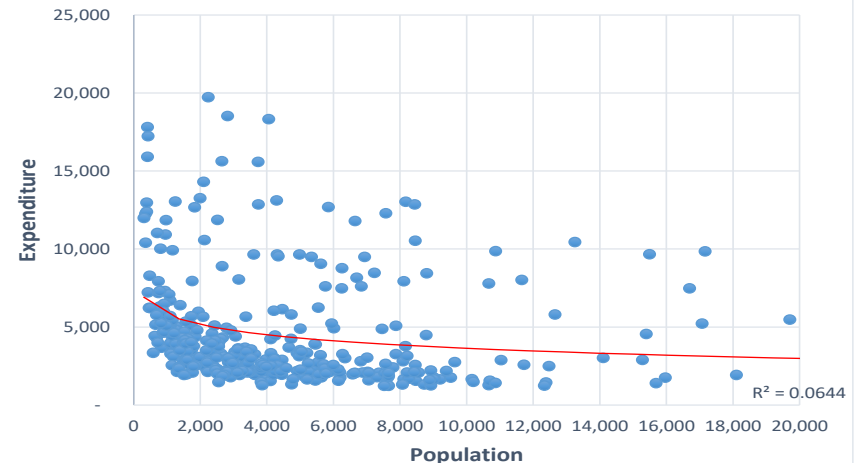


Or undertaking unit cost analysis in subnational expenditure to identify sources of inefficiency

House-building and public utilities services, 2015 per capita



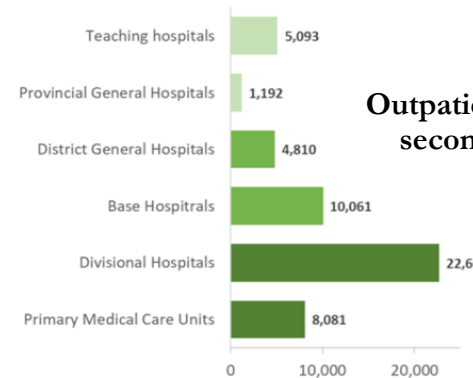
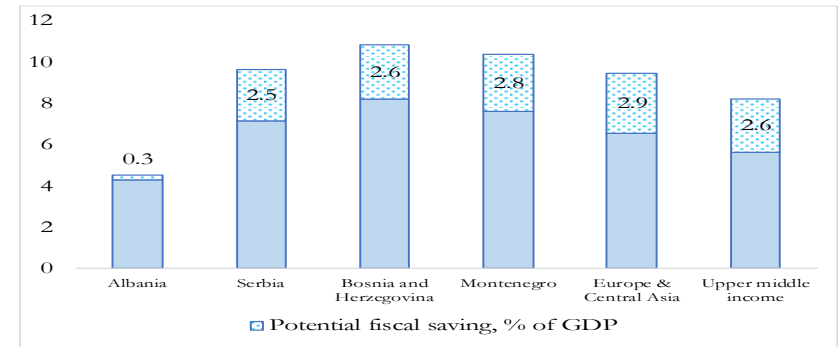
General public services, 2015 per capita



There are multiple perspectives that could be pursued when analyzing the wage bill

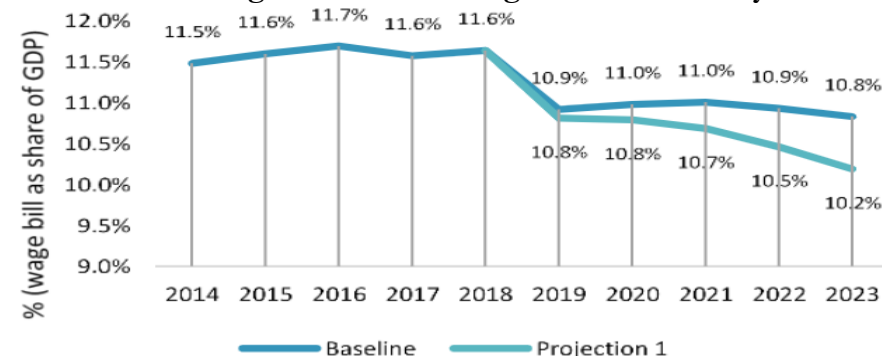
- Estimating structural levels & basic benchmarking
- Drilling down employment and wage compensation
- Assess flexibility to adapt to structural changes
- Assess public sector wage premium & wage decomposition
- Identifying critical human resource management bottlenecks
- Assessing sustainability and quantifying the impact of wage bill reforms

Public Wage bills and potential fiscal savings



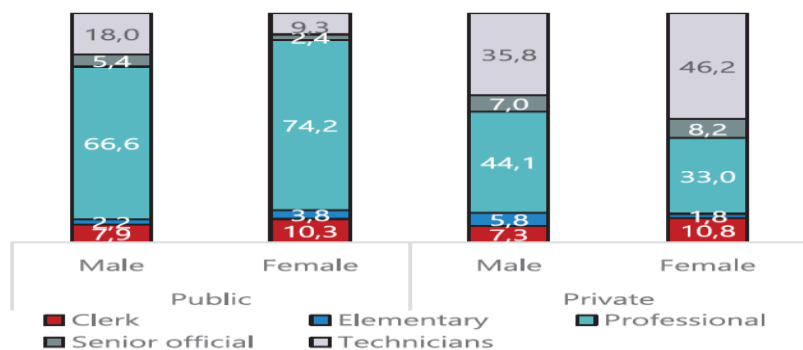
Outpatients visit continue to rely on secondary and tertiary services

Fiscal savings in Ecuador's wage bill due to salary cuts

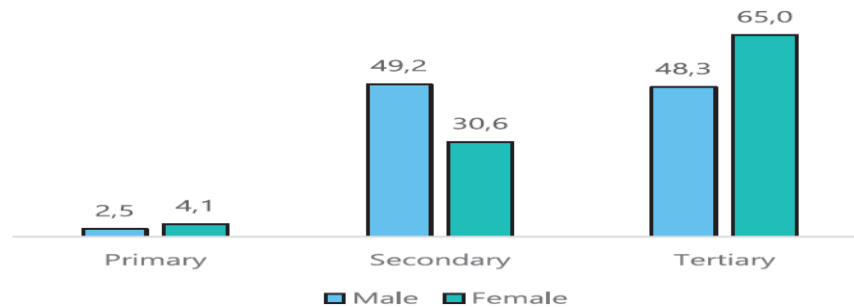


There are multiple perspectives that could be pursued when analyzing the wage bill

A: Workforce demographics by occupations

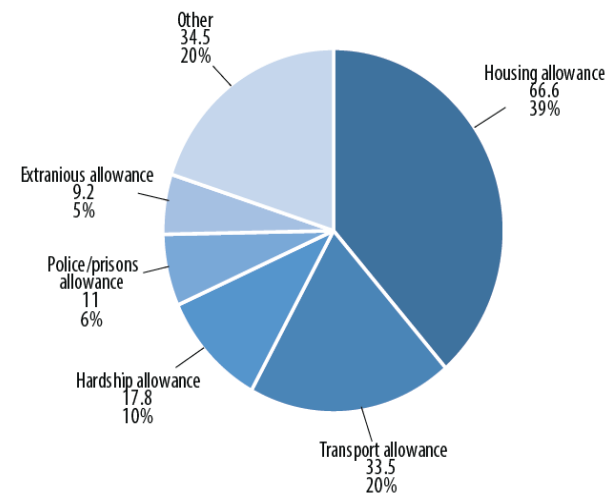
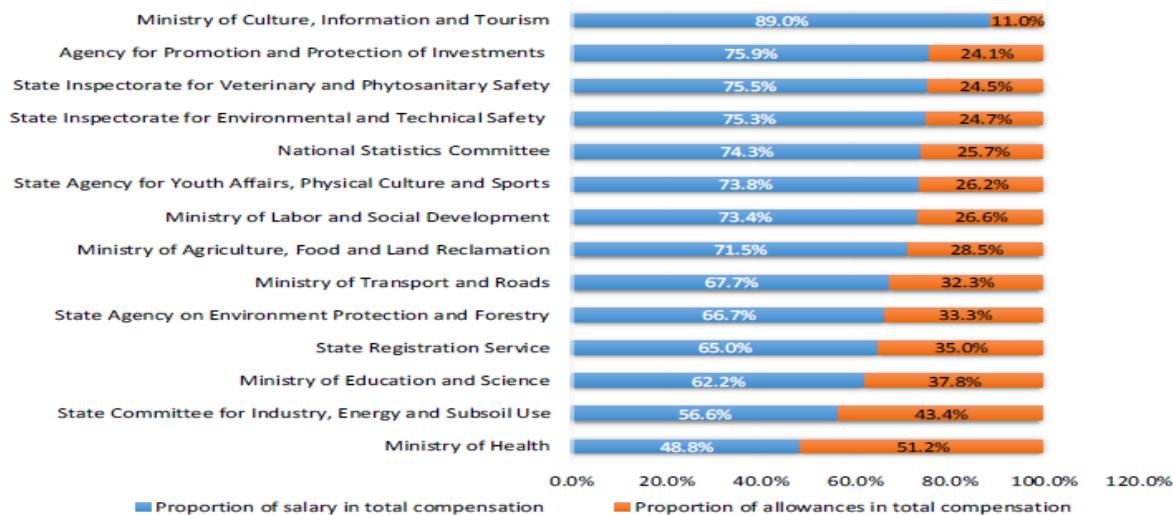


B: Educational qualifications of public sector workers



Examples of deeper dives on employment and wage decomposition

Figure 6.5. Proportion of Salary and Allowances in Total Compensation

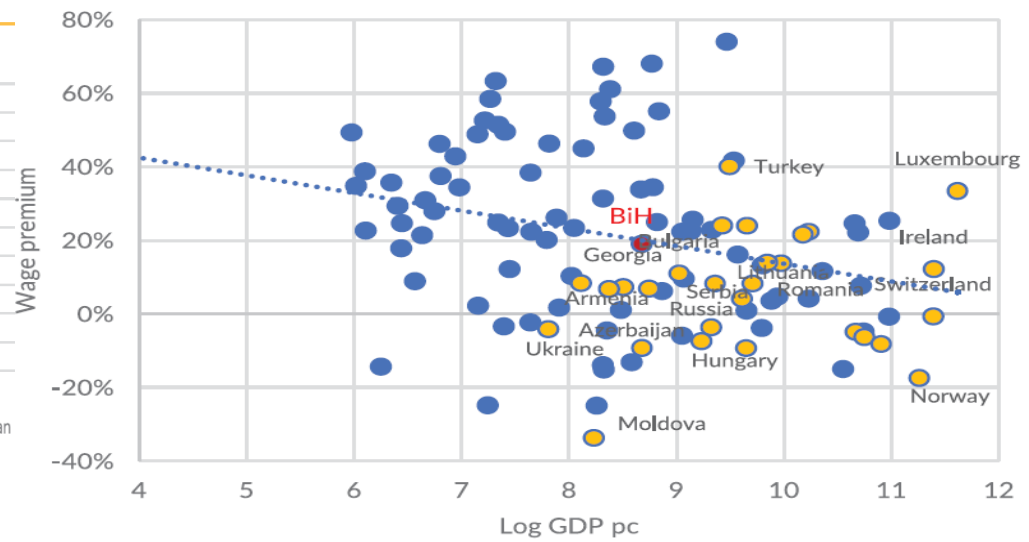
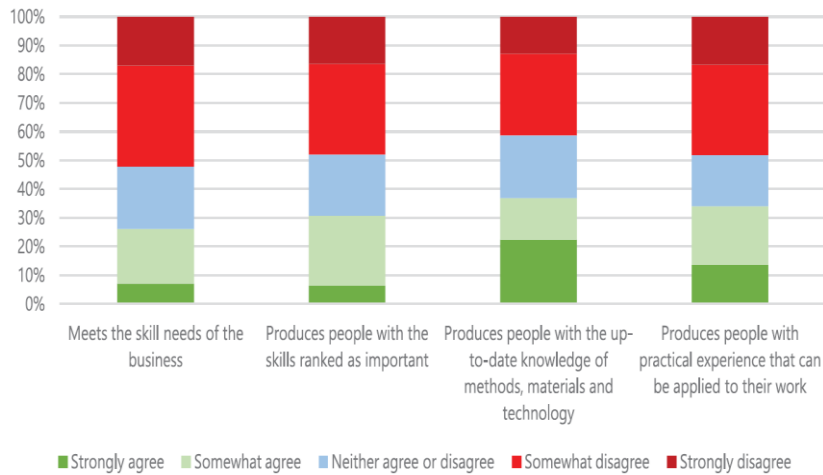


There are multiple perspectives that could be pursued when analyzing the wage bill

Assess public sector wage premium

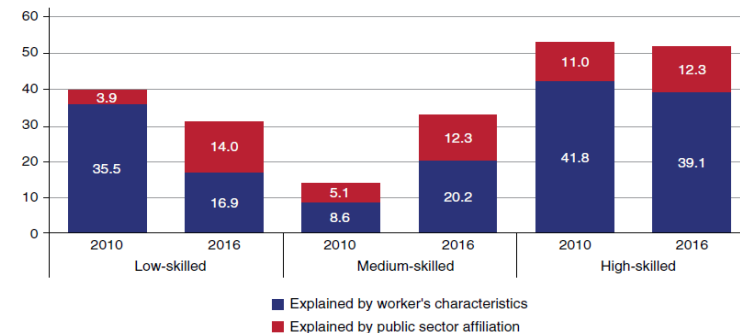
Bosnia-Herzegovina wage premium is substantial and potentially distortionary

Figure 13. Firms state that the education system is not producing the needed skills



Wage premium can be further unbundled by occupation, location, gender, skills, etc..

Costa Rica 2018 PFR



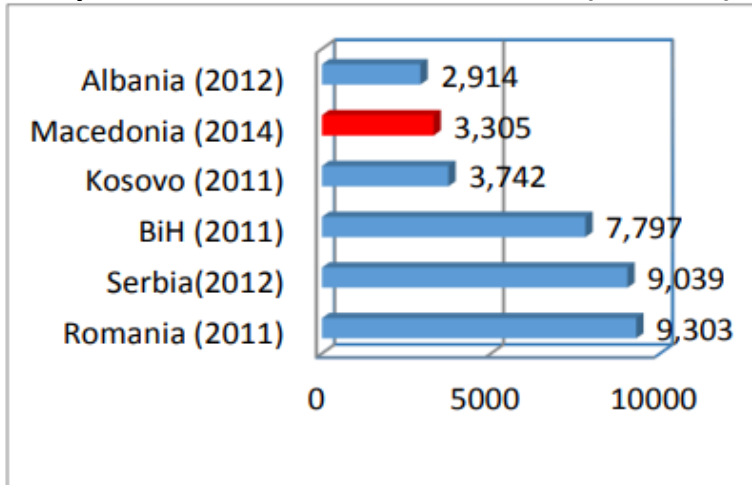
Assessing the Operational Efficiency of Capital Investments is a Key Priority to inform prioritization

Challenge: Most countries lack system inter-operability

Assessing operational efficiency requires the ability of linking project level disbursement data with administrative fields to estimate cost overruns and time delays and undertake broader portfolio reviews.

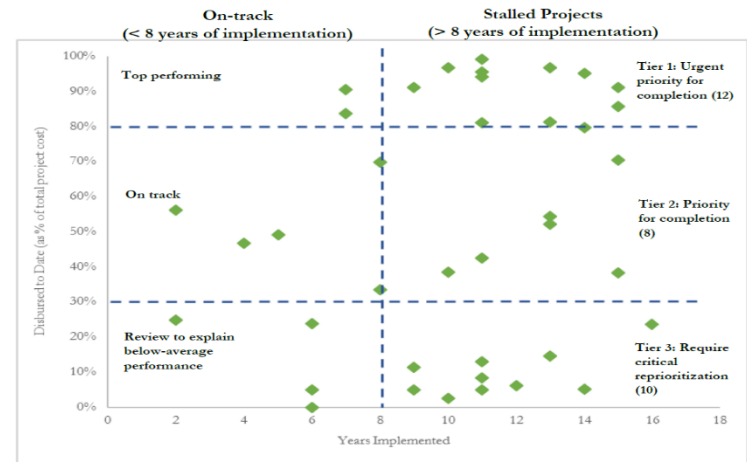
Spatial analysis can also help identify infrastructure gaps and maintenance needs - Tools can assist in the analysis including Geospatial Planning and Budgeting Platform and RONEIT

Expenditure on Road Maintenance (EUR/km)

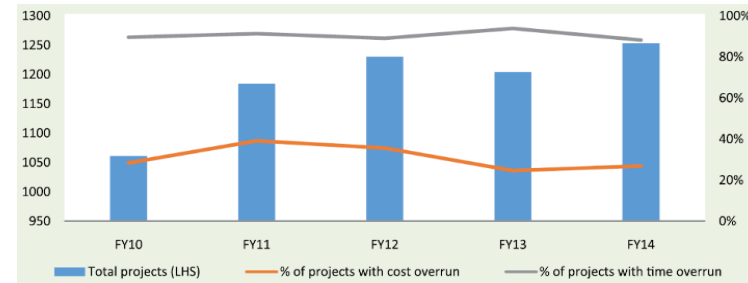


Equally important is the need to look at institutional arrangements underpinning management of public investments where tools like PEFA and PIMA can offer invaluable insights.

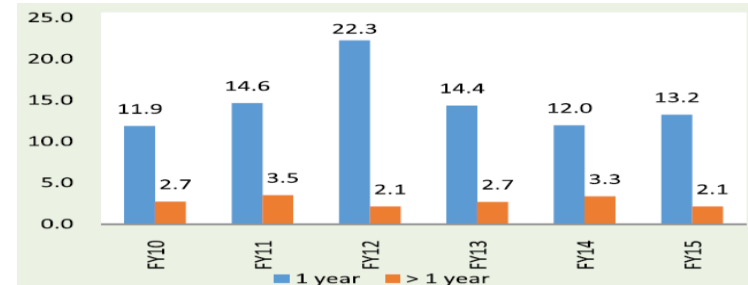
Myanmar tier prioritization, (2017 PER)



a. Operational efficiency



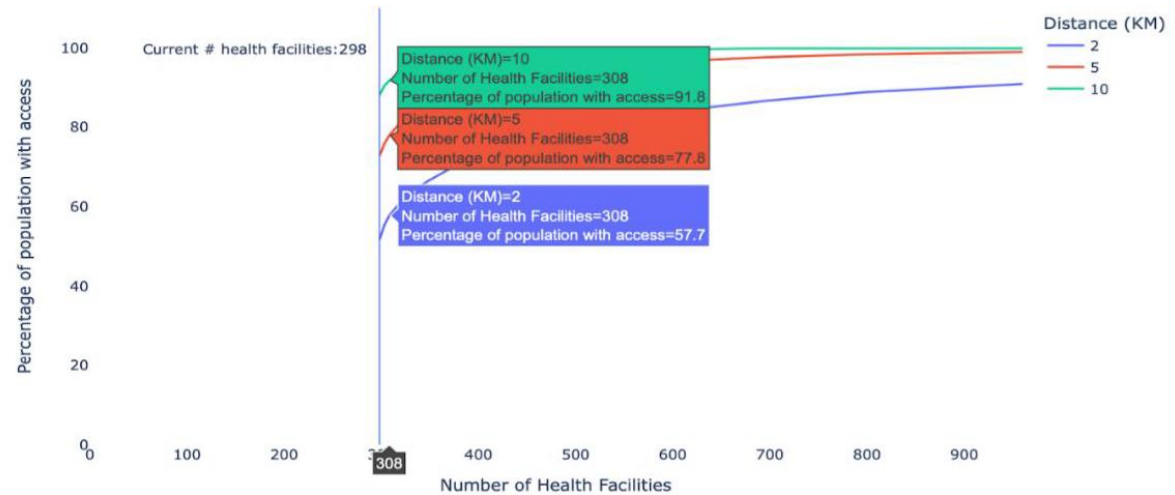
• % projects without expenditures



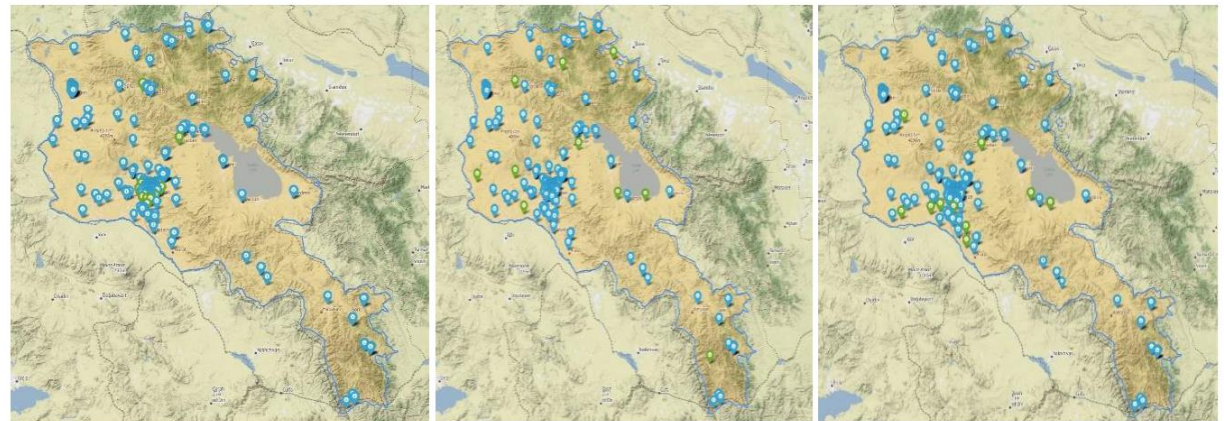
Geospatial analysis can help prioritize capital investments and maintenance

- Leveraging the **Geospatial Planning and Budgeting Platform (GPBP)** can help contextualize the extent of infrastructure gaps, and present avenues for policymakers to optimize the targeting of capital spending

- **Network criticality** aims to show which links of the network are particularly vital for the resilient operation of transport services.



Simulations based on model-prescribed location of new facilities



blue represents existing health facilities; green represents locations prescribed by the model

Procurement of goods and services is one of the largest constraints to greater efficiency in public spending

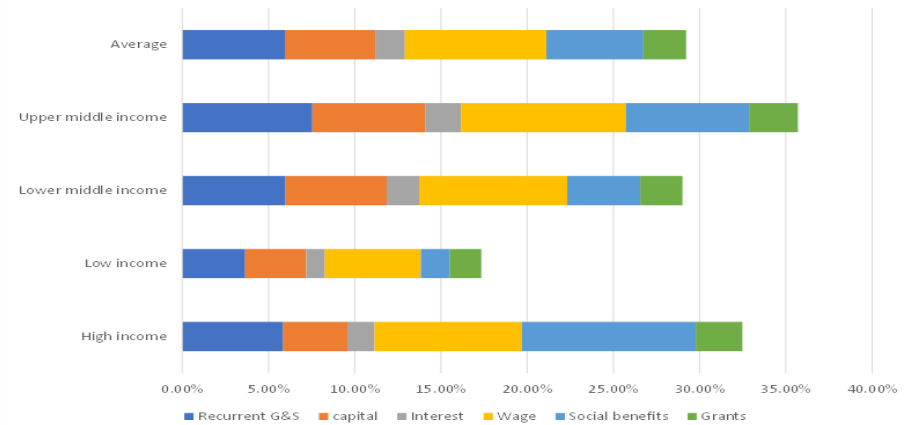
Procurement spending offers one of the largest sources of efficiency savings...

.....And yet it is also one of the least explored areas in spending reviews

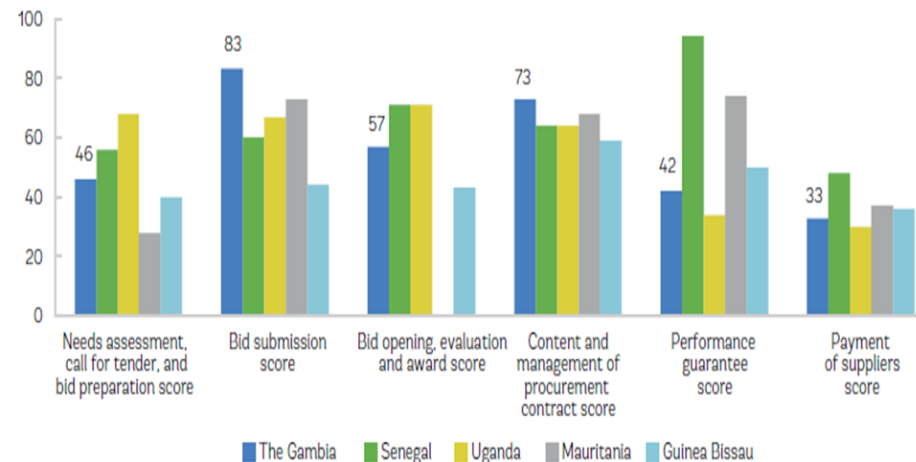
Innovative approaches such as **strategic sourcing methodology** allow for deeper investigation of efficiency in procurement

Equally important is the need to look at institutional arrangements underpinning procurement systems (MAPS, BPPT)

Procurement (Recurrent/capital) account for 40% of total spending

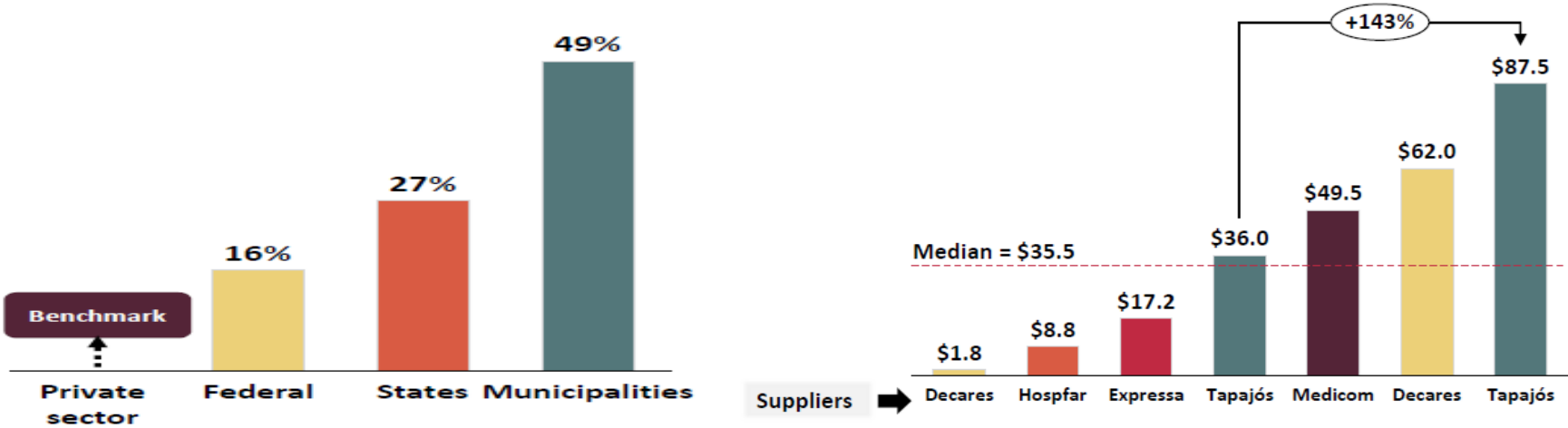


Benchmarking Public Procurement Toolkit (BPPT)

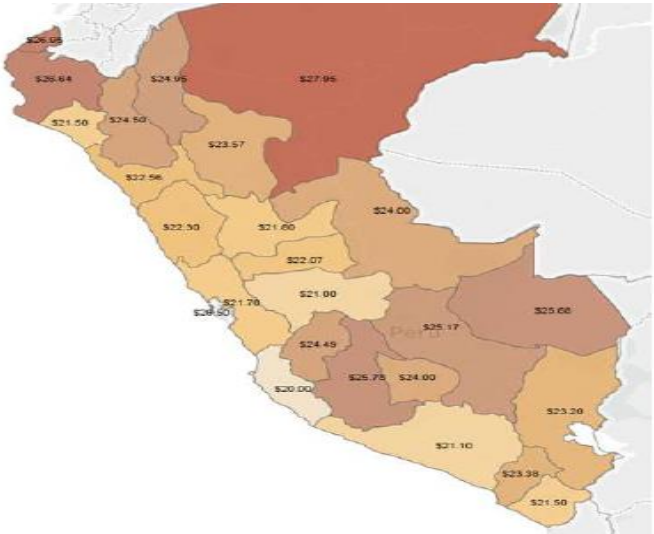
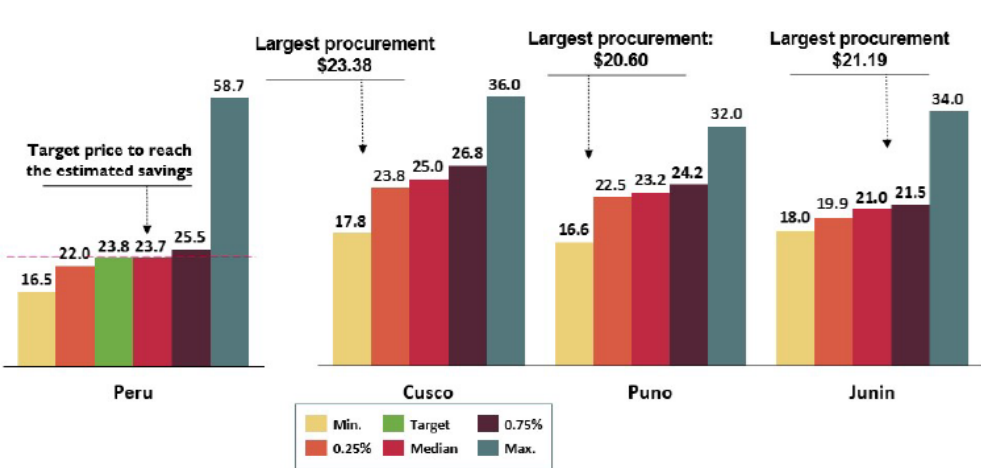


A robust analysis requires linking transaction level spending with process data to gain valuable insights on cause of efficiency losses

Governments typically pay more.. with stark differences for same product/supplier!



Unit cost dispersion across purchases of cement, Peru

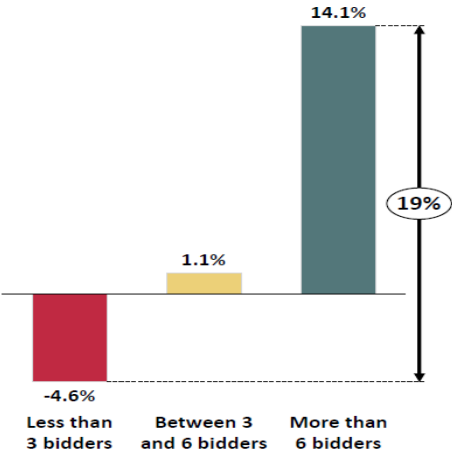


Source: World Bank based on SEACE data in 2015.

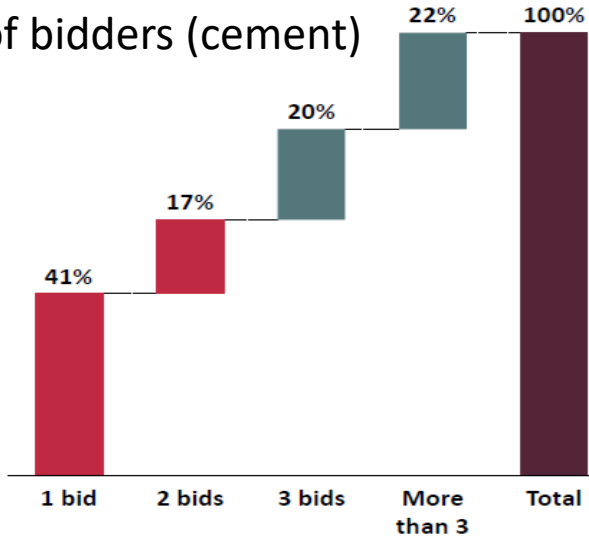
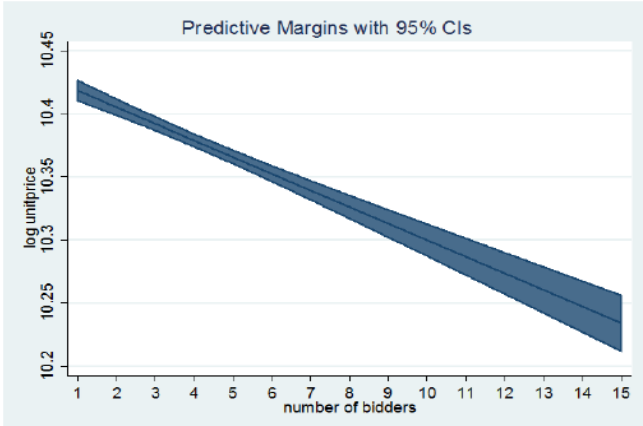
A robust analysis requires linking transaction level spending with process data to gain valuable insights on cause of efficiency losses

More competitive and transparent bidding processes yield greater savings

Savings and number of bidders, Brazil

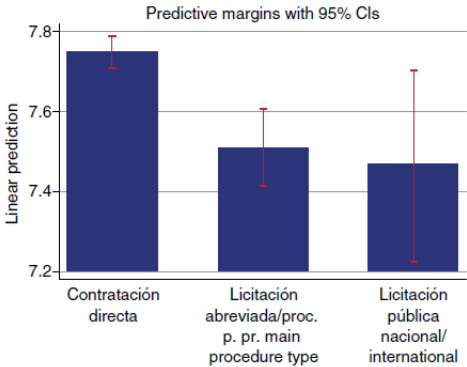


Around 60% of total volume in Peru saw less than 3 bidders despite gains with higher # of bidders (cement)

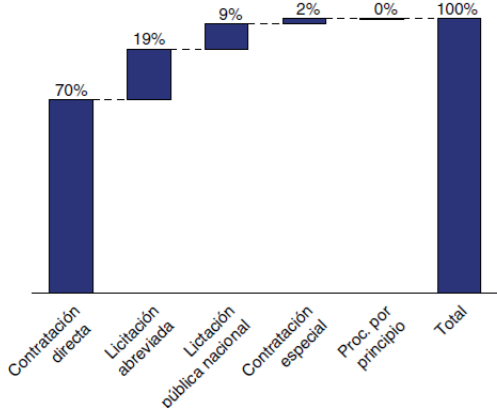


Less direct contracting would lower average prices paid (Costa Rica)

Direct contracting led to higher prices

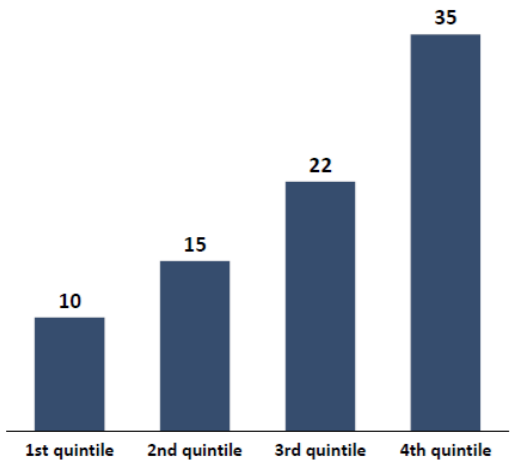
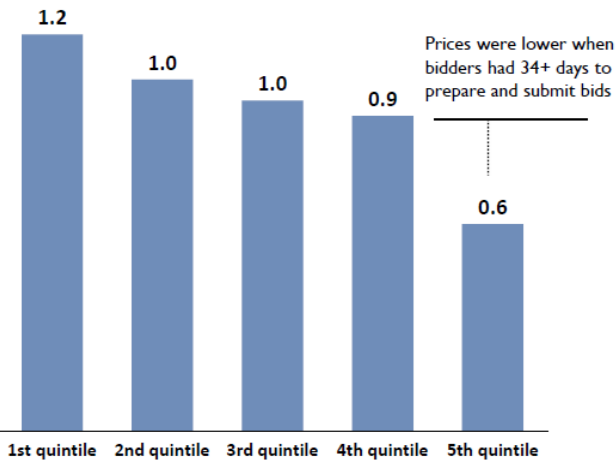


Distribution of awarded contracts according to the procedure type used

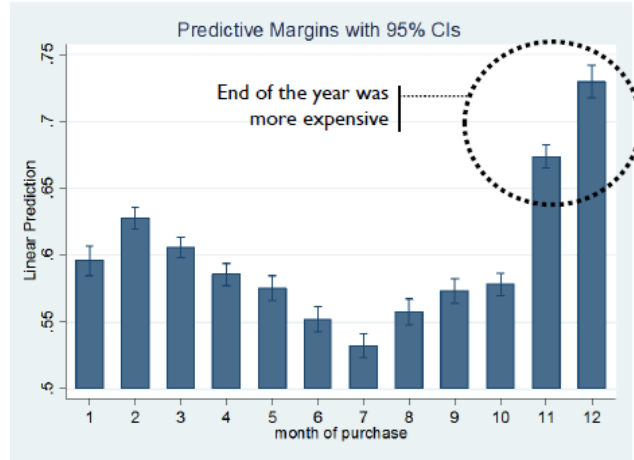


A robust analysis requires linking transaction level spending with process data to gain valuable insights on cause of efficiency losses

More bidding time yields lower prices but different reality....

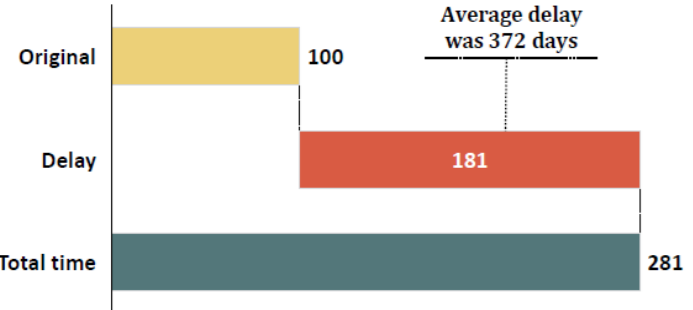


Higher unit prices over the past two month....



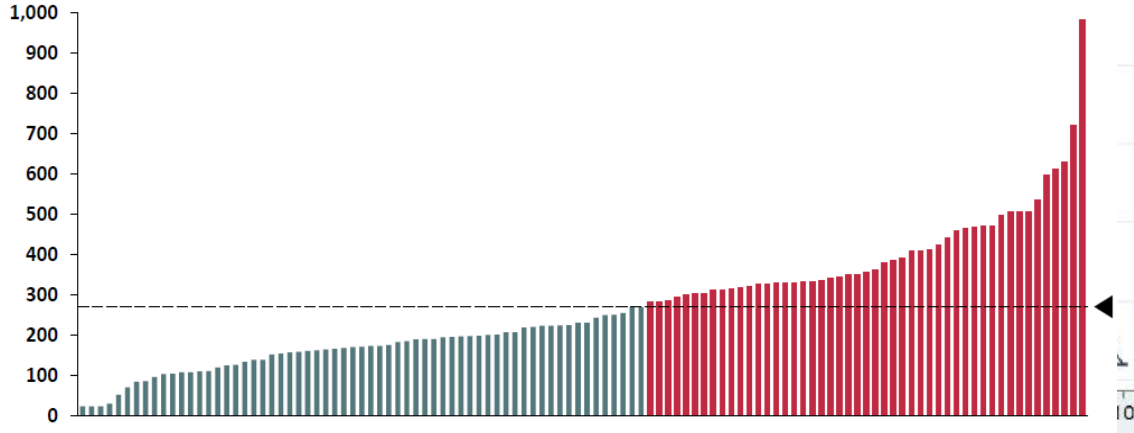
Widespread incidence of delays

Size of schedule overrun
In % of original schedule, 2010



Medium turnaround time in contract award differ substantially

In number of days, by agency



Key Takeaways



Embed spending reviews in budget process

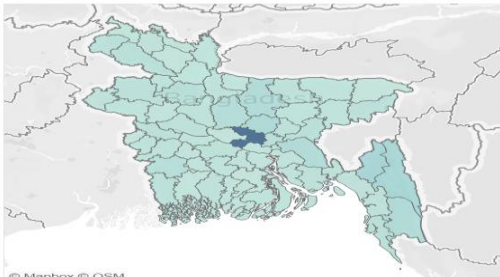


Take stock of all available information



Invest in data infrastructure

Expenditures by ministry



Taka spent
101,009,160 32,353,899,070

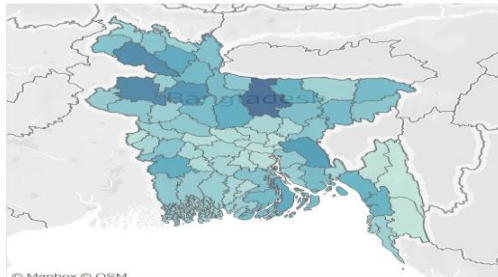
Fiscal year

2016-17

Expenditure category

- 101-President's Office
- 101-President's Office
- 102-National Parliament
- 103-Prime Minister's Office

SDG+ Indicators



Indicator survey estimate
45,372 1,090,807

Survey year

2017

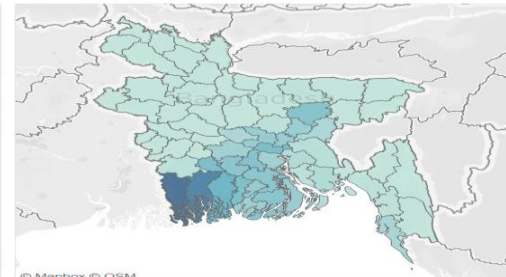
SDG

2

Indicator

Aman Rice (Broadcast) Area (Hectares)

Climate Indicators



Mean of climate indicator
0.000 2.510

Metric

Bangladesh_inuncoast_rcp8p5_wtsub_2080_rp0005_0



Build an arsenal of tools / enhance capacity



The Bank stands ready to provide analytical support where needed