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# HIV FINANCING LANDSCAPE ANALYSIS AND FUTURE FUNDING PROSPECTS IN 15 ASIAN COUNTRIES



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## Abbreviations

ART	antiretroviral therapy
ARV	antiretroviral
GDP	gross domestic product
GGE	general government expenditure
GGHE	general government health expenditure
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GNI	gross national income
HP+	Health Policy Plus
IMF	International Monetary Fund
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
US\$	U.S. dollar
USAID	U.S. Agency for International Development
WHO	World Health Organization

## Introduction

Many Asian countries have concentrated HIV epidemics with relatively low HIV prevalence rates, yet there has been mixed progress in reducing the HIV burden further in the region in recent years. Some countries are close to achieving epidemic control, where new HIV infections have decreased and are below the total number of AIDS-related deaths, while others have stagnant or even increasing HIV incidence rates. These trends suggest some countries are far from achieving epidemic control and may face resurgent epidemics. Contextual differences in epidemiology and design of HIV programs across countries, as well as social, political, financial, and other factors, have contributed to this divergence in outcomes in the region.

Among 15 selected countries supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and the U.S. President's Emergency Plan For AIDS Relief (PEPFAR) (see Box 1), five countries—Bangladesh, Kazakhstan, Pakistan, the Philippines, and Tajikistan—have at least twice as many new HIV infections than AIDS-related deaths and stagnant or increasing adult HIV incidence rates over the last five years (see Figure 1). Only three countries—Cambodia, Nepal, and Thailand—have fewer new infections than AIDS-related deaths (UNAIDS, 2018a). These 15 countries are the focus of the analysis in this report, based on a selection made with the input of the U.S. Agency for International Development (USAID)/Washington and USAID Asia offices.

Countries in this group struggling to achieve epidemic control lag behind others in meeting UNAIDS's 90-90-90 targets in which 90 percent of all people living with HIV are identified, 90 percent of all identified people living with HIV are on treatment, and 90 percent of all those on treatment are virally suppressed by 2020 (see Figure 2). For example, Pakistan has the lowest identification rate in the region, estimated to be just 15 percent, resulting in low antiretroviral therapy (ART) coverage and viral suppression (7 percent) among all people living with HIV; these low rates contribute to stalled progress in reducing HIV incidence and AIDS-related deaths in the country. On the other hand, two countries—Thailand and Vietnam—already exceeded the target of identifying 90 percent of people living with HIV. Even though several countries are on track to meeting the first 90, they face challenges in linking and retaining people living with HIV on ART, particularly in Kazakhstan, Lao PDR, and Papua New Guinea (UNAIDS, 2018a). Viral suppression rates among people living with HIV on ART are relatively high in most countries, although viral load testing coverage is low. Fewer than half of ART patients in six countries receive a viral load test (UNAIDS, 2018a).

### Box 1. Countries Analyzed

High impact countries\*:

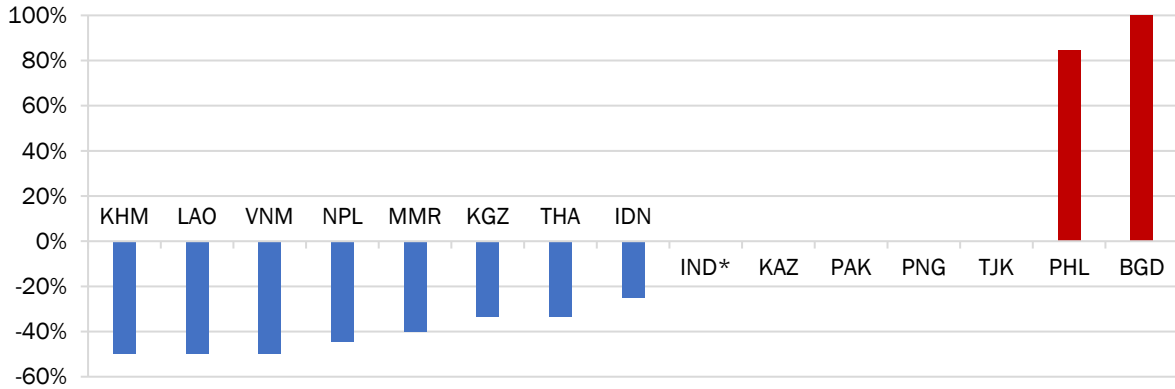
- Bangladesh (BGD)
- Cambodia (KHM)
- India (IND)
- Indonesia (IDN)
- Myanmar (MMR)
- Pakistan (PAK)
- Philippines (PHL)
- Thailand (THA)
- Vietnam (VNM)

Other PEPFAR-supported countries:

- Kazakhstan (KAZ)
- Kyrgyz Republic (KGZ)
- Lao PDR (LAO)
- Nepal (NPL)
- Papua New Guinea (PNG)
- Tajikistan (TJK)

\*Classified as high impact by the Global Fund. Pakistan and Bangladesh are not PEPFAR-supported countries.

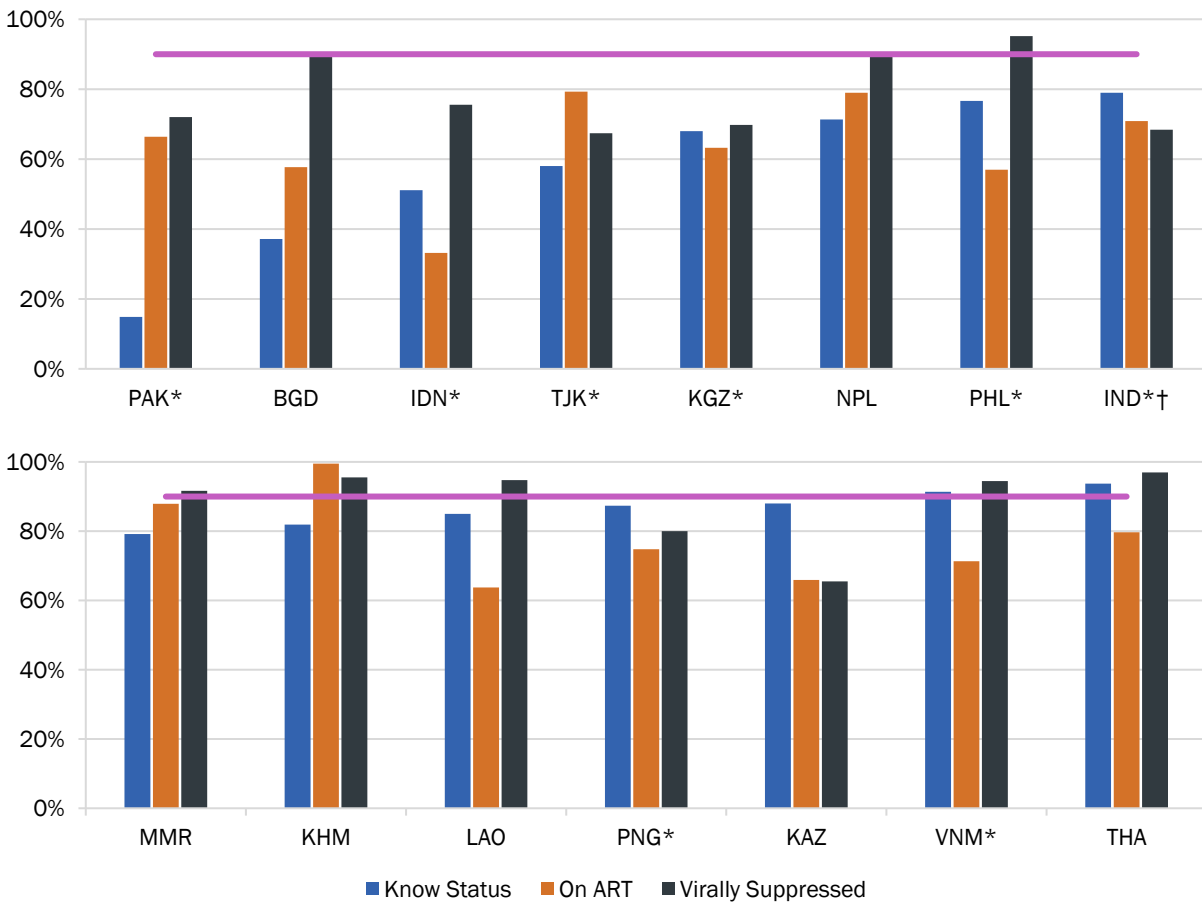
**Figure 1. Percent Change in HIV Incidence Rates among Adults Ages 15–49, 2013–2018**



Source: UNAIDS, 2018a

\*India achieved a small decrease in incidence from 2013 to 2017, but specific numbers are not available (NACO, 2018).

**Figure 2. Progress Toward Meeting 90-90-90 Targets, 2018**



Source: UNAIDS, 2018a; Indonesia MOH ART Acceleration Plan 2019

\* Viral load testing coverage below 50 percent (16% in Paskistan, 9% in Indonesia, 18% in the Philippines, 17% in India, 5% in Papua New Guinea, and 37% in Vietnam). Viral load testing coverage is missing for Tajikistan and Kyrgyz Republic.

† Progress on “Know Status” and “On ART” is only available for 2017 in India.

Given differences in current HIV programmatic achievement and outcomes across these selected countries from Asia, there is a need for context-specific HIV financing solutions. Some countries may need to invest in new approaches like recency testing as they aim to reach the few people living with HIV who remain undiagnosed. Other countries may need funding to improve service quality or scale up existing services with fidelity in order to reverse recent trends and get back on track to achieving national and global targets. However, across nearly all countries in the region, resource requirements are expected to increase as more people receive HIV services or investments are needed to maintain epidemic control. Given these expected increases in costs—as well as potential declines in external financing assistance in the short to medium term as some countries' economies grow and disease burden declines—governments will need to mobilize additional domestic resources for HIV.

An analysis published in August 2019 found that many Asian countries can increase domestic resources available for health and HIV by increasing revenue collection, increasing budgetary allocations to the health sector, and obtaining debt relief (Ithibu and Amendah, 2019). However, this analysis was limited to the nine high-impact countries supported by the Global Fund and it does not specify an amount of funding that countries may be able to spend on health and HIV across scenarios. As a result, the USAID- and PEPFAR-funded Health Policy Plus (HP+) project compared health and HIV financing trends and analyzed HIV funding prospects in 15 Asian countries that currently receive Global Fund and PEPFAR financing support. This analysis aims to answer the following questions to inform upcoming Global Fund applications and grant negotiations:

- How much can countries increase spending on health and HIV?
- What types of investments or changes to current spending are needed given the epidemiological and programmatic context?

## Methods

To understand country capacity to increase domestic government spending on health and HIV, HP+ completed three tasks:

- 1. Analyzed cross-country trends** for 12 key macroeconomic, health, and HIV financing indicators (see Table 1). Other studies have either used these indicators to assess fiscal space for health and HIV or have found them to be explanatory factors for budget allocations to health or HIV (Remme et al., 2016).
- 2. Projected future funding levels** for health and HIV based on two scenarios:
  - a. *Baseline scenario*: Health spending as a proportion of general government expenditure remains constant and HIV spending as proportion of health spending remains constant for each country.
  - b. *Ambitious health spending scenario*: Health spending as a proportion of general government expenditure increases to 15 percent and HIV spending as a proportion of health spending remains constant for each country. This calls for a significant increase in health spending for many countries and is the upper bound of potential government spending on health.



**3. Considered political will and other factors** influencing HIV financing by reviewing documents and consulting with regional HIV experts.

**Table 1. Key Indicators**

Indicator Type	Indicator	Relevance to Domestic Public Spending on Health and HIV
<b>Macro-economic indicators</b>	Gross national income (GNI) per capita	External financing assistance and co-financing requirements are partially based on country income classifications; GNI per capita correlates with government spending.
	Ratio of net debt to revenue (excluding grants)	A high ratio may lead to economic slowdown or may limit government ability to increase spending on social programs, including health and HIV.
	Revenue (excluding grants) as a percentage of gross domestic product (GDP)	Indication of governments' control over country resources and ability to collect revenue, which affects government spending potential.
	Three-year cumulative GDP growth rate	Economic growth forms the foundation for increased revenue collection and government spending.
<b>Health financing indicators</b>	Total health expenditure by funding source	Reveals to what extent a country relies on external financing support or out-of-pocket payments to finance healthcare.
	General government health expenditure (GGHE) as a percentage of general government expenditure (GGE)	Indicates relative prioritization of health compared to other programs and industries that receive government financial support; many African countries have aimed to allocate at least 15 percent of GGE to health in line with the 2001 Abuja Declaration, although most have not met this target (McIntyre et al., 2017).
	GGHE as a percentage of GDP	Provides fiscal context of government health spending; the World Health Organization recommends that governments spend at least 5 percent of GDP on health to attain universal health coverage.
<b>HIV financing indicators</b>	HIV spending as a percentage of total health expenditure	Indicates how HIV spending is prioritized relative to spending on other health areas.
	HIV expenditure by source	Reveals to what extent a country relies on external financing support or out-of-pocket payments to finance the HIV program.
	HIV commitments versus disbursements/spending	If disbursements or spending are lower than commitments, there may be issues with government management of HIV funds, such as problems with budgeting, planning, or reporting.
	Key population outreach and prevention expenditure as a percentage of HIV expenditure	Indicates if there are any issues in targeting HIV funds for key population outreach and prevention in concentrated epidemic settings.
	HIV treatment expenditure per person on ART	Relatively high unit costs of treatment suggest efficiency gains can be made.

HP+ used data from publicly available sources, such as Global Fund funding request and grant documents, and International Monetary Fund (IMF), World Bank, or World Health Organization (WHO) databases, to analyze baseline trends. For some indicators, data were not available for all countries or the data were reported for different years (see Annex A for data sources for each indicator).

For the health and HIV spending projection analysis, HP+ used IMF projections of future government health spending for the next three years. These projections are based on several assumptions regarding economic growth, government revenue collection, and other factors, and are usually updated annually given the underlying uncertainty in the estimates and changes in the economic outlook of a country.

## Findings

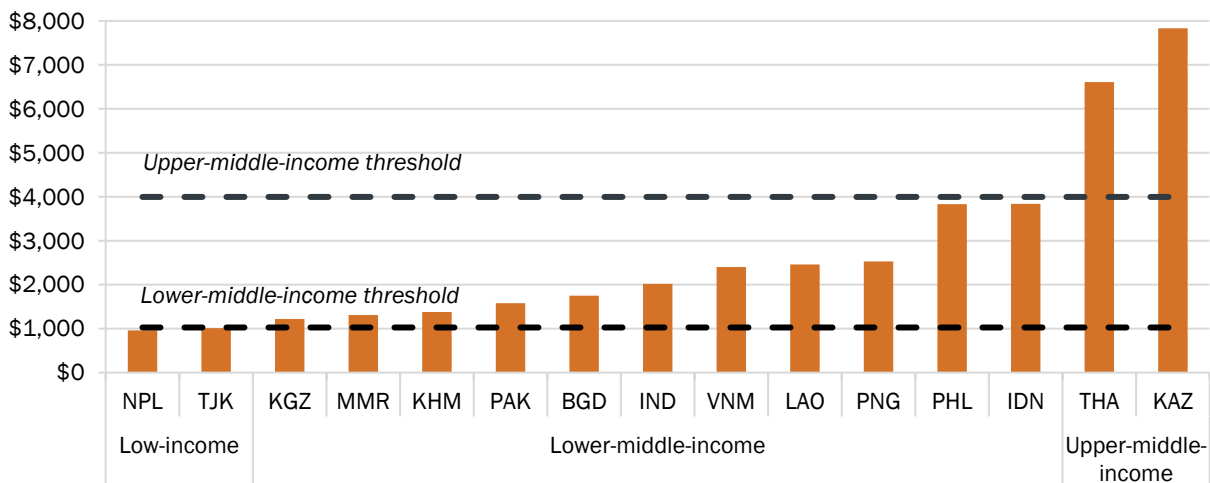
This section assesses governments’ potential to increase domestic public spending on health and HIV by analyzing baseline trends across countries and projecting future spending under two scenarios.

### Is there potential to increase government spending on health?

#### *Macroeconomic overview*

Most countries in the region are classified as lower-middle-income, with gross national income (GNI) per capita ranging from US\$960 in Nepal to US\$7,830 in Kazakhstan (see Figure 3). Only two countries experienced changes in income classification in recent years; Cambodia rose from a low-income to a lower-middle-income country in 2017, whereas Tajikistan fell from a lower-middle-income to a low-income country in 2018. Countries approaching the upper-middle-income threshold, such as the Philippines and Indonesia, may face declines in external financial assistance for health and increased co-financing responsibilities in the near term.

**Figure 3. GNI per Capita by Country (Current US\$, Atlas Method)**



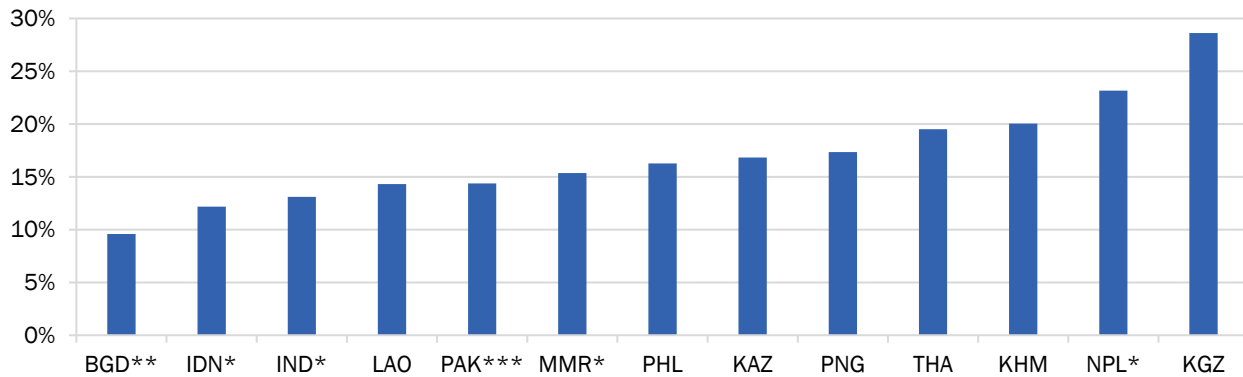
Source: World Bank, 2018

Notes: Lower-middle-income: \$1,026 to \$3,995; upper-middle-income: \$3,886 to \$12,375.

Raising sufficient government revenue to finance public programs, including health, education, and other areas, remains a challenge in most low- and middle-income countries. Excluding grants, these countries primarily rely on taxes for government revenue. Many lower-middle-income countries in the region rely more on indirect taxes on goods and services (e.g., value-added tax, excise tax, and import duties) than on income or property taxes (McIntyre and Meheus, 2014). Reasons for low levels of tax collection can include a small tax base in terms of income or population, tax evasion, poor tax administrative capacity, or complex tax policies with multiple exemptions and tax rates.

Government revenue as a percentage of gross domestic product (GDP) is indicative of a country’s ability to raise sufficient revenue to fund public programs. Although the government revenue to GDP ratio may vary by country due to differences in income levels and economic structures, a relatively low ratio suggests issues in raising adequate government revenue. Among the countries included in the analysis, government revenue, exclusive of grants, as a percentage of GDP ranges from 9.6 percent in Bangladesh to 28.6 percent in the Kyrgyz Republic (see Figure 4). Bangladesh has one of the lowest ratios of government revenue to GDP in the world, and a growing problem of tax evasion, which reached a peak of 47.2 percent of GDP in 2014 (Nurunnabi, 2019). However, some countries have seen improvements in tax collection in recent years; for example, tax collection in Cambodia in 2018 exceeded expectations (*Phnom Penh Post*, 2018).

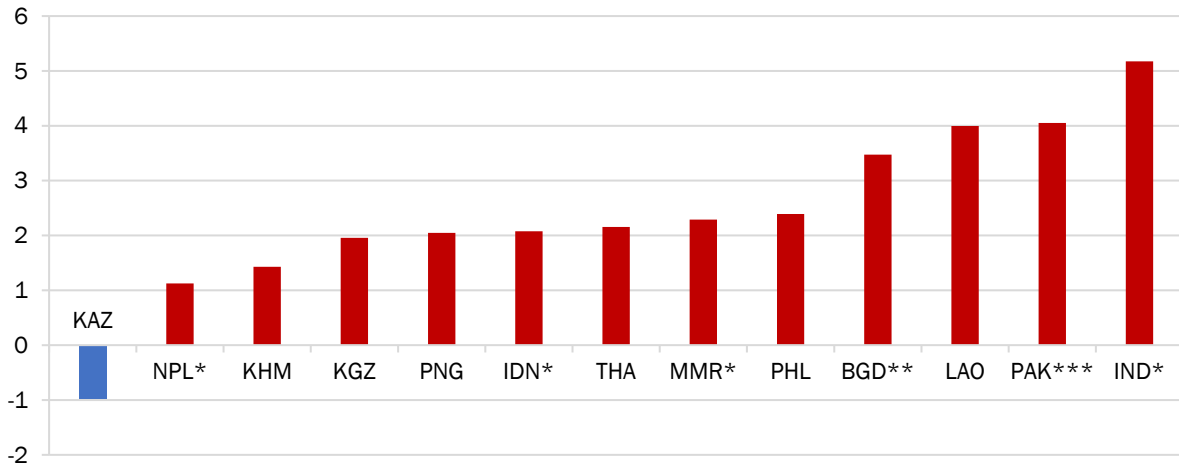
**Figure 4. Government Revenue (Excluding Grants) as a Percentage of GDP**



Source: IMF, 2018a \* 2017 data \*\* 2016 data \*\*\* 2015 data

In countries where fiscal collections are relatively low, growing debt could present a challenge for economic growth and government spending. When comparing net debt to government revenue (excluding grants), nine countries have twice as much net debt as revenue (see Figure 5).

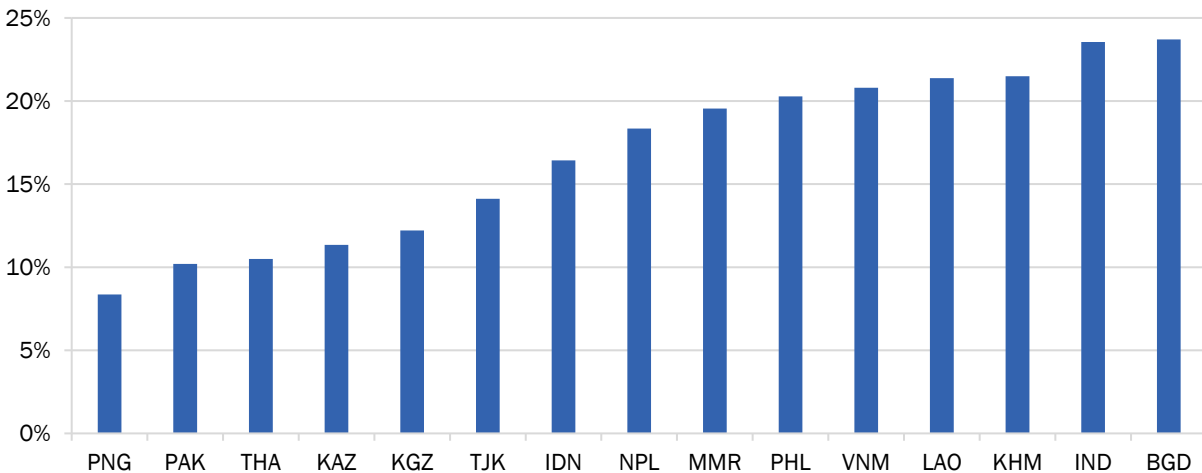
**Figure 5. Ratio of Net Debt to Government Revenue (Excluding Grants)**



Source: IMF, 2018a \* 2017 data \*\* 2016 data \*\*\* 2015 data. Data is missing for Tajikistan and Vietnam.

If countries can improve their tax effort (i.e., increase the proportion of actual tax collection relative to tax capacity) as their economies grow, they may be able to increase revenue collection and therefore increase resources available for government programs, including health. Although economic growth projections vary by country and are highly uncertain given the 2019 coronavirus pandemic, many countries in the analysis were expected to see moderate to high rates of economic growth over the next few years prior to the pandemic (see Figure 6). Bangladesh (with a 23.7 percent three-year cumulative growth rate) and India (23.5 percent) were expected to see the largest growth in GDP from 2019 to 2022. Papua New Guinea had the lowest estimated cumulative economic growth rate from 2019 to 2022, at just 8.4 percent.

**Figure 6. Cumulative Economic Growth Rate, 2019–2022 (Percent of 2019 GDP)**



Source: IMF, 2019

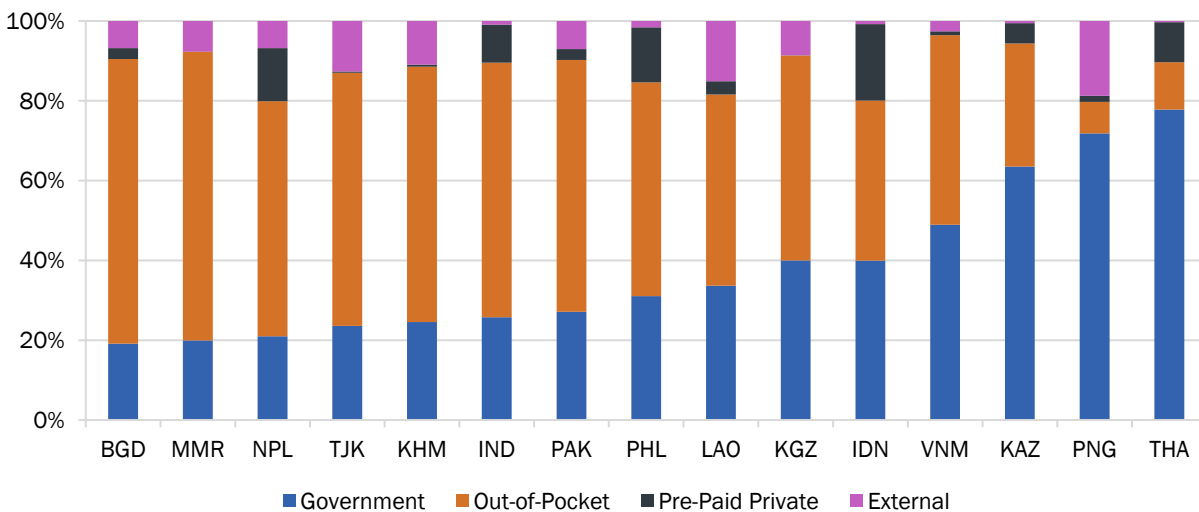
Economic growth in the region is trending downward as the 2019 coronavirus pandemic unfolds, although the extent of the negative impacts of the pandemic on the global economy are

still uncertain. One analysis predicts that severe drops in tourism, trade, and domestic consumption and investment in developing countries in Asia due to the pandemic may lead to economic losses amounting to US\$42 billion, or 0.5 percent of GDP (ADB, 2020). A more recent analysis conducted by the World Bank also suggests economic growth in developing countries in East Asia and the Pacific will decline sharply in 2020. Countries that have weak health systems; rely heavily on trade, tourism, and commodities; are heavily indebted; and rely on volatile financial flows are most vulnerable to the pandemic’s economic shock. The World Bank analysis forecasts economic contraction in Indonesia, Papua New Guinea, the Philippines, and Thailand. Political instability (as seen in Myanmar, the Philippines, and Tajikistan), growing income inequality (as seen in Cambodia, India, and Indonesia), climate change (affecting Bangladesh and Papua New Guinea), and economic concentration in natural resource activities (in Papua New Guinea) also pose medium-term risks to recovery efforts and economic growth in countries in the region (Dang and Lanjouw, 2018; IMF, 2018b; World Bank, 2016a).

### Health financing trends and projections

Domestic government health spending represents less than half of total health expenditure in 12 of the 15 countries (see Figure 7). Out-of-pocket expenditure is the majority of total health expenditure in 11 of the countries. Pre-paid private expenditure, although a sizeable proportion of total health expenditure in some countries like Indonesia and Thailand, is still a smaller proportion of total health expenditure than out-of-pocket payments. This suggests that financial protection remains a challenge in the region. Papua New Guinea relies on external financing support for health more than any other country in the analysis; in most countries, external financing support represents less than 10 percent of total health expenditure. As countries face transitions in donor financing support, the challenge is to ensure programs remain fully funded and that expenses are not shifted to patients in the form of out-of-pocket payments at the point of care.

Figure 7. Total Health Expenditure by Source, 2016

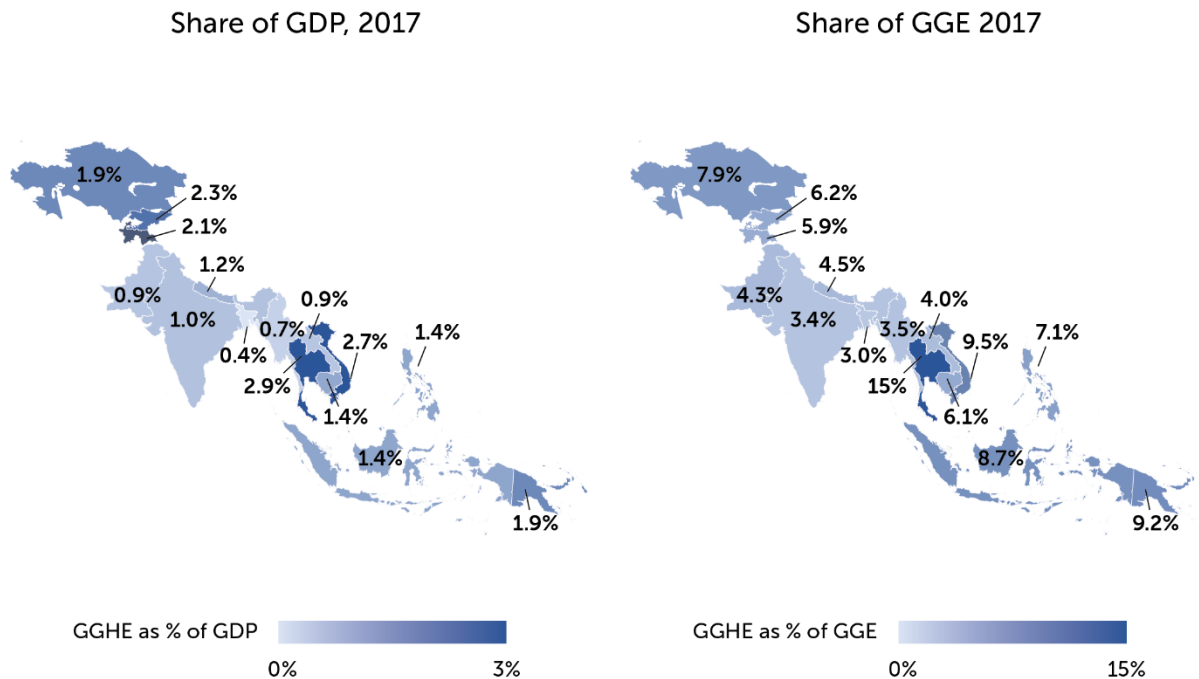


Source: IHME, 2016

Although there is no standard for health spending as a proportion of general government expenditure, many countries aim to spend 15 percent of general government expenditure on health in line with the 2001 Abuja Declaration (McIntyre et al., 2017). There is a wide range in regard to how countries prioritize health spending in relation to GGE (see Figure 8). Just 3 percent of general government expenditure is spent on health in Bangladesh, compared to 15 percent in Thailand.

The WHO recommends governments spend at least 5 percent of GDP on health, as such a rate is generally required to ensure that out-of-pocket payments account for no more than 20 percent of total health expenditure (Jowett et al., 2016). None of the countries in the analysis meet this benchmark; health spending as a proportion of GDP ranges from 0.4 percent in Bangladesh to 2.9 percent in Thailand.

**Figure 8. General Government Health Expenditure (GGHE) as Share of General Government Expenditure (GGE) and GDP**



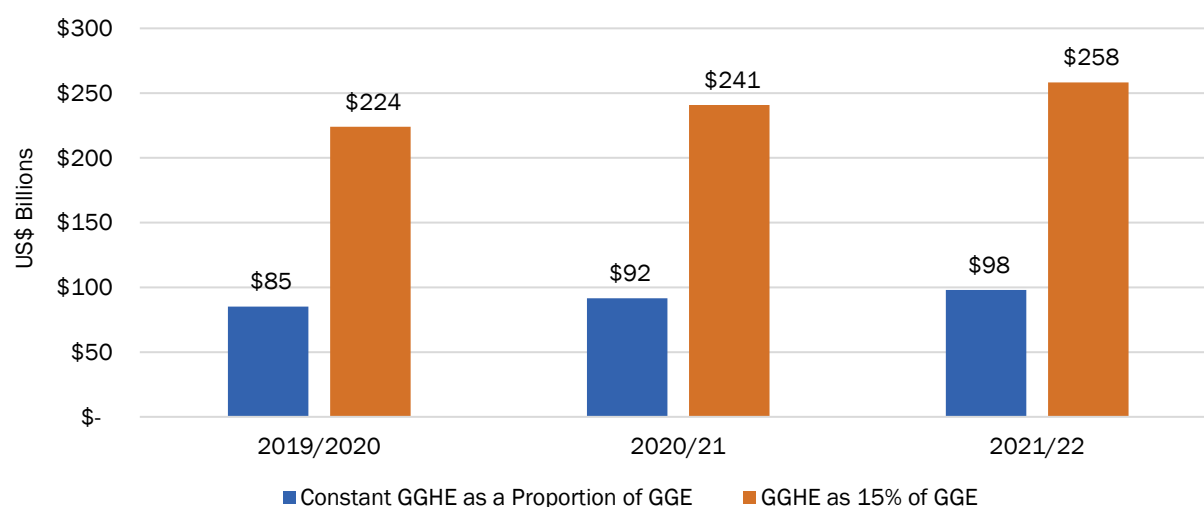
Source: WHO, 2017

Given the uncertain impact of the coronavirus pandemic on countries' economies, future health spending is also uncertain. Prior to the pandemic, government expenditure on health was expected to increase across all countries over the next three years, even if countries did not increase allocations to health relative to other areas, due to positive macroeconomic projections. The steps involved in calculating future health spending for each country included:

- Projecting growth in GDP (baseline GDP and annual percentage growth) using IMF data.
- Projecting growth in general government expenditure (as a percentage of GDP) using IMF data.
- Assuming constant (country-specific rates) or increased (15 percent) health spending (as a percentage of general government expenditure).

Under the baseline scenario, based on economic projections prior to the pandemic and where government health expenditure as a proportion of general government expenditure remains constant in each country, an additional US\$12.7 billion could be mobilized for health from fiscal years 2019/20 to 2021/22 across 14 countries where sufficient data are available (see Figure 9). Under the ambitious health spending scenario, where health accounts for 15 percent of government spending, an additional US\$448.5 billion could be available for health in these countries from 2019/20 to 2021/22. India is projected to spend the most on health under both scenarios (see Annex B). Due to India's large economy, it accounts for the majority (56 percent) of projected health spending across all 14 countries under the ambitious scenario in 2021/22. However, these health spending projections are unlikely to be met given the pandemic's economic toll in the region and need to be updated once revised economic projections become available.

**Figure 9. Projected Spending on Health by Scenario across 14 Countries**



Note: Tajikistan is excluded from the analysis due to lack of data on projected government expenditures.

Even as countries experience economic growth, governments need to have political will to maintain or increase allocations to health. Some countries have demonstrated that health is a budget priority by committing to meet health and spending targets or by introducing laws and regulations that expand health coverage. For example, the Philippines passed a sin tax law in 2012 where 85 percent of tax revenue from tobacco and alcohol sales go to health, which resulted in the government health budget doubling from 2013 to 2016 (Obermann et al., 2018). Passage of the Universal Health Coverage Act in 2019 again demonstrated that health is a government priority; this law automatically enrolls all Filipinos in its national health insurance scheme. Similarly, Indonesia recently implemented minimum service standards and local governments are expected to commit sufficient funding to meet health targets.

Many other countries, however, have relatively low political will or face other challenges to increasing health spending, including competing priorities for other social programs. In Cambodia, the government continues to prioritize investment in infrastructure and education over health. In Nepal, fiscal decentralization over the last two years poses a risk as local

governments may prioritize spending on other areas or may not link their health spending to national commitments and strategies.

### **Key takeaways**

Current government health spending varies widely by country. For example, government spending on health as a proportion of total health expenditure ranges from 19 percent in Bangladesh to 78 percent in Thailand. There is a strong correlation between GNI per capita and government health spending as a percentage of total health expenditure; governments with higher incomes tend to contribute more to overall health spending than governments with lower incomes. However, there is only a moderate correlation between GNI per capita and government health spending as a proportion of general government expenditure, indicating that some countries have chosen to prioritize health spending over others in the region. Government health spending as a proportion of general government expenditure ranges from 3 percent in Bangladesh to 15 percent in Thailand.

Prior to the coronavirus pandemic, many countries included in the analysis were expected to experience moderate to high rates of economic growth; three-year cumulative economic growth projections exceeded 10 percent in all countries except Papua New Guinea. This economic growth was projected to lead to increases in government revenue and expenditure. However, the coronavirus pandemic may result in sharp declines in economic growth, including contraction in some countries in the short term. The region also faces other risks to its recovery efforts and medium-term economic growth, including political instability, high ratios of net debt to government revenue (excluding grants), and poor tax collection capacity and effort. Bangladesh, India, Lao PDR, and Pakistan are relatively more constrained in terms of debt and poor tax collection than other countries included in the analysis. An updated analysis is needed once economic impact estimates from the coronavirus pandemic become available and more reliable.

Still, our analysis found that if countries can recover quickly from the pandemic and they prioritize health spending, additional public resources could be mobilized for health. Based on economic growth projections before the pandemic, between \$97 and \$255 billion could be spent on health across 14 countries in fiscal year 2021/22, depending on the level of prioritization of health. Strong political will to invest in health is required to achieve the upper-bound estimate, which is evident in some but not all countries included in the analysis.

## **Is there potential to increase government spending on HIV?**

If countries in the region increase overall health spending, government spending on HIV may increase as well. However, this may not occur if countries choose to prioritize other health issues over HIV or expect external financing assistance to fill HIV program financing gaps. In this section, we assess current HIV spending and analyze HIV financing prospects across the 15 countries.

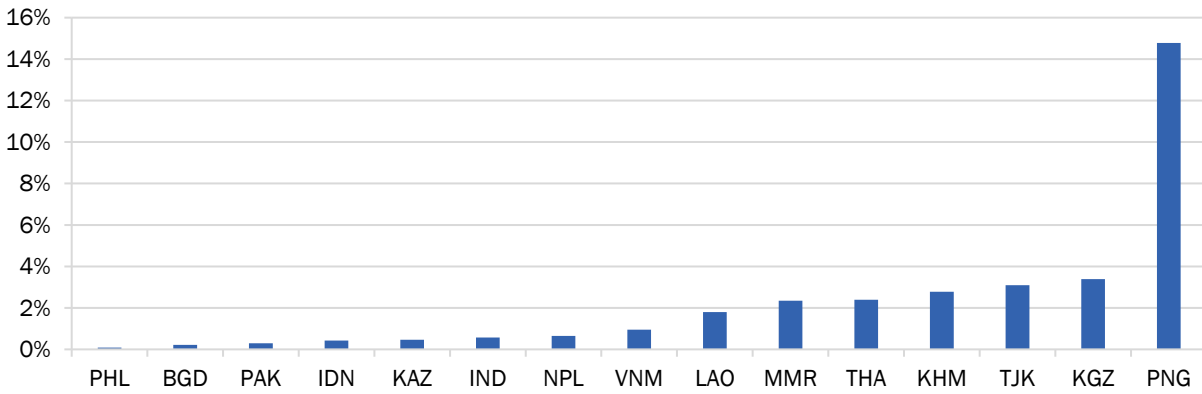
### **What do countries spend on HIV?**

In all countries except Papua New Guinea, HIV spending accounts for a relatively small proportion of total health expenditure (see Figure 10). In eight countries, HIV expenditure is less than 1 percent of total health expenditure. This relatively low spending is primarily a result of countries having concentrated epidemics with low HIV prevalence and competing health



demands. The countries included in this analysis still face challenges in maternal and child health, tuberculosis, and other health areas, while also experiencing a high and rising burden of noncommunicable disease, which often requires expensive, chronic treatments.

**Figure 10. HIV Expenditure as a Share of Total Health Expenditure, 2016**



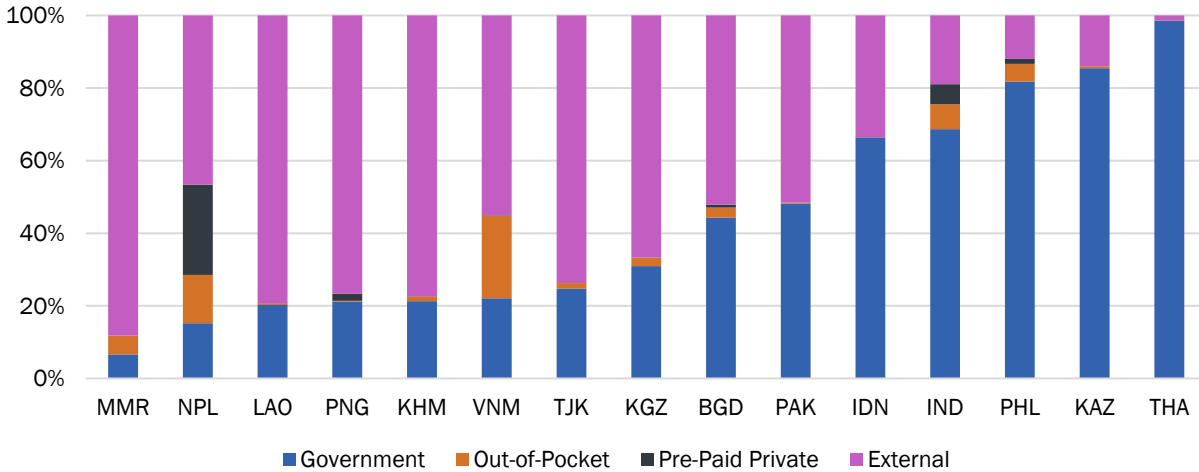
Source: IHME, 2016

Note: Total health expenditure includes domestic (public and private) and external expenditure on health.

Although HIV spending accounts for a small proportion of total health expenditure in the region, most countries continue to rely on external financing to carry out their HIV programs (see Figure 11). External financing for HIV as a percentage of total HIV spending ranges from just 1.4 percent in Thailand to 88.2 percent in Myanmar. Only five countries—India, Indonesia, Kazakhstan, the Philippines, and Thailand—finance the majority of their HIV response using domestic government funding. Out-of-pocket payments, which tend to account for most of health spending in many countries, account for a very small proportion of HIV spending in the region.

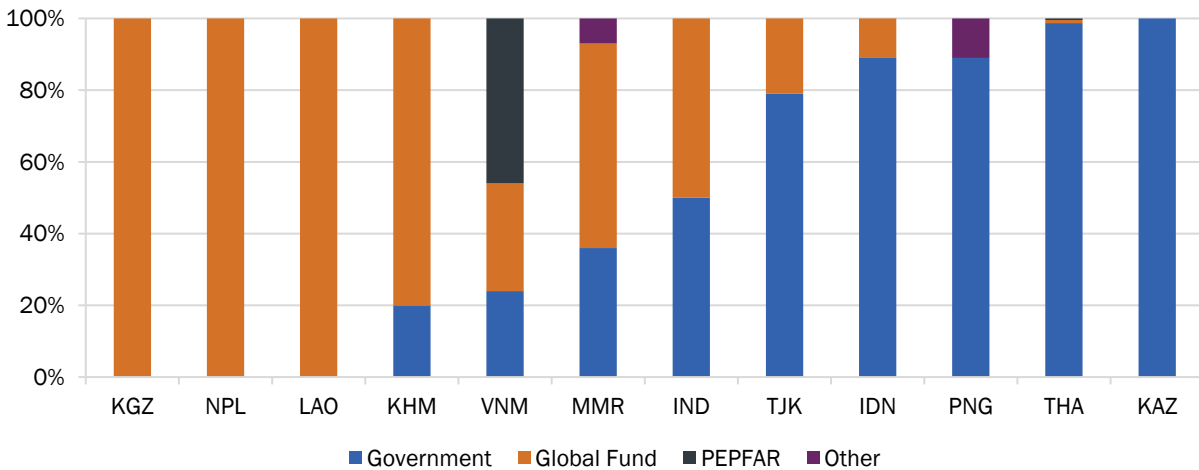
Government spending on key commodities, particularly antiretroviral (ARV) drugs, varies significantly by country (see Figure 12). Some countries such as Nepal and the Kyrgyz Republic rely solely on the Global Fund for ARV procurement. Alternatively, the proportion of ARVs financed by the government exceeds proportional contributions to the overall HIV response in some countries. For example, 36 percent of ARVs are financed by the government in Myanmar even though government spending on the entire HIV response is below 10 percent (PEPFAR, 2019a).

Figure 11. HIV Expenditure by Financing Source, 2016



Source: IHME, 2016

Figure 12. Spending on ARVs by Funding Source

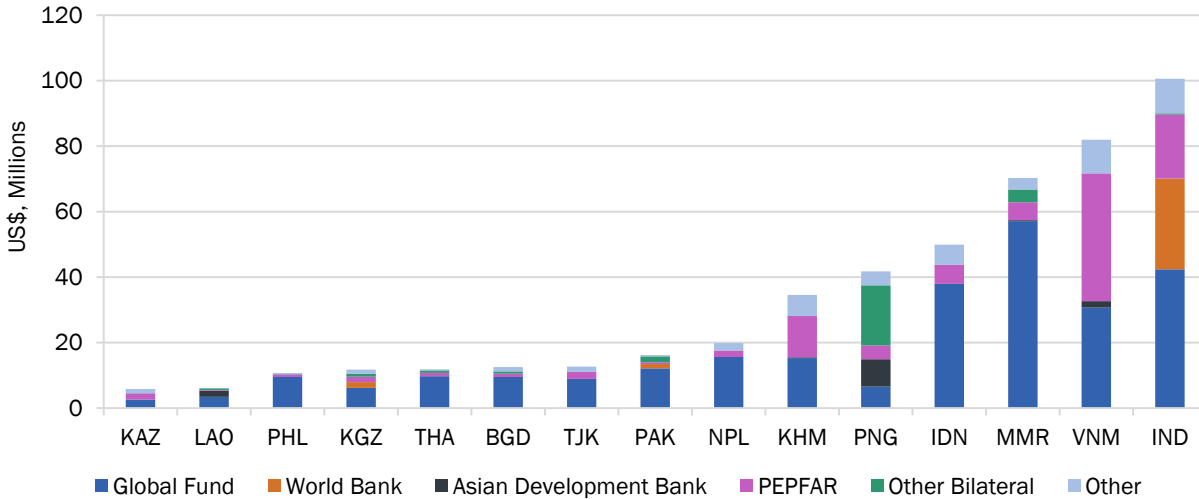


Source: PEPFAR, 2019a

Note: Data are missing for Bangladesh, Pakistan, and the Philippines.

India, Vietnam, and Myanmar receive the largest disbursements of external financing assistance for HIV (see Figure 13). The Global Fund accounts for the majority (55 percent) of external financing assistance disbursements for HIV in the 15 countries included in the analysis. However, PEPFAR provides substantial support to Cambodia, India, and Vietnam.

Figure 13. HIV Disbursements by Development Partner, 2016

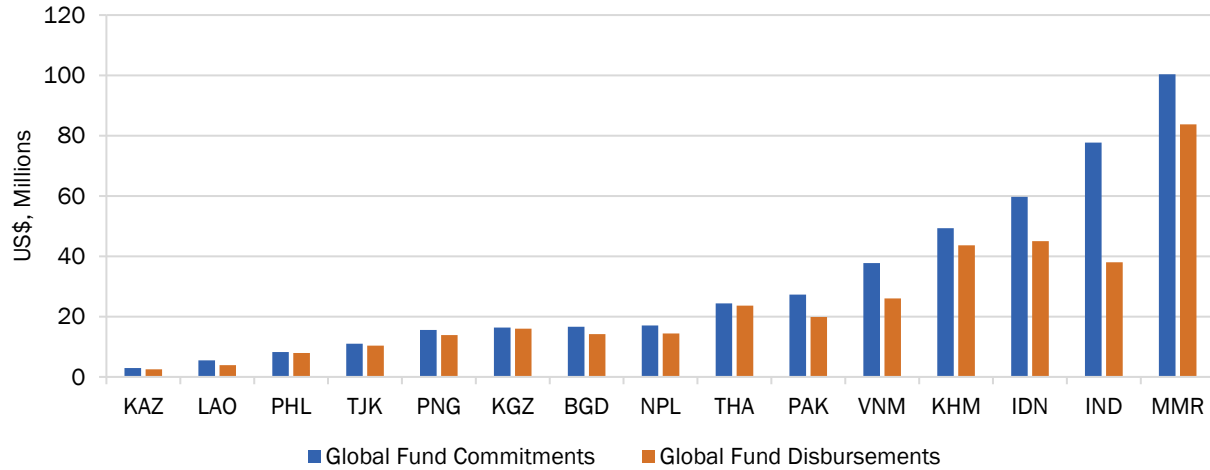


Source: IHME, 2016

Although data were not available to evaluate differences in HIV financing commitments, disbursements, and expenditures by funding source, Global Fund and PEPFAR data suggest a mismatch in commitments/planned funding by donors and actual disbursements/expenditures. For Global Fund HIV grants continuing into 2020, cumulative disbursements from 2018 to 2020 range from just 49 percent (India) to 98 percent (Kyrgyz Republic) of committed funds (see Figure 14). Delayed or smaller disbursements could be a result of poor planning and budgeting for HIV activities, inadequate or delayed country reporting, performance problems, mismanagement of funds, or other issues. Conversely, PEPFAR expenditure under the Asia regional program in 2019 was nearly double the amount of planned funding for the year. Similarly, PEPFAR expenditure under the Central Asia regional program was 18 percent higher than planned funding in 2019 (PEPFAR, 2020).

Domestic government budget execution rates for HIV are only available for a few countries. In Thailand, the HIV budget execution rate (113.6 percent) exceeds the overall health budget execution rate (89.4 percent) (PEPFAR, 2019b). In India, however, the National AIDS Control Organization has one of the lowest budget execution rates within the health sector; the organization spent only 35 percent of its US\$1,188 million budget allocation from 2007 to 2013, primarily due to delays in commodity procurement (Bagechi, 2015). Low health budget execution rates in other countries could indicate a problem in utilizing domestic public HIV funds. For example, while the Philippines has increased government budget allocations for HIV, including for commodity procurement, only 42 percent of obligated funding for the budget line item “prevention and control of other infectious diseases” (which includes HIV) was disbursed in 2019 (ProtectHealth, unpublished).

**Figure 14. Global Fund HIV Commitments versus Disbursements, 2018–2020**



Source: Global Fund, 2020

Notes: Commitments and disbursements for grants in the current implementation period. India has five ongoing grants; Bangladesh has three; and Indonesia, Myanmar, Pakistan, Thailand, and Vietnam each have two. All grants end December 31, 2020, except Bangladesh (November 30, 2020), India (March 31, 2021), and Nepal (March 15, 2021).

### **Why are some countries spending more on HIV?**

Some countries may spend relatively more on HIV than others in the region due to differences in programmatic needs. For example, countries with a rising burden of disease and poor program performance are expected to need more resources in the short term relative to countries with a falling burden of disease. Differences in prioritization of HIV within health budgets are also a function of political will to increase spending on HIV. While many countries have committed to reach national or global HIV targets, including 90-90-90 targets, and made corresponding financial commitments to their HIV response, countries often fall short in meeting their commitments (see Box 2).

Relatively high spending on HIV could also indicate that there are allocative or technical inefficiencies. Efficiency analyses using the Optima HIV model in several countries revealed the need to reduce high management and other indirect costs within national HIV programs, increase spending on key population programs, and shift allocations between prevention and treatment spending (World Bank, 2016b; Shattock et al., 2017; Grantham et al., 2016). For example, optimization analysis in the Kyrgyz Republic revealed that the top priority should be to increase ART spending to 31 percent of all HIV spending to maximize reductions in mortality and new infections, while focusing prevention spending on people who inject drugs and men who have sex with men (World Bank, 2016b).

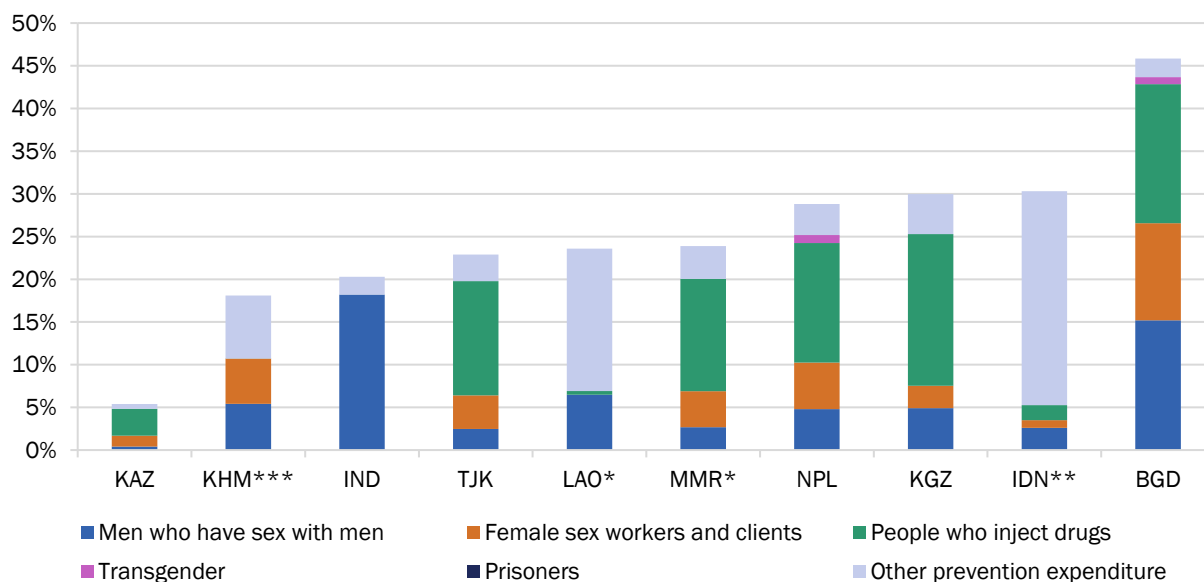
#### **Box 2. Falling Short in Government Commitments to HIV: Country Examples**

**Thailand:** Although the government committed to fully fund the HIV program with domestic resources by 2017, the country still receives external financing support.

**Lao PDR:** The government committed to finance 10 percent of ARV procurement, but only allocated funding for 7 percent in 2019, amounting to less than US\$100,000 (PEPFAR, 2019a).

Most countries in the region have concentrated epidemics that require targeted prevention funding for key populations. In eight of ten countries with sufficient expenditure data, outreach and prevention expenditure accounts for at least one-fifth of overall HIV expenditure (see Figure 15). Prevention and outreach spending as a share of overall HIV expenditure is particularly low in Kazakhstan, possibly a result of poor prioritization of these interventions along with high HIV treatment costs.

**Figure 15. Key Population Prevention and Outreach Expenditure as a Percentage of HIV Expenditure**



Source: UNAIDS, 2018b \* 2017 data, \*\* 2016 data \*\*\* 2015 data

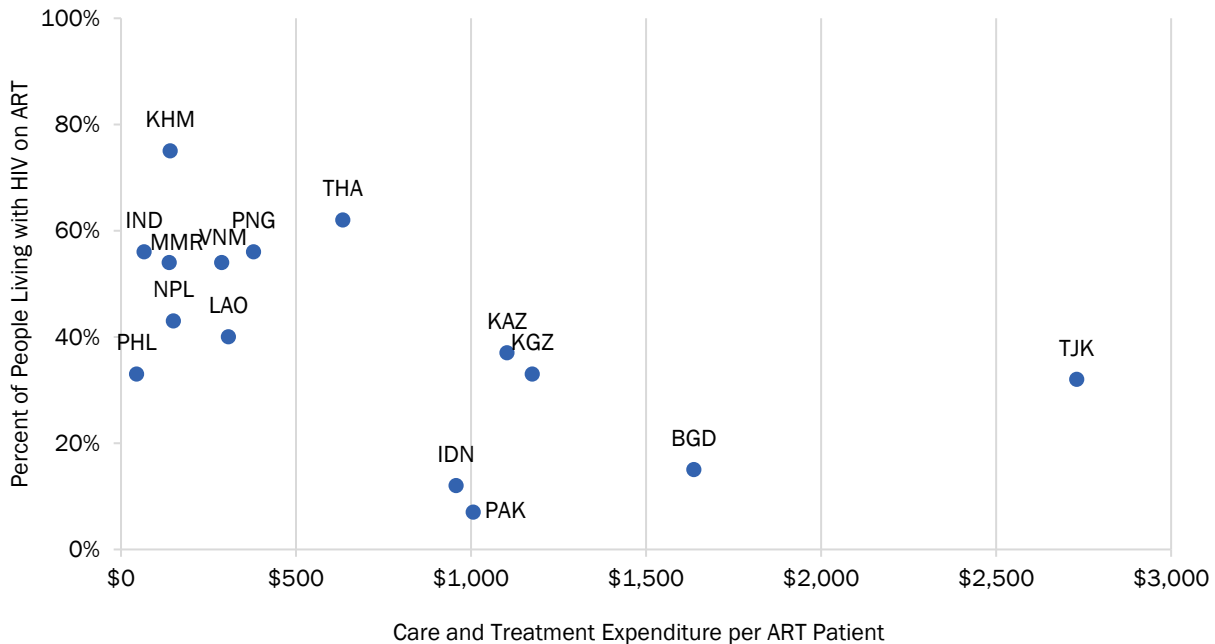
Note: Data is unavailable for Pakistan, Papua New Guinea, the Philippines, Thailand, and Vietnam.

In Kazakhstan, the Kyrgyz Republic, Myanmar, Nepal, and Tajikistan, the majority of key population outreach and prevention expenditure is for harm reduction and other programs for people who inject drugs. These countries have relatively large populations of people who inject drugs and a disproportionate number of people living with HIV are included in this population. For example, approximately 40 percent of all people living with HIV in Kazakhstan and the Kyrgyz Republic and 30 percent in Tajikistan reported either current or prior injecting drug use (Deryabina and El-Sadr, 2019). India is the only country where most prevention and outreach expenditure is for men who have sex with men. In two countries—Indonesia and Lao PDR—the majority of prevention and outreach expenditure is not targeted toward any key population group, even though key populations are most affected by HIV. Further analysis is needed to determine if allocation changes are needed; relatively low spending on key populations in these countries could be a result of small key population sizes and efforts to focus on larger “bridging” populations, such as key population partners. These countries may need to reexamine how they can optimize use of existing prevention and outreach funding to reduce new infections and increase identification of people living with HIV given limited HIV financial resources.

Countries that have a higher percentage of people living with HIV on treatment tend to have relatively lower treatment costs per person, indicating that countries may be achieving

economies of scale as more people are put on ART (see Figure 16). Notably, six countries—Tajikistan, Bangladesh, the Kyrgyz Republic, Kazakhstan, Pakistan, and Indonesia—have very high HIV treatment unit expenditures, at about US\$1,000 per person per year or more.<sup>1</sup> In these countries, the high cost of HIV treatment is primarily driven by high ARV costs. This is the case in Kazakhstan, where the government is excluded from voluntary license agreements that pharmaceutical companies negotiate with generic manufacturers due to its upper-middle-income status (Shattock et al., 2017). ART unit expenditure in Thailand, the only other upper-middle-income country in the analysis, is approximately half that in Kazakhstan, mainly due to local production of ARVs.

**Figure 16. Care and Treatment Expenditure per ART Patient versus Percentage of People Living with HIV on ART, 2016**



Source: UNAIDS, 2018a; IHME, 2016

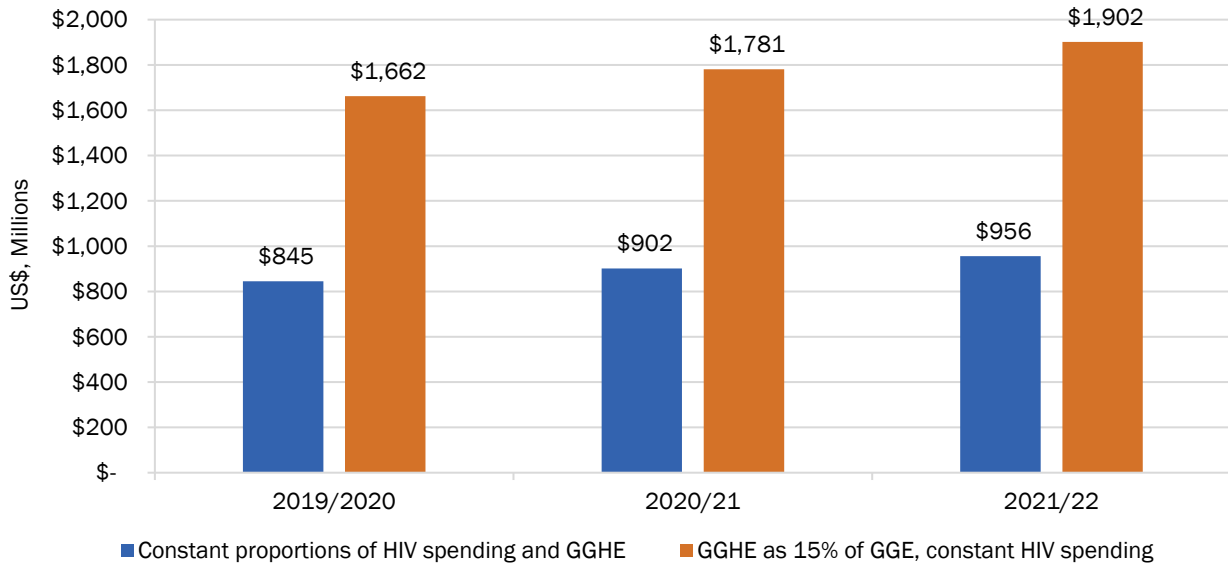
### ***How can increases in government health spending affect government HIV spending?***

Even if governments did not increase the share of government resources being spent on health or HIV, countries could spend an additional US\$110.6 million on HIV from fiscal years 2019/20 to 2021/22 based on economic growth projections, prior to the coronavirus pandemic (see Figure 17). Under this baseline scenario, Thailand is expected to spend the most on HIV, reaching US\$462.5 million by 2021/22. Cambodia, Pakistan, and Lao PDR are expected to see the biggest percentage increases in HIV spending from 2019/20 to 2021/22 under this scenario due to high projected growth in government expenditure during this period. Under an ambitious scenario, which assumes health spending accounts for 15 percent of general government

<sup>1</sup> ART costs in Indonesia are expected to decrease as the country was able to negotiate lower prices for generic ARVs. As of March 2020, prices dropped as much as 68 percent for select ARVs.

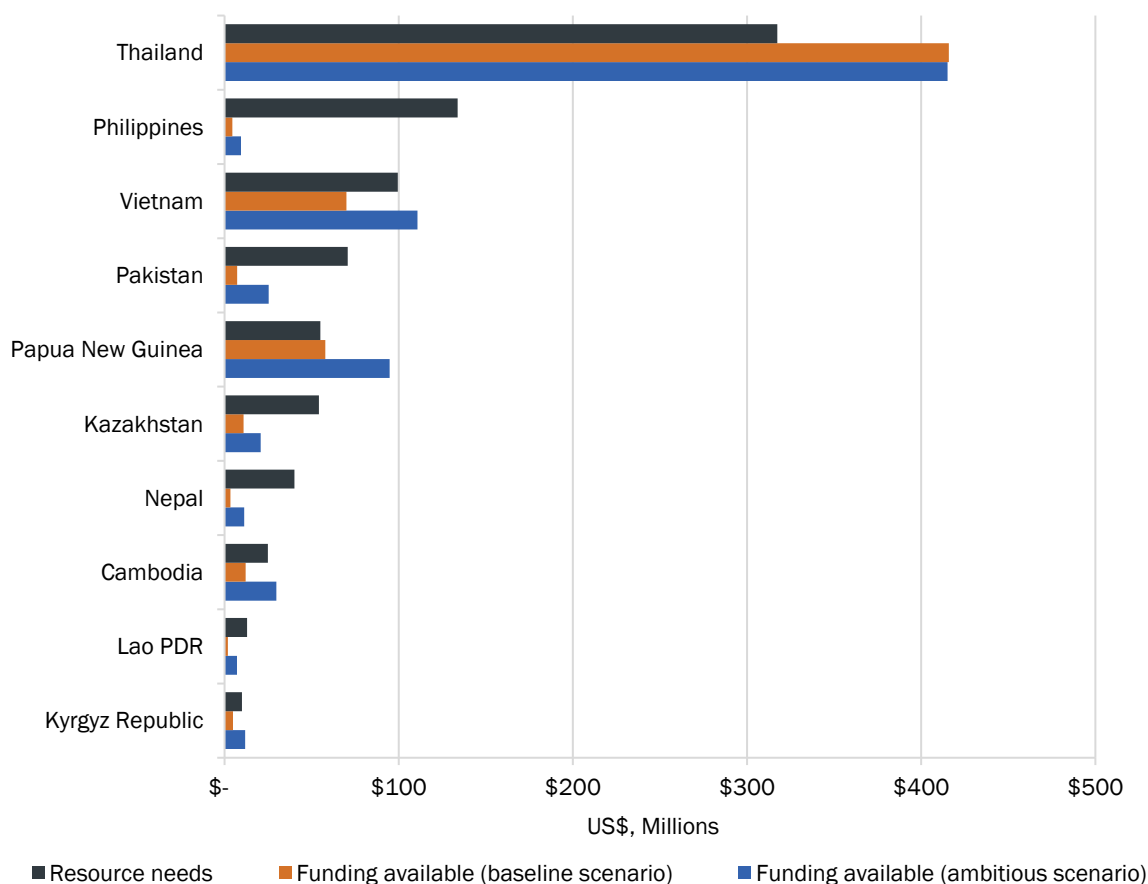
expenditure, as much as US\$5.3 billion could be spent on HIV from 2019/20 to 2021/22 across the 14 countries. Under this scenario, HIV spending by 2021/22 would range from US\$8.6 million in Lao PDR to US\$821.8 million in India.

**Figure 17. Projected Government Spending on HIV by Scenario across 14 Countries**



Note: Tajikistan is excluded from the analysis due to lack of data on projected government expenditures.

To contextualize these scenarios, it is important to compare projected resources available to resource requirement estimates (see Figure 18). Under the baseline scenario, Thailand and Papua New Guinea are the only countries that could mobilize sufficient domestic government funding for their HIV response in fiscal year 2019/20. Even under the ambitious scenario, only five countries—Cambodia, the Kyrgyz Republic, Papua New Guinea, Thailand, and Vietnam—are estimated to have sufficient government funding to meet HIV resource requirements in 2019/20. The remaining five countries for which cost data are available (Kazakhstan, Lao PDR, Nepal, Pakistan, and the Philippines) are estimated to have a funding gap for HIV in 2019/20, even if they increase health spending to be 15 percent of general government expenditure and keep proportional HIV spending constant. Across these five countries, only 24 percent of the countries’ estimated resource needs for HIV could be financed by domestic public funding under the ambitious scenario, resulting in an estimated US\$238 million funding gap for HIV in 2019/20. The countries with the largest percentage funding gaps for HIV even under the ambitious funding scenario are the Philippines (93 percent of resource needs unmet) and Nepal (72 percent).

**Figure 18. HIV Costs versus Potential Funding Available by Country and Scenario**

Despite the inability for many governments to fully finance their HIV response, strong political will to invest in HIV and inclusion of HIV in ongoing health reforms in the region presents opportunities to increase domestic resources for HIV and improve sustainability of the HIV response (see Box 3). In Cambodia, a policy circular, SarChorNor 213, passed by the Prime Minister in February 2019 shows the government's high-level commitment to increase financing for HIV through the Health Equity Fund, contract with civil society organizations to provide HIV services, use facility funds for HIV, and better integrate HIV within the health sector. The government has also committed to gradually increasing funding for ARVs.

Several other countries have also focused on including HIV services in social health insurance schemes over the last two decades. Countries like Thailand have paved the way for others (such as Kazakhstan and Lao PDR) to consider HIV during the process of establishing social health insurance. However, insurance coverage among people living with HIV tends to be lower than the general population and copayments under these schemes present barriers to improving financial protection among people living with HIV. For example, people living with HIV in Vietnam are expected to pay up to 20 percent in copayments for HIV treatment under the social health insurance, which marks a significant change from previously receiving HIV services free of charge (Todini et al., 2018). This financial burden on people living with HIV could be alleviated through subsidies. In 2019, Ho Chi Minh City committed funding to subsidize social



health insurance premiums and ARV copayments for select people living with HIV who are unable to pay. Another limitation of health insurance, though, is that schemes tend to focus on individual-based curative services, meaning governments still need to identify sustainable financing mechanisms for prevention and outreach services, particularly for key populations.

Social contracting arrangements, in which the government can directly fund civil society organizations, may therefore be needed to ensure continuation of civil society-led key population programs, including prevention and outreach, as countries experience transitions in external financing assistance for HIV. Some countries, such as Indonesia and the Kyrgyz Republic, have social contracting mechanisms in place and are planning to expand provision of grants and contracts to civil society organizations providing HIV services in the upcoming fiscal year. In the Kyrgyz Republic, for example, the government plans to allocate US\$217,000 for social contracting with civil society organizations in fiscal year 2020/21.

### Box 3. Integration of HIV into Universal Health Coverage Initiatives

**Cambodia:** In 2019, the government designated all people living with HIV as a priority population to be covered by the Health Equity Fund and expanded its benefits package to include HIV services.

**Indonesia:** Clinical HIV services are covered under the country's national health insurance scheme, JKN, of which 81 percent of Indonesians are enrolled. The country established a technical working group in 2019 to consider how to arrange purchasing under JKN to incentivize high-quality HIV service delivery.

**Kyrgyz Republic:** People living with HIV have the right to free healthcare and are eligible to receive a monthly unconditional cash transfer benefit.

**Philippines:** PhilHealth has an HIV outpatient treatment benefits package covered under the National Health Insurance Program and, in 2018, PhilHealth expanded accreditation to stand-alone HIV treatment centers to expand access.

**Thailand:** A wide range of HIV services are included in the social health insurance benefits package (including opioid substitution therapy) and the country may expand this to include pre-exposure prophylaxis. In 2013, the government introduced a new policy to cover cross-border migrant workers, who are disproportionately affected by HIV.

**Vietnam:** The government revised its social health insurance benefits package to include HIV services, increased the number of HIV patients enrolled in social health insurance from 40 percent in 2014 to 89 percent in 2018, and procured ARVs through social health insurance for the first time in 2019.

### Key takeaways

There are several barriers to increasing HIV spending including limited fiscal space, particularly if countries experience a slowdown in economic growth as suggested by recent IMF revisions to economic growth projections for a few countries included in the analysis. Other barriers include lack of political will to invest in HIV, stigma and discrimination against key populations that lead to inadequate funding for key population programs, and inability to fund civil society organizations directly by the government. However, ongoing health reforms, including

expansion of social or national health insurance and other social protection schemes in the region, social contracting arrangements, and expansion of private sector models, present significant opportunities for securing additional domestic resources for HIV. If countries improved allocative and technical efficiency in addition to increasing domestic government spending on HIV, they may require less external financing assistance in the short to medium term to reach national and global HIV targets. Regional pooled procurement and fully rolling out transition to tenofovir/lamivudine/dolutegravir (TLD) in countries could help reduce the high cost of ARVs in the region, which is a main cost driver for HIV spending in several countries.

## Conclusion

Some countries such as Thailand and Vietnam are close to achieving epidemic control and may have the ability to finance the majority, if not all, of their HIV response through domestic government financing in the near term due to macroeconomic growth projections (prior to the 2019 coronavirus pandemic) and political will to invest in health and HIV. Other countries like Pakistan and the Philippines are far from achieving epidemic control and face significant constraints to raising additional domestic resources for HIV and using these resources effectively and efficiently. Most of the countries included in this analysis fall somewhere in the middle; they are capable of gradually increasing domestic public spending on HIV given economic growth projections (prior to the pandemic) and political will to invest in health, allowing for progress toward global HIV targets (see Table 2). However, they will likely need external financing support to continue scaling up programs in the near term, particularly if economic recovery from the pandemic is slow. These countries will also require the proper incentives to ensure governments allocate funds in line with their ability to take on increased financial responsibility for HIV.

Results of this analysis have implications for upcoming Global Fund applications and negotiations with countries. Global Fund HIV allocations have increased by 15 percent from 2017–2019 to 2020–2022 for the 15 countries studied. HIV allocations more than doubled in Papua New Guinea, the Philippines, and Pakistan (see Table 3). The Global Fund also adjusted HIV allocations upwards in several countries (Cambodia, Kazakhstan, the Kyrgyz Republic, Nepal, the Philippines, and Tajikistan) based on needs for key and other vulnerable populations, rather than using the allocation formula primarily based on disease burden and country income.

Even though the Global Fund has increased its HIV allocations in 10 of the 15 countries, countries cannot rely on continued external financing assistance for their HIV response and need to mobilize additional domestic resources to achieve national and global HIV goals. In Global Fund allocation letters for the 2020–2022 grant cycle, some countries received directives to increase domestic government spending on specific HIV investments (see Table 4).

The analysis suggests that if countries in the region prioritize health spending and are able to quickly rebound from the pandemic's economic shock, significant additional public resources can be mobilized for health and HIV. Government commitments to health and HIV in national strategies, and widespread consideration of HIV in design and implementation of universal health coverage schemes, indicate that there is substantial political will to ensure the financial sustainability of HIV programs in the region. Additional analyses are needed in countries to

understand public financial bottlenecks that could affect HIV spending, along with interventions needed to improve allocative and technical efficiency. It is recommended that this analysis be updated to account for revised macroeconomic projections following the 2019 coronavirus pandemic.

**Table 2. Summary Findings on Relative Cascade Performance and Country Capacity to Increase Spending on HIV (in alphabetical order)**

Country	Percentage of people living with HIV virally suppressed	GNI per capita	Three-year cumulative economic growth*	Government health spending as % of GDP	Government spending on HIV as % of total HIV spending
Bangladesh	19%	\$1,750	24%	0.4%	44%
Cambodia	78%	\$1,380	21%	1.4%	21%
India	38%	\$2,020	24%	1.0%	69%
Indonesia	13%	\$3,840	16%	1.4%	66%
Kazakhstan	38%	\$7,830	11%	1.9%	85%
Kyrgyz Republic	30%	\$1,220	12%	2.3%	31%
Lao PDR	51%	\$2,460	21%	0.9%	20%
Myanmar	64%	\$1,310	20%	0.7%	7%
Nepal	51%	\$960	18%	1.2%	15%
Pakistan	7%	\$1,580	10%	0.9%	48%
Papua New Guinea	52%	\$2,530	8%	1.9%	21%
Philippines	42%	\$3,830	20%	1.4%	82%
Tajikistan	31%	\$1,010	14%	2.1%	25%
Thailand	72%	\$6,610	10%	2.9%	98%
Vietnam	62%	\$2,400	21%	2.7%	22%

Note: Color coding denotes the bottom (red), middle (orange), and top (green) third of countries.

\* Economic growth projections do not take into account the impact of the 2019 coronavirus pandemic.

**Table 3. Changes to Global Fund HIV Allocations by Country**

Country	HIV Commitments 2017–2019	HIV Allocations 2020–2022	Percent Change
Papua New Guinea	\$8,211,639	\$21,065,825	157%
Philippines	\$8,483,242	\$20,338,651	140%
Pakistan	\$34,956,107	\$71,687,227	105%
Thailand	\$23,473,375	\$40,573,017	73%
Nepal	\$21,964,144	\$26,926,654	23%
Kazakhstan	\$4,500,000	\$5,197,500	16%
Indonesia	\$91,934,562	\$102,717,937	12%
Tajikistan	\$12,939,544	\$14,362,894	11%
Bangladesh	\$21,495,447	\$23,000,765	7%
Kyrgyz Republic	\$11,266,362	\$11,491,690	2%
Cambodia	\$41,597,533	\$41,595,706	0%
Lao PDR	\$6,931,650	\$6,930,536	0%
India	\$155,063,624	\$155,000,000	0%
Myanmar	\$123,102,465	\$122,408,561	-1%
Vietnam	\$56,638,006	\$54,996,342	-3%

Source: Global Fund, 2020

**Table 4. Global Fund HIV Domestic Financing Expectations for 2020–2022**

Country	Domestic Financing Expectation
Cambodia	Increase government spending on ARVs to US\$5 million by 2023
Indonesia	Fully finance costs of staff at provincial, district, and facility levels; diagnostic testing; and any technical assistance to the national HIV program
Kyrgyz Republic	Progressive government uptake of financing ARVs and increased spending on human resources for health
Lao PDR	Gradual increased government spending on ARVs and treatment for opportunistic infections, key population outreach and care, and prevention of mother-to-child transmission
Myanmar	Gradual transfer of Global Fund-supported staff to the government payroll
Nepal	Government commitment to financing HIV commodities, scale-up of key population interventions, and match Global Fund financing for addressing human rights barriers; government financial commitments to health are maintained during devolution
Papua New Guinea	Fully finance commodity procurement (ARVs, treatment for opportunistic infections, testing kits, and condoms), key population prevention activities, and clinical services for people living with HIV
Philippines	Full access to the PhilHealth service package for all people living with HIV
Tajikistan	Increase government spending on HIV commodity procurement and health systems

Source: Global Fund, 2020

## Annex A: Indicator Data Sources

Indicator Type	Indicator	Data sources
<b>Macroeconomic indicators</b>	Gross national income per capita	World Bank DataBank, 2018
	Ratio of net debt to revenue (excluding grants)	IMF Government Finance Statistics, 2018 (India, Indonesia, Nepal, and Myanmar data from 2017; Bangladesh data from 2016; Pakistan data from 2015; data missing for Tajikistan and Vietnam)
	Revenue (excluding grants) as a percentage of gross domestic product (GDP)	IMF Government Finance Statistics, 2018 (India, Indonesia, Nepal, and Myanmar data from 2017; Bangladesh data from 2016; Pakistan data from 2015; data missing for Tajikistan and Vietnam)
	Three-year cumulative GDP growth rate	IMF World Economic Outlook, 2019
<b>Health financing indicators</b>	Total health expenditure by funding source	Institute for Health Metrics and Evaluation, 2016
	General government health expenditure (GGHE) as a percentage of general government expenditure (GGE)	WHO Global Health Expenditure Database, 2017
	GGHE as a percentage of GDP	WHO Global Health Expenditure Database, 2017
<b>HIV financing indicators</b>	HIV spending as a percentage of total health expenditure	Institute for Health Metrics and Evaluation, 2016
	HIV expenditure by source	Institute for Health Metrics and Evaluation, 2016
	HIV commitments versus disbursements/spending	Global Fund, 2020; PEPFAR, 2020
	Key population outreach and prevention expenditure as a percentage of HIV expenditure	UNAIDS Global AIDS Monitoring, 2018 (Lao PDR data from 2017; Indonesia data from 2016; Cambodia data from 2015; data unavailable for Pakistan, Papua New Guinea, the Philippines, Thailand, and Vietnam)
	HIV treatment expenditure per person on antiretroviral therapy	Institute for Health Metrics and Evaluation, 2016

## Annex B: Health Spending by Country by Scenario

Country	Current GGHE as % of GGE	Baseline Scenario Health Spending (US\$ Millions)		Ambitious Scenario Health Spending (US\$ Millions)	
		2019/20	2021/22	2019/20	2021/22
India	3.4%	\$28,160	\$32,312	\$125,156	\$143,605
Indonesia	8.7%	\$18,594	\$21,985	\$31,953	\$37,782
Thailand	15.0%	\$17,374	\$19,319	\$17,342	\$19,283
Vietnam	9.5%	\$7,386	\$8,445	\$11,691	\$13,368
Philippines	7.1%	\$5,321	\$6,137	\$11,200	\$12,918
Pakistan	4.3%	\$2,483	\$2,969	\$8,657	\$10,348
Bangladesh	3.0%	\$1,375	\$1,536	\$6,890	\$7,692
Kazakhstan	7.9%	\$2,324	\$2,669	\$4,429	\$5,087
Myanmar	3.5%	\$595	\$792	\$2,554	\$3,402
Nepal	4.5%	\$521	\$592	\$1,735	\$1,969
Cambodia	6.1%	\$434	\$525	\$1,070	\$1,296
Papua New Guinea	9.2%	\$391	\$413	\$641	\$676
Lao PDR	4.0%	\$107	\$129	\$397	\$478
Kyrgyz Republic	6.2%	\$144	\$163	\$349	\$394

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