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Conditioned Domestic "Co-financing" Policies in Global Health

A Landscape Analysis

SUSAN SPARKES · MYMAI YUNGRATTANACHAI · VICTORIA FAN

Abstract

Conditioned domestic financing policy, referring to the domestic financing of health projects, programs, and national responses conditioned by global health funding agencies and recipient country governments, is one mechanism to promote sustainability and country ownership. We aim to understand how the concept is defined and operationalized by agencies and how such policies relate to overall health spending patterns. We first landscape the conditioned domestic "co-financing" policies and related accountability mechanisms of selected agencies. Next, applying quantitative analysis of publicly available data, we examine two agencies—Gavi and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM)—to analyze the magnitude of conditioned domestic financing, relative to external assistance for health, and separately, to domestic general government health expenditure. We find wide variation in agency definitions and policies for domestic obligations in terms of what is required, reported, and accounted. The quantitative analysis highlights potential discrepancies between *de jure* policies and how they are *de facto* implemented. The results raise questions about how these policies are operationalized in terms of overall budget space for health and overall domestic sustainability planning. Both global and domestic policymakers should consider sector-wide domestic government financing for health to address the current conditioned domestic "co-financing" policies.

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Susan Sparkes
World Health Organization

MyMai Yungrattanachai
World Health Organization

Victoria Fan
Center for Global Development

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CENTER FOR GLOBAL DEVELOPMENT
2055 L Street, NW Fifth Floor
Washington, DC 20036

1 Abbey Gardens
Great College Street
London
SW1P 3SE

www.cgdev.org

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Contents

Introduction 1

Methodology and data 2

Results 5

Agency definitions of "co-financing" 5

Desk review of "co-financing" policies 6

Quantitative analysis 10

Limitations 19

Discussion 20

Concluding remarks 23

References 24

Appendices 30

Figures

1. Average total agency disbursements as a percentage of external assistance for health, 2017–19 11

2. Routine immunization domestic government expenditure as a percentage of Gavi total disbursements, 2017–19 13

3. Domestic expenditure on routine immunization to Gavi total disbursements, 2017–19, in current USD (million) 13

Tables

1. Agency definitions and implementation policy of "co-financing" 5

2. Agency definitions and implementation of eligibility, "co-financing", and compliance monitoring 7

3. Average total agency disbursements as a percentage of external assistance on health, 2017–19 11

4. Summary of average domestic government health programmatic expenditure as a percentage of donor programmatic expenditure, 2017–19 14

5. Average Gavi domestic "co-financing" as a percentage of domestic general government health expenditure, 2017–19 15

6. Average Gavi-specific domestic "co-financing" as a percentage of domestic government health programmatic expenditure, 2017–19 16

7. Average GFATM domestic commitments as a percentage of domestic general government health expenditure, estimated 2020–22 17

8. Average GFATM domestic commitments as a percentage of GFATM program budget, estimated 2021 18

A1. Metric sources 30

A2. Analysis formula and notes 33

Introduction

Countries around the world, and in particular low- and middle-income countries, face fiscal tightening resulting from the COVID-19 pandemic and its economic impacts.[1] The combination of economic downturn, labor market pressures, increasing debt burdens and interest rates, and rising prices will only continue to pressure public sector budgets, especially as interest payments exceed entire health budgets.[2,3] The sustainability of health systems, particularly in those countries looking to transition from external funding, becomes especially important.[2,4,5]

This concern about the sustainability and overall coverage achievement in global health is not new.[6] The large increases in external funding for health in the early 2000s have long raised questions about domestic budget prioritization of health and the fungibility of external assistance for health, i.e., that additional external resources displace domestic government resources for the health sector.[7–9] In recognizing this issue, certain global health funding agencies (henceforth 'agencies') introduced "co-financing" policies to promote greater domestic resource allocations, both for health and for the specific programs and interventions they support. As countries and agencies alike grapple with how to sustainably and efficiently invest in programs to address ever-complex health challenges, there is a need to review such "co-financing", or conditioned domestic financing, policies to understand their intended function and their impact on overall public sector budgets for health, as well as for externally supported interventions. There is no published literature to our knowledge about the ways or impacts in which "co-financing" policies vary across agencies.

Domestic "co-financing" is a policy or tool leveraged by some global health funding agencies, generally to promote sustainability, collaboration, and country ownership in relation to externally supported programs or initiatives. In this paper, we examine specific domestic "co-financing" definitions across agencies. In general, these policies specify the amount of domestic resources, e.g. government or other public resources, that must be committed, paid, and/or matched to donor allocations. For this paper, the concept of "co-financing" refers to the conditioned domestic "co-financing" of health projects, programs, or national responses by recipient country governments, as specified or required by an agency. However, we recognize that in the broader multilateral development finance space, the term "co-financing" refers to joint finance of donors, such as the Global "co-financing" Platform launched by major multilateral development banks.

In this study, we focus on the agencies that use grant financing, the predominant form of external health financing, in contrast to loan or concessional financing.[10] According to the OECD Creditor Reporting System (CRS) database, health official development assistance (ODA) gross disbursements for development countries in 2021 were 86 percent ODA grants, 14 percent ODA loans, and less than 1 percent equity investments.[i] We landscape domestic "co-financing" policies of selected agencies focused on grant financing and developed a typology of "co-financing". We further investigated

i Health ODA defined as OECD CRS sectors: 120 Health + 130 Population Policies/Programmes & Reproductive Health.

the domestic "co-financing" policies used by agencies, the stated policy goals (e.g. promoting country ownership or sustainability), how these commitments and requirements were tracked, and estimates of size of agency-specific domestic "co-financing" in relation to country domestic government health expenditure.

The overall objective of this study is to shed light and understanding as to how domestic "co-financing" policies come together from a domestic financing perspective. While domestic "co-financing" policies are developed separately by agency, they are inherently linked in country, domestic budgeting processes and allocation decisions. This study is not an evaluation of agency-specific, domestic "co-financing" policies. Rather, it works to explain and unpack the differences in policies to support dialog around effective approaches that can best support countries' health-related spending, coverage, and outcome objectives.

Methodology and data

For this landscaping analysis, we first purposively selected seven agencies: Gavi; the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM); the World Bank (WB); the Global Financing Facility (GFF); the Gates Foundation; the US President's Emergency Plan for AIDS Relief (PEPFAR); and the UK Foreign, Commonwealth and Development Office (FCDO). While not an exhaustive list of agencies, this sample of multilateral agencies, global health initiatives, and bilateral agencies may serve as a baseline to understand how "co-financing" policies are defined, interpreted, and used. Excluded was the World Health Organization (WHO), which predominantly uses a country-based staff model for technical assistance rather than as a grant disbursement model. These agencies were also represented in the Sustainable Financing for Health Accelerator that convened to promote greater alignment across donors in support of sustainable, domestic financing for health.

This study employed qualitative and quantitative methods to explore the relationship between an agency's domestic "co-financing" policies and domestic general government health expenditure. We focus on domestic government health expenditure as the key source of domestic funding for sustainable and equitable coverage expansion.[5,11] Only data from publicly available sources was used in the quantitative analysis for transparency and replicability purposes.

Over August to September 2022, we conducted a literature review along with one-on-one stakeholder interviews of the key health financing focal points within the agencies to focus on eligibility, transition, and "co-financing" policies used by global health funding agencies to answer the following four key questions:

- *Does the agency have a specific "co-financing" policy in place?*
- *If there is a policy in place, for what purpose does the agency state that it uses "co-financing"? In what ways does the agency state that it uses "co-financing" as a lever for sustainability and country ownership?*

- *What are the agency's current "co-financing" policies in practice?*
- *How does the agency track and monitor the implementation of co-financing?*

We first compiled the definition of "co-financing" used for the selected agencies. Definitions encompassed both the organization's official definition of the term (or *de jure* definition), as well as the application and implementation (or *de facto* definition) of "co-financing". Next, we parsed and mapped "co-financing" policies for each agency, including "co-financing" application and compliance monitoring as well as eligibility criteria. Eligibility criteria can indicate when a country is "transitioning" or has "transitioned" from funds.

Next, we triangulated results from the desk review using quantitative analysis of publicly available, cross-country databases on health financing, including data publicly available from the GFATM and Gavi on their websites. The main objective of using databases and publicly available data is to quantify how these policies manifest in country spending and governments budgets, broadly defined, to answer the fifth key research question:

> *What is the magnitude of an agency-specific "co-financing" compared to a country's domestic general government health expenditure (GGHE-D) and specifically, programmatic government spending?*

Based on seven interviews with agency health financing focal points conducted over August to September 2022, several countries emerged as "co-financing" case studies, of which six were selected for in-depth analysis, given their diversity by income and region as well as application and execution of "co-financing" policies. The six countries chosen for the quantitative analysis of Gavi and GFATM were Ghana, Lao PDR, Mozambique, Nigeria, Pakistan, and Sri Lanka, five of which are lower-middle-income countries and one (Mozambique) a low-income country as classified by the World Bank.[12] These countries are in high levels of debt distress or are in debt distress or are facing high debt burdens, according to the World Bank's Debt Sustainability Analysis.[1,13,14] The issue of donor transition and greater domestic "co-financing" demands placed as countries reach lower-middle-income status explains the selection of these countries for more detailed analysis. Due to quantitative data limitations, Pakistan and Lao PDR were not included in all analyses. In addition to these selected countries, data for 26 countries for which publicly available GFATM Board documentation existed was also included.

For all quantitative analysis, only publicly available data was used. Quantitative data over from 2017–2021 was obtained through the WHO Global Health Expenditure Database (GHED), the OECD Creditor Reporting System (CRS) database, World Bank World Development Indicators (WDI), Gavi and GFATM published data reports, the UNICEF-WHO JOINT Reporting Form on Immunization (JRF) database, and GFATM Board documentation on the Secretariat's Recommendation on Funding from the 2020–2022 allocation cycle.[ii] See appendix for more details on country selection and data sources.

ii Represented in the 43rd, 44th, 45th, 46th, 47th and 48th Board Meeting documentation.

Gavi and Global Fund Domestic, "co-financing" data

Gavi's domestic "co-financing" data is sourced from country-specific "co-financing" reports, which are accessible to the public on Gavi's website. These reports offer detailed historical and projected information on each country's eligibility status, "co-financing" achievements, and obligations. Specifically, they outline the history of Gavi-supported vaccines introduced in each country, the country's "co-financing" payments made to date, and the "co-financing" requirements for the current year. Additionally, the reports include projections for future "co-financing" needs based on Gavi's latest forecasts at the time of publication.

Domestic commitments made by countries in the Board grant approval process are taken as a proxy for expected domestic "co-financing" against GFATM grant allocations. The GFATM also formally communicates minimum "co-financing" requirements through its allocation letters; however, these are figures are not publicly available. Therefore, there may be discrepancies between the domestic commitments countries make during the grant approval process and the minimum domestic "co-financing" amounts set by the GFATM in its allocation letters. The GFATM-related domestic commitments are used in this analysis for the following reasons: (i) they are the only publicly available figures from the GFATM related to domestic spending; (ii) these are the only figures related to domestic financing for the three diseases and RSSH that are reported to the GFATM Board; (iii) the figures are communicated by countries to the GFATM in terms of their own domestic spending commitments; (iv) they serve as the basis for reported domestic financing catalyzed by GFATM grants, as well as the basis for domestic financing GFATM investment case projections; and (v) they are used by the GFATM's Office of Inspector General to demonstrate country compliance with the GFATM's Sustainability, Transition, and Co-financing Policy.[35,36]

We analyze (a) the scale of Gavi and GFATM in the country's external health financing portfolio, (b) Gavi and GFATM disbursements relative to general domestic government health expenditure (GGHE-D), and finally, (c) the magnitude of agency-specific domestic "co-financing" requirements in relation to domestic government spending on health, including programmatic spending. We investigated the following indicators, with details on the analysis methodology and data sources in Appendix:

a) **Total agency disbursements as a percentage of external assistance on health** as an indication of the agency presence compared to country's external health assistance expenditure
b) **Domestic government health programmatic expenditure as a percentage of agency disbursements** as a measure of the scale of government programmatic compared to agency spending on health, providing insight on reliance for programmatic health financing
c) **Agency-specific domestic "co-financing" as a percentage of domestic general government health expenditure (GGHE-D), including programmatic spending** to express the "co-financing" magnitude expected or required, compared to actual domestic health financing expenditure, as well to provide insight on whether and to what extent domestic expenditure can meet the agency's "co-financing" requirements.

Results

Agency definitions of "co-financing"

Table 1 presents the compiled *de jure* definitions of "co-financing" by agency, demonstrating that terminology varies across agencies. The table shows that, when referring to the requirements placed by an agency on domestic funds, the Gavi and GFATM use the term "co-financing" whereas the World Bank and the Global Financing Facility use the term "counterpart financing". In contrast, when referring to joint financing from multiple external organizations including other multilaterals, Gavi and GFATM use the term "blended finance" whereas the World Bank uses the term "co-financing". Agencies also vary in their expenditure tracking mechanism for domestic "co-financing", broadly classified into two categories: expenditure against the procurement and purchase of commodities, or expenditure against general health sector support and health service delivery.

TABLE 1. Agency definitions and implementation policy of "co-financing"

Agency	Definition of "co-financing"	Use of Domestic "co-financing" Funds
Gavi	Amount of new, domestic public resources that are allocated to the purchase of vaccines matched to various levels of agency investments.	Commodities (vaccines)
GFATM	Amount of new, domestic public resources spent on disease program/health systems strengthening matched to various levels of agency investments.	Health service delivery (disease programs, resilient and sustainable systems for health (RSSH)). This may include specific costs such as commodities, human resources, specific programs for vulnerable populations, but is not limited to those costs. Co-financing requirements are differentiated across income levels, including the magnitude and targeting of requires domestic investments. For LICs, "co-financing" contributions are not restricted to disease program, and they may spend 100% of their investments in RSSH. In lower-LMICs, "co-financing" contributions should be in line with a minimum of 50% invested in disease programs. Upper-LMICs with high disease burden should be in line with a minimum of 75% in disease programs.[15] In UMICs, "co-financing" must be focused on disease programs and/or RSSH activities focused on roadblocks to transition, with a minimum of 50% focused on interventions for key and vulnerable populations.

TABLE 1. (Continued)

Agency	Definition of "co-financing"	Use of Domestic "co-financing" Funds
World Bank	Co-financing is considered the proportion of an overall health reform project that is financed by the World Bank in relation to the overall estimated cost to the government or otherwise the amount financed by another development agency jointly with the World Bank. Loans: Counterpart i.e. government requirement depends on the type of IDA grant conditional on the level of debt distress; more generally, counterpart financing refers to domestic public resources to pay back the principal amount and interest of the concessional loan portion of an IDA grant.	Counterpart financing and debt repayments are tracked. Loans: Not applicable since countries are responsible to pay back of concessional loan to the agency.
Global Financing Facility	No formal definition but interviewees interpreted it as amount of funding from other funding agencies as part of overall investment case cost estimates.	Not tracked but notionally linked to investment case estimates.
Gates Foundation	In GAVI-associated projects, will follow Gavi definition.	If GAVI-associated, commodities (vaccines).
PEPFAR	No explicit policy, definition or use of co-financing.	Not applicable
FCDO	No explicit policy, definition or use of co-financing.	Not applicable

Sources: Compiled by authors over August to September 2022. See Appendix 3 for source references.

Desk review of "co-financing" policies

Next, we landscaped the "co-financing" policies across agencies (Table 2). Both Gavi and GFATM have published clear and updated eligibility and "co-financing" policies. Both organizations have published a general framework for funding allocation and transition that guide country-specific negotiations. In contrast, the eligibility and "co-financing" requirements for the bilateral agencies were less apparent. The World Bank's policies for IDA grants are explicit and transparent, although not using the term "co-financing". Implications and enforcements attached to achieving "co-financing" requirements vary by agency.

TABLE 2. Agency definitions and implementation of eligibility, "co-financing", and compliance monitoring

Agency	Eligibility for Funding			Co-financing Application			Compliance Monitoring		
	Income	Disease Burden	Credit Rating	Measured by	Amounts Scaled by	Spent on	Consequence if Met	Consequence if not Met	Exception
Gavi	Yes	No	No	Share of certain vaccines paid for by domestic government; new, additional funds not from donor.	Country income eligibility phases, starting fraction and price fraction. Initial self-financing countries contribute USD 0.20 per dose. Counties in preparatory transition experience a 15% increase each year in the price fraction. Countries in accelerated transition experience a linear increase to reach 100%, or fully self-financing. Periodic follow-up campaigns have a range of "co-financing" from 2% to 5%.	Vaccine portfolio (including supply chain).	No	If country remains in default for more than one year, support for the relevant vaccine will be suspended until all requirements are met unless the Board considers exceptional circumstances.	Yes
GFATM	Yes	Yes	No	Progressive government health expenditure, uptake of key program costs and negotiated incentive: USD/local currency for disease program at amount meeting "co-financing" incentive (at least 50% for LICs, at least 100% for MICs); additional funds not from other external sources. Magnitude/targeting of "co-financing" requirements differ by income level.	(1) Magnitudes and targeting of "co-financing" requirements are scaled by country income level. (2) Magnitudes are proportional to country's grant allocation.	RSSH and programmatic investments (more flexibility for lower income countries).	If sufficient "co-financing" commitments are made in line with requirement receive "co-financing" incentive (~15% of allocation).	If "co-financing" requirements are not met, may withhold/ reduce current grant and/or reduce future allocations. The exact reduction is generally proportional to the non-realization of "co-financing" requirements by country.	Yes
World Bank (IDA) and GFF	Yes	No for general IDA Yes for GFF	Yes	Debt Sustainability Analysis conducted for low-income countries, resulting in debt distress risk ratings. Countries at high risk or in debt distress (red light) can benefit from 100% grants, medium-risk countries (yellow light) from 50%, while low-risk countries (green light) cannot benefit from grants. Middle-income countries have access to capital markets based on credit rating agencies.	Low-income countries can evaluate the level of concessionality of the loan portion of WBG assistance (also known as 'grant element') using the online grant element calculator. GFF grant may be used to leverage domestic resources, IDA/IBRD financing, and other external sources including private sector, as well as buy down IBRD loan.	World Bank financed project, with Bank payments to country expended against disbursement loan indicators (DLI).	Compliance with required debt servicing payments affects market access but increases eligibility for grant element of IDA assistance. GFF country-specific use cases indicate how GFF grant may be leveraged for "co-financing" in lieu of government expenditure for loan financing.		
Gates Foundation	No explicit policy on eligibility or co-financing; negotiated on a country or organization basis; follow Gavi policy if Gavi-associated project.								
PEPFAR	No explicit policy on eligibility or co-financing; negotiated on a country basis, and may also consider GFATM "co-financing" policies and data as a form of "co-financing".								
FCDO	No explicit policy on eligibility or co-financing; may be negotiated on a country and/or organization basis.								

Sources: Compiled by authors over August to September, 2022. See Appendix 3 for source references.

Case study and desk review of Gavi and GFATM and their "co-financing" policies[iii,iv]

Gavi and GFATM had official documentation for the explicit term "co-financing". Gavi's and GFATM's domestic "co-financing" policies are applied differently, with Gavi focused on "co-financing" for the purchase of commodities and GFATM focused on "co-financing" for health sector and overall programmatic expenditures. In the case of Gavi, a country is required to provide the necessary "co-financing" amounts ex ante before Gavi-supported vaccines are released. In contrast, in the case of GFATM, the country agrees to a "co-financing" amount but actual provision of those funds is not a requirement to receive the agency funds. Rather, domestic "co-financing" thresholds are used as an incentive to release the entire grant (minimum 15 percent withheld without meeting "co-financing" requirement). As referenced above, the only publicly available documentation of GFATM "co-financing" information by country is from the Board's approved domestic commitments. Notably, in the GC7 funding round, GFATM has begun to specify domestic "co-financing" amounts in allocation letters. To our knowledge, exactly how domestic spending to meet either domestic commitment or the minimum additional "co-financing" requirements are tracked, monitored, and accounted is not stated publicly.

To determine eligibility for Gavi funding, countries are categorized on thresholds defined by their three-year average GNI per capita as based on World Bank thresholds for country income categories, annually adjusted for inflation. Under the Gavi eligibility framework, countries should aim to transition to a final stage of complete self-financing of vaccination. The categorization of funding eligibility directly ties to a country's "co-financing" requirements. Gavi deems "co-financing" amounts as new, additional domestic public financing not from other Gavi funds. The required "co-financing" amount is converted into vaccine doses that must be paid for by domestic governments. The four country categorizations for 2022 include:[16]

1. **Initial self-financing (ISF):** Low-income countries with GNI per capita below US $995 in 2019 (currently $1086 in 2023). Countries may fall within this phase for a variable duration. In this phase, countries co-finance all vaccines at US $0.20 per dose with no annual increase.
2. **Preparatory transition (PT):** Low-income countries developing into higher economic statuses as income per capita increases. Countries may fall within this phase for a variable duration. In this phase, countries increase their "co-financing" amount by 15 percent

iii This paper does not examine the World Bank's "co-financing" or counterpart policies, in part due to the differences in terminology but also because the World Bank model of concessional financing is fundamentally different compared to the grants model prevalent by global health initiatives. Concessional financing differs substantially from pure grant financing because of the default country ownership created and thus the incentive to either generate the revenues or ensure domestic government budget allocations.

iv This review focuses on Gavi and GFATM "co-financing" policies, conducted over August 2022 to September 2023. These policies are periodically updated by their respective boards. But even though specific thresholds may shift, the general framework of their "co-financing" policies have not yet changed at the time of this article's publication.

year-over-year. During the first year, a grace period is allowed, where a country's total "co-financing" amount for the portfolio of "co-financed" vaccines remains at the same level as during their ISF phase. However, its "co-financing" requirements for the individual vaccines in its portfolio will be calculated by applying the Starting Fraction, which is calculated by dividing a country's total "co-financing" contribution for all co-financed vaccines by the total cost of all co-financed vaccines. After that, the Price Fraction is applied equally across all vaccines, increasing the previous year's fraction by 15 percent each year; for example, from 10 percent to 11.5 percent.

3. **Accelerated transition (AT):** Once countries cross the Gavi eligibility threshold of US $1580 GNI per capita in 2019 (currently $1730 in 2023), they have five years to achieve full self-financing. Similarly, the first year of the AT phase enables a grace period for countries, where "co-financing" increases by 15 percent as when the country was in its PT phase. However, after that first year, "co-financing" requirements increase linearly to cover 100 percent of vaccinations without Gavi support as Gavi funding is phased out.
4. **Fully self-financing (FSF):** Independent, sustainable financing of vaccines achieved.

Meanwhile, the GFATM uses two factors to determine eligibility for funding.[17] Like Gavi, the first eligibility factor accounts for a three-year average of the country's GNI per capita. Based on World Bank thresholds, countries are categorized into low-income countries (LIC), lower-middle income countries (lower LMIC and upper LMIC), upper-middle income countries (UMIC), and high-income countries (HIC). Unlike Gavi, GFATM has a second additional factor that evaluates the disease burden of HIV, TB, and malaria. Importantly, eligibility is determined by disease component. That is, a country may be eligible for funding for one, two, or all three of the disease components.[18]

All LICS and LMICs are eligible regardless of disease burden. Only UMICs with "high" disease burden are eligible for funding. In terms of domestic co-financing, for countries that are eligible to and receive funding, the GFATM expects countries to meet two core domestic "co-financing" requirements. Countries must show (1) progressive government expenditure on health and (2) progressive absorption of key program costs. In 2014, a "co-financing incentive" to implement its "co-financing" policy, whereby a certain percentage of a country's allocation (at least 15 percent, but certain circumstances more) is conditioned on a country committing to and then realizing a minimum amount of that funding. The "co-financing" incentive is made available if countries contribute additional domestic commitments. Both the magnitude and the focus of these domestic investments differs by country income levels:

1. **LICs:** Regardless of disease burden, "co-financing" contributions are not restricted to the disease program or related RSSH costs and have the flexibility to demonstrate that their investment is 100 percent for RSSH interventions.
2. **Lower LMICs:** "Co-financing" contributions should be in line with identified priority areas within the disease program or RSSH, with a minimum of 50 percent in disease program interventions.

3. **Upper LMICs:** For upper-LMICs with a "high," "severe," or "extreme" disease burden, "co-financing" contributions should be in line with identified priority areas within the disease program and RSSH, with a minimum 75 percent in disease program interventions. In countries with a "low" or "moderate" disease burden, applicants are encouraged to show a greater share of domestic contributions that will address systemic bottlenecks for transition and sustainability.
4. **UMICs:** Regardless of disease burden, "co-financing" contributions should be focused on disease components and RSSH activities to address roadblocks to transition, with a minimum 50 percent invested in specific disease components targeting key and vulnerable populations, as relevant to the country context.[17]

Quantitative analysis

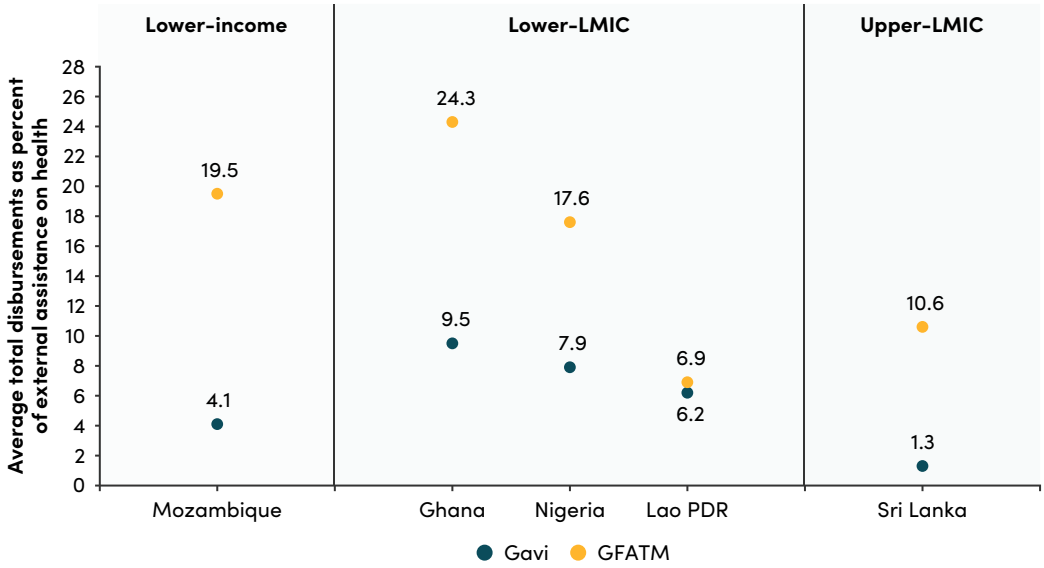
Presence of donor in external assistance on health landscape

Gavi disbursements played a larger role in countries in the Preparatory and Accelerated Transition phase, such as Ghana, Nigeria, and Lao PDR. In Mozambique, an "Initial Self-Financing" country in 2019, Gavi accounted for 4.1 percent of the country's external assistance for health. In Sri Lanka, a "Fully Self-Financing" country, Gavi disbursements were only 1 percent of external health assistance. Gavi's share in a country's external assistance on health appears consistent with its country transition categorization.

Overall, GFATM disbursements played a larger role in countries' total external assistance on health when compared to Gavi (Figure 1), which is expected given that GFATM has substantially more resources and a broader remit compared to Gavi on a global level. For example, between 2017–19 in Ghana, GFATM disbursements constituted almost 25 percent of the external assistance on health expenditure, compared to Gavi disbursements constituting 4 percent. In Mozambique, Ghana, and Nigeria, GFATM played a significant role in the countries' total external assistance on health expenditures. Overall, as countries progress in income status, GFATM disbursements as a share of external assistance on health also decreased, indicating alignment with GFATM's funding transition strategy.[19]

Together, GFATM and Gavi played a significant role in a country's external health funding, indicating higher dependence in Ghana, Mozambique, and Nigeria. For example, in 2019, Mozambique's external assistance on health expenditure as a percentage of its total current health expenditure was 63 percent. Table 3 shows that GFATM and Gavi disbursements alone comprised almost a quarter of Mozambique's external assistance on health expenditure that year.

FIGURE 1. Average total agency disbursements as a percentage of external assistance for health, 2017–19



Notes: Compiled by authors. Denominator: external health expenditure (current USD) from the GHED; Global Fund disbursements (current prices USD) from OECD.

TABLE 3. Average total agency disbursements as a percentage of external assistance on health, 2017–19

Country	Gavi Stage	Income Status	Gavi	GFATM	GAVI + GFATM
Mozambique	ISF	LI	4.1%	19.5%	23.7%
Ghana	PT	L-LMI	9.5%	24.3%	33.8%
Nigeria	AT	L-LMI	7.9%	17.6%	25.5%
Lao PDR	AT	L-LMI	6.2%	6.9%	13.0%
Sri Lanka	FSF	U-LMI	1.3%	10.6%	11.9%

Notes: The average was calculated by summing the numerators over three years and dividing by the sum of the denominators for the same period. Compiled by authors; AT – Accelerated Transition; ISF - Initial Self-Financing; FSF – "Fully Self-Financing"; PT – Preparatory Transition; LI – low-income country; L-LMI – lower-middle-income country; U-LMI – upper-middle-income country; income country classifications are established by the World Bank. Gavi stage and income stage are as of 2019 and persistent to date. Denominator: external health expenditure (current USD) from the GHED; GF numerator: Global Fund disbursements (current prices USD) from OECD; Pakistan excluded, as GHED external health assistance show high standard deviation ranging from 153M $USD (current 2023) in 2017, $54M in 2018 and $606M in 2019.

Ratio of program-specific government spending to agency

As GFATM and Gavi disbursements are primarily earmarked for program-specific expenditures,[v] we calculated the **scale of total domestic government programmatic health expenditure compared to agency disbursements** to provide insight on a country's reliance on external sources for programmatic health expenditure. For the GFATM, this calculation examines country's domestic programmatic expenditure expressed as a share of GFATM disbursements for HIV/AIDS, TB and Malaria respectively. For Gavi, this is determined through a country's domestic programmatic expenditure on routine immunization expressed as a share of Gavi disbursements. Smaller percentages indicate greater donor dependence of the program, i.e. a smaller role of government compared to the agency. Note that the size of government programmatic spending compared to agency disbursements shows a large role of global health funding agencies, which has been defined in the past as a form of "donor dependency."[20]

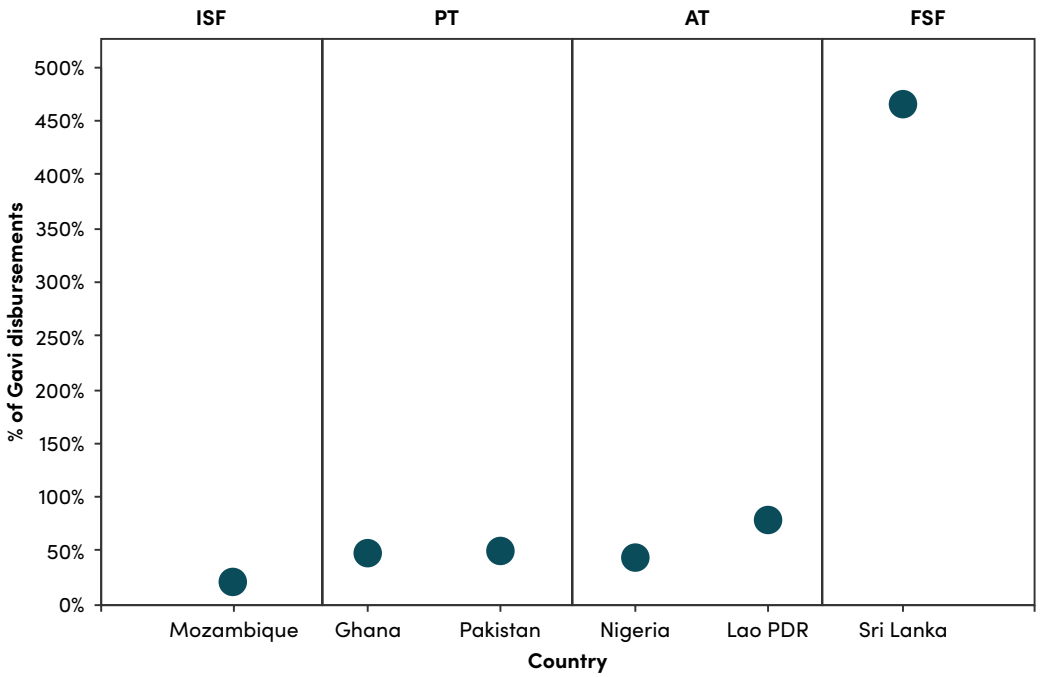
The analyses show that the role of Gavi is clearly tied to a country's income status and tiered. As a country moves through Gavi-classified stages, a country's routine immunization share in relation to Gavi disbursements increases in the sample, indicating country absorption of routine immunization costs (see Figures 2 and 3). For example, in Pakistan, a Preparatory Transition country, the government spent on routine immunization half of what Gavi disbursed from 2017–19. In Sri Lanka, a Fully Self-Financing country, the government spent on routine immunization almost five times what Gavi spends.

In contrast, when examining ratios of government-to-GFATM spending, no pattern is immediately apparent, varying idiosyncratically by country and disease program, even though the GFATM "co-financing" policy explicitly states a policy that varies by income (as well as disease burden) (Table 4).

Whereas government spending on routine immunization as a percentage of Gavi expenditure is bounded between 21 percent and 71 percent for ISF, PT, and AT countries (with Sri Lanka at 464 percent as a classified FSF country), the bounds of government spending on each of the three constitutive diseases as a percentage of GFATM disbursements ranges from 0.4 percent to 644 percent, indicating a potentially significant and variable role of GFATM relative to domestic government expenditures for a given disease area. These percentages may be interpreted in different ways. For example, in Nigeria, government spending on routine immunization as a share of Gavi disbursements was 42 percent, indicating 42 domestic dollars for every 100 Gavi dollars. In contrast, in Mozambique, this percentage was 21 percent, indicating 21 domestic dollars for every 100 Gavi dollars.

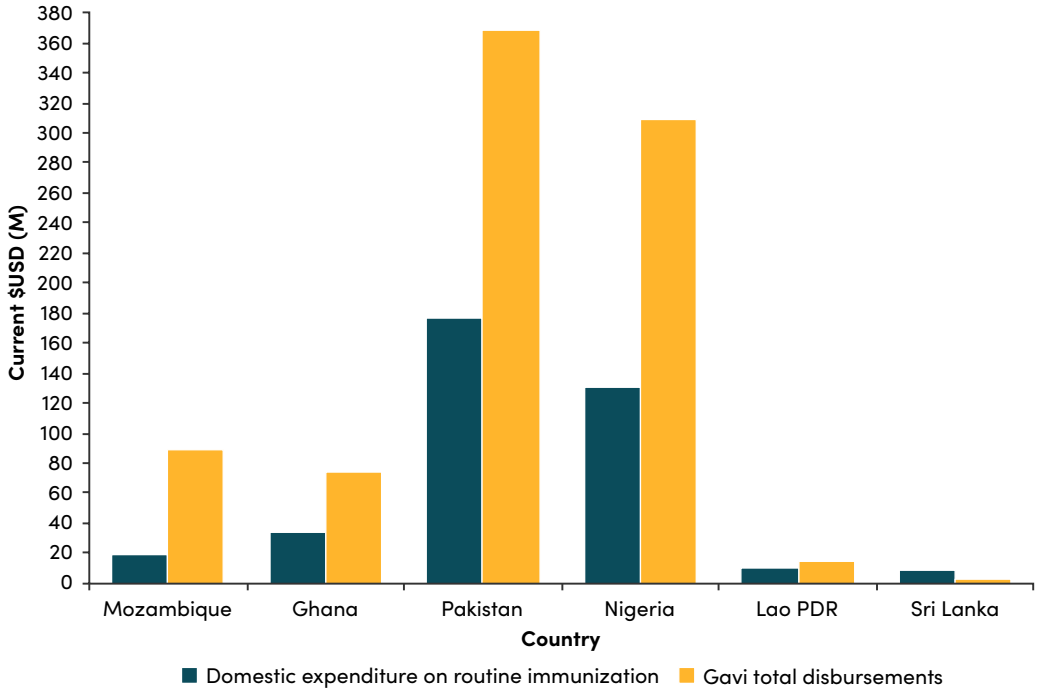
v Both GFATM and Gavi funds may be used for broader system-level investment purposes, e.g. the GFATM's inclusion of RSSH in its grant portfolios.

FIGURE 2. Routine immunization domestic government expenditure as a percentage of Gavi total disbursements, 2017–19



Source: Compiled by authors.

FIGURE 3. Domestic expenditure on routine immunization to Gavi total disbursements, 2017–19, in current USD (million)



Source: Compiled by authors.

TABLE 4. Summary of average domestic government health programmatic expenditure as a percentage of donor programmatic expenditure, 2017–19

Country	Gavi Stage	GFATM Income Status	Gov't Spending on Routine Immunization as % of Gavi	Gov't Spending on HIV as % of GFATM	Gov't Spending on TB as % of GFATM	Gov't Spending on Malaria as % of GFATM
Mozambique	ISF	LI	21%	84%	0.4%	42%
Ghana	PT	L-LMI	46%	11%	12%	411%
Pakistan	PT	L-LMI	48%			
Nigeria	AT	L-LMI	42%	464%	273%	644%
Lao PDR	AT	L-LMI	77%			
Sri Lanka	FSF	U-LMI	464%	309%	312%	77%

Notes: Prepared by authors. The percentage of government spending on routine immunization used as its denominator the disbursements by year from Gavi document "GAVI Commitments-Approvals-Disbursements_31072019" and its numerator as government routine immunization expenditure from WHO-UNICEF Joint Reporting Form. Lao 2018 and Nigeria 2019 were missing data on government expenditure on routine immunization, so previous year values were used in estimation. Sri Lanka refers to data from 2017 only due to lack of data for later years. For the percentage of government spending on HIV, TB and malaria, the denominator refers to the GFATM disbursements (current USD) from OECD CRS and its numerator as government HIV, malaria and TB spending from GHED. Ghana and Mozambique only have programmatic government spending over 2017–2018. Pakistan and Lao were excluded due to lack of available data on domestic government health programmatic expenditure.

Domestic "co-financing" magnitudes

Gavi has made its domestic "co-financing" magnitudes publicly available. In contrast, GFATM communicates its "co-financing" expectations to countries in their allocation letters, approves domestic commitments at the Board level, and then internally tracks and accounts for compliance against targets. To assess domestic "co-financing" magnitude relative to domestic health spending, we calculated **agency-specific domestic "co-financing" as a percentage of GGHE-D.**

The Gavi analysis continues to focus on the six countries and uses the actual domestic allocations for the period 2017–19. The GFATM analysis uses the Board-approved domestic commitments for HIV, TB, malaria and RSSH from 2020–22. We use this period as the 2017–19 domestic commitments numbers reported to the Board were not well-specified, with data quality issues in terms of their relationship to actual expenditures.

Gavi domestic "co-financing" magnitudes

Among the countries sampled, Gavi's "co-financing" requirements reflect a small fraction of the total general domestic government health expenditure (GGHE-D), with almost all countries having equal to or less than 1 percent of the country's GGHE-D allocated to Gavi "co-financing" (Table 5). The only exception is Nigeria, at 1.5 percent. As countries become increasingly responsible for immunization financing, Gavi domestic "co-financing" as a percentage of GGHE-D appears to decrease. Gavi "co-financing" requirement expressed as a percentage of GGHE-D ranged from 0.2 percent–1.5 percent.

TABLE 5. Average Gavi domestic "co-financing" as a percentage of domestic general government health expenditure, 2017–19

Country	Gavi Stage	Gavi-related Domestic "co-financing" as % of GGHE-D
Mozambique	ISF	0.8%
Ghana	PT	0.6%
Pakistan	PT	0.9%
Nigeria	AT	1.5%
Lao PDR	AT	0.5%
Sri Lanka	FSF	0.2%

Notes: Compiled by authors. Denominator: country GGHE-D from GHED. Gavi numerator: Gavi-specific domestic "co-financing" from Gavi country-specific "co-financing" reporting.

Domestic "co-financing" amounts were further analyzed a share of programmatic spending, as disbursements by Gavi is generally tied to program-level spending (see Table 6). In the case of Gavi, domestic "co-financing" amounts were analyzed specifically for domestic government routine immunization expenditure, the area in which Gavi funds support. Among the six countries, all but Sri Lanka allocated more than a third of their government programmatic spending on routine immunization towards Gavi domestic "co-financing" requirements. Two countries, Pakistan and Nigeria, spent more than half of their domestic routine immunization budget to fulfill Gavi "co-financing" requirements. Gavi-specific domestic "co-financing" decreases as the country progresses towards FSF status, indicating consistency between *de facto* "co-financing" with the Gavi "co-financing" and transition *de jure* policy.

TABLE 6. Average Gavi-specific domestic "co-financing" as a percentage of domestic government health programmatic expenditure, 2017–19

Country	Gavi Stage	Gavi-related Domestic "co-financing" as % of Government Routine Immunization Expenditure
Mozambique	ISF	36%
Ghana	PT	45%
Pakistan	PT	45%
Nigeria	AT	64%
Lao PDR	AT	20%
Sri Lanka	FSF	12%

Source: Compiled by authors. Similar data limitations as noted in Table 4 apply to Table 6. WHO-UNICEF JRF note: This figure should include recurrent immunization-specific expenditures for routine immunization financed by the government. Expenditures for routine vaccines (traditional, new, and under-utilized) and vaccine "co-financing" payments using government funds, associated injection supplies, salaries and per diems of health staff working full-time on immunization, transport specific for immunization, vehicles and cold chain maintenance, immunization-specific training, social mobilization, monitoring and surveillance and program management should be included. Shared health systems costs should be excluded in this indicator. Government expenditures include all administrative levels such as national and sub-national governments, all fund allocated through the national and subnational government budgets, social health insurance and pooled financing. Extra-budgetary financing from donors, out-of-pocket and informal private payments are excluded. This estimate should primarily come from robust immunization expenditure tracking methods, such as the System of Health Accounts (SHA). If this source is not available, documents providing actual immunization-specific expenditures such as MoH budget expenditure reports and NIP (National Immunization Program) budget execution reports can be used. Government expenditures can be corroborated using documents from other sources such as ad hoc routine immunization expenditure studies, the baseline year from the cMYP or execution reports, and donor agencies, such as UNICEF country office or Supply Division and PAHO country or regional office. Data is triangulated with UNICEF "co-financing" data for Gavi countries to check that country-reported data on government expenditure on vaccines is greater than the amount disbursed to procure vaccines as part of Gavi Alliance "co-financing" commitments. Data would be provided by Gavi or the UNICEF Supply Division. Similarly, it is important to check that country-reported data on total expenditure on routine immunization are higher than grants disbursed by Gavi for vaccines and health system strengthening. There are rare cases where reported expenditures may be lower than disbursed grants, which occurs when disbursed grants are spent in the following year. [Data Review and Data Estimation Protocols for JRF immunization expenditure data January 2022].

GFATM domestic "co-financing" magnitudes

A country's domestic commitment reported to the GFATM grant allocation for 2020–22, expressed as a share of GGHE-D ranged from 118% for Lesotho to 0.2% for Afghanistan, Guatemala and Ecuador (Table 7). In the case of Lesotho, for every 118 dollars of domestic commitments reported to the Board, there are 100 dollars of general domestic government health expenditure available.

For the GFATM, domestic "co-financing" commitments reported to the GFATM do not appear to systematically decrease as a share for overall GGHE-D by income level, with variation noted across each income category. Of the six upper-middle income countries in Table 7, Namibia is an outlier reporting a high percentage of domestic commitment of GGHE-D 21%. The way GFATM sets, measures, and tracks "co-financing" does not lend itself to a consistent or clear interpretation, therefore it is not possible to make a link with income-level or programmatic dependency on external support.

TABLE 7. Average GFATM domestic commitments as a percentage of domestic general government health expenditure, estimated 2020–22

Country	GFATM Income Classification (2021)	Domestic Commitment as % of GHHE-D
Uganda	1 – LI	36.3%
Guinea-Bissau	1 – LI	25.3%
Malawi	1 – LI	11.5%
Madagascar	1 – LI	9.9%
Gambia	1 – LI	7.3%
Sierra Leone	1 – LI	4.6%
Afghanistan	1 – LI	0.2%
Lesotho	2 – Lower-LMI	117.6%
Benin	2 – Lower-LMI	40.1%
Kenya	2 – Lower-LMI	18.5%
Côte d'Ivoire	2 – Lower-LMI	0.9%
Angola	3 – Upper-LMI	3.6%
Bhutan	3 – Upper-LMI	2.8%
Philippines	3 – Upper-LMI	2.6%
Mongolia	3 – Upper-LMI	2.1%
Indonesia	3 – Upper-LMI	1.0%
Namibia	4 – UMI	21.4%
Azerbaijan	4 – UMI	4.3%
Belarus	4 – UMI	3.4%
Costa Rica	4 – UMI	1.5%
Guatemala	4 – UMI	0.2%
Ecuador	4 – UMI	0.2%

Notes: Assumed average yearly EUR to USD conversion rate as reported by IRS from 2020–2022: https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates; Assumed even distribution of GFTAM-related domestic commitments (2020, 2021, 2022) across three years in order to map average annual (2020 and 2021) National Health GGHE-D at an annual rate.

Source: Compiled by authors from Global Fund Board Documentation, Decisions on Secretariat's Recommendation on Funding from the 2020–2022 Allocation accessed here: https://www.theglobalfund.org/kb/board-decisions/b43/ and WHO Global Health Expenditure Database accessed here: https://apps.who.int/nha/database.

Table 8 presents GFATM-related domestic commitments as a share of the overall GFATM program budget, indicating an increasing trend in domestic commitments as a share of overall program budgets as country income increases. There is a lack of domestic disease program expenditure available to understand its relationship to domestic commitments. The GFATM's policy, which provides for RSSH-related funds to be reported as part of "co-financing" requirements for countries of all income levels, means that programme dependency on GFATM resources is not possible to determine with reported funds. For example, reported domestic commitments for the GFATM grant as a share of domestic disease programmatic expenditures was approximately 239 percent in 2021 for Afghanistan for the malaria grant, 15 percent for Sierra Leone for all grants, 25 percent for Madagascar for the malaria grant, 99 percent for Guinea Bissau for malaria grant, 204 percent for Côte d'Ivoire for TB grant, 245 percent for Belarus for the HIV/TB grant, and 434 percent for

TABLE 8. Average GFATM domestic commitments as a percentage of GFATM program budget, estimated 2021

Country	GFATM Disease/ RSSH Program	Global Fund Income Classification (2021)	Domestic Commitment as % of GFATM Program Budget
Zanzibar	HIV/TB	1 – LI	4%
Afghanistan	Malaria	1 – LI	5%
Gambia	Malaria	1 – LI	6%
Sierra Leone	HIV/TB/Malaria/RSSH	1 – LI	8%
Malawi	HIV/TB/Malaria	1 – LI	12%
Gambia	HIV/TB	1 – LI	38%
Madagascar	Malaria	1 – LI	39%
Guinea-Bissau	Malaria	1 – LI	52%
Madagascar	RSSH	1 – LI	99%
Uganda	HIV/TB	1 – LI	129%
Zanzibar	Malaria	1 – LI	313%
Kenya	Malaria	2 – Lower-LMI	59%
Kenya	TB	2 – Lower-LMI	63%
Côte d'Ivoire	TB	2 – Lower-LMI	165%
Lesotho	HIV/TB	2 – Lower-LMI	517%
Kenya	HIV	2 – Lower-LMI	609%
Benin	RSSH	2 – Lower-LMI	661%
Angola	HIV/TB/Malaria/RSSH	3 – Upper-LMI	147%
Mongolia	HIV/TB	3 – Upper-LMI	247%
Bhutan	HIV/TB	3 –U pper-LMI	264%
Philippines	TB	3 – Upper-LMI	300%
Sri Lanka	HIV	3 – Upper-LMI	324%
Bolivia	HIV/TB	3 – Upper-LMI	425%
Philippines	Malaria	3 – Upper-LMI	740%
Indonesia	HIV	3 – Upper-LMI	812%
Philippines	HIV	3 – Upper-LMI	1024%
Kosovo	HIV/TB	4 – UMI	268%
Guatemala	TB	4 – UMI	270%
Ecuador	HIV	4 – UMI	527%
Azerbaijan	HIV/TB	4 – UMI	672%
Namibia	HIV/TB/Malaria/RSSH	4 – UMI	832%
South Africa	HIV/TB	4 – UMI	1237%
Belarus	HIV/TB	4 – UMI	1407%
Costa Rica	HIV	4 – UMI	7147%

Notes: Assumed average yearly EUR to USD conversion rate as reported by IRS from 2020–2022: https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates; Assumed even distribution of GFTAM-related domestic commitments (2020, 2021, 2022) across three years in order to map average annual (2020 and 2021) domestic disease programmatic expenditure at an annual rate.

Source: Compiled by authors from Global Fund Board Documentation, Decisions on Secretariat's Recommendation on Funding from the 2020–2022 Allocation accessed here: https://www.theglobalfund.org/kb/board-decisions/b43/ and WHO Global Health Expenditure Database accessed here: https://apps.who.int/nha/database.

Costa Rica for the HIV grant (see source information for Table 8). The lack of clarity in terms of what is included in these domestic commitment figures further underscores that validation or accountability of the expenditures is challenging.

Limitations

There are several limitations to this analysis including availability and accessibility of data. We compiled data from multiple sources, which are subject to availability, measurement error and inconsistency across data sources. For example, domestic programmatic expenditure on HIV, tuberculosis, and malaria was only available from Mozambique, Ghana, Nigeria, and Sri Lanka. Of those countries, Nigeria and Sri Lanka had data for 2017–2019, whereas Ghana and Mozambique only had data available for 2017–2018. See Appendices 2 and 3 for a detailed record of these data limitations.

The GFATM data for 26 countries reflects all available domestic commitments to the GFATM Board of 105 countries that received GFATM support. The data are the only publicly available data indicative of domestic "co-financing" to implement its "co-financing" policy. There is no other publicly available data that could confirm how these domestic commitments are verified and validated in terms of budget execution and implementation. As the analysis for Gavi reflected only 6 countries, the results for Gavi should be interpreted cautiously and further research should examine the entire portfolio of countries receiving Gavi support.

This study was limited by its methodology of desk review, a small set of interviews, and quantitative analysis. This study does not examine the non-financial resources that may be committed or allocated by countries, such as in-kind training of human resources and other project costs, sunk costs, or costs otherwise not captured in a country's GGHE-D (though GGHE-D covers public salaries for human resources). Further, this study did not conduct a detailed public expenditure review to examine how "co-financing" is tracked or implemented in official government accounts or budgets. In-depth country case studies would be necessary to understand from the country perspective how "co-financing" policies are interpreted and implemented. Thus, understanding the implementation of these policies or what happens in the "real world" is needed. Given the expected size of domestic "co-financing" required by GFATM and Gavi, implementation research as well as third-party evaluation could ensure accountability.

The quantitative analysis in this paper is limited to grant financing and to two major agencies—Gavi and GFATM. The study does not examine concessional/non-concessional loan financing. Further research could examine the ways in which concessional loan financing is jointly invested with grant financing as countries "transition".[5,21] This study did not examine the extent to which there is coordination between agencies policies or the size of "co-financing" requirements aggregated for multiple donors. However, it does highlight the variation in definition, reporting and measurement

of these policies that indicates inconsistencies that could work against the general objectives of the policies themselves when considered in aggregate.

Discussion

To our knowledge, this paper is the first to systematically compile domestic "co-financing" policies for multiple agencies and to examine specific country-level data on domestic "co-financing" policies against other measures of health spending. "Co-financing" policies are part of eligibility, transition, and sustainability-related policies of both GFATM and Gavi. The analysis reflects potential budget impact of "co-financing" commitments and potential donor dependency in the results on programmatic expenditures. Our use of the term "co-financing" has referred throughout to the notion of conditioned domestic financing, while recognizing that its use is increasingly specific and unique to global health initiatives and not the broader multilateral development finance community.

This paper does not answer the question of whether these policies meet intended objectives related to sustainability and country ownership, which understandably require actions beyond financing. The paper's findings have several potential implications for the future and reform of the global health aid architecture.

First, this study compares differences between the Gavi and GFATM domestic "co-financing" policies, along with other agency approaches. In general, Gavi and GFATM's share in a country's external health assistance landscape decreases across country income categorization. In certain countries, the two agencies play a very large role. Domestic "co-financing" amounts required by Gavi are consistent with eligibility based on country income, and while there is variability in proportionality of domestic commitments related to GFATM, the amounts are generally determined by allocation size. Gavi's "co-financing" policy is measured by the share of certain vaccines paid ex ante by the domestic government, scaled by country income eligibility phases and spent on vaccine portfolios. In contrast, the GFATM's "co-financing" application is measured by progressive government health expenditure and uptake of key disease program costs that require countries to make a minimum domestic investment to receive the "co-financing" incentive as a percent of the grant, scaled by a varied timeline, and spent on programmatic investments (with less flexibility for higher income countries).

Gavi's policy has clear metrics and accountability, as countries must place "co-financing" commitments ex ante into the UNICEF supply division bank account. The strict application has raised issues in liquidity and potentially in debt when there is limited discretionary budget, which in turn can put pressure on overall health budgets. In the stakeholder interviews, we learned that several countries were reported to have allocated portions of World Bank loans, concessional or non-concessional, to meet their Gavi "co-financing" obligations. Additionally, Gavi's policy does not require "co-financing" of its "health system strengthening" monies, arguably a category of spending

for which sustainability is important. The Gavi approach also raises questions related to country ownership over domestic funding allocations, as well as overall fungibility of domestic health budgets, particularly in relation to discretionary budget space.

The GFATM policy, as well as the expressions of domestic commitment, provide greater flexibility in relation to how countries specify their financing allocation across disease programs and RSSH. This flexibility is coupled with a tradeoff in relation to the transparency with what is included in domestic commitments or "co-financing" requirements, how they are accounted for and reported, and whether additionality of domestic investments is achieved. The GFATM policy in *de jure* terms promotes overall increases in health sector budgets to try to avoid fungibility of health budgets to fund "co-financing", while deprioritizing other health expenditure areas (separate from the constitutive disease areas). But how "co-financing" is reported and measured *de facto* is unknown, indicating little validation or accountability. Further, the GFATM "co-financing" requirement is identified in GFATM allocation letters which is not available publicly, and then reported by the country grant recipient in a GFATM proposal or administrative document. A 2022 report on domestic financing by the Global Fund's Office of Inspector General, as well as a 2023 update by the Global Fund's Health Financing Department on "co-financing", also highlight the need for greater visibility and transparency in how "co-financing" requirements are set and accounted for by the Secretariat within the context of overall improvements in domestic health spending monitoring and tracking, as well as greater alignment and cohesion between domestic commitments and minimum, additional "co-financing" requirements communicated in allocation letters.[22,23]

Second, this review indicated that the definitions and policies of "co-financing" and "sustainability" strategies greatly varied by agency. The lack of a common language and terminology across agencies of the meaning of "co-financing" can confuse officials engaged in domestic budgeting, including interpretation, decision-making authority, and overall fiscal capacity questions. Others have argued that "co-financing" should refer to donor's portion and not the domestic portion required in order to indicate that "co-financing" should be a secondary rather than primary payer.[5] Lack of common language hinders inter-agency conversations and communications on overall health budget prioritization and financial sustainability. A broader and shared framework formally adopted by global health agencies of the definition and meaning of "co-financing" that can be used in both grant and loan financing circumstances can enable productive policy dialogue. This finding is aligned with the shifts and priorities laid out in the Lusaka Agenda,[24] in particular related to how GHIs and donors can support sustainable increases in domestic spending on health, as well as the need for strategic and operational coherence to ensure a minimal burden on countries.

Agencies varied in the criteria for the application of "co-financing" and transition policies, a euphemism for the time at which the agency's resources are no longer required by, or no longer available to, the country. What happens to countries after "transitioning" merit further research and analysis.[25,26] PEPFAR, the Gates Foundation and FCDO do not have a policy on eligibility, co-financing,

or transition towards sustainability. Both Gavi and GFATM rely on a country income (GNI per capita) in determining eligibility and co-financing. GFATM and GFF also use disease burden, while the World Bank considers debt distress. Notably, no agency systematically uses government health expenditure or availability of government resources as a measure of "co-financing" capacity, such as government revenues or government expenditures, arguably a key measure of health financing, fiscal capacity and thus overall strength of the health system.[vi]

This paper highlights the importance of the national health accounts data system for third-party verification and validation. As with any policy, there is a risk for perverse incentives if "co-financing" policies were to use data from the national health accounts; however, it remains the key, global repository for global health expenditure data to help check for inconsistencies and verify trends.[27,28] The UHC Knowledge Hub in Japan has the potential to bring together WHO and World Bank expertise in support of information and data to increase transparency on domestic government financing, including related to donor "co-financing" policies.[29] The authority, budget, and resources to independently collect national health accounts must be protected, even as global health funding agencies fail to support this valued global health resource.

Third, domestic "co-financing" policies should be aligned to a comprehensive framework for sustainability planning. Donor concerns of increases in external assistance on health displacing domestic budget prioritization for health have not been addressed by donor's own policies, despite the stated intention to. Indeed, in recent years several countries appear to have reduced health within domestic budgets (exclusive of considerations around COVID-19).[30] The large role of external assistance for Gavi and GFATM's constitutive diseases of concern compared to government health expenditures challenge sustainability and emphasize donor dependency. In aligning with the Lusaka Agenda priorities, greater coordination between donors in terms of joint donor investment (or donor co-finance) can help to address concerns of sustainability as well as durable investments in the health system.[24] They can also support aligning both external and domestic financing flows to support primary health care-oriented approaches that emphasize the need for integrated, people-centered service delivery approaches.

Much of the GFATM monies disbursed are not only grants but also *off-budget*[31] (i.e. off government budgets). Even calls for greater localization of health aid may not necessarily increase state capacity to implement health projects or programs if channeled through nongovernmental organizations.[32] In global health, the dominant model of off-budget grants with a vertical or single-focus approach was intended to rapidly disburse monies, but such a model has yet to deliberately plan, coordinate, or integrate with domestic government health budgeting processes, increase state capacity or sustainability, or address concerns of donor dependency. The presence of fragmented vertical funds and their disjoint policies on domestic financing may create competition for zero-sum government resources rather than promote overall increases in GGHE-D.[33]

vi The GFATM is now incorporating aspects of a country's ability to pay into setting "co-financing" requirements.

Concluding remarks

This study's findings are consistent with demands by policy makers for greater integration and coordination as articulated by the Lusaka agenda in a fragmented global health architecture.[24] At a minimum, standardized terminology and measurement of domestic "co-financing" policies as well as third-party validation and auditing of compliance can increase accountability and advance the goals of country ownership and sustainability. It also raises questions about the role and function of donor-driven, domestic "co-financing" policies. At a minimum, any policy on "co-financing" should be designed as part of a broader agenda on the sustainability of external health assistance and domestic health spending and the appropriate, country-tailored balance between the two sources.

In-depth country case studies and implementing research can shed light on how an agency's "co-financing" requirements are earmarked or tracked in domestic government accounts as well as the ways in which external demands can affect domestic priorities. Country ownership remains a central principle of aid effectiveness, and thus, country perspectives should lead conversations and policy dialogue on health financing in a fragmented and disjointed health aid architecture with competing policies on domestic health finance.[34]

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Appendices

APPENDIX 1. Metric sources

Metric	Database	Further Info	Availability
Total domestic general government health expenditure (current $USD) (GGHE-D)	GHED		
Domestic General Government Expenditure on Immunization Programmes	GHED		Varies by country. Ghana and Mozambique available for 2017–2018. Pakistan and Sri Lanka available except for 2017–2019. Lao missing
Government expenditure on routine immunization	WHO UNICEF JRF	https://www.who.int/teams/immunization-vaccines-and-biologicals/vaccine-access/planning-and-financing/immunization-financing-indicators https://cdn.who.int/media/docs/default-source/immunization/financing/immunization-expenditure-data-review-data-estimation-protocol.pdf?sfvrsn=749df8a4_1&download=true	Varies by country. Lao 2018 and Nigeria 2019 data missing; these values are estimated by reflecting the value of the year before it. Only 2017 is available for Sri Lanka
Domestic General Government Expenditure on HIV/AIDS and Sexually Transmitted Diseases (STDs)	GHED	https://apps.who.int/nha/database	2017–19 for Nigeria and Sri Lanka. Only 2017–18 available for Ghana and Mozambique. Lao and Pakistan have no data 2020–2021 for GFATM
Domestic General Government Expenditure on Malaria	GHED		Same as above
Domestic General Government Expenditure on Tuberculosis (TB)	GHED		Same as above
External Health Expenditure (current $USD)	GHED		2017–2019. Pakistan excluded in analysis due to large standard deviation in numbers

APPENDIX 1. (Continued)

Metric	Database	Further Info	Availability
GAVI Co-Financing Stage	GAVI Commitments-Approvals-Disbursements_31072019	https://www.gavi.org/our-alliance/operating-model/gavi-transparency-portal-and-iati The most recent version available on Gavi's portal was last updated on November 26, 2019. For this analysis, an earlier version was used, which was updated about four months prior, on July 31, 2019. The authors chose not to update the data because there was minimal to no difference in the disbursement data for the selected country samples between 2017 and 2018. However, it is important to note that Gavi's latest disbursement data omits 2019 entirely. Therefore, data for 2019 was sourced from the earlier version. The "Disbursements by 'Year Paid'" table shows the payments made since GAVI inception up to the date of the report. The payments are shown in the calendar year in which the payment was made.	2019
GAVI Total Disbursement ($USD)	GAVI Commitments-Approvals-Disbursements_31072019	https://www.gavi.org/our-alliance/operating-model/gavi-transparency-portal-and-iati	2017–2019
GAVI Co-Financing Total ($USD)	Gavi "co-financing" sheet as relevant to country and year, found on its public website	Ghana: 2017 actuals. 2018–2019 projected obligations. https://www.gavi.org/sites/default/files/document/co-financing-information-sheet-ghanapdf.pdf Lao PR: 2017–2018 actuals. 2019 projected obligations. https://www.gavi.org/sites/default/files/document/co-financing-information-sheet-lao-pdrpdf.pdf Mozambique: 2017–2018 actuals. 2019 projected obligations. https://www.gavi.org/sites/default/files/document/co-financing-information-sheet-mozambiquepdf.pdf Nigeria: 2017–2018 actuals. 2019 projected obligations. https://www.gavi.org/sites/default/files/document/co-financing-information-sheet-nigeriapdf.pdf Pakistan: 2017 actuals. 2018–2019 projected obligations. https://www.gavi.org/sites/default/files/document/co-financing-information-sheet-pakistanpdf.pdf Sri Lanka: 2017 actuals. 2018–2019 projected obligations. https://www.gavi.org/sites/default/files/document/co-financing-information-sheet-sri-lankapdf.pdf	2017–2019 (includes estimated projections)

APPENDIX 1. (Continued)

Metric	Database	Further Info	Availability
GFTAM Income Category	Global Fund database		2019
GFTAM HIV Total Disbursement ($USD)	OECD	https://www.oecd-ilibrary.org/development/data/creditor-reporting-system_dev-cred-data-en	2017–2020
GFTAM Malaria Disbursement ($USD)	OECD	https://www.oecd-ilibrary.org/development/data/creditor-reporting-system_dev-cred-data-en	2017–2020; except for Lao where data is only available for 2017
GFTAM TB Total Disbursement ($USD)	OECD	https://www.oecd-ilibrary.org/development/data/creditor-reporting-system_dev-cred-data-en	2017–2020; except for Ghana where data is only available for 2017–2018
GFTAM Domestic Commitment by Disease Program ($USD)	GFTAM Board Meeting 43–48 documents	https://www.theglobalfund.org/kb/board-decisions/b43/	2020–2022

Source: Compiled by authors.

APPENDIX 2. Analysis formula and notes

Analysis	Formula	Notes
Donor disbursements as % of Extl Health Assistance	[Donor disbursement]/[Extl Health Expenditure]	Pakistan excluded, as GHED external health assistance show high standard deviation ranging from 153M $USD (current 2023) in 2017, $54M in 2018 and $606M in 2019.
Routine Immunization Domestic Government Expenditure as a % of Gavi Total Disbursements	[Routine Immunization Domestic Government Expenditure]/[Gavi Total Disbursements]	2017–2019; Lao 2018 and Nigeria 2019 was missing data on government expenditure on routine immunization, so previous year values were used in estimation. Sri Lanka is not an average, only includes values of 2017 due to limited data availability.
Programmatic Domestic Government Expenditure as a % of GFTAM Total Disbursements	[Programmatic Domestic Government Expenditure by disease component e.g. HIV, Malaria, TB]/[GFTAM Total Programmatic Disbursements e.g. HIV, Malaria, TB]	2017–2019; Ghana and Mozambique only have programmatic government spending from 2017–2018; data not available for Pakistan and Lao
Average donor-specific domestic "co-financing" as a % of domestic general government health expenditure	[Average donor-specific domestic co-financing]/[Domestic general government health expenditure]	
Gavi average donor-specific "co-financing" as a % of domestic government health programmatic expenditure [2017–19]	[Gavi co-financing]/[GGHE-D]	
GFTAM average donor-specific domestic "co-financing" as a % of domestic government health programmatic expenditure [2020–22]	[GFTAM domestic commitments by disease component]/[Programmatic Domestic Government Expenditure by disease component e.g. HIV, Malaria, TB]	

Source: Compiled by authors.

Appendix 3. Source references for Table 1 and 2

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