Benchmarking SAI Funding Levels

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1. Background and Context

Supreme Audit Institutions play an important role in promoting efficiency, accountability, effectiveness and transparency of public administration, by raising awareness on how well the governments use their financial resources. An independent, effective and credible SAI is essential in a democratic system where accountability, transparency and integrity are indispensable parts.[1] To be able to fulfil their functions and ensure their potential value to citizens, SAIs need to be seen as trustworthy, credible, competent and independent. This requires adequate resources – financial, human, and logistical – sufficient to attract and retain suitably qualified and experienced staff enabling the SAI to discharge its mandate to the desirable level of quality. Insufficient resources is widely regarded as one of the principal challenges SAIs in developing countries face in discharging their mandates, improving their capacity and performance, and delivering benefits for the lives of citizens.[2]

Benchmarking of SAI funding levels has been on the work plan for the INTOSAI-Donor Cooperation since its inauguration, albeit as a low priority task. The launch of the 2013 IDI Global Survey in late 2013 provided an opportunity to gather data on SAI funding levels and key variables that may be influence funding needs and levels. This activity was therefore given higher priority in the 2014 work plan. This report presents the work to date, and suggestions for taking this forward.

1.1 Rationale for Benchmarking and Estimating SAI Funding Needs

SAIs need to prepare and submit budget requests to the organization that approves the funding of the SAI. Benchmarking SAI funding levels will give SAIs a stronger foundation on which to base their budget requests, and assert their resourcing needs. Benchmarking could also give those approving SAI budgets (Legislatures, Finance Ministries and Head of States/Government[3]) a better basis for their decisions on the requested SAI budgets.

The process of lobbying for a budget sufficient to enable an SAI to deliver on its mandate can be tough for SAIs, due to limited funding in countries in general, and on some occasions a lack of political commitment to strengthen the SAI's capacity. In this context, national and international organisations with an interest in stronger accountability systems can be important advocates towards the government for increased prioritization of funding for SAIs in the national budget. The benchmarking would give these stakeholders a stronger basis for this kind of advocacy.

Regarding other stakeholders, the Paris Declaration, Accra Agenda for Action and the Busan Partnership for Effective Development Cooperation commit countries to strengthen their Public Financial Management (PFM) systems, including public external audit. They further commit development partners to increase the amount of external assistance that flows through a country's PFM system to achieve more effective and sustainable development. To do so, development partners need to assess the

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[1] ISSAI 12: The Value and Benefits of Supreme Audit Institutions – making a difference to the lives of citizens

[2] INTOSAI-Donor Cooperation Program Document, Phase 2, 2013-15

[3] Based on the Lima Declaration and Mexico Declaration on SAI Independence, and reinforced by the UN General Assembly Resolution A66/209 on SAI Independence, SAI budgets should be submitted directly to, and be approved by, the public body deciding on the national budget (i.e. the legislature or one of its commissions). However, the 2013 IDI Global Survey shows this is not the practice in many countries.

strengths of these systems and commitments to further improving these systems. An important part of the assessment of a country's PFM system is assessing the extent to which the SAI, which exercises oversight of the whole system, is adequately resourced to fulfill its mandate. The resourcing of an SAI is also a signal of commitment, at a political level, to accountability, good governance, and fighting fraud and corruption. A benchmarking of SAI funding levels could give development partners important information to inform such assessments, as well as provide a basis for further dialogue and advocacy on the need for sufficient funding for SAIs.

1.2 Approach to Benchmarking and Estimating SAI Funding Needs

As noted above, SAIs and other stakeholders would like to know what level of resources an SAI needs to discharge its mandate to the desired quality. A detailed estimation of needs would require a bottom-up budgeting approach based on required inputs, unit costs and assumed efficiency levels. The inputs would need to be matched against the SAI's mandate and stakeholder perceptions of the levels of additional work the SAI should perform against other ad hoc requests. Estimating a standard efficiency level for an SAI is also challenging; in practice it is difficult to determine to what extent an SAI is under resourced compared to the extent to which the SAI does not use its resources in the most efficient manner.

An alternative approach to estimating SAI funding needs is to analyze actual SAI funding levels across a large number of countries. By attempting to control[4] for external factors which vary between countries, a model can be produced which predicts actual SAI funding levels based on a number of independent variables. Such a model would identify which variables have a statistically significant effect on SAI funding levels, and the average relationship between these variables and funding levels. Applying this model would enable a user to predict the average funding level of a SAI with certain characteristics. Further, grouping countries for which these variables were similar would allow the establishment of meaningful benchmarking clubs, e.g. countries for which SAI funding levels could meaningfully be compared. This would provide SAIs and other stakeholders a basis on which to advocate for additional funding, or more effective use of funding.

1.3 Objective for the Research on Benchmarking and Estimating SAI Funding Needs

The objective of this work is to develop a model that can be used to estimate SAI funding levels and enable benchmarking of SAI funding levels, so SAIs and other stakeholders can advocate for sufficient funding for SAIs to discharge their mandates to the desired quality.

2. Methodology

2.1 Data Collection

Data on SAI annual budgets was collected through the 2013 IDI Global Survey. Of 177 SAIs responding to the survey, 120 provided credible information on their total annual budget. Further survey questions were included to enable modelling of the drivers of SAI funding levels. These included the number of

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[4] I.e. through the development of an econometric model

entities and total expenditure of entities within the SAI's mandate, the levels of government and other entities covered by the SAI's mandate, and the types of audit covered by the SAI's mandate. Analysis shows the quality of some of this data to be low, requiring further validation. Other data needs to be mapped against country characteristics (i.e. what levels of government exist in the country, which was not included in the survey). Therefore further work will be required on this data before including it in analysis to develop a model of SAI funding.

2.2 The Dependent Variable

SAIs and other stakeholders are interested in the funding needs of an SAI. However, the financial needs of SAI India clearly can not be compared to the needs of SAI Cook Islands. To adjust for differing country sizes and produce a dependent variable which is comparable across countries, we propose measuring SAI budget as a percentage of Gross National Income (GNI)[5], hence forth "SAI Budget/GNI"[6].

2.3 Independent variables

To create a model to explain SAI Budget/GNI, independent variables which logically would appear to drive SAI funding needs must be identified, prior to testing their significant in the model. (Including variables which are statistically correlated with SAI funding but which don't have a logical reason for that correlation would not lead to a logical model of SAI funding).

From a theoretical perspective, the following independent variables may be linked to SAI funding needs.

- **Levels of government audited by the SAI**. GNI measures the size of the entire economy. However, some SAIs only have responsibility for the audit of central government, while state/regional and local governments are audited by other auditors. A dummy variable to control for these circumstances should be included.
- **Audit of public corporations**. Some SAIs have a mandate to audit public corporations, increasing the level of resources they require, whilst others do not. Again a variable to control for this should be included.
- **Audit of NGOs, donor funded projects, other audit mandates**. Again, appropriate dummy variables may be required to control for these differing mandates.
- **Types of audit conducted**. Whilst most SAIs now conduct financial, compliance and performance audit, a small number have limited mandates, thereby requiring less resources to discharge their *current* mandate. This should be controlled for.
- **Other mandated activities**. Some SAIs have additional mandated activities, such as pre-audit or preparation of financial statements. As the budget figures relate to the whole activity of the SAI, these variations need to be controlled for.
- **Country security and infrastructure**. Poor security and lack of basic functioning infrastructure in a country (e.g. roads, power, telecoms) increase operational costs. Cross-country indexes measuring these exist and could be included in the model.

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[5] GNI Atlas Method has been used for cross-country comparisons, rather than a Purchasing Power Parity (PPP) method.
[6] A possible alternative would be to use central government public expenditure, though this data is available for a smaller number of countries.

- **Strength of the PFM system**. A stronger PFM system, with proper record keeping, audit trails, strong internal audit, standardized accounting practices and accurate and timely financial reporting is likely to reduce the cost of audit.
- **Education levels and availability of professionally qualified staff**. Both the general education levels in a country, as well as the prevalence of professionally qualified staff within the country, impact on the costs faced by the SAI in training its staff in the competencies required to discharge the SAI's mandate to the desired quality. This could be included in the model.
- **Wages and cost of living**. An SAI's main costs are its staff, and staff costs are likely to be correlated to the costs of living in a country, and the average salaries in the country. This could be included in the model using a proxy such as GNI/capita (using purchasing power parity method).
- **Economies of scale from SAI size**. Very small countries are likely to find that there are minimum sizes for an SAI to be able to function effectively, and therefore SAI Budget/GNI may be higher for small countries. Economies of scale may also kick in for SAIs above a certain size. Therefore a measure of country size may also be included in the model.
- **De-concentration of government**. Public sector audit is likely to be less costly when most audited entities are in the capital city near the SAI, and increasingly more expensive as more audited entities are de-concentrated across the country. This could be included in the model.
- **Other factors**. Further thought is likely to identify other factors which influence the cost of SAI's delivering their mandates, and could be included in the model.

The process of constructing the model would involve identifying existing data to proxy for the above variables, and creating cross-country data for other variables based on global survey results. Econometric modelling would be used to test different models and find which of the variables have both a statistical and economic significance in a funding model. It is likely that only a small number of the above variables would be significant in the final model.

3. Initial Benchmarking of SAI Funding Levels

Based on global survey data, SAI Budget/GNI has been compiled for all 120 survey respondents, ordered according to size of GNI (smallest to largest). This is shown in the figure 1 below. The trend line[7] clearly shows that average SAI Budget/GNI declines as countries increase in size. For illustration purposes, we have divided the group of 120 countries into three, based on the following categories.

- Small countries (GNI below $10 billion) – 33 countries
- Medium countries (GNI between $10-100 billion) – 42 countries
- Large countries (GNI above $100 billion) – 45 countries

SAI Budget/GNI for each group of countries is shown in the following pages. This smaller grouping also allows identification of the countries in graphical format.

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[7] Exponential trend line was used.

Figure 1. SAI Budget/GNI for 120 countries, smallest to largest GNI.
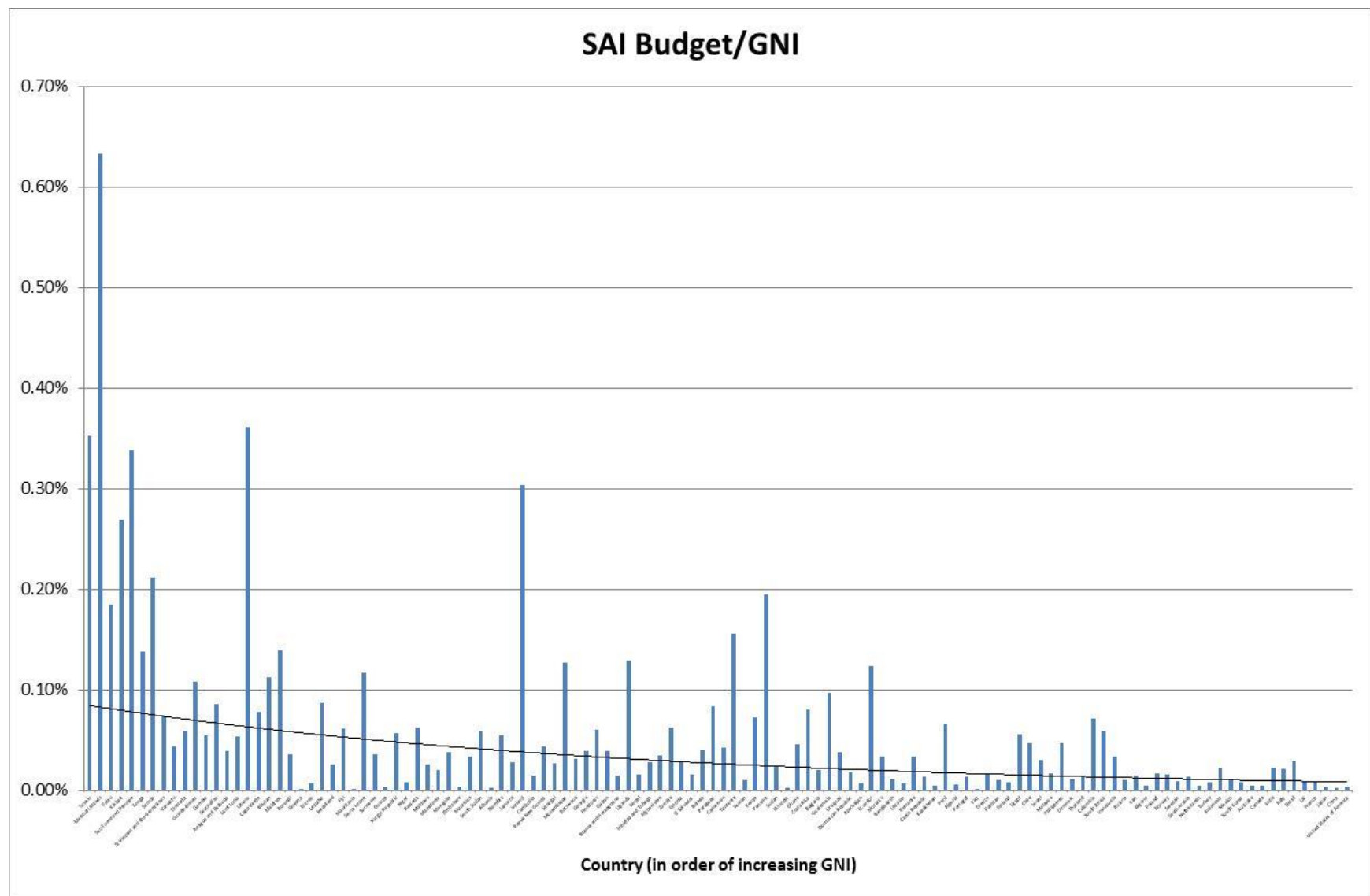
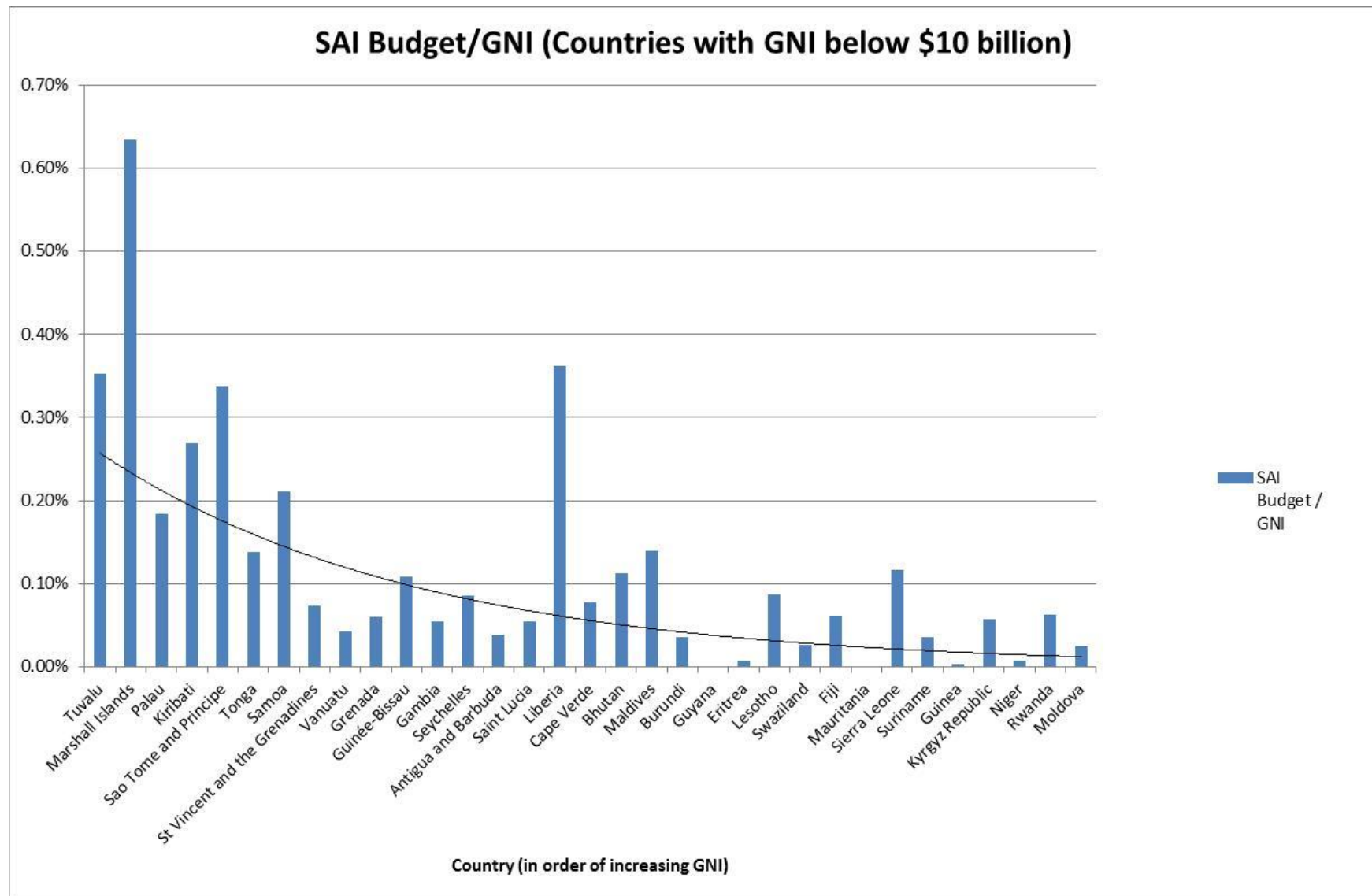**Figure 2. SAI Budget/GNI for small countries, smallest to largest GNI.**

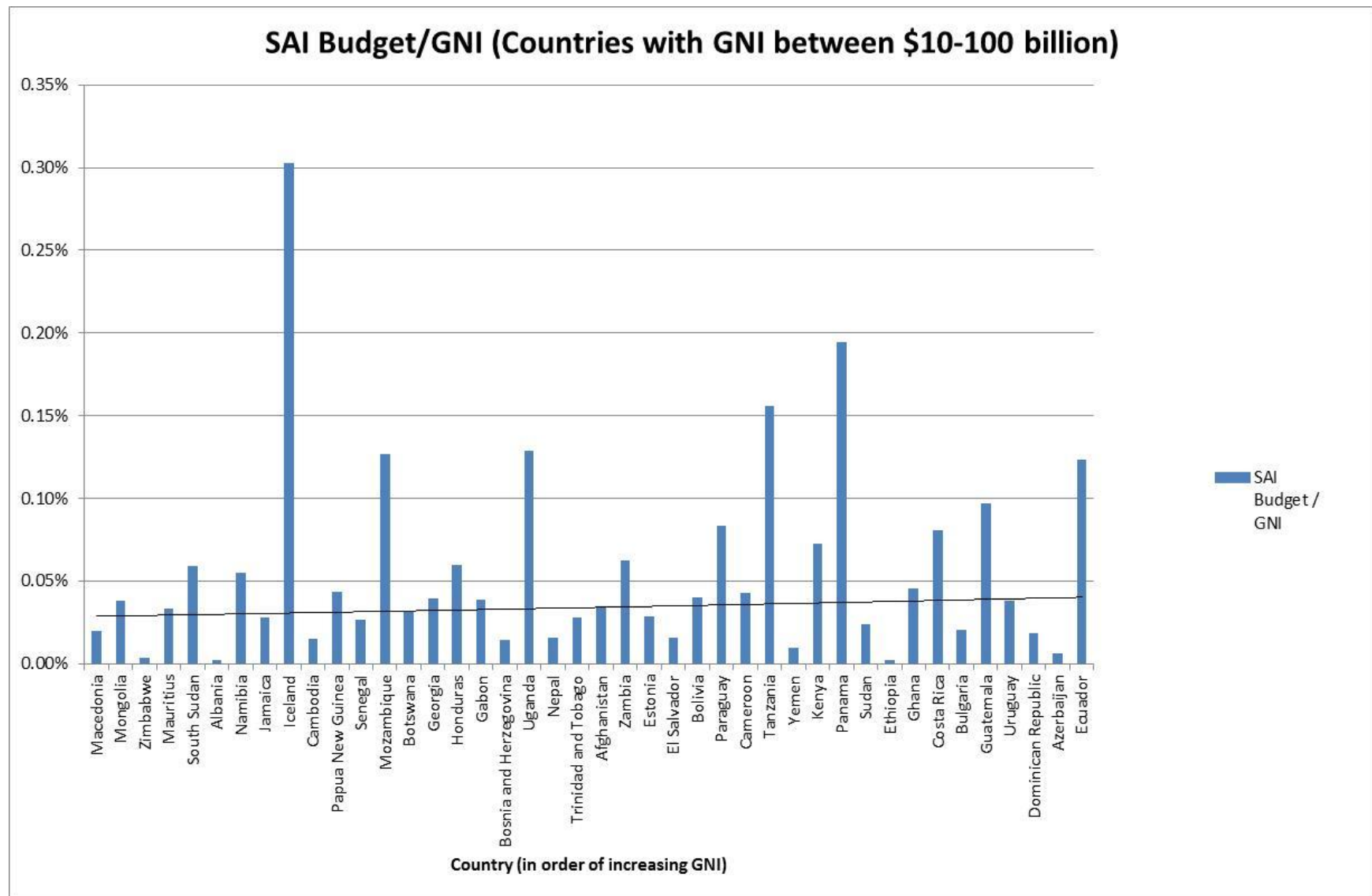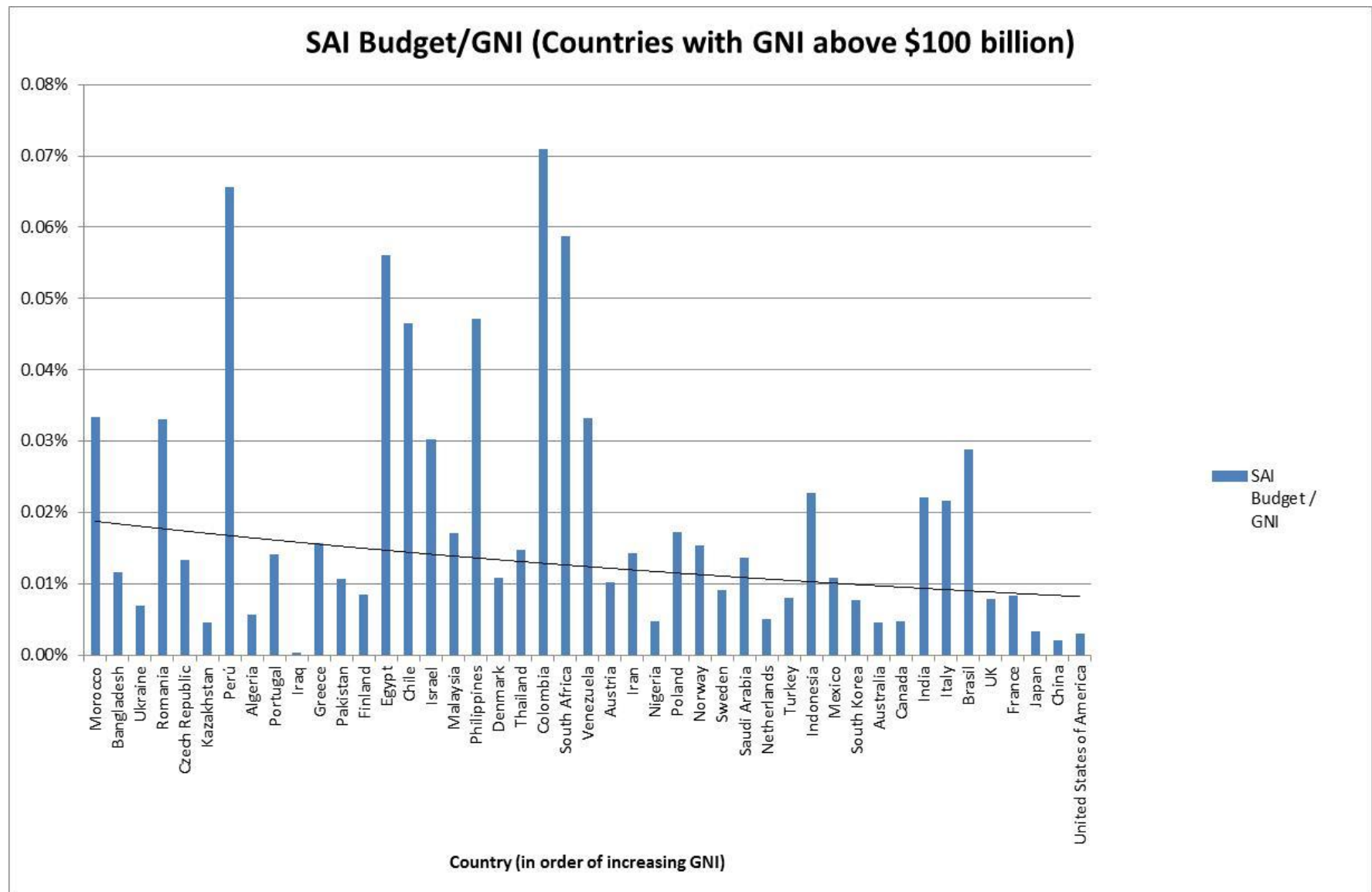**Figure 3. SAI Budget/GNI for medium countries, smallest to largest GNI.**

Figure 4. SAI Budget/GNI for large countries, smallest to largest GNI.

The trend of declining SAI Budget/GNI with increasing country size, noticed for the whole population, is also evident for the small and large country groups, but not for the medium country group.

Clearly the above analysis is very crude, and there are large variations from the trend line in many countries, which a more sophisticated model would seek to reduce.

The countries can also be grouped according to standard OECD-DAC income classifications as well as size, and the average SAI Budget/GNI calculated for each group. This is shown below.

Table 1. Average SAI Budget/GNI, based on country size and income classification

Country Size	Least Developed and Other Low Income	Lower Middle Income	Upper Middle Income	Developed Countries	All Countries
Small countries	0.124% (n=18)	0.137% (n=7)	0.084% (n=8)	N/A (n=0)	0.117% (n=33)
Medium countries	0.053% (n=14)	0.050% (n=10)	0.049% (n=14)	0.095% (n=4)	0.055% (n=42)
Large countries	0.012% (n=1)	0.023% (n=9)	0.027% (n=14)	0.012% (n=21)	0.019% (n=45)
All Countries	0.090% (n=33)	0.064% (n=26)	0.048% (n=36)	0.026% (n=25)	0.059% (n=120)

Figure 5. Average SAI Budget/GNI, based on country size and income classification
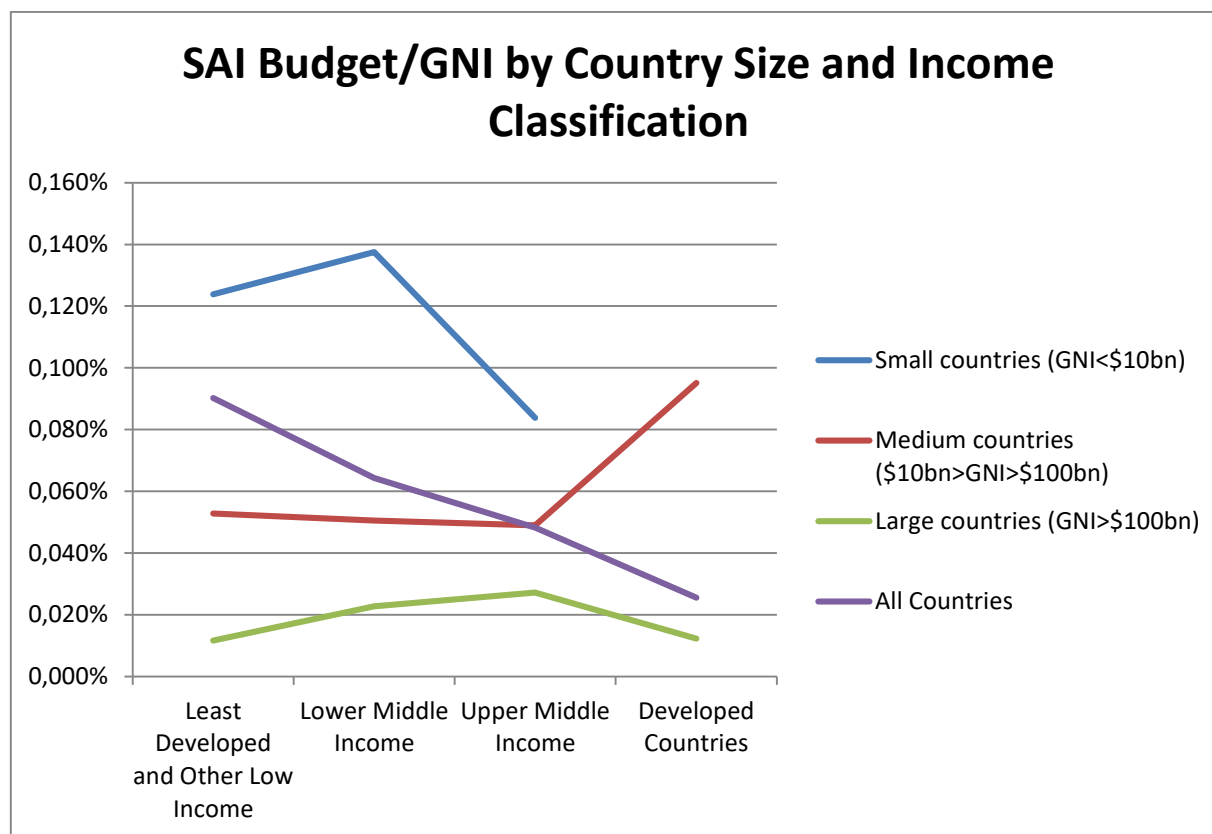
Figure 5 clearly shows that SAI Budget/GNI is higher for smaller countries and lower for larger countries. Overall, there is also trend that SAI Budget/GNI decreases as a country develops. This trend is also observed when controlling for the size of countries, except in two cases. First, for large but least developed countries, where the average figure is based on just one observation. Second, for medium size developed countries. Here, the average is based on four countries which includes one significant outlier, Iceland. Removing Iceland, the average would be 0.03% and the trend would be as expected. Of course, in developing the model outliers would not be removed in this way, but other variables would be included in the model to try to explain why such countries are significant outliers.

4. Way Forward

This paper has identified a rationale for modelling and benchmarking SAI funding levels, and set out a methodology for taking this forward. It has also showed the existing data and presented some graphical analysis suggesting that SAI Budget/GNI decreases as countries get larger and more developed.

More work could be done with the existing data, to test various hypotheses and generate statistically significant findings about the relationship between SAI Budget/GNI and various independent variables, through applying an econometric model. More work could also be done to collate cross-country data from the global survey and other sources, to produce a data set on which a model to estimate average SAI funding could be developed. Based on the variables which appear statistically and economically significant in such a model, a proposal for benchmarking clubs could be developed. This would allow identification of groups of SAIs with similar characteristics (in relation to variables which determine SAI Budget/GNI), so that meaningful comparisons could be made between countries, as part of efforts to ensure SAI's are adequately resourced to deliver their mandates to the desired quality.

Point for Discussion and Decision

Does the INTOSAI-Donor Steering Committee wish to take forward further work on benchmarking SAI funding levels?

The INTOSAI-Donor Cooperation was established in October 2009, when INTOSAI and several donors signed a milestone Memorandum of Understanding, to augment and strengthen support to the SAI community. The MoU recognizes the potential value of Supreme Audit Institutions (SAIs) in strengthening governance, accountability and poverty reduction.

The MoU brings together all the SAIs and the Donor Community in a common approach that provides a strategic focus for donors and the SAI Community in strengthening SAI capacity in developing countries and a variety of mechanisms for facilitating donor funding and support in line with donor mandates, priorities and requirements. Donor support will be provided through a hierarchy of activities, principally at the country, and then at the INTOSAI regional and INTOSAI global levels.

The Steering Committee appointed the IDI as Secretariat for the Cooperation, recognizing the importance of INTOSAI ownership as well as IDI's broad experience from SAI capacity building and wide network within INTOSAI.

Published by

INTOSAI-Donor Cooperation

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