Chapter 7

Public Financial Management and Health Service Delivery: A Literature Review*

Yevgeny Goryakin, Paul Revill, Andrew J. Mirelman, Rohan Sweeney, Jessica Ochalek and Marc Suhrcke

Abstract

This chapter provides a summary review of the existing academic literature, both theoretical and empirical, on the contributions of public financial management (PFM) systems and reforms to improving the effectiveness of health service delivery based on a literature review conducted by Goryakin et al. (2017). We consider both population health indicators as well as more proximate process indicators related to health system performance. The existing literature is limited and only 53 articles are reviewed, divided across three subthemes: first, “system quality” studies, on the impact of PFM quality and good governance generally; second, “health system strengthening” studies, including articles on medium-term expenditure frameworks (MTEFs), reforms related to budget transparency and participatory budgeting and decentralization; third, studies on the impact of donor-related reforms such as the introduction of sector-wide approaches (SWAs). The theoretical literature predicts that high-quality PFM systems will have a positive impact on various dimensions of performance; whereas evidence from empirical studies is more limited,

*The opinions expressed and arguments employed herein are solely those of the authors and do not necessarily reflect the official views of the OECD or its member countries.
though generally positive. Overall, evidence shows good governance has an important role in health service delivery. Increased public funding of health programmes is likely to be more effective in countries with better governance, but what this means in practice is highly context-specific.

1. Introduction

Public financial management (PFM) reforms are widely seen as having an important part to play in the efforts of low- and middle-income countries (LMICs) to improve the welfare of their populations. Many countries have expressed a commitment to strengthening their PFM systems in several high-level international initiatives and declarations,¹ and development partners are paying increasing attention to countries’ PFM performance when making decisions about committing development assistance (de Renzio, 2006; de Renzio et al., 2010, 2011).

PFM describes the ways that governments manage public resources, including systems for budget preparation, approval, execution and evaluation (Cabezon and Prakash, 2008; Andrews et al., 2014). This chapter focuses primarily on the quality dimensions of PFM including: the credibility, reliability and efficiency of the budget process; the transparency of the budget process; the extent of appropriate institutionalized accountability and the appropriate use of earmarked and extra-budgetary funds. We review, synthesize and critically discuss the existing literature on the contributions of PFM systems and PFM reforms to improving the effectiveness of health service delivery. To proxy the quality of health services, we use more proximate “process indicators” of the performance of health services delivery, such as the extent of the utilization of different health services, patient satisfaction levels and waiting times.

This chapter first summarizes the theoretical foundations of the hypotheses that have been identified and addressed in the literature around the link between PFM quality and effective health service delivery. It then provides a broad summary of the evidence to support (or contradict) these

¹ Examples include the 2005 Paris Declaration, the 2008 Accra Agenda for Action and the 2011 Busan Partnership for Effective Development Cooperation.
hypotheses. A more detailed summary of the evidence is available from Goryakin et al. (2017), where judgements on the strength of the evidence are also discussed.

2. Methods

The hypotheses around the link between PFM quality and effective health service delivery were identified from a review of the literature which included studies that provide theoretical and/or empirical evidence for the presence or absence of associations — ideally causal associations — between higher or lower quality PFM systems, and the presence of PFM reforms and indicators suggesting “better” or “worse” health service delivery. For a detailed explanation of the search strategy including inclusion and exclusion criteria used in this review see Goryakin et al. (2017). In brief, the search terms aimed to account for a broad range of potentially relevant quality measures. These included, for example, aggregate scores such as the Public Expenditure and Financial Accountability (PEFA) score (as used in Fritz et al., 2014), proxies for PFM quality, quality of governance-specific PFM-related reforms and initiatives designed to improve the accountability, transparency and responsiveness of those tasked with managing health systems (e.g. the introduction of community scorecards, sector-wide Approaches (SWAs) and participatory budgeting).

The outcome measure used was the quality of health services, which is difficult to measure. Health system performance can be assessed with the help of standard population health indicators such as life expectancy at birth and child mortality rates; however, the quality of a country’s health system is not the only driver of population health outcomes, so we relied on indicators more closely related to the performance of health services. The Organisation for Economic Co-operation and Development

2 Any articles that proposed links between population health outcomes and PFM quality were also considered as given the overarching goal of health services is to improve health, population health indicators such as life expectancy at birth and mortality and morbidity indicators as the relevant outcome variables may be used as outcomes in some cases. This was not the primary outcome, however, as in practice, it is difficult to establish a credible direct link between PFM and population health outcomes because such outcomes are at least co-determined by a range of factors beyond the control of health systems.
(OECD) suggests a range of indicators for evaluating health system performance, which are presented with the objective of gaining “a broader view of public health” (OECD, 2015). Bearing in mind these limitations, we considered a long list of possible outcome indicators, including both population health outcomes and process indicators. For the purpose of the review, the following indicators were considered most relevant:

**Input/process indicators:**
- the availability of medicines in the public sector;
- the number of avoidable hospital admissions;
- waiting times in the public sector;
- immunization coverage;
- health service utilization.

**Health outcome indicators:**
- infant mortality rate/maternal mortality rate;
- life expectancy at birth;
- avoidable hospitalizations/mortality;
- surgical complication rates;
- mortality from cardiovascular diseases;
- general satisfaction with health.

**Efficiency:**
- measured by technical/allocative efficiency scores derived from stochastic frontier analysis models of public health service delivery or from data envelopment analysis.

We also reviewed studies that treated the allocation of funding towards health in the total budget as an outcome variable. Despite not being a perfect measure of health service delivery, we considered the impact of decentralization and participatory budgeting on budgetary allocations to health, for example, to be of interest in this review because health expenditures are an important determinant of the quality of health service delivery. In addition, we included studies which considered the combined impact of spending on health and the quality of governance as an additional measure of PFM quality (as discussed in the following). The
theory underlying the identified hypotheses is discussed below, followed by a summary of the evidence.

In Section 3, we first lay out the theoretical predictions outlined in the literature about the relationship between PFM quality and PFM-related reforms with various dimensions of effective health service delivery. We then scrutinize each of these theoretical predictions in light of the existing empirical evidence. We group the evidence into the following three broad categories:

- The first group is made up of “system quality” studies, including studies on the impact of PFM quality itself as well as the impact of good governance.
- The second group comprises studies on the impact of “PFM-related reforms”, which include medium-term expenditure frameworks (MTEFs), reforms related to budget transparency and participatory budgeting, decentralization reforms and several other types of reforms, as well as good governance practices such as transparency, accountability and lack of corruption. The studies in this group can also be considered part of the so-called “health system strengthening” literature. These studies, while not explicitly measuring PFM systems, are concerned with dimensions of health systems that are potentially important for well-functioning PFM systems.
- The third group contains studies on the impact on health service delivery of donor-related reforms such as the introduction of SWAs.

3. Results

We first lay out the theoretical predictions outlined in the literature about the relationship between PFM quality and PFM-related reforms. The implicit/explicit hypotheses regarding the relationship between PFM and health service delivery were drawn out from the selected studies and are summarized in Table 1 alongside a concluding set of remarks identifying the degree to which the hypotheses have been supported by the reviewed empirical evidence.

In the following, we lay out the theoretical predictions outlined in the literature about the relationship between PFM quality and PFM-related reforms with various dimensions of effective health service delivery that underlie each of the hypotheses presented in Table 1. Then the empirical evidence for each is summarized.
Table 1. Summary of hypotheses and evidence reviewed.

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<thead>
<tr>
<th>Hypothesis</th>
<th>Summary of evidence</th>
<th>Number of studies reviewed</th>
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<tbody>
<tr>
<td>PFM system quality</td>
<td>1. Better PFM quality is positively related to health service delivery.</td>
<td>The evidence on the impact of PFM quality (as measured by broad generic indicators) on health service delivery is uncertain. One study found that the CPIA rating of the quality of budgetary and financial management had a positive and significant association with public sector efficiency in the health sector. Another found that a narrower range of PEFA scores and the broader Country Policy and Institutional Assessment (CPIA) index were unrelated to efficiency in service delivery.</td>
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<td>Quality of governance</td>
<td>2. The quality of general governance is positively related to health care delivery.</td>
<td>A range of indicators of the quality of governance were found to be generally positively related to health service delivery-related outcomes.</td>
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<td>Quality of governance</td>
<td>3. The extent of corruption is negatively related to health service delivery, including health outcomes.</td>
<td>Corruption was found to be persistently negatively related to a range of health service delivery-related outcomes.</td>
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<td>Quality of governance</td>
<td>4. Good governance helps translate public health spending into a more effective health service delivery.</td>
<td>All of the studies reviewed found that public spending on health was more effective in better-governed countries.</td>
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<td>Impact of PFM reforms</td>
<td>5. The introduction of MTEFs is likely to lead to improvements in health service delivery.</td>
<td>The evidence for the positive impact of MTEF reforms on health service delivery is conflicting, although there is more evidence in support of this hypothesis than against it. One study found that MTEF</td>
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Hypothesis Summary of evidence Number of studies reviewed
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1. reform had not prevented a decline in the proportion of budgets allocated to health care. Another study found that the most advanced form of MTEF, i.e. Medium Term Performance Framework (MTPF), was positively related to the cost-effectiveness of public health expenditures. In a third study, MTPFs were found to have a significant positive impact on technical efficiency in the health sector.

6. Fiscal and budgetary transparencies are positively correlated with health service delivery, particularly in well-governed countries with sufficient institutional capacity. Several studies found strong evidence of a positive relationship between various indicators of fiscal and budgetary transparency and outcomes related to health service delivery. 11 (8 were of questionable design)

7. Initiatives to increase transparency and accountability, such as participatory budgeting and community scorecards, are positively correlated with health service delivery. There is some evidence for the positive impact on the health service delivery of initiatives to increase transparency and accountability such as participatory budgeting and community scorecards. 12

8. Fiscal decentralization is likely to lead to better health service delivery outcomes, although the effect is likely to depend on local institutional capacity. Fiscal decentralization in general was found to be positively related to good health service delivery outcomes. However, it seems that decentralization is more likely to be effective where there is sufficient local institutional capacity and accountability. 7

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<th>Hypothesis</th>
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<tr>
<td>Fiscal decentralization 9. Activity-based budgeting is likely to be positively related to health service delivery outcomes.</td>
<td>There is limited evidence on the impact of activity-based budgeting on the quality of health service delivery. One study found that activity-based budgeting had only a limited impact on cost-effectiveness and cost containment.</td>
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<td>Fiscal decentralization 10. The introduction of HMIS is likely to lead to better health service delivery outcomes.</td>
<td>We found no empirical evidence on the impact of FMIS on health service delivery. One study undertaken specifically of HMIS concluded that very little improvement in decision-making in the health sector resulted from the introduction of HMIS.</td>
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<td>Impact of donor-related reforms 11. The introduction of SWAps is likely to be positively correlated with health service delivery, although its predicted impact on aid flow toward health is less certain.</td>
<td>While the scarce available case study evidence provides some initial support for the hypothesis (and for the notion that SWAps can increase resources allocated to the health sector), the lack of studies involving any advanced quantitative analysis does not allow for major conclusions at this stage.</td>
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### 3.1. PFM system quality

The first identified hypothesis addresses the impact of PFM quality on health service delivery outcomes. The PFM literature postulates that higher quality PFM systems produce a number of benefits that could result in more reliable and better-quality service delivery, including health service delivery (Fritz et al., 2012). For instance, better PFM may be
linked to more transparent and accountable governance, which may in turn lead to greater efficiency in public spending (Fonchamnyo and Sama, 2016). The development of more robust budgeting systems, in which stakeholders adhere to formal rules and enforcement mechanisms, may lead to the fiscal system being more stable and reliable. Ultimately, better PFM systems should

- improve overall fiscal discipline, with realistic budgets being executed in a timely fashion;
- improve allocative efficiency, with fund allocations aligned with public priorities;
- maximize social welfare;
- improve operational efficiency, with reduced waste, reduced corruption and other leakages (Fritz et al., 2014).

Within the literature reviewed, two studies (Fritz et al., 2014; Fonchamnyo et al., 2016) attempted to directly evaluate the impact of PFM system quality on health service delivery. Both articles were relatively high-quality econometric studies that relied on cross-country evidence.

3.2. Quality of governance

Hypotheses 2–4 in Table 1 consider the quality of PFM systems and the quality of governance, which are likely to be strongly interlinked. It is widely recognized that state-building and PFM progress are mutually interdependent (Fritz et al., 2012), and there is a large body of empirical evidence on the relationship between the effectiveness of public health spending and the quality of governance. The impact of public spending on health is therefore likely to depend on the institutional capacity of the system to convert this investment into improved public services (Filmer and Pritchett, 1999; Fukuda-Parr et al., 2011). This institutional capacity may include well-designed PFM systems. The reasons why high-quality

3 By “quality of governance”, we mean the quality of formal institutions (such as formal laws and regulations designed to guarantee transparency and accountability and to prevent corruption), as well as the technical capacity and competence of the bureaucracy.
governance is important for better service delivery are numerous and may include the following factors:

- greater technical capacity of the relevant staff and institutions responsible for managing the delivery and auditing of public funds;
- reduced information asymmetries associated with corruption and resource leakages, for example, through a more transparent budget process and greater accountability in the use of funds (Rajkumar and Swaroop, 2008; Holmberg and Rothstein, 2011; Hu and Mendoza, 2013);
- a more transparent procurement process, leading to lower purchase costs, adjustments in incentive systems to prevent fraud and promote cost-effectiveness (Rajkumar and Swaroop, 2008);
- greater responsiveness to population preferences when setting budgeting priorities.

One important function of well-designed PFM systems is that of reducing or preventing corruption and the misuse of public fund by reducing informational asymmetries or by adjusting incentives for agents. These effects should be achieved because well-designed PFM systems establish and implement rules about who has access to public resources and about the processes for accessing these resources, for example through effective procurement mechanisms (Cabezon and Prakash, 2008). This is challenging, however, since politicians may not necessarily find it in their self-interest to increase transparency and accountability (Sarr, 2015). Higher levels of corruption can also lead to less efficiency in PFM, since even well-designed PFM systems may not function well if bribery, stealing and fraud are widespread (Akin et al., 2005). Governmental transfers designed to encourage greater utilization of health services through reductions in user fees may be ineffective if there are significant resource leakages in the process (Gauthier and Wane, 2009) or if inadequate procurement rules result in the payment of exceedingly high prices.

Eleven empirical studies were reviewed for this section, of which all but one were quantitative. The research design of these studies was generally of good standard, with multivariate regression employed. Several studies applied more advanced methods (e.g. fixed-effects and instrumental variable (IV) regressions). Cross-country data were used in
almost all of the studies. While such study designs and data can still produce relevant insights not least due to their wide-ranging, potentially global scope, the extent to which they allow for causal inference tends to be more limited, compared to study designs using ideally randomized designs and/or more fine-grained within-country data.

3.3. Impact of PFM reforms

PFM reforms are generally conducted with the goal of improving service delivery, which should ultimately lead to better health outcomes. Thus, according to the framework developed in Fritz et al. (2012), PFM reforms can have an impact on service delivery through a number of sequential inputs and outcomes, both intermediate and final. In theory, PFM reforms should lead to changes in intermediate outcomes, including the extent of transparency, oversight and accountability in PFM systems. This is expected to lead to improvements in fiscal discipline, with more efficient allocation of resources and greater efficiency in public spending. For these reasons, PFM reforms are expected to lead to improvements in capacity and accountability, and ultimately to better service delivery and population health. At the same time, however, the effectiveness of PFM reforms, as well as the speed and effectiveness of the transmission of benefits between different links in the chain of assumed relationship, is also expected to depend on contextual factors such as existing income levels and governmental and institutional capacity.

3.3.1. Impact of PFM reforms: Medium-term-expenditure frameworks

As mentioned in the Introduction to this review, the defining features of well-functioning PFM systems include the timeliness, effectiveness and predictability of the budgeting process. One important reform to improve the long-term budgetary planning ability of governments is the introduction of fiscal commitment devices, known under the umbrella term of MTEFs. When implemented properly, MTEFs can be viewed as a key component of high-quality PFM systems. The intended purposes of these frameworks include reducing volatility in revenue collection and the disbursements of funds, the
institution of multiyear expenditure controls, as well as improving overall budgetary discipline and increasing the ability to take future fiscal challenges into account in preparing annual budgets (Bevan and Palomba, 2000; Vlaicu et al., 2014). More than two-thirds of all countries had introduced multiyear MTEFs by 2010 in an effort to improve their budgeting processes (Brumby et al., 2013). MTEFs also serve as a straightforward accountability device, enabling government performance to be checked against previously declared targets. A potential complication, however, is that spending patterns may remain unaffected over the medium-term in spite of changing needs (and hence the need to change targets) (Brumby et al., 2013). This lack of change means that the extent to which improved PFM quality translates into improved health service delivery is not certain, since the allocative efficiency may remain unaffected by MTEF reforms.

Three quantitative studies were evaluated to assess the hypothesis that the introduction of MTEFs leads to improvements in health service delivery. All three were of relatively high quality, relying on a range of estimation techniques, including panel data and IV to deal with endogeneity, though still mostly relying only on cross-country data (hence allowing for only a limited degree of causal inference).

3.3.2. Impact of PFM reforms: Fiscal and budget transparency

Transparency is particularly important both as a component and goal of PFM systems as it may help ensure that the benefits of public spending are not distributed only to elites (Bellver and Kaufmann, 2005), and greater transparency may increase public trust in government and thus encourage greater public participation in policy decision-making processes (de Renzio et al., 2005). Greater transparency may also increase allocative efficiency as a result of public officials being subject to increased accountability and gaining greater legitimacy (de Renzio et al., 2005).

One way of enhancing transparency in fiscal policymaking is to undertake open budgeting initiatives aimed at reducing information asymmetries (Fukuda-Parr et al., 2011; Simson, 2014). However, a number of potential contextual factors may limit the gains in service delivery that open budgeting initiatives to improve transparency are intended to facilitate,
such as limited ability and/or incentives for individuals to process and act upon complicated financial information. Adequate institutional mechanisms to monitor and punish corrupt public officials may be needed in order for initiatives to be effective (Carlitz, 2013).

Eleven empirical studies were identified to review the hypothesis that fiscal and budgetary transparency are positively correlated with health service delivery (particularly in well-governed countries with sufficient institutional capacity). However, eight of these studies had questionable research design. Weaknesses in the quantitative studies included a lack of controls and/or a reliance on simple correlations. The qualitative studies, meanwhile, included small case studies with findings that are difficult to generalize to other settings.

3.3.3. Impact of PFM reforms: Participatory budgeting and community scorecards

Effective PFM systems are supposed to make public spending not only more resistant to the influence of corruption but also more closely aligned with the preferences of the general public. PFM reforms may thus include such initiatives as participatory budgeting and community scorecards, as well as more general monitoring.

Participatory budgeting initiatives were originally inspired by the Porto Alegre experiment to study the potential of citizen participation to influence budgeting and spending priorities in Brazilian municipalities (Robinson, 2006). Such initiatives can be viewed as a potential alternative to fiscal decentralization, with a similar goal of increasing the responsiveness of policymaking to people’s preferences and thus ultimately leading to improved allocative efficiency in the delivery of public services (Robinson, 2006). Participatory budgeting is expected to improve health service delivery by enhancing information flows between policymakers and users of health services by strengthening accountability as a commitment device for policymakers and by enabling easier and more frequent checks on policymakers’ actions (Gonçalves, 2014). The mechanism of action is thus somewhat similar to open budgeting initiatives aimed at reducing information asymmetries between principals and agents. However, the focus of participatory
budgeting is not only on increasing accountability but also on enabling
greater information exchange with the aim of increasing responsiveness
to voters’ preferences.

The use of community scorecards, while not generally viewed as a
mechanism aimed at affecting the quality of PFM, is intended to improve
transparency and accountability in health service delivery by increasing
public participation in policymaking and by holding public officials and
service providers to account (Ho et al., 2015). Combining the techniques
of social audits and citizen report cards, community scorecards are a
monitoring tool that is expected to lead to greater public accountability
and responsiveness from the service providers (Mistra and Ramasankar,
2007). While community scorecards may not be viewed as an essential
component of well-functioning PFM systems, they can affect their quality
in a similar way to the accountability and transparency initiatives
discussed before. Another monitoring device is the “balanced scorecard
performance system”, which is basically a collection of a range of
performance indicators in key domains, also described in Edward et al.
(2011) as “an integrated management and measurement tool that enables
organizations to clarify their vision and strategy and translate them into
action”. The rationale for using balanced scorecard systems is similar to
the rationale for using community scorecards.

Twelve empirical studies were reviewed to assess the hypothesis that
transparency and accountability initiatives such as participatory budgeting
and community scorecards will be positively correlated with health
services delivery. One was a synthesis report summarizing empirical
evidence from other studies; three were individual case studies; four were
studies with relatively poor design (e.g. lack of controls in regression, or
lack of clarity about their empirical approach) and four were relatively
high-quality econometric studies. The majority of the studies relied
primarily on cross-country data only.

3.4. Fiscal decentralization

Fiscal decentralization has been promoted as a mechanism for increasing
the responsiveness of public policy to voters’ preferences and for
increasing democratic participation in governance. The theoretical
argument for greater decentralization is the presumed inability of centralized systems to coordinate large-scale activities due to lack of knowledge about local culture and circumstances (Robalino et al., 2001; Akin et al., 2005). In this view, decentralization may bring about Pareto improvements in aggregate welfare, i.e. improvements that help some people without harming others (Akin et al., 2005). Decentralization is also sometimes theorized to encourage yardstick competition among local governments and thus potentially lead to better-quality public services (Adam et al., 2008), especially if accompanied with appropriate performance management. In relation to health service delivery, fiscal decentralization is expected to bring about improvements in allocative and technical efficiency through the above-mentioned mechanisms (Robalino et al., 2001), as well as by involving local communities in decision-making and implementation processes (Uchimura and Jütting, 2009).

However, fiscal decentralization reform will not necessarily lead to greater community participation unless accompanied by additional steps such as the introduction of participatory budgeting and community scorecards, as well, perhaps, as the adoption of SWAs (discussed in the following).

As in the case of transparency, however, the view on the usefulness of fiscal decentralization initiatives is not uniformly positive. A major concern is that decentralization may lead to the capture of decision-making processes by local elites rather than by the communities they represent (Akin et al., 2005), thereby promoting rather than preventing corruption (Vian and Collins, 2006). Another concern is that the poorer regions may suffer if the redistributive powers of central government are reduced (Robalino et al., 2001). The positive impact of decentralization reforms is also viewed sceptically in the context of institutionally weak systems (Lewis, 2006).

Seven empirical studies were reviewed to assess the hypothesis that fiscal decentralization is likely to lead to better health service delivery outcomes, although this effect will depend on the local institutional capacity. Of these, one was a quality-adjusted literature review of other empirical evidence. The remaining six articles all used relatively high-quality econometric approaches based on cross-country data analysis (for which, as mentioned earlier, it is harder to draw causal inferences, even with sophisticated econometric methods).
3.5. Other PFM reforms

“Activity-based budgeting” is an MTEF-related reform designed to improve the budgeting process by increasing the capacity to set appropriate priorities and cost activities, which should lead to a greater sense of ownership of the budgeting process. Under activity-based budgeting, changes in funding allocations should be related to changes in activities (Anipa et al., 1999) rather than being based simply on the spending in previous years (Bentes et al., 2004).

“Performance-based budgeting”, meanwhile, aims to improve health service delivery through a number of assessment mechanisms designed “to strengthen links between the funds provided [...] and their outcomes/outputs” (Brumby and Robinson, 2005, p. 5). These assessment mechanisms act as incentives related to achieving certain service quality targets. Although there is an extensive literature on the use of such mechanisms in the financing of health care, almost all of this literature is limited to high-income countries (HICs) (Brumby and Robinson, 2005; Glied and Smith, 2011). Performance-based budgeting is not considered in this review because such budgeting can affect health service delivery not only through changes in PFM quality but also through the provision of strong incentives on organizational behavior focused on the impact of cost-containment incentives.

Another potentially important factor for improving health service delivery is the greater reliability of funding flows. This could be achieved, for example, by a more efficient setup of payroll mechanisms. Additionally, stronger and more competitive open market procurement systems may theoretically result in lower costs, more reliable resource flows and better health service outcomes. As yet, however, there is little to no reliable evidence on this (Andrews et al., 2014). Finally, the introduction of health management information systems (HMIS), of which financial management information systems (FMIS) are a subcomponent, is another reform with the potential to improve health service delivery. Such systems are intended to enable the integration of reliable data which can then be used to measure and ultimately improve the quality of health services (Chaulagai et al., 2005).

There are therefore two hypotheses to be evaluated: first, activity-based budgeting is likely to be positively related to health service delivery
outcomes; second, the introduction of HMIS is likely to lead to better health service delivery outcomes.

Four empirical studies were reviewed in this group, none of which were large-N econometric/statistical studies. All four studies relied on case study design, thus limiting their ability to generalize findings to other contexts.

3.5.1. Impact of donor-related reforms

Given the importance of donor involvement in the health care and PFM reform agendas of developing countries, the literature review looked specifically at the theoretical and empirical evidence for links between typical donor-related PFM reforms and their impact on health care delivery.

In the context of donor support, SWAs have been adopted in many countries as a strategy to increase the efficiency of health spending. SWAs are designed to improve efficiency by increasing the responsiveness of health policy to local priorities, fostering greater public participation and improving interaction between different key stakeholders (particularly donors) in a fragmented system (Cassels and Janovsky, 1998; Bodart et al., 2001; Chansa et al., 2008). SWAs are expected to strengthen coordination between different players, serve as a mechanism for improved coordination and alignment between donors and partners, improving domestic ownership and accountability, reduce transaction costs, improve planning, improve resource allocation and policy implementation capacity and ultimately to lead to better health service delivery (Dickinson, 2011). However, the implementation of SWAs may also lead to a perception on the part of some donors that they are losing control. For this reason, there is some concern that the implementation of SWAs may lead donors to reduce aid toward health programmes in low-income countries (LICs) (Sweeney et al., 2014).

Three empirical studies were found in the literature relevant to the hypothesis that the introduction of SWAs is likely to be positively correlated with improved health service delivery. However, there is less certainty about the predicted impact of SWAs on aid flow toward health. None of the studies involved advanced quantitative analysis. One was a literature review, while the other two were case studies.
3.6. **Reviewing the identified hypotheses**

The literature review has reviewed the selected studies in order to draw out more clearly their implicit or explicit hypotheses regarding the relationship between PFM and health service delivery. These hypotheses are summarized here alongside a concluding set of remarks identifying the degree to which the hypotheses have been supported by the reviewed empirical evidence.

3.7. **Summary of the evidence**

The studies reviewed use different definitions of PFM and health service performance, making it problematic to draw comparisons between them. In addition, while it is preferable to use a direct measure of PFM quality (e.g., a measure that can take into account the ability of PFM systems to ensure the transparency and reliability of the budget process), aggregate scores may suffer from a number of disadvantages. For example, aggregate scores may be unable to take into account separate subdimensions of PFM, or to distinguish between a PFM system that scores highly with the correct “form” but that nevertheless fails to deliver actual functionality. An alternative approach is to consider the impact of proxies for these separate dimensions, such as the extent of transparency, the quality of governance and the responsiveness of PFM and related institutions.

Within this review, empirical evidence on the nature of PFM systems was taken from studies in which the impact of PFM systems was more or less clearly defined and measured (e.g., as CPIA index or PEFA scores) as well as from studies in the health system-strengthening literature that concerned dimensions of health systems in some way related to well-functioning PFM systems, though these latter studies did not explicitly measure PFM quality.

One of the strongest and most consistent findings was the evidence that simply increasing public funding of health programmes is unlikely to be as effective in poorly governed countries as in better governed countries (with “governance” likely to include the quality of PFM). Good governance is also likely to be positively correlated with public sector efficiency in achieving good population health outcomes.
There is some evidence, however, that greater participation of stakeholders in the design, implementation and evaluation of health services may be an effective way to improve their quality so as to maximize the benefit of additional financing. This could be achieved through mechanisms such as participatory budgeting initiatives (Baiocchi et al., 2006; Gonçalves, 2014), community scorecards (Mistra and Ramasankar, 2007; Ho et al., 2015), community-based monitoring of primary care provision (Bjorkman and Svensson, 2007) and SWAps (Bodart et al., 2001; Chansa et al., 2008; Dickinson, 2011).

Fiscal decentralization was found to be generally positively related to population health (Robalino et al., 2001; Uchimura and Jütting, 2009), although this appeared to be dependent on the availability of good local institutional capacity. However, decentralization may also lead to some undesirable results, such as declining proportions of budgets going to primary health care or other public goods (Akin et al., 2005; Brixi et al., 2013). Despite fiscal decentralization being a widely adopted policy in LMICs, the evidence thus does not indicate that decentralization is unambiguously positive for health service delivery. In some cases, therefore, continued central control over the allocation/use of funds may be beneficial, especially in health care.

The studies review found that MTEF reforms usually improve budget reliability and fiscal discipline, and sometimes lead to improvements in the technical efficiency of the health sector (especially in the case of MTPF reforms). However, such reforms may actually lead to lower allocation of funding toward health, especially if there is significant fungibility in health aid financing (Lu et al., 2010; Bevan and Palomba, 2000). The reduced funding of health care observed in some countries may reflect a genuine preference for alternative spending targets, for example on education (as discussed in Bevan and Palomba, 2000), even in countries with apparently well-governed PFM systems.

In some cases, greater public financial accountability can have unintended consequences. For example, some service providers, when placed under pressure, may focus less on the qualities of the services they deliver and opt instead to focus on quantitative outcomes. Nevertheless, as the evidence for this unintended consequence comes only from the USA,
which has a highly idiosyncratic health system setup, this finding may not apply in LMICs.

There is evidence of greater allocations of funding toward health (as well as greater reliability of health funding) in countries with greater budget transparency and less corruption (Mauro, 1998; Robinson, 2006; Simson, 2014; Sarr, 2015). In some cases, this was even found to be translated into better health outcomes, including lower rates of infant mortality rates and higher rates of health care utilization (Gupta et al., 2000; Bellver and Kaufmann, 2005; Fukuda-Parr et al., 2011; Sarr, 2015). However, the reduced funding of health care observed in some countries may reflect a genuine preference for alternative spending targets, e.g. on education (as discussed in Bevan and Palomba, 2000), even in apparently well-governed PFM systems.

4. Discussion

While the overall evidence in this field appears to be patchy, the evidence in some subfields is much more developed than in others. For example, there were 11 empirical articles on the impact of good governance, most of which were of high-quality design, while only two empirical studies were found on the impact of PFM system quality (measured directly) on health services delivery. A significant proportion of the reviewed articles were single-country case studies, or qualitative articles where it was not completely clear how the conclusion was reached. Many of the quantitative studies we reviewed were also not ideal, with some relying on simple correlations, some using regression analysis without appropriate controls and some employing inappropriate methodological approaches. On the other hand, quite a few of the econometric studies we reviewed relied on more advanced approaches such as panel data analysis and IV regression. Even these better-designed studies, however, often relied on cross-country data only, hence allowing for limited causal claims. Only one study made use of a truly randomized design, implying greater causal inference. Nevertheless, given that this field appears to be in its early stages of development, and given the difficulty of finding relevant articles among hundreds of results generated by the search terms, we believe that the 53 empirical
articles that we found (not counting the articles that informed the theoretical part of our review) provided a good basis for this initial review. In the future, it may be useful to have more studies focusing on the specific subdimensions of PFM systems. One way to start doing this would be to break down the analysis of the broad indicators into their component parts.

5. Conclusion

The theoretical literature predicts that high-quality PFM systems will have a positive impact on the various dimensions of performance, whereas evidence from empirical studies is more limited, though generally positive. Overall, evidence shows good governance has an important role in health service delivery. Increased public funding of health programmes is likely to be more effective in countries with better governance, but what this means in practice is highly context-specific.

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Public Financial Management and Health Service Delivery


