

# Donor Funding Volatility and the Sustainability of HIV/AIDS Programmes in Sub-Saharan Africa: A Secondary Data Analysis and Policy Review

Nche Frungwa Che<sup>1</sup>

nchefrungwa@gmail.com

Unicaf University Zambia

Samuel Nkengfua<sup>2</sup>

University of Buea

Brian Lang Ngong<sup>3</sup>

Université de Yaoundé I

Yauba Saidu<sup>4 5</sup>

Clinton Health Access Initiative

Michael Doros<sup>1</sup>

Unicaf University Zambia

Ousmane Diaby<sup>6 7</sup>

Université de Yaoundé II

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## Research Article

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# Abstract

## Background

International development assistance has enabled major gains in HIV treatment, prevention, laboratory systems and community outreach across Sub-Saharan Africa. Yet aid volatility, fiscal pressure in donor countries and changing global priorities have exposed a structural weakness in health systems where recurrent HIV programme costs remain substantially externally financed. This study examined how reductions or uncertainty in USAID-supported and broader donor health funding influence health financing priorities and opportunities for health systems strengthening in Sub-Saharan Africa.

## Methods

The manuscript was developed from an unpublished master's dissertation and an expanded article draft. A qualitative-dominant secondary-data design was used. Quantitative information on aid trends, selected country dependence, public health expenditure and health indicators was synthesized descriptively. Qualitative evidence from institutional reports, peer-reviewed literature and policy documents was analyzed thematically using health financing, donor dependency and health system resilience.

## Results

The analysis identified HIV/AIDS treatment, medicines and supply chains, community outreach, maternal health, vaccination and health workforce functions as the most exposed areas when external funding falls abruptly. Countries with broader tax capacity, established insurance pools, stronger public financial management and integrated primary healthcare platforms appear better positioned to absorb funding shocks. Conversely, settings with high external-aid shares, fragmented procurement systems and weak fiscal space face elevated risks of stock-outs, staff attrition, service interruption and widening inequities.

## Conclusion

Donor transition should be planned as a staged health-system reform rather than a short-term budget exercise. Sustainable transition requires predictable multi-year funding pathways, domestic resource mobilization, pooled procurement, integration of HIV services into primary healthcare, protection of community systems and stronger accountability for public health expenditure.

# Highlights

- Donor assistance has delivered substantial HIV/AIDS gains in Sub-Saharan Africa, but recurrent dependence on external funding leaves medicines, laboratory systems, community outreach and prevention programmes exposed to fiscal shocks.
- The safest transition route is not abrupt substitution of donor funding by domestic budgets; it is a phased plan that protects treatment continuity while moving financing, procurement and data systems into government-led platforms.
- Domestic resource mobilisation can strengthen health sovereignty, but its success depends on governance quality, tax capacity, public financial management, equity protections and credible integration with primary healthcare.

# Introduction

The financing of HIV/AIDS programmes in Sub-Saharan Africa is one of the most consequential examples of modern global health cooperation. Over the past two decades, large-scale donor support from the United States Government, the Global Fund and other development partners has helped transform HIV from a largely fatal condition into a manageable chronic illness for millions of people. PEPFAR alone reported support for antiretroviral treatment for more than 20.6 million people across 55 countries in fiscal year 2024, while UNAIDS estimated that 31.6 million people worldwide were accessing antiretroviral therapy in 2024 [1, 2]. These achievements have saved lives, expanded laboratory systems, trained health workers and strengthened community-based service delivery.

The same success, however, has generated a difficult sustainability question. In several low- and lower-middle-income countries, donor financing continues to cover a substantial share of recurrent HIV programme expenditure, including antiretroviral medicines, viral-load reagents, prevention commodities, community tracing, monitoring and evaluation, and portions of health worker remuneration. When such support becomes unpredictable, the problem is not merely a funding gap. It becomes a systems problem affecting procurement, human resources, clinical continuity, data quality, local trust and equity of access.

The original dissertation on which this manuscript is based examined the impact of USAID health funding reductions on health financing priorities and opportunities for health systems strengthening in Sub-Saharan Africa. It used a qualitative-dominant mixed-methods approach based entirely on secondary data, combining descriptive trends in health financing with thematic analysis of policy documents and institutional reports. The dissertation concluded that reduced USAID funding may create short-term pressure on donor-dependent programmes, especially HIV/AIDS and maternal and child health services, but may also encourage domestic resource mobilisation, financing efficiency and institutional reform. This article refines that dissertation into a journal-style manuscript with a clearer policy contribution, shorter structure and stronger visual synthesis.

This topic is timely because the global aid environment has become more uncertain. Donor governments are facing competing fiscal and geopolitical pressures, while debt distress and slow post-pandemic fiscal recovery constrain public spending in many low-income countries. KFF and UNAIDS continue to track donor government funding for HIV in low- and middle-income countries, and the World Bank has warned that government health spending in many low- and lower-middle-income countries declined after the pandemic-related surge [3, 4]. For countries where HIV treatment and prevention remain externally supported, these shifts pose risks to the continuity of services and the achievement of Sustainable Development Goal 3.

The central argument of this article is that donor funding volatility should be treated as a health-system transition challenge rather than as a narrow financing event. A country can increase domestic spending and still fail to protect HIV outcomes if procurement systems, primary healthcare platforms, community networks and accountability mechanisms remain weak. Conversely, countries with credible fiscal planning, broad-based pooling mechanisms and integrated service delivery can convert external

pressure into a reform opportunity. This article therefore analyses the relationship between funding volatility, programme vulnerability and health systems strengthening, with emphasis on feasible policy actions for Sub-Saharan Africa.

## **Methods**

### **2.1 Study design**

This study employed a qualitative-dominant mixed-methods design based on secondary data analysis and policy review. The manuscript was developed by editing and restructuring an existing article draft and aligning it more closely with the master's dissertation from which the topic originated. The study does not constitute a registered systematic review because no verifiable protocol registration was available in the source documents. Instead, it provides a transparent synthesis of secondary quantitative data, published literature, institutional reports, and policy documents relevant to USAID-supported health funding reductions, donor dependency, and health systems strengthening in Sub-Saharan Africa.

### **2.2 Data sources**

Multiple secondary evidence sources were used to examine the relationship between donor funding volatility and the sustainability of HIV/AIDS programmes in Sub-Saharan Africa. These included quantitative indicators compiled in the master's dissertation, peer-reviewed literature, institutional reports, and policy documents. The quantitative component drew on compiled data describing international health aid trends, external aid dependence, public health expenditure, selected health outcomes, and country adaptation strategies. These indicators were treated as secondary, policy-relevant evidence rather than as a new econometric dataset. The qualitative component drew on peer-reviewed publications, policy documents, and reports from international organizations, including the World Health Organization (WHO), the World Bank, UNAIDS, and PEPFAR.

### **2.3 Data analysis**

The quantitative data were analyzed descriptively to compare countries and programme areas according to donor dependence, fiscal capacity, and programme vulnerability. The figures presented in this article are intended to illustrate trends and comparative patterns rather than establish causal relationships. Qualitative data were analyzed using thematic content analysis. Evidence from peer-reviewed literature, institutional reports, and policy documents was coded into four analytical categories:

- Funding dependence
- Programme vulnerability
- Domestic resource mobilization
- Health system resilience

The analysis was informed by established health financing theory, particularly the concepts of revenue collection, pooling, and strategic purchasing. Interpretation was further guided by health systems frameworks emphasizing service delivery, health workforce, medicines, information systems, financing, and governance, as well as resilience frameworks describing the capacity of health systems to absorb, adapt, and transform during external shocks [5–7].

## 2.4 Scope of the analysis

The review prioritized evidence relating to HIV/AIDS programmes while recognizing that donor funding volatility affects broader health system functions. Vertical HIV programmes frequently share health workers, laboratory infrastructure, information systems, procurement mechanisms, and supply chains with tuberculosis, maternal and child health, immunization, and primary healthcare services. Consequently, the analysis sought to identify cross-cutting health system vulnerabilities and propose a practical transition framework rather than examine HIV programmes in isolation.

## 2.5 Ethical considerations

### Ethical approval

was not required because the study relied exclusively on publicly available information and previously compiled secondary data and did not involve human participants.

Table 1  
Secondary evidence streams used for the manuscript

| Evidence stream                            | Examples of sources                                                      | Role in analysis                                                          | Main limitation                                                  |
|--------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------|
| Secondary quantitative indicators          | Aid trends, external-aid shares, public spending and selected indicators | Compared dependence, fiscal capacity and vulnerability                    | Compiled figures are illustrative, not causal estimates          |
| Institutional and policy reports           | WHO financing guidance, World Bank reviews, UNAIDS and PEPFAR reporting  | Contextualised donor transition and domestic resource mobilisation        | Definitions and reporting years vary across institutions         |
| Peer-reviewed literature                   | Studies on donor aid, HIV outcomes, resilience and financing reform      | Supported interpretation of risks, mechanisms and policy responses        | Evidence is heterogeneous and often country-specific             |
| Unpublished dissertation and article draft | Master’s dissertation and supplied manuscript draft                      | Provided research question, analytic direction and initial tables/figures | Required restructuring, verification and reduction of overclaims |

## Results

## 3.1 Donor support remains central, but dependence varies substantially

The dissertation's secondary data show a steep expansion in international health aid to Sub-Saharan Africa between 2000 and 2015, followed by a lower estimate in 2020. This pattern is consistent with the broader literature showing that development assistance for health rose sharply during the era of PEPFAR, the Global Fund and other global health initiatives, while later growth became less predictable [8]. The key point is not only the amount of donor funding, but also the extent to which countries built recurrent programme commitments around external resources. Figure 1 visualizes the estimated evolution of international health aid in the dissertation dataset. The rise between 2000 and 2015 reflects the rapid scale-up of HIV, malaria, immunization and maternal health initiatives. The subsequent decrease in the illustrative series points to a central policy concern: programmes created under growth conditions may face operational stress when external resources stagnate, shift priorities or decline.

Dependence also varies by country. In the dissertation data in Fig. 2 below, Mozambique and Malawi had very high external-aid shares, Uganda and Tanzania had high shares, Rwanda and Ghana were moderate, and South Africa was comparatively low. This matters because a reduction of the same nominal amount has very different implications in countries with different fiscal capacity, procurement systems, insurance coverage and political ability to reallocate domestic budgets.

## 3.2 Fiscal capacity shapes whether domestic resource mobilization is feasible

A frequent assumption in donor-transition debates is that domestic resource mobilization can replace declining external assistance (Fig. 5). The evidence suggests a more conditional interpretation. Domestic resource mobilization is essential, but its feasibility depends on fiscal space, tax administration, public financial management, political prioritization of health and the capacity to purchase services strategically. The WHO Global Health Expenditure Database provides comparable expenditure data for countries and is used by the World Bank and WHO to monitor health spending; however, these data also reveal large differences across income groups and countries [9, 10]. Figure 3 compares public health expenditure as a percentage of GDP and per capita spending in selected countries from the dissertation dataset. South Africa combines a higher GDP share with much higher per-capita spending than the other countries. Rwanda spends a higher share of GDP than Kenya, Nigeria and Cameroon, despite lower overall fiscal resources than South Africa. This difference illustrates why donor transition cannot use a single regional template. Countries with smaller revenue bases may show strong political commitment but still lack enough fiscal space to replace large donor programmes quickly.

The most realistic domestic financing options include broader and more progressive tax collection, earmarked health taxes where politically feasible, national or community-based insurance pools with

explicit subsidies for poor households, efficiency gains from pooled procurement, and better alignment of donor funds with national budget systems. These options are complementary rather than interchangeable. Earmarked taxes without strong budget execution may not reach frontline services, while insurance schemes without subsidies may exclude informal and poor households.

### 3.3 Programme vulnerability is highest where external funding supports recurrent operational functions

The strongest vulnerability signal in the secondary evidence concerns programmes where donor funding supports recurrent operational functions rather than temporary technical assistance. HIV/AIDS treatment programmes are especially exposed because interruption of antiretroviral therapy has direct clinical consequences, including viral rebound, increased risk of transmission, opportunistic infections and potential drug resistance. Prevention programmes for adolescent girls and young women, key populations, condom distribution, PrEP and community-led testing are also exposed because they are often less protected than treatment when budgets contract.

Medicines and supply chains represent a second high-risk domain. When donor procurement, warehousing, laboratory reagent purchasing or distribution contracts are disrupted, domestic systems may not have adequate foreign exchange, emergency procurement procedures or stock buffers. Health workforce functions are similarly vulnerable when donor funds cover salary top-ups, lay health workers, data clerks, community health workers or outreach teams. A funding reduction can therefore affect not only one disease programme but also the operational architecture through which several services are delivered.

Table 2 summarizes programme-level vulnerabilities. Figure 4 translates the synthesis into a four-domain vulnerability heatmap. The scoring is a qualitative interpretation of the dissertation and article evidence rather than a statistical index. It is designed to support policy prioritization by showing where transition planning must protect essential functions first.

Table 2  
Programme vulnerability matrix for donor-funding volatility.

| <b>Programme domain</b>                   | <b>Main exposure to donor volatility</b>                                                     | <b>Likely short-term effect</b>                                                | <b>Priority mitigation</b>                                                                                  |
|-------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| HIV/AIDS treatment                        | ART procurement, viral-load testing, clinical monitoring and adherence support               | Stock-outs, missed appointments, viral rebound and increased loss to follow-up | Ring-fenced commodity financing, multi-month dispensing, pooled procurement and treatment continuity plans  |
| HIV prevention and community outreach     | Peer educators, DREAMS-style services, PrEP, condom distribution and key-population outreach | Reduced testing, fewer prevention contacts and increased hidden incidence      | Protect community contracts, integrate outreach into local health plans and maintain rights-based services  |
| Maternal and child health                 | PMTCT, antenatal services, immunisation support and referral systems                         | Lower service coverage and delayed care for women and children                 | Bundle PMTCT with primary care and protect maternal-child health budgets                                    |
| Health workforce                          | Salary top-ups, community health workers, data clerks and donor-funded technical staff       | Attrition, burnout, reduced supervision and data gaps                          | Absorb critical cadres gradually into public payrolls and strengthen task-sharing protocols                 |
| Medicines, laboratories and supply chains | Reagents, warehousing, logistics contracts and procurement systems                           | Diagnostic backlogs, commodity rationing and treatment delays                  | Regional pooled procurement, emergency buffers and transparent inventory monitoring                         |
| Governance and information systems        | Monitoring, evaluation, reporting platforms and donor reporting staff                        | Reduced visibility of service interruptions and weaker accountability          | Integrate HIV indicators into national health information systems and publish service continuity dashboards |

## 3.4 Government responses show four transition pathways

The reviewed evidence suggests four common government responses to external funding pressure. The first is budget reallocation, in which ministries of finance and health move funds from lower-priority sectors or lower-priority health activities toward essential commodities and core services. This approach is fast but limited by fiscal space and political constraints. The second is expansion of pooling mechanisms, including national health insurance and community-based health insurance. This can reduce out-of-pocket payment and strengthen purchasing, but coverage among informal workers and poor households requires explicit subsidy design.

The third response is efficiency improvement. Examples include reducing fragmentation between donor-funded and government procurement, harmonising reporting systems, strengthening expenditure tracking and improving facility-level budget execution. Efficiency reforms are politically less visible than

tax increases but can release resources if waste, duplication and leakage are material. The fourth response is diversification of financing through public-private partnerships, regional procurement arrangements, philanthropic partnerships and carefully designed earmarked taxes. Diversification is useful only when it is governed by national priorities and does not create new fragmentation.

Table 3 presents a policy synthesis of these pathways. The most successful transition strategies are likely to combine all four rather than rely on a single instrument.

Table 3  
Domestic transition pathways and governance requirements.

| Transition pathway        | Policy instruments                                                                                                  | Conditions for success                                                                         | Risks to manage                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Budget reallocation       | Medium-term expenditure frameworks, ring-fenced HIV commodity lines and contingency funds                           | High-level political commitment and credible budget execution                                  | Cuts to other essential services or unfunded mandates                             |
| Pooling and insurance     | National health insurance, community-based insurance and explicit subsidies for poor households                     | Clear benefits package, provider payment reform and enrolment of informal workers              | Exclusion of poor or rural populations if subsidies are weak                      |
| Efficiency improvement    | Pooled procurement, harmonised reporting, reduced parallel systems and results-based purchasing                     | Strong public financial management, transparent data and facility autonomy with accountability | Efficiency gains may be overstated or captured away from frontline services       |
| Financing diversification | Earmarked health taxes, public-private partnerships, regional manufacturing and social contracts with civil society | Regulation, equity safeguards and alignment with national health strategies                    | Fragmentation, regressive taxation or private capture of public health priorities |

## Discussion

### 4.1 Principal findings

The findings support a central conclusion: donor funding volatility is most dangerous when health systems have allowed externally funded projects to become substitutes for national delivery functions. HIV programmes demonstrate the tension clearly. External funding accelerated treatment access, laboratory infrastructure, community outreach and data systems. Yet the same vertical architecture can become fragile if donor-financed staff, commodities and reporting systems are not integrated into national platforms over time. The policy challenge is therefore not to reject donor support, but to use it in ways that strengthen domestic systems before fiscal shocks occur.

### 4.2 Implications for HIV programme sustainability

The first implication is that abrupt donor withdrawal is clinically unsafe. HIV treatment is not a discretionary programme that can be paused while governments search for replacement funding. Interruptions in treatment and monitoring can quickly undermine viral suppression, increase the risk of opportunistic infection and threaten population-level epidemic control. For this reason, transition plans should protect a minimum service package: uninterrupted ART, viral-load monitoring, early infant diagnosis, PMTCT, tuberculosis-HIV integration, key-population outreach, community adherence support and data systems that identify service disruption. In practice, this requires buffer stocks, multi-month dispensing, contingency financing and joint transition calendars agreed by donors and governments.

## **4.3 Domestic resource mobilization and health financing reform**

The second implication is that domestic resource mobilisation must be framed as a governance reform rather than simply a revenue target. Raising more money for health is necessary, but the value of additional revenue depends on whether it is pooled equitably, allocated transparently and used to purchase priority services. Countries with stronger public financial management can translate new resources into service continuity. Countries with weak budget execution may announce increased allocations without delivering medicines to clinics. This is why health financing reform must include budget credibility, procurement reform, expenditure tracking and public reporting.

## **4.4 Equity and integration of HIV services into primary healthcare**

The third implication concerns equity. Donor-funded HIV programmes often reach populations that face stigma, legal barriers or political neglect. Key-population services, adolescent-girl prevention, mobile outreach and community-led testing may be among the first activities reduced when domestic budgets are under pressure because they have less political visibility than facility-based treatment. A purely domestic transition that excludes these services would risk increasing hidden transmission and widening inequalities. National ownership should therefore include explicit rights-based commitments and contracting mechanisms for civil society organizations.

The fourth implication is that integration with primary healthcare is essential but must be operationally careful. Integration can reduce duplication, improve continuity of care and strengthen health system resilience. However, integration that simply shifts HIV responsibilities to already overstretched primary care clinics without staff, training, commodities or data capacity can reduce quality. Integration should be staged: shared records, harmonized appointments, combined chronic care visits and joint supervision should be introduced before specialized donor-supported functions are removed.

## **4.5 Policy implications**

The fifth implication is that donors remain important during transition. Sustainable financing is not achieved by sudden exit, but by changing the purpose of external support. Over time, donor funding should move from paying recurrent parallel costs toward co-financing transition milestones: supply-

chain integration, domestic budget execution, local manufacturing, health workforce absorption, civil society contracting, data system interoperability and strategic purchasing. This approach maintains accountability for health outcomes while reducing long-term dependence.

These findings align with the wider health systems literature. Development assistance has contributed to measurable health improvements [8, 11], but global health initiatives can also create fragmentation when they operate outside national planning and budget systems [12, 13]. Health financing theory similarly emphasizes that sustainable progress requires revenue collection, pooling and purchasing arrangements that protect people from financial hardship while improving efficiency and equity [6, 7]. Donor transition is therefore a test of whether these functions can be strengthened in practice. The recommended policy actions for governments, donors and other stakeholders are summarized in Table 4.

Table 4  
Action-oriented roadmap for safer donor transition.

| <b>Recommendation</b>                     | <b>Lead actors</b>                                                    | <b>Immediate action (0–12 months)</b>                                            | <b>Medium-term action (12–36 months)</b>                                 | <b>Success indicator</b>                                                                            |
|-------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Protect treatment continuity              | Ministries of Health, PEPFAR/USAID, Global Fund, procurement agencies | Map commodity pipelines, create buffer stocks and protect ART/viral-load budgets | Move procurement into transparent national or regional pooled systems    | No avoidable ART stock-outs; stable viral-load testing coverage                                     |
| Plan gradual donor transition             | Donors, Ministries of Finance, Ministries of Health                   | Agree multi-year transition calendars and minimum service packages               | Link donor reductions to verified domestic budget execution milestones   | Published transition plan with annual financing gap analysis                                        |
| Strengthen domestic resource mobilization | Ministries of Finance, revenue authorities, parliaments               | Identify feasible tax, insurance and budget reallocation options                 | Expand pooled prepayment with subsidies for poor and informal households | Increased domestic government health expenditure without higher catastrophic out-of-pocket spending |
| Integrate HIV services into PHC           | Health ministries, districts, professional councils, civil society    | Protect high-risk services while harmonizing records and referral pathways       | Introduce integrated chronic care visits and joint supervision           | Retention and viral suppression maintained during integration                                       |
| Protect community systems and equity      | Health ministries, civil society, donors, human rights bodies         | Maintain contracts for peer-led and community outreach services                  | Institutionalize civil society financing within national health plans    | Testing, PrEP, PMTCT and key-population coverage maintained                                         |
| Improve transparency and accountability   | Auditors, health information units, finance ministries, donors        | Publish financing, procurement and service-disruption dashboards                 | Link purchasing to results and independent verification                  | Timely public data on expenditure, stock status and service continuity                              |

## 4.6 Strengths and limitations

A strength of this article is that it converts a broad dissertation into a focused manuscript with a clear policy argument, visual synthesis and journal-style structure. It combines quantitative descriptive indicators with thematic interpretation, making the findings accessible to both academic and policy audiences. The article also avoids overclaiming. It does not present the supplied draft as a registered systematic review because the available documents did not provide sufficient proof of protocol registration or a reproducible search record.

Several limitations remain. First, the article relies on secondary data and does not include interviews with policymakers, health workers, patients or donor officials. Second, the quantitative tables are illustrative and compiled from secondary sources; they should not be interpreted as a definitive country-level panel dataset. Third, the relationship between donor reductions and health outcomes is complex. Economic growth, political decisions, conflict, pandemics, exchange-rate changes and other donors may influence observed changes. Fourth, Sub-Saharan Africa is heterogeneous, and country-level transition plans must be tailored to institutional context.

## Conclusion

Donor funding volatility is a major sustainability risk for HIV/AIDS programmes and wider health systems in Sub-Saharan Africa. The risk is greatest where external assistance finances recurrent operational functions such as antiretroviral medicines, laboratory reagents, community outreach, data systems and health worker support. Funding reductions in such contexts can rapidly translate into service disruption, stock-outs, declining prevention coverage and widening inequities.

At the same time, donor transition can create an opportunity for stronger domestic ownership if it is planned, gradual and system-oriented. The evidence points toward a transition model that protects HIV treatment continuity, mobilizes domestic resources, strengthens public financial management, integrates HIV services carefully into primary healthcare, preserves community systems and uses donor support to co-finance institutional reform rather than permanent parallel structures. Sustainable health financing should therefore be understood not as the end of donor support, but as the creation of resilient national systems capable of protecting hard-won HIV gains even when the aid environment changes.

## Declarations

### **Ethics approval and consent to participate**

Not applicable. This article used secondary data and documentary sources only.

### **Consent for publication**

Not applicable.

## Competing interests

The authors declare no competing interests. This statement should be confirmed by all authors before submission.

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## Author Contribution

C.N.F developed the original master's dissertation and topic focus. D.M provided academic supervision and conceptual guidance. Y.S, O.D, N.B.L and S.M contributed to manuscript development, policy framing and editorial refinement. All authors should review and approve the final manuscript before submission.

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## Data Availability

Data used in this article are drawn from the dissertation's secondary tables and from publicly available institutional sources from WHO, the World Bank, UNAIDS, OECD, USAID/PEPFAR and the Global Fund, cited in the reference list.

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## Figures

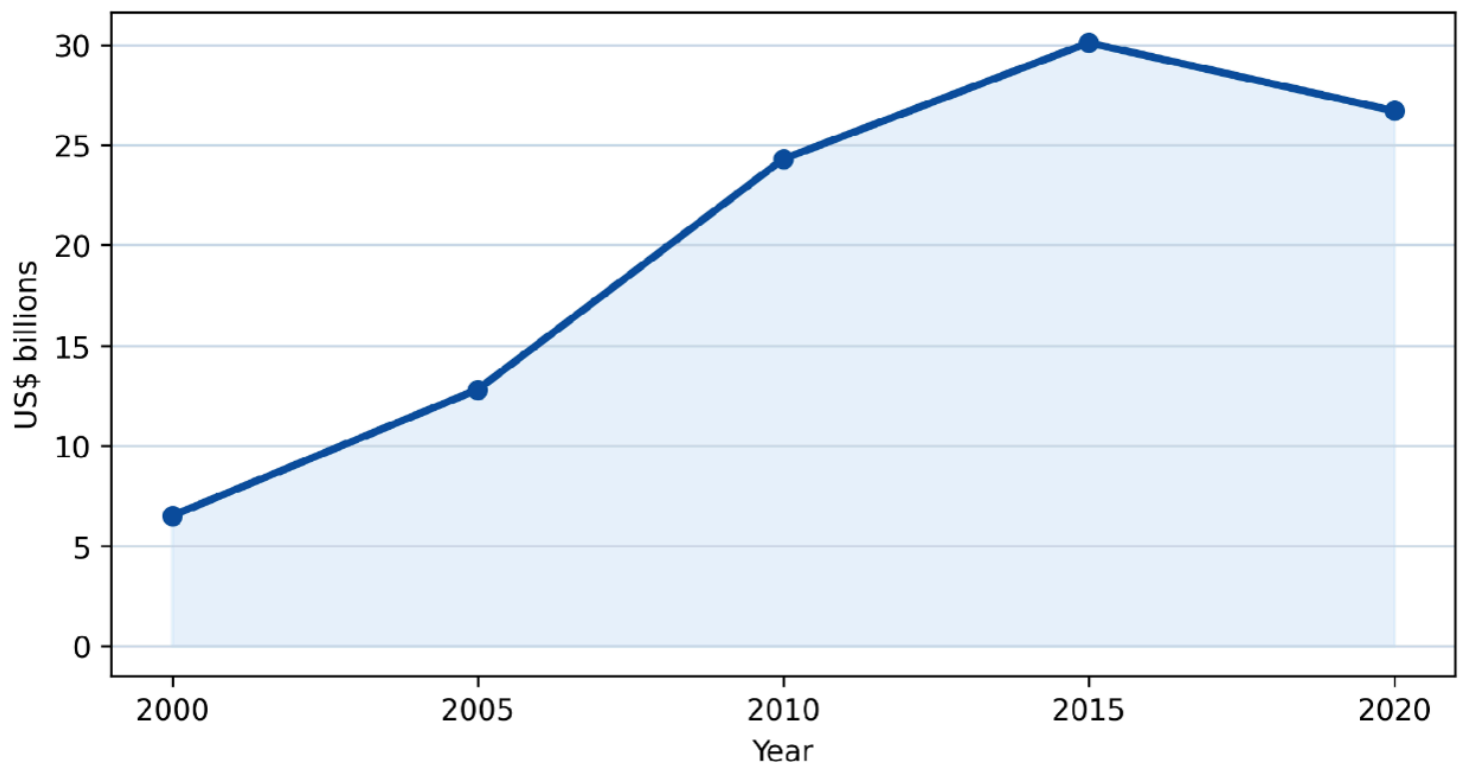


**Figure 1**

**Estimated international health aid to Sub-Saharan Africa, 2000–2020. Source: author visualization based on secondary data compiled in the dissertation.**

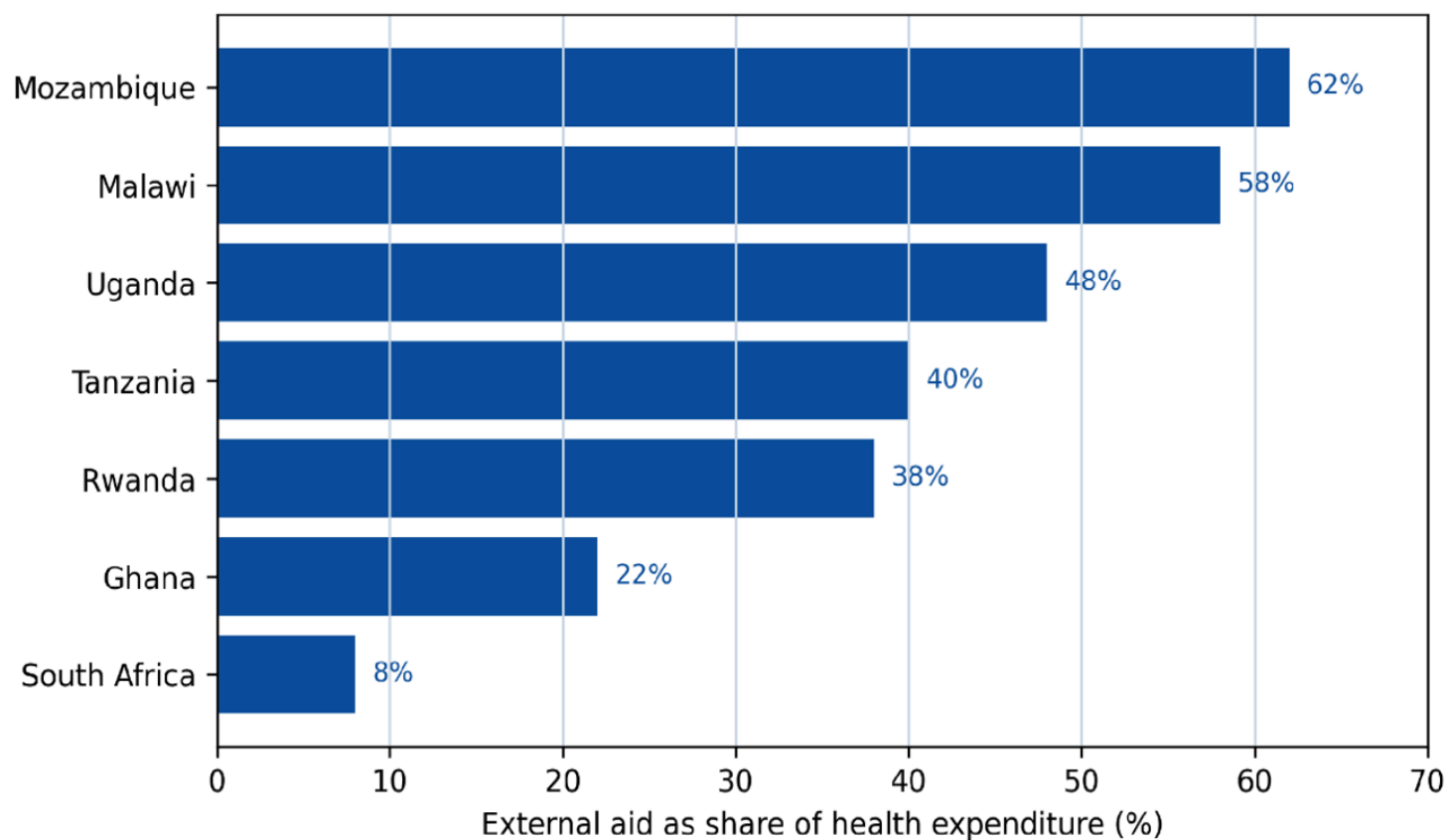


**Figure 2**

**Selected-country dependence on external health aid. Source: author visualization based on dissertation secondary data.**

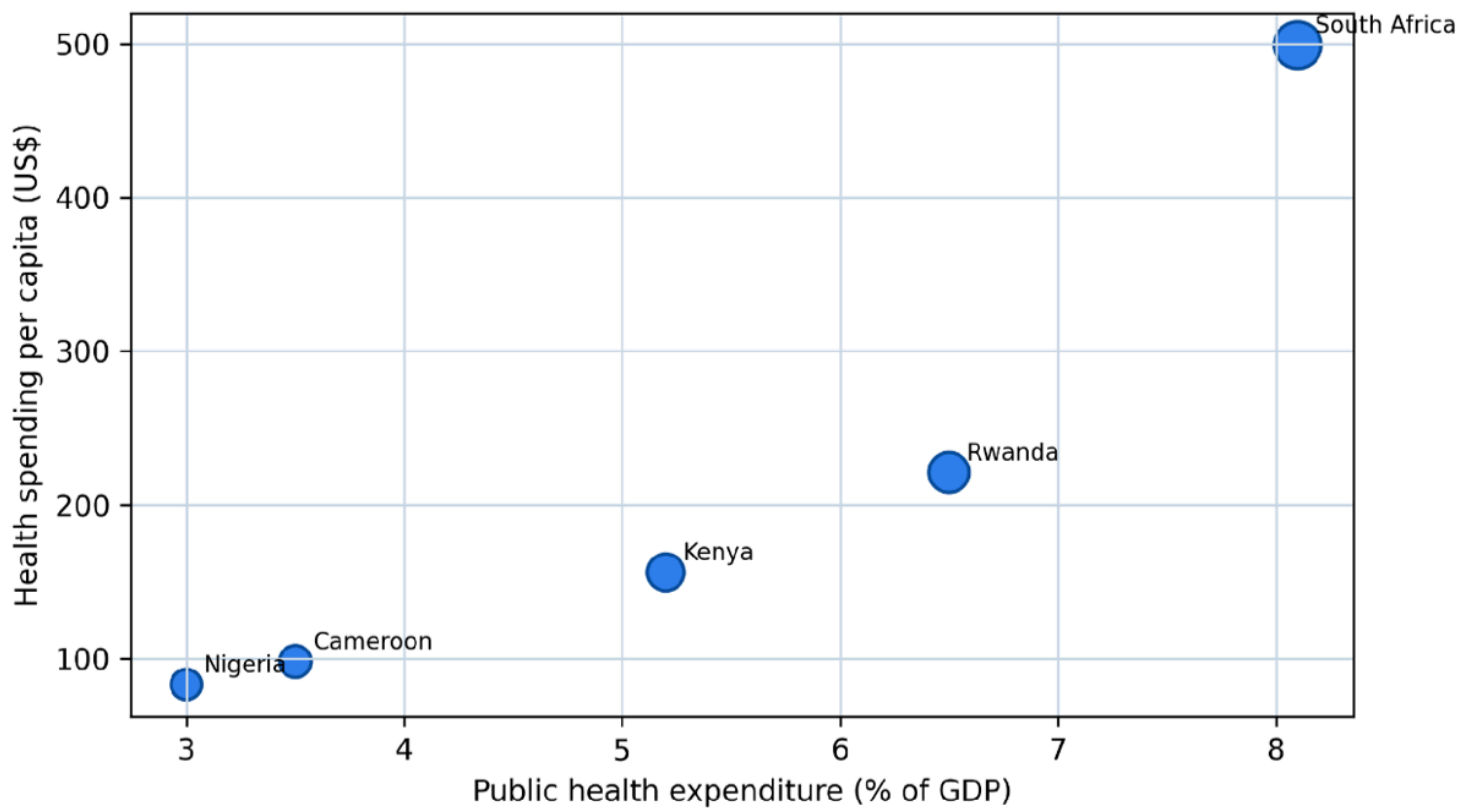


**Figure 3**

**Fiscal capacity and public health expenditure in selected countries. Source: author visualization based on dissertation secondary data.**

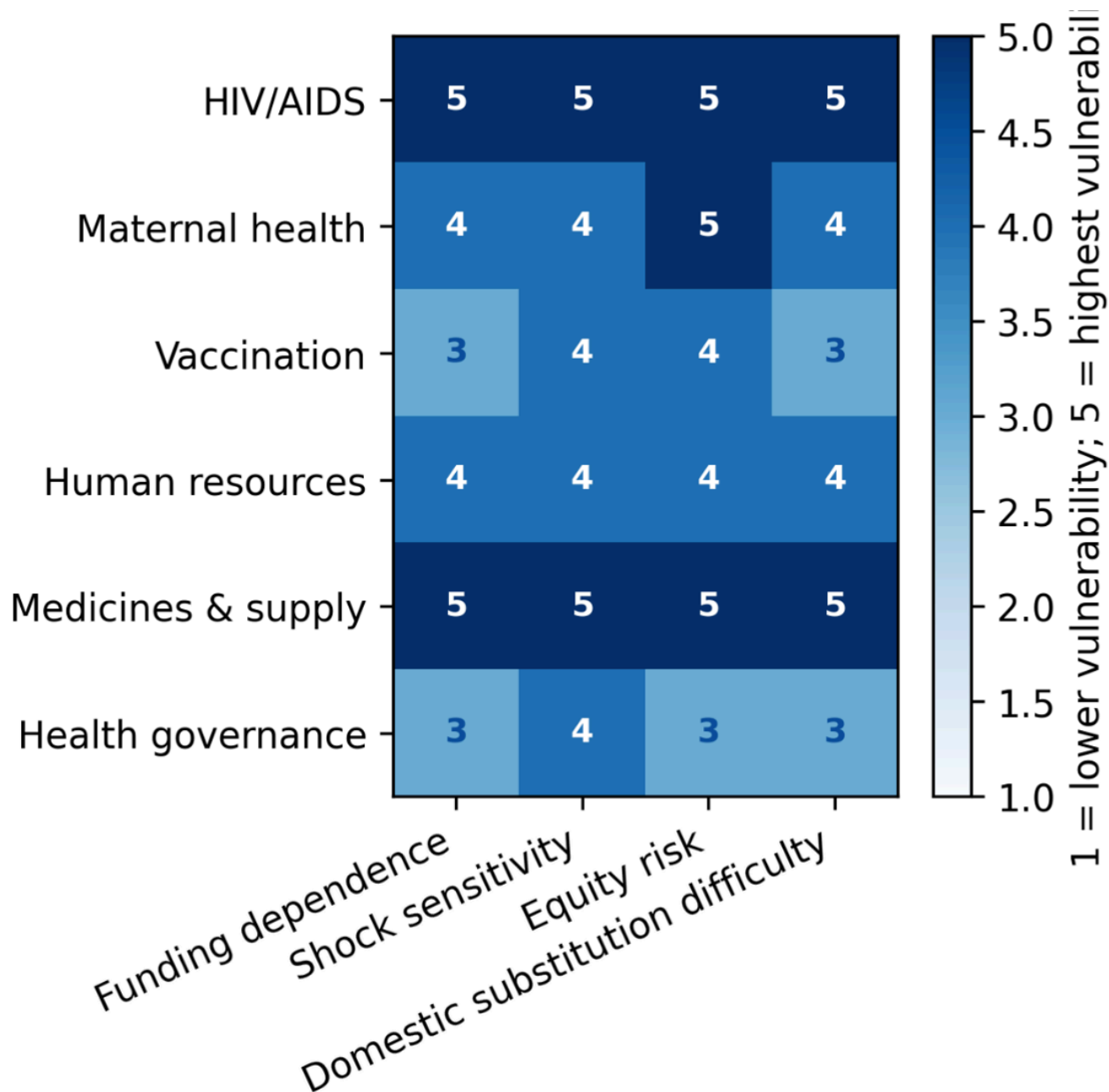


Figure 4

Programme vulnerability to donor-funding volatility. Source: qualitative synthesis of dissertation evidence and policy literature; 1 = lower vulnerability, 5 = highest vulnerability.

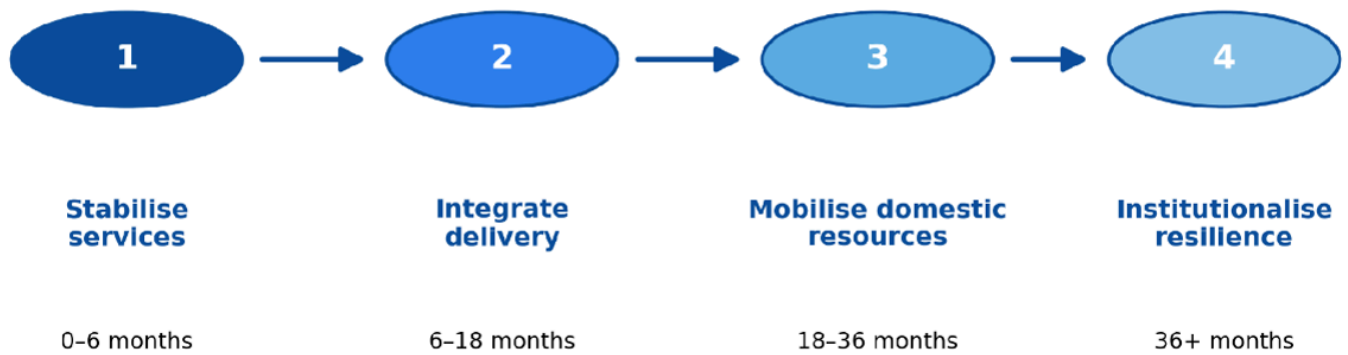


Figure 5

Phased transition framework for health-financing sustainability. Source: author synthesis.