
Problem-driven diagnostics: the case for financial bottleneck analysis

Working paper

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1 Introduction

In recent years there has been an increasing drive for public financial management (PFM) to transcend its traditional role of financial control and function to a greater extent as an enabler of service delivery.¹ Practitioner interest in the perceived link between PFM and service delivery is not particularly new and is reflected by the regular use of diagnostic tools with service delivery dimensions since at least the 1990s. These include the *Public Expenditure Review* (PER) which often analyses the efficiency and effectiveness of public spending in particular sectors and the *Public Expenditure Tracking Survey* (PETS) which traces resources from the central government down to the front line of service delivery. Debates originally focussed on the adequacy of the budget.² More recently, thinking has moved on to issues around strengthening national and sectoral systems for financial management. This new emphasis is reflected by the advent of systems-wide diagnostic tools such as the *Public Expenditure and Financial Accountability* (PEFA) assessment tool which evaluates the quality of PFM processes across the budget cycle. However, while the PEFA is perhaps the most comprehensive and influential PFM diagnostic tool currently available, it does not typically provide a detailed assessment of systems at the sectoral level.³ This apparent gap in the PFM toolkit may account for the more recent interest in exploring financial management issues within individual sectors. Greater international emphasis on transitioning away from aid dependence, as well the increasing pressure on PFM reforms to demonstrate development impact, are also contributing factors to this heightened interest (Hadley et al., 2020).

Where there is continuing difficulty is in prioritising PFM reforms based on a systematically derived link between budgetary systems and service delivery. It has been suggested that the root of the problem is the lack of an overarching theory that establishes the relationship between PFM systems and service delivery outcomes (Welham et al., 2017). This is exacerbated by the dearth of clear empirical evidence to support the existence of any strong link between the two concepts. However, the diversity of institutional arrangements for PFM and the role of government in service delivery in different contexts perhaps renders the development of a 'general theory' a somewhat futile exercise.⁴ Where such relationships between PFM and service delivery *have* been identified, they are typically focussed on a specific part of the interface (such as late procurement or delayed fund releases) and in a particular context. This leads one to think that the most productive approach to resolving perceived PFM challenges in sectors lies not so much in a 'top-down' search

¹ For instance, Welham et al. (2013) and ODI (2020).

² For example, the 2002 Abuja Declaration called for 15 per cent of budgets to be allocated to health (WHO, 2011).

³ This is not a criticism – it has never been its focus and a single tool cannot cover all sectors. That said, the PEFA Secretariat has recently developed a draft service delivery module for subnational assessments (PEFA, 2020).

⁴ As a recent review (ODI, 2020) highlights, the effective allocation and use of resources for service delivery is determined by a much broader array of public management systems (e.g. policy development, human resource management, regulatory oversight etc.) than PFM alone and so the relative importance of PFM will likely vary considerably according to the sector being examined and the specific management arrangements within the country context.

for all possible PFM weaknesses in a sector but rather in a ‘bottom-up’ analysis of *service delivery challenges that have budgetary related origins* whether in whole or in part.

Recently, links between PFM and service delivery have been explored in diagnostic studies that seek to identify *financial bottlenecks* (FBNs) which inhibit or undermine service delivery. There appears to have been more effort to understand PFM challenges in the health sector than in any other sector, with a number of new studies and tools recently developed to understand how financial management impacts health outcomes and especially progress towards Universal Health Coverage (UHC).⁵ Recent studies include an Overseas Development Institute (ODI) paper (Welham et al., 2017) that reviews evidence for the impact of specific PFM reforms on UHC and a World Health Organisation (WHO) paper (Cashin et al., 2017) arguing for greater flexibility in health sector budgets and key reforms such as medium-term budgeting. Diagnostic tools include a WHO process guide (WHO, 2017) for diagnosing misalignments between health financing policies and PFM systems and a World Bank FinHealth Toolkit⁶ which aims to provide a ‘whole-of-system’ view on the linkages between PFM problems and service delivery.⁷

Methodologies that explicitly identify FBNs that impact service delivery in a specific country context would appear to have some promise. They imply a movement away from general assessments of PFM in sectors towards an analysis of service delivery challenges that may (or may not) have a financial dimension. This is an important distinction, since the end goal is focussed on service delivery improvements rather than financial management improvements (which may ultimately have limited impact on service delivery). In other words, FBN analysis can incentivise a more development orientated approach to PFM reform. The approach has other advantages. First, it focuses on the functionality of the PFM system as viewed by *budget users* (i.e. service providers themselves) thereby creating a larger common ground between PFM and sector specialists. Second, it focuses on understanding the *underlying causes* of PFM weaknesses – the *why* more than the *what* – which enables the better specification of potential remedies. Third, recommendations can be tailored to the specific needs of service providers based on extensive consultation with stakeholders, making them more feasible to implement and more likely to have impact. These characteristics of the ‘debottlenecking’ approach render it especially compatible

⁵ Not all studies of PFM and service delivery use the terminology of ‘financial bottleneck’ directly – for instance, a popular term is ‘alignment’ between PFM and health financing.

⁶ This tool is forthcoming. See Hadley et al. (2020) for further details.

⁷ Some may wish to include *Marginal Budgeting for Bottlenecks* (MBB) as an early health initiative in this area, but it did not have the same goals. MBB was a UNICEF initiative (with WHO and World Bank) and was conducted mostly in the health or WASH sectors from the 1990s onward. MBB is described as “a result-based planning and budgeting tool that utilizes knowledge about the impact of interventions on child and maternal mortality in a country, identifies implementation constraints and estimates the marginal costs of overcoming these constraints”. It differs from a financial debottlenecking approach in two important respects. First, its goal is not to identify FBNs, but system bottlenecks: bottlenecks in the supply and demand of/for adequate and effective coverage of essential primary-health-care services, and obstacles to the application of high-impact intervention packages in each of the main service delivery modes. Secondly, budget only comes into the final stage of MBB which is not to remedy budgetary systems but to establish what resource inputs are required to overcome the systemic bottleneck. In practice MBB analyses often recommended additional inputs and drew conclusions on fiscal space.

with contemporary problem-driven approaches⁸ and we return to this theme in Section 4 of the paper.

The World Bank and the EU recently commissioned a *financial debottlenecking analysis of the education sector in Myanmar*.⁹ Based on the methodology adopted for this analysis and building on the work referenced above, this paper outlines the concept of the FBN and the value it adds to the ongoing discussion around the role of PFM systems in improving service delivery. The note seeks to develop both a working definition and a practical approach to support future diagnostic work in this area, as well as determining where financial debottlenecking (DBN) methodologies fit within the broader suite of PFM diagnostic tools currently available. Following this introduction, Section 2 deals with definitional issues and suggests a possible typology. Section 3 sets out an approach for conducting DBN analysis. Section 4 discusses the role of DBN analyses within the PFM diagnostic toolkit currently available to practitioners. Section 5 outlines some of the remaining challenges involved in applying the DBN methodology. Section 6 concludes the paper.

⁸ The World Bank (2017) notes that global progress on PFM reform has been disappointing, with relatively few instances of transformational PFM strengthening and several cases of countries 'backsliding'. This lack of progress has spawned a new literature on alternative approaches including the 'problem-driven iterative adaptation' (PDIA) approach, which emphasises (among other things) the vital importance of local leadership in the identification of problems and the development and implementation of solutions (Andrews et al., 2017).

⁹ See Oxford Policy Management (2019)

2 Definitions

A major challenge for DBN studies is that there is no standard definition of what a financial bottleneck is exactly. For all its visual appeal, 'bottleneck' is a term without any pedigree in the PFM lexicon. While the word is often used in the PFM and service delivery literature, its precise meaning is never explicitly stated and appears to lack a conceptual basis. It needs a working definition and this note offers a suggestion below. As a preliminary we might observe that the term is essentially a negative – it represents a systemic shortcoming. The diagnostic that results is a search for financial management weaknesses in the system that undermine the delivery of social services. Its opposite might be a search for 'financial enablers' – financial system features which promote sectoral goals.

The broadest possible definition of a financial bottleneck would encompass any financial weakness that could potentially adversely impact the efficiency and effectiveness of spending, the operation of the sector's systems and the achievement of its goals. It would include all financial management weaknesses that could affect service delivery, either direct (e.g. the delayed release of funds) or indirect (e.g. the widespread use of cash for transactions). A feature of this broad definition would be the implicit benchmarking of a sector's PFM systems against international best practice, whether context appropriate or not (for instance, the effective use of programme budgeting). Although comprehensive, this definition implies the need for a suite of diagnostic tools and is unlikely to facilitate a prioritised set of actions.

At the other end of the spectrum, a narrower definition might be limited to a literal interpretation – a bottleneck as a constriction on the flow of funds to service delivery points. It would incorporate such budgetary challenges as short releases of funds, cash rationing, excessive earmarking or rigidity in the use of funds, leakages *en route* to service delivery points, etc. However, this narrow definition appears to be too limited to be of much use and is arguably already taken care of in PETS-type analysis (see Box 1 below). Ultimately, good financial management implies a lot more than simply getting the allocated money to the right place at the right time – it also requires systems that effectively allocate resources in the first place, incentivise performance and provide oversight, accountability, value-for-money and control.

The functional definition we propose lies somewhere between these two extreme points and is deliberately tailored to the needs of social sectors. We define FBN as *any systemic budgetary weakness which adversely affects the delivery of services through its impact on efficiency, equity or execution and which can be remedied primarily through budgetary means*. The inclusion of an identified problem as an FBN will therefore depend on two key criteria: (i) its significance for the achievement of sector objectives; and (ii) the extent to which it can be resolved by improvements in financial management practice. Hence, the relationship between *financial weaknesses* and *budgetary outcomes* is important since the latter are not always the result of the former. For instance, the value-for-money (VFM) of teacher salary expenditure may be affected more significantly by sub-optimal teacher recruitment, deployment and management policies than

financial procedures.¹⁰ This highlights an important insight regarding FBNs, which is that they are not defined by the typical measures of VFM (i.e. efficiency, effectiveness and equity) but rather refer to the *underlying causes* of why such outcomes may be suboptimal. This distinguishes the DBN approach from PERs which typically analyse indicators of efficiency (e.g. per capita distribution of midwives; school dropout rates) and effectiveness (e.g. use of improved sanitation facilities; levels of stunting) of resource use, with comparatively less emphasis on the underlying causes of identified problems.¹¹ Figure 1 below clarifies this distinction through illustration, using the education sector as an example.

Box 1: Existing PFM diagnostic tools concerned with service delivery

PEFA Assessment Tool: evaluates the quality of a government’s overall public finance management system, using 31 high level indicators with a total of 94 dimensions (sub-indicators) for measuring and monitoring PFM performance across all phases of the budget cycle. Emphasis is on central government processes (typically managed by the Ministry of Finance) which impact all sectors. The PEFA can be applied at the subnational level but does not currently examine in detail the specific PFM systems and processes within individual sectors and line ministries.

Public Expenditure Review: typically analyses key fiscal policy and management issues such as sustainability, policy-budget alignment and technical efficiency of expenditure. As such, it evaluates the three primary objectives of PFM (fiscal discipline; allocative efficiency; and operational efficiency). They are often applied to individual sectors with a focus on the adequacy, sustainability, efficiency and equity of resource use within the sector. While PERs have a lot to say about the (in)efficiency of sectoral expenditure, they usually do not delve too deep into the mechanics of the PFM system.

Public Expenditure Tracking Survey: tracks the flow of public funds and non-financial resources from the central government level through the administrative hierarchy to frontline service providers. PETS aim to answer two questions: (i) do public funds and material resources end up where they were supposed to? and, if they don’t (ii) why are funds diverted? Often, PETS will focus on individual budget lines (e.g. school grants; medicines). As such, the emphasis of PETS is on specific aspects of budget execution rather than broader concerns of financial management or service delivery.

Source: PEFA Secretariat (2018); World Bank (2017); Gurkan et al. (2009); with minor adaptation by authors

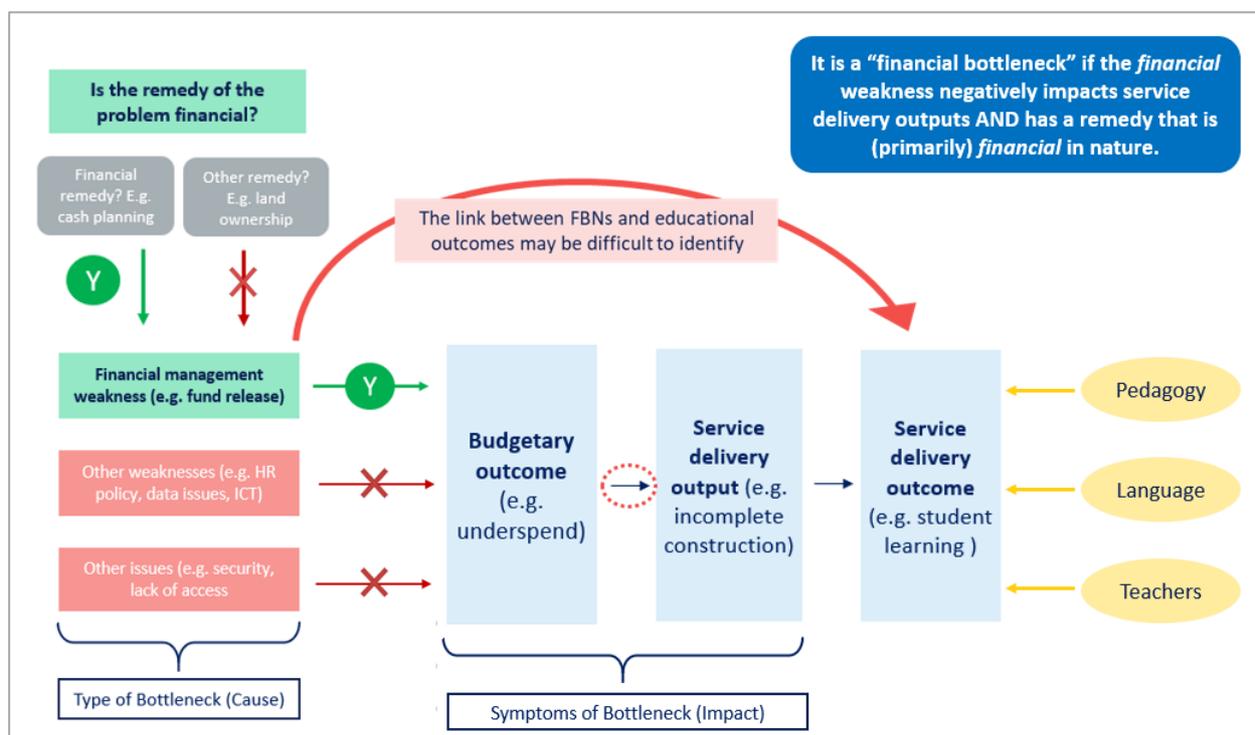
¹⁰ For instance, in education, large salary differentials between primary and secondary school teachers may be suboptimal from the perspective of allocative efficiency (as they may reduce the incentive for better teachers to teach at the primary level). However, this is mostly addressed by changes in human resource management practices and not primarily within the budgetary system.

¹¹ As highlighted in Section 4 of this paper, there is no hard and fast rule over what diagnostic tools such as the PER should and should not cover. As set out by the World Bank (2017), PER teams may decide to examine PFM weaknesses in the sector under review. However, given the time and resources needed to investigate potential underlying PFM problems, it is unlikely that PER teams will be able to do this comprehensively in addition to the focus areas of the diagnostic.

Our definition interprets service delivery as relating to sector *outputs* rather than *outcomes*. This is because current understanding of the linkages between financial inputs and outputs is much stronger than our understanding of the link between financial inputs and sector outcomes. For instance, in education, the link between timely release of funds and the provision of textbooks is more clearly established than links to improvements to student learning or employability (World Bank, 2018). In the health sector, specialists have identified a stronger link between inputs and sector outcomes – for example, via the relationship between the supply of skilled birth attendants and the incidence of maternal mortality – than appears to be the case in education (Barroy et al., 2019). However, in many sectors, there is currently very limited empirical evidence available to be confident about any causal links between inputs and outcomes (ODI, 2020).

The challenges of linking PFM systems to better service delivery outcomes are a key theme of a recent review. A paper by ODI (2020) identifies three main reasons for this persistent challenge. First, that the effective allocation and use of resources to deliver services relies on a much broader set of public management processes than simply PFM (e.g. HR systems in the example presented earlier regarding teacher salaries); second, that the quality of service provision depends on how these various systems work together as part of a broader system; and finally that complex tasks such as public service delivery make it difficult to develop clear theories as to what works in different settings. The link to outputs in our definition of financial bottlenecks above acknowledges these challenges in connecting financial inputs to outcomes and seeks to strengthen its practical value.

Figure 1: Identifying FBNs in education – a suggested typology



Source: authors' interpretation

Our definition explicitly excludes issues related to adequacy and sustainability. This is because any assessment of the sufficiency and/or sustainability of budget allocations for achieving sector goals would require both detailed sectoral costings and/or the identification of fiscal space which are better addressed by other diagnostic tools such as the public expenditure review (PER).

Finally, some may argue that in view of the differences in management arrangements within and across sectors, there is no room for a general DBN method. For instance, within the education sector, there are a variety of models for service delivery that different countries have adopted (e.g. results-based financing; contracting out to private providers; voucher schemes; performance-based teacher contracts) that may necessitate different budgetary management arrangements (Lee et al., 2019). Financial management arrangements often differ across sub-sectors such as technical and vocational education and training (TVET) and higher education, with a higher frequency of contracting and the existence of semi-autonomous bodies. Variation in financial management arrangements will also exist within other complex sectors such as sanitation, nutrition or roads. However, we argue that, as with other sectoral PFM diagnostics, there is room for a general method for the review of budgetary systems, lines of enquiry and the identification and prioritisation of financial bottlenecks that is wholly accommodative of variations in emphasis driven by sectoral characteristics.¹² Nonetheless, the development of sector-specific methodologies that take account of such variations will continue to be valuable.

¹² This is the case even if the specific line of questioning that follows is different. Regardless of sector, policy makers and budget managers will be concerned about whether buildings are completed on schedule and within budget; if operational funds reach service providers on time to ensure purchase of key inputs; whether financial formulae that govern allocations are efficient and equitable; whether expenditure reporting systems provide useful data to guide future allocations; whether financial rules are suitable to enable adequate flexibility at the local level; and so on. The relative importance of such factors will vary across sectors and countries, and for this reason, it is likely better that DBN methods avoid score-based performance measurement (such as PEFA) and rather focus on evaluating performance against the requirements or ambitions set by the sector or country itself.

3 Approach

The following paragraphs set out a suggested approach for identifying and prioritising FBNs affecting service delivery, drawing from our recent experience. The approach comprises four elements: review of budget systems and processes across all stages of the budget cycle; identification of FBNs and collection of associated evidence; verification of FBNs identified; and finally, prioritisation. The approach adopts a *bottom-up problem-driven analysis* of financial management in the sector, drawing heavily on the point of view of users of the budget at the subnational level, but also from those who manage it at the national level. It is based on an assessment of formal systems and processes as well as observed informal budget practices, grounded in both qualitative and quantitative evidence. This involves extensive engagement with the relevant line ministry at all levels, a process that is mediated by stakeholders outside the ministry including the central agencies of finance and parliamentary committees.

The process begins with an ex-ante review of sector budgetary systems and processes based on existing resources at the national level. In Myanmar, this phase involved a literature review followed by an analysis of budgetary data; examination of relevant internal procedures and directives; and interviews with key budget officials within the sector and in the central finance agencies. It was followed by a pilot study at the subnational level to triangulate initial findings and develop lines of enquiry for further fieldwork. This stage encapsulates the iterative and problem-driven character of DBN studies, since it pulls together the views and priorities of different stakeholders with various roles in the budgetary system. It also informs the development of a more concrete research framework for the subsequent stages of work, by obtaining a good understanding of the main service delivery problems (symptoms) that guide the approach to identifying the underlying bottlenecks (cause).

The identification of FBNs requires intensive fieldwork at the subnational level and the collection of evidence from every level to corroborate the FBNs identified. In Myanmar, processes maps were developed for every stage of the budget cycle and bottlenecks (as observed by budget users) were identified, using a combination of detailed semi-structured questionnaires and the collection of associated evidence (see Box 2). In accordance with the problem-driven method, the objective is to gain an understanding of the key service delivery areas of concern for subnational officers and the aspects of financial management which are perceived to adversely affect them. At this point there is little prioritisation, and a relatively long list of candidate FBNs with varying degrees of significance can emerge.

Preliminary verification work is carried out at the time the FBN is first identified, but a more intensive verification process is completed subsequently. It comprises further examination of documentation, relevant data and further interviews – especially with line ministry officials at the national level and the Ministry of Finance. This process also allows for identification of bottlenecks at the national level or understanding underlying causes of those observed at the subnational level. In the case of Myanmar, an electronic survey of subnational authorities not visited during fieldwork was administered to further triangulate findings.

Box 2: Separating symptom from cause – what data is needed to assess FBNs?

Given the focus of DBN studies on underlying processes that govern PFM, they require different types of information than the usual budgetary and cost data that is commonly used in PERs and other assessments. Setting out all the data requirements for a full DBN study is beyond the scope of this paper. However, to provide a flavour of the kind of data that is needed, let us take the example of the execution of the construction (capital) budget. The performance of construction budget will be of interest for most DBN studies given that it is used to build facilities that deliver services (e.g. clinics, schools, roads).

First, the assessment team may begin by examining **budget out-turn** data as an indicator (or symptom) of potential execution challenges. If execution rates are low, the budget data would be usefully complemented by **project implementation status reports**, showing the completion rate for projects (ideally geographically disaggregated) over time during the fiscal year to identify patterns. Second, in order to understand why project completion rates might be low in certain sub-sectors or geographical locations, the team may develop a detailed **process map** that sets out the various stages in the process of executing the construction budget to identify the source of potential bottlenecks (e.g. processes related to procurement, construction and monitoring). Third, **qualitative interviews** with key officials involved in each stage of the process will reveal pressure points that may indicate potential causes of the problem. Finally, the team should collect additional **quantitative data** that provide evidence of the root cause – for instance, delays in the completion of tender processes, delays in contracting, or delays in the payment of contractors. These can be measured in terms of the number of days taken to complete each stage in the process, as documented by official department records.

As illustrated in this example, the type of data required depends on specific pressure points identified. Furthermore, the deeper the search for the ‘root cause’ goes, the more likely it is that it will be related to bottlenecks identified elsewhere in the PFM system. For instance, in the example above, delays in finalising tenders might be related to a broader problem of a lack of appropriate financial management guidelines provided by the centre to the service delivery units. As such, bottlenecks are rarely isolated from each other and need to be considered within an overall perspective of the broader sectoral financial management system.

The exact identification and verification of FBNs is challenging and is often a matter of judgment on which budget specialists may differ. It is not a strict science. For example, it is possible that operational inefficiencies in budget execution may result where budget releases are tightly earmarked for specific budget lines. The tight earmarking may be identified as a bottleneck if it is deemed to affect service delivery adversely. On the other hand, where inefficiencies arise from burdensome procurement processes, it could be argued that the procedures are only burdensome because of poor procurement skills and the lack of such skills (rather than the procedures themselves) is the bottleneck. The inverse could also be true – this is where identification of the cause is crucial. There may be a hierarchy of problems, causes and sub-causes, and where to stop is a matter of judgment.

The final stage is prioritisation and is necessary to keep FBNs to a manageable number to support the development of a strategy or plan to address them. The detailed analytical work and participatory nature of DBN studies readily supports the development of sector-specific PFM action plans. In Myanmar this was achieved through a participatory review and prioritisation of bottlenecks identified. In practice ranking bottlenecks in order of importance is challenging, since it can be difficult or impossible to quantify and measure their impact on service delivery. For instance, it is difficult in practice to quantitatively assess whether excessively rigid rules for the virement of funds represent a more significant bottleneck than the absence of a medium-term budgeting perspective. Consequently, it is hard to know which bottlenecks will have the most benefit for service delivery if resolved. However, there are several things that can be done to develop a more manageable list of FBN priorities.

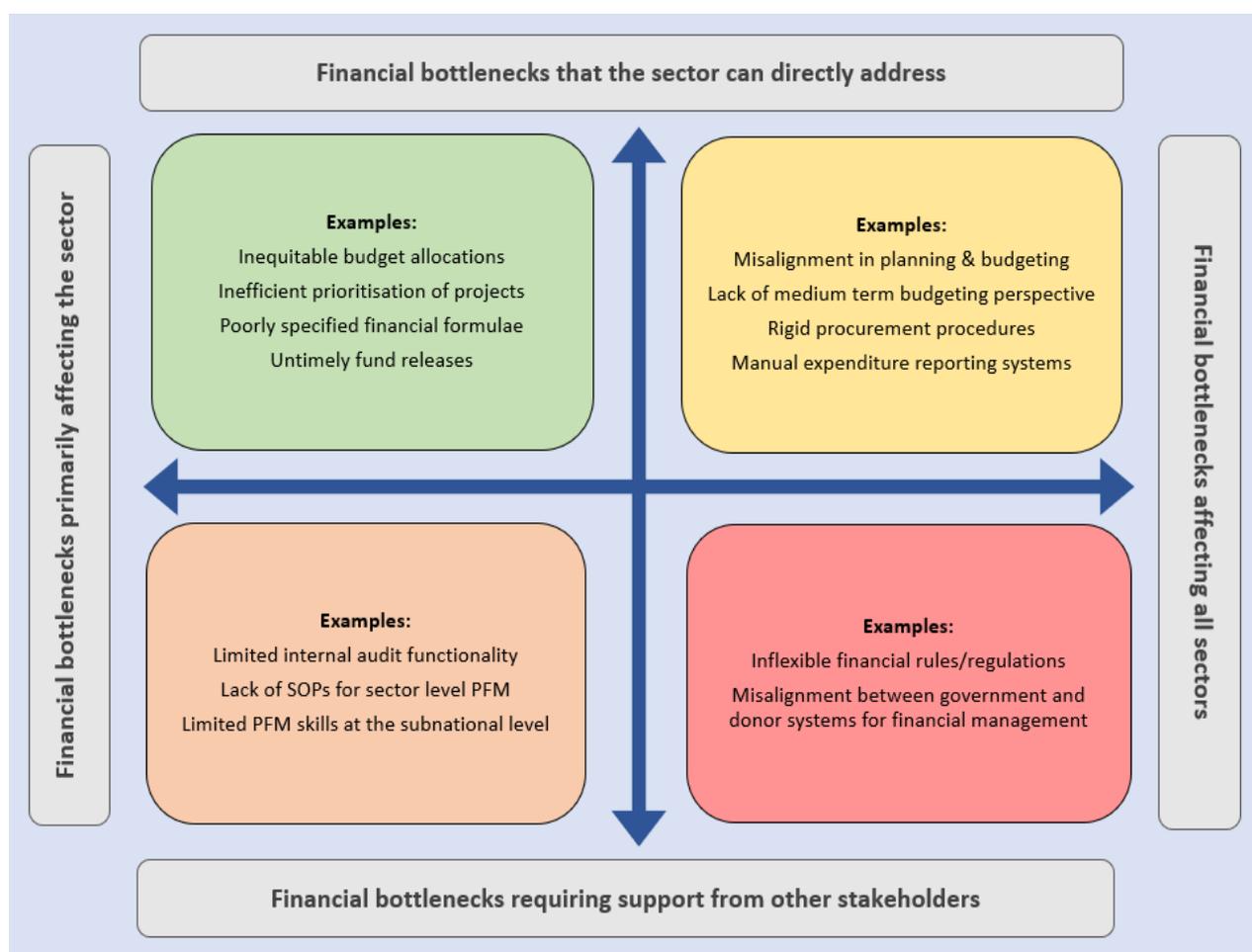
In the first instance, it is possible to broadly assess the significance of any potential FBN against the production of service outputs. The significance of such links may be assessed by reference to clear contextual evidence from the sector under review; or where this is not possible it may be drawn from relevant conclusions of research in the sector drawn from studies in other countries. For instance, in the education sector there is a consensus that school grants are a powerful tool for improving educational outputs, and so any FBNs affecting the functionality of these grants may be deemed significant. Similarly, in the health sector there is a general understanding that increases in the percentage of births supervised by trained midwives has a positive impact on the maternal mortality rate over time. Any problems threatening this indicator may therefore be deemed significant.

Some identified bottlenecks may undeniably represent technical PFM failings but may have an indiscernible impact on service outputs. These might include outdated accounting standards, or the failure to review and sign off bank reconciliations which would improve financial control but may not affect service delivery significantly. Such bottlenecks could be discarded *for the purposes of developing a sector level financial management action plan* on the basis that resolving them would likely have a relatively small impact on service delivery and would be better addressed through a whole-of-government PFM reform programme led by the central agencies of finance. This is consistent with existing research into the specific areas of PFM functionality that seem most likely to impact service delivery directly (e.g. Rao, 2013).

Secondly, bottlenecks can be prioritised according to their ease of remediation. That is against criteria relating to which entities they primarily affect, the ease of resolution and internal priorities of the line ministry. One such tool to assist prioritisation is a matrix which divides identified bottlenecks into those which affect only the sector under review and those which affect many or most sectors. The second axis of the matrix would separate the bottlenecks into those that the sector can fix on its own and those which require intervention from other entities – often the Ministry of Finance or Ministry of Local Government. The logic behind this matrix is to help identify which problems can be addressed more easily and which will pose a greater institutional challenge and require coordination with other stakeholders to resolve. Figure 2 below illustrates this tool and provides examples of potential bottlenecks that might fall into each category (these are based on our findings in Myanmar, but will vary according to each country's specific sector circumstances and PFM system).

This method of prioritisation is helpful for officials in assessing which bottlenecks may be addressed more quickly and easily and which will require a longer-term strategy to resolve. For instance, the bottlenecks in the upper left quadrant (those that are specific to the sector and can be addressed by the sector alone) can be considered more straightforward to resolve than those in the bottom right quadrant (those that affect all sectors and require external support) which are likely to be more difficult to solve. Given the relative ease of solving the problems in the upper left quadrant, the sector may consider prioritising these as ‘quick wins’ while developing longer term approaches to problems located in the other three quadrants. The results from this exercise can contribute to the assessment of ‘reform space’ as advocated under the PDIA method, but the focus here is more on institutional authority to implement reforms and less on political constraints for doing so.¹³ Furthermore, given the focus of the matrix on the questions of institutional authority to implement reforms, even those that are in the upper left quadrant may not necessarily be easily resolved from a purely technical perspective.

Figure 2: Matrix proposing four categories of FBNs



Source: authors’ interpretation

¹³ This approach can also be augmented by other PDIA tools such as the ‘Triple-A change space analysis’ which explores for each proposed action the extent of Authority, Acceptance and Ability amongst stakeholders.

An important approach to prioritisation is to seek opinions and validation from focus groups such as assembled workshop participants – from the national and subnational level – and/or survey respondents. This method has the essential benefit of ownership; however, it may identify solutions that are not feasible to implement (whether technically or politically). Furthermore, the prioritisation that emerges may be biased according to the composition of the group and may not take account of all evidence. Despite these challenges, it is a vital part of generating buy-in from officials who will ultimately be responsible for implementing the resulting action plan and learning from its successes and failures. Skilful workshop facilitation is crucial in achieving a good balance between effective prioritisation and ownership. The prioritisation process may use straw polls, survey questionnaires, the matrix described above, and other tools.

There can be a conflict between the approaches to prioritisation outlined above. For instance, officials may prioritise actions to solve problems for which there is limited evidence. In such a circumstance the requirement for sector ownership and the principles of PDIA demand that the opinions of sector staff should prevail. If a less than optimal prioritisation results it becomes a learning opportunity.

Finally, prioritisation is not sequencing. After determining the high priority bottlenecks, the ensuing action plan must consider in what order they should be addressed: whether they can be addressed in parallel or whether they must be addressed sequentially because one change is dependent on the prior introduction of another. For instance, the development of standard operating procedures for key sector PFM processes would logically precede the delivery of financial management training. Similarly, the revision of budget allocation formulae could only be done effectively if data gaps relating to key indicators are substantially resolved first.

Box 3: The ‘fishbone’ and DBN

Some recent DBN studies have attempted to identify FBNs through a ‘fishbone’ or Ishikawa diagram. This approach identifies multiple causes of an event – in this case the underlying causes of *constraints on service delivery outcomes*. The fishbone presents major immediate causes of constraints on sectoral service delivery outcomes, and then continues to identify sub-causes and sub-sub-causes. Some causes and sub-causes will be political, others technical or institutional, but some will be financial. The FBNs, along with other causes, are thus derived directly from high-level constraints on service delivery outcomes.

However, the neatness of the concept belies some of the challenges in practice. In any given country or context, there can be differences amongst sector specialists as to what constitute key constraints on service delivery outcomes. In education for instance one sector specialist may argue that it is the poor quality of teacher training, whilst another may argue that it is the lack of kindergarten facilities to prepare children for school. This potential for disagreement continues down the chain, and there may again be different views on the causes of poor quality in teacher training, which may ultimately include budgetary issues.

A second challenge in using the fishbone in conjunction with DBN analysis is that some FBNs contribute to many, if not all, high-level constraints on service delivery. Value for money and procurement challenges, for instance, can be proximate causes of service delivery constraints in the construction of houses, the construction of school buildings, the procurement of materials and equipment, school maintenance programs and the deployment of teachers. Many such “cross-cutting” FBNs exist, including late releases of funds; lack of a results focus in budgeting; etc. It is both presentationally cumbersome and analytically unhelpful to repeat these as proximate causes of all high-level constraints. One design remedy respecting the value of the Ishikawa diagram might be to introduce these crosscutting FBNs in the body of the fish.

Third and related to the above, one of the challenges of this method is that the link between the FBN and the service delivery outcome is almost always tenuous – as noted earlier in this paper. The link may be stronger in the case of specific *outputs* (as opposed to outcomes) such as availability of teachers or good quality school buildings. Consequently, even where FBNs are identified through the fishbone, it is difficult to determine which are the most significant.

Fourth, it seems that the fishbone is less helpful when examining a subset (here a financial subset) of causes of outcome challenges. The reason is that after sector outcomes, the second level of causes tend to relate to the availability or quality of sector outputs. Financial considerations are often at a third level of causation at best, along with many other sub- and sub-sub- causes that together reflect the complexity of social sectors. In view of this, there is greater potential for a fishbone analysis to support determination of FBNs underlying a key sectoral *output* (e.g. enrolment rates in education; supervised births in health) rather than the sector as a whole. Although the fishbone method was not formally adopted in our study, this was the essence of our approach – identifying troublesome outputs and then working backwards to identify the causes of the problem.

Finally, where the explicit goal of a study is the identification of FBNs, there is a risk that the fishbone analysis of proximate causes will be biased towards the financial. Thus, it may overstate the significance of budgetary constraints to effective service delivery. Gearing the fishbone analysis towards the delivery of specific outputs may reduce this problem.

A way forward could be to develop a generic DBN framework that identifies the key linkages between PFM systems and sector outputs to inform standard lines of enquiry. Such a framework could be used as a starting point for guiding the bottom-up process of identifying bottlenecks, using the fishbone approach once particularly troublesome outputs have been identified. Assessors would not necessarily be required to conduct a detailed investigation into all possible bottlenecks but rather focus on key outputs and work backwards to identify the most relevant systemic PFM problems.

4 Other diagnostics

There is a plethora of PFM diagnostics. As far back as 2010, the OECD DAC Task Force on PFM identified 9 ‘whole of system’ PFM diagnostics, such as PEFA and the PER; 11 diagnostics focussing on individual components of the PFM system, such as PETS; and 6 internal donor tools, such as Fiduciary Risk Assessments (Mackie, 2010). A 2018 update reported an increase in the number of tools in each category to 12, 24 and 9 respectively (PEFA, 2018).

Studies of FBNs are sectoral tools, and their closest cousins in the family of PFM diagnostics are other sectoral diagnostics, notably PER and PETS. Critically, both PERs and PETS can be tailored to fit the sector and context. That said, a PER is designed to evaluate the effectiveness of public finances and typically analyses government expenditures over a period of years to assess their consistency with policy priorities and the results achieved.¹⁴ PETS on the other hand were initially designed to track leakage of funds, but increasingly asked more broadly whether public funds and material resources end up where they are supposed to, and if not, why not? PETS have also strengthened their connection to service delivery outputs when linked to Quantified (or sometimes Perceptions-based) Service Delivery Surveys (QSDS).

An initial reflection on where DBN studies sit in the family of diagnostic tools suggest a potential for adding value. In comparison with the PER, a DBN study has a greater focus on the downstream elements of the budget cycle, a more granular link to service delivery challenges and a ‘problem-driven’ emphasis which highlights challenges (and their underlying causes) faced by subnational actors. DBN studies perhaps have closer links to PETS as they include a close review of fund flows at the subnational level. However, they have a much wider focus on the broader question of how budgets affect service delivery. Unlike the PETS, the DBN focus includes processes of budget allocation and monitoring as well as execution. Also, as with the PER above, its ‘problem-driven’ emphasis is not a feature of the PETS. Moreover, PETS may not always find sufficient buy-in from the government because of its focus on leakages. Finally, DBN studies share certain common elements with the subnational PEFA. However, the subnational PEFA does not yet have the same sectoral emphasis of DBN studies, nor its problem-driven focus.

A major advantage of DBN studies is that they focus substantially more on understanding on how budgetary systems and processes work (or not) than other tools. The method uses data analysis only as a starting reference point but spending patterns do not necessarily drive lines of enquiry. Instead, the focus is on underlying systemic problems that cause suboptimal budgetary or service delivery results. In other words, the bottlenecks identified are focussed more on the ‘how’ and ‘why’ than the ‘what’. A DBN study can therefore likely serve as a complement to the PER. Logically, it might be useful to conduct a PER prior to a DBN study. A PER would say more about budgetary outcomes and service delivery challenges. By contrast, a DBN study would focus on understanding system impediments that generate such outcomes and challenges.

¹⁴ See the World Bank’s Open Budgets Portal: <http://boost.worldbank.org/tools-resources/public-expenditure-review>

A key aspect of the DBN methodology which perhaps sets it apart from other diagnostics is the extent of consultation and continuous engagement. Successful DBN studies require broad and deep consultation with both senior management and technical staff working at all levels of the system. This is necessary in order to identify financial management challenges, to collect corresponding evidence, to confirm their relevance to service delivery, and to jointly identify potential remedies. This requires building good relationships both with the sector ministry and central agencies of finance as well as an approach that is owned and driven by senior management. Finally, DBN studies, with their demand-driven approach to identifying both bottlenecks and their potential solutions may be more welcome than tools such as PETS (which may be politically contentious particularly at the sector level)¹⁵ and the PER (which may not have the same problem-driven emphasis nor offer such practical solutions).

DBN studies share many of the characteristics of the PDIA approach to reform. In their seminal study for the World Bank, Fritz et al (2017) set out a number of success factors for PFM reform, including: (i) exploring with counterparts what they perceive as their core problems and how they seek to address them; (ii) understanding and discussing with counterparts what has gone wrong or has not worked as expected in the past and why; (iii) probing the views and buy-in from stakeholders and encouraging discussions between different actors within the system; and (iv) setting realistic expectations and being selective in the number and type of reform actions. These characteristics all feature strongly in the DBN methodology indicating the potential of the approach in formulating impactful and realistic reform strategies.

There is room for a more complete study of the position of DBN studies in the family of sectoral PFM diagnostics. Such a study could identify the strengths of each diagnostic, the gaps that exist in the family of diagnostics as a whole and expand upon the contribution that can be made through DBN analysis to fill some of these gaps. Such a study must also recognize the versatility of PFM diagnostics and the many modifications to the standard versions which are made in practice. This (desirable) customization in use leads to an overlap, or a blurring of the lines, between one diagnostic and another.

¹⁵ See for instance World Bank (2009) which notes “Ministries of Finance have been supportive of PETS initiatives as they have a clear incentive in seeing sector-based resources being used more efficiently. On the other hand, there are cases where sectoral ministries have been on the defensive with respect to the studies; this is because the PETS are perceived as part of anticorruption crusades and as a way to cut public spending in their respective sectors.”

5 Ongoing challenges

This paper has highlighted some challenges associated with the application of the DBN methodology and they indicate areas for deeper analysis, reflection and research. Many arise from the effort to identify, prioritise and sequence PFM improvements based upon the strength and significance of their connection with service delivery improvements at the output and outcome level. The following issues/questions arise which might form the basis of a research agenda:

1. **How should we define a financial bottleneck in order to maximise the value added by the DBN method?** Is the definition proposed here a good starting point? This is an urgent need if the term is to be the lynchpin of an effective diagnostic which is comparable from one study to another.
2. **An FBN derives its significance from its role in hindering significant sectoral outputs or outcomes.** But how do we determine 'significant outputs' or 'significant outcomes' for a sector or sub-sector to create a starting point for the identification of FBNs?
3. **The Myanmar study found the link between FBNs and sectoral outcomes (as opposed to outputs) is often difficult to identify and thus the focus was greater on the latter.** But how should those significant outputs be ranked? How do we determine the relative importance of different outputs in terms of the availability and quality of services delivered? Is there a consensus amongst sector specialists on which outputs are generally critical to outcomes? Does the strength of the link vary by sector? Is there a consensus on critical outputs in the country of research? Having the answers to these questions would greatly enhance the value of DBN studies.
4. **How do we determine which PFM weaknesses contribute to insufficient or inadequate outputs?** In some cases, it is relatively clear (e.g. short fund releases). Some PFM weaknesses have a direct link to a particular output (e.g. a rigid capital budgeting process). But how do we assess the significance of FBNs that have an indirect impact on sectoral outputs and outcomes and are difficult to quantify or measure – for instance, weaknesses in reporting processes or internal controls?
5. **How do we balance the FBNs identified by budget users (i.e. problem-driven) with the FBNs that might be identified by a more top-down approach?** The latter might include the lack of a results focus in the budget; an absence of transparency/accountability; the absence of effective audit; and the widespread use of cash. However, these may not be highlighted in a bottom-up approach despite being important potential FBNs. To what extent will an overarching framework reduce the possibility of bias in the selection of FBNs?
6. **A sector-wide search for FBNs requires extensive research.** Is there a role for studies that focus on specific particularly troublesome sectoral issues rather than attempting a sector wide analysis? Do we also need to accept that DBN cannot cover all potential issues? For instance, it is not the right tool to assess the risk of cash payments. If so, how do we 'ring-fence' what the DBN method examines and what other tools should cover?

7. **How do we approach FBNs that are largely outside the control of the sector but vital for service delivery?** For instance, unrealistic revenue projections from the Ministry of Finance that lead to cash rationing and disrupted flows to sectors. Given the solution-oriented approach, should DBN studies limit themselves to problems that are actionable and relatively easy to resolve by the sector ministry alone?
8. **There are also sector-specific challenges.** In our experience with the education sector, challenges included:
 - Limited literature on the linkages between PFM and education service delivery.
 - A lack of standards regarding norms for budget processes in the education sector (for instance, on capital budget allocations, or procurement processes).
 - Available evidence emphasises the teacher-student interface as the key factor in determining learning outcomes. Does this mean that bottlenecks in human resource management and pedagogical philosophies underpinning teacher training are more directly important than budgetary matters?

6 Conclusions

Analysis of financial bottlenecks is being increasingly adopted but without a recognised method to guide it. If the approach can be adopted in the manner suggested here, as a problem-driven sector diagnostic focussing on service delivery budgets, it may have a useful role to play in supplementing the existing family of diagnostics. We hope that this paper has highlighted the lack of clarity which currently exists and lead in due course to a broad agreement on approach.

The primary innovation of the financial debottlenecking method is to focus directly on the interface between financial management weaknesses and sector outputs. This explicitly problem-driven and bottom-up approach brings PFM and sector stakeholders closer together and provides a platform for constructive dialogue ensuring that recommendations are owned, relevant and actionable. A sound understanding of institutional nuances further strengthens the recognition of challenges by counterparts and therefore the ownership of the reform strategy. For DBN studies to be effective, intensive engagement with stakeholders at central and subnational levels is critical; and the trust of those in authority, especially central ministries, is indispensable.

DBN studies can stand alone but can also complement existing sectoral diagnostics. A DBN study need not replace other sectoral diagnostic tools. The thinking behind the DBN approach can influence existing diagnostics to better accommodate service delivery challenges. Similarly, DBN studies can benefit significantly from a recent PEFA or PER analysis that provides guidance on areas of concern. DBN methods can therefore be more effective when twinned with, or incorporated within, a broader analysis of sectoral performance.

Our experience suggests that the broad DBN approach is replicable across countries and sectors. Although sectors and country contexts vary considerably, the starting point for analysis in most cases will likely be similar. As with other diagnostics, variations can be accommodated through levels of emphasis and a degree of customisation where appropriate.

Finally, users of DBN methodologies should recognise the importance of other public management systems within the service delivery architecture. Financial management may not be the most critical cause. Service delivery outcomes are impacted by numerous factors, not least politics, the quality of sectoral policy, and other public management systems such as human resource management. DBN studies are therefore most likely to be effective when prepared in collaboration with sector policy specialists, human resource management experts and others.

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