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Government Spending on Health in Lao PDR: A Narrative Summary

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Government Spending on Health in Lao PDR: A Narrative Summary

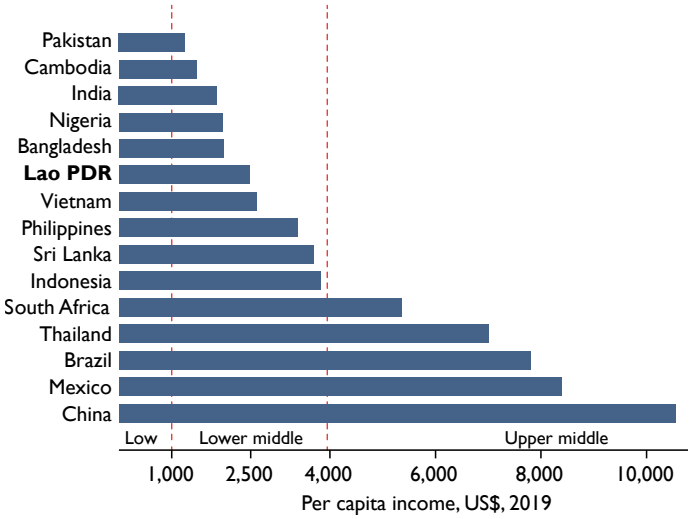
This narrative summary was co-produced by the Lao PDR-based members of the JLN collaborative on Domestic Resource Mobilization (DRM) including Suphab Panyakeo (Ministry of Health, Government of Lao People's Democratic Republic) and Soulaxay Bounthideth (National Institute for Economic Research, Government of Lao People's Democratic Republic) with Emiko Masaki and Jewelwayne Salcedo-Cain. The narrative summary was supported by the DRM collaborative facilitation team in the World Bank, comprising Aditi Nigam, Danielle Elena Bloom, Lauren Oliveira Hashiguchi, and Somil Nagpal.

This purpose of this narrative summary is to analyze trends in government budgetary spending on health in Lao PDR. It demonstrates how policymakers can summarize historical budgetary data to have a more informed within-country dialogue on issues related to domestic resource mobilization (DRM) for health. The analysis reported in the narrative summary is meant to be illustrative, demonstrating how such information can be used to form the basis for setting the stage in assessing DRM options for health through better understanding of (a) where the country is and where it has come from in terms of broader health financing trends and (b) how these trends have interacted with the overall macro-fiscal context in the country.

BACKGROUND

Lao PDR is a land-locked country in the World Bank's (WB's) East Asia and Pacific (EAP) region. With a population of 7.3 million, the country is located at the center of the Indochinese peninsula. The latest estimate of its per capita income was US$2,480, comparable to that of Bangladesh and Vietnam (Figure 1).[1] The country is currently classified as a lower middle income (LMI) country and is projected to transition to upper middle income (UMI) status by 2030. About 18% of the country's population is estimated to be living below US$1.90-per-day. At $3.10-per-day, this share increases to more than half of the country's population (59 percent).

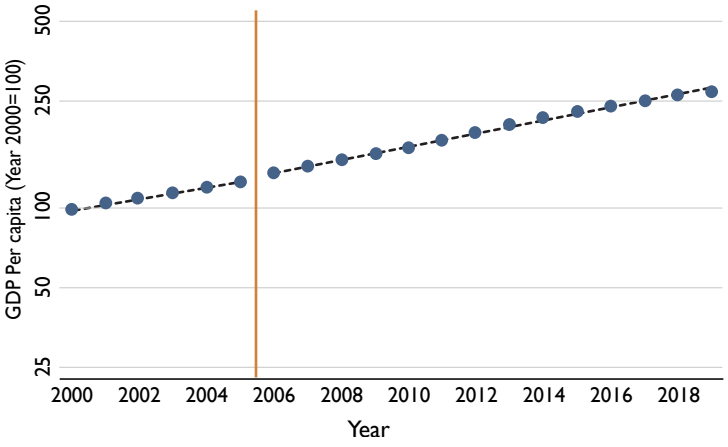
Figure 1: Per capita income (US$), Lao PDR and comparator countries



Source: World Bank World Development Indicators (WDI) 2020.

Lao PDR experienced rapid economic growth in the last 20 years, one of the fastest in the East Asia and Pacific Region. The 'Pritchett Landscape' of Lao PDR's per capita growth trajectory can be categorized as a 'hill' with growth rates in per capita Gross Domestic Product (GDP) exceeding 3% per year before and after a statistically-determined break in trend in 2006[2] (Figure 2).[3] Annual economic growth rates averaged 5% in per capita terms over 2000-2006, accelerating to 6% over

Figure 2: Per capita GDP, Lao PDR



Source: WHO Global Health Expenditure Database (GHED) 2019.

[1] Estimates are from the World Bank World Development Indicators 2020.

[2] Pritchett, L. 2000. "Understanding Patterns of Economic Growth: Searching for Hills among Plateaus, Mountains, and Plains." World Bank Economic Review, 14 (2): 221–250

[3] While some countries have experienced consistently steady linear growth in per capita public spending on health, others show systematic variations in the growth rates over 2000-2017. These large shifts in trends can be captured statistically and a policy relevant "break-point"—a year when a break in trend for per capita public spending on health—can be identified. Capturing this instability in the growth rates is important in understanding the growth dynamics of public spending for health.

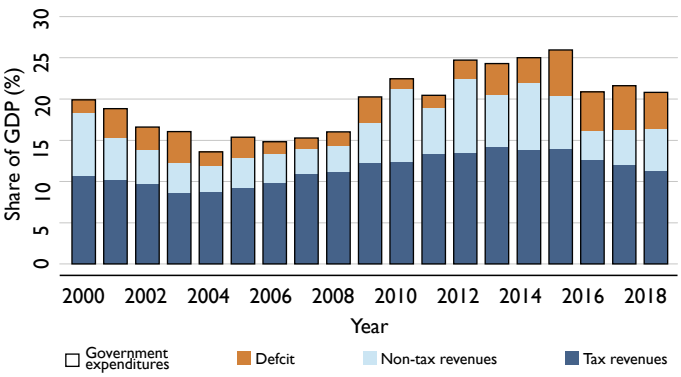
2006-2019. As a result, in cumulative per capita terms, the size of Lao PDR's economy almost tripled over the period 2000-2019, averaging 5.5% per year. However, the global COVID-19 outbreak has a significant negative impact on Lao PDR's economy, which already suffers from structural vulnerabilities from weak fiscal framework, a low foreign currency reserve and limited financing opportunities.

General government expenditures as a share of GDP indicates the size of the government spending relative to the economy. At 21% of GDP in 2018, total government expenditure as share of GDP in Lao PDR is low relative to the region and among LMI countries, driven largely by low total government revenues (16% of GDP) and low tax revenues (11% of GDP) (Figure 3).[4] These numbers are even lower in 2019, with expenditure share at 20% and revenue share at 15% (Table 1). In particular, Lao PDR's tax revenues do not reach the 15% benchmark that has recently been highlighted in a study by the International Monetary Fund (IMF) as being necessary for sustaining economic growth.[5] Lao PDR's total government expenditure has been relatively volatile, going up to as much as 37% of GDP and down to as low as 13% over 2000-2019.[6]

HEALTH SYSTEM

Health care in Lao PDR is mainly provided through the public system, with three administrative levels (central, provincial, and district) and four levels of service providers (central, provincial, district, and health center). In 2021, there were a total of 1,269 health facilities including eight central hospitals, 29 army and 5 police hospitals, 17 provincial hospitals, 135 district hospitals and 1,075 health centers.[7] The private health sector -- pharmacies, practitioners of traditional medicine, and private clinics – has expanded in recent years.

Figure 3. Government Revenues and Expenditure in Lao PDR



Source: IMF World Economic Outlook (October 2021 edition), IMF World Revenue Longitudinal Dataset.

Table 1: Comparison of government expenditures, revenues, deficit, and surplus (as share of GDP), 2019

Country	Government expenditures	Government revenues		Government deficit/surplus
		Total	Tax	
Lao PDR	**20**	**15**	**11**	**-4**
Bangladesh	15	10	8	-5
Brazil	37	31	21	-6
Cambodia	24	27	17	3
China	34	28	16	-6
India	27	20	17	-7
Indonesia	16	14	11	-2
Mexico	26	24	14	-2
Nigeria	13	8	5	-5
Pakistan	22	13	13	-9
Philippines	22	20	16	-2
South Africa	32	27	25	-5
Sri Lanka	21	13	12	-8
Thailand	22	21	16	-1
Vietnam	23	20	15	-3
EAP	47	46	16	-1
LMIC	31	28	17	-3

Source: IMF World Economic Outlook (October 2021 edition), IMF World Revenue Longitudinal Dataset.

Over the past decade, Lao PDR has implemented health financing reforms to expand health coverage across the population, to increase access to services for poor and vulnerable populations, and to reduce the fragmentation of health service delivery. As stipulated

[4] Estimates are from the IMF World Revenue Longitudinal Data 2020.
[5] Gaspar, V., L. Jaramillo, and P. Wingender. 2016. "Tax Capacity and Growth: Is there a Tipping Point?" IMF Working Paper WP/16/234, Washington, DC: International Monetary Fund.
[6] Estimates are from the IMF World Economic Outlook 2020.
[7] DHIS2. Accessed on October 12, 2021. https://hmis.gov.la

in the National Health Insurance (NHI) Law approved in December 2018, the NHI has initiated a merger of the formal sector schemes covering private employees and civil servants under the National Social Security Fund (NSSF) in 2019. If the insurance schemes for formal sector are included, the total social health protection coverage in Lao PDR is about 94% of the population.

As part of the health sector reform strategy implementation, the government established a unified NHI scheme in 2016 to expand social health projection coverage to the whole population and to integrate the free health services for the poor (Health Equity Fund, or HEF) and free services for mothers and children under 5 years of age (free MCH program), and community-based voluntary health insurance.[8] This major policy reduced fragmentation in the health system.

In 2016, the MOH officially launched a tax-based scheme to expand coverage and include the informal sector. Currently, the NHI scheme covers about 5 million people or about 74% of the total population.

POPULATION HEALTH

In the last few decades, Lao PDR has made progress in terms of improvement in maternal and child health outcomes; however, substantial challenges remain. Maternal and child mortality rates and chronic malnutrition (stunting) levels remain among one of the highest in the region (Table 2). For maternal and child health (MCH) outcomes, the country remains among the poorest performers in the East Asia and Pacific region.

With a life expectancy of 68 years and an adult survival rate of 71%, most population health outcomes are expected given Lao PDR's income level; however, when compared with global estimates, challenges remain with some lagging population health outcomes, particularly high levels of under-five mortality and childhood stunting. Geographic and income-related inequalities are relatively large.[9] The progress in achieving health outcomes in Lao PDR varies hugely by province, including child mortality and stunting rates which are 4-5 times higher in some provinces. There are also huge disparities by economic status and ethnicity. Lao

Table 2: Comparison of Health Outcomes

Country	Population (millions)	Life expectancy	Fertility	Under-five mortality	Adult survival	Maternal mortality	Childhood stunting
Lao PDR	**7.3**	**68**	**3**	**46**	**70.5**	**185**	**30.2**
Bangladesh	164.7	73	2	31	77.1	173	30.2
Brazil	212.6	76	2	14	79.5	60	6.1
Cambodia	16.7	70	2	27	73.1	160	29.9
China	1,402.1	77	2	8	86.4	29	4.7
India	1,380.0	70	2	34	71.9	145	30.9
Indonesia	273.5	72	2	24	75.9	177	31.8
Mexico	128.9	75	2	14	78.8	33	12.1
Nigeria	206.1	55	5	117	49.0	917	35.3
Pakistan	220.9	67	3	67	71.0	140	36.7
Philippines	109.6	71	3	27	72.5	121	28.7
South Africa	59.3	64	2	35	58.9	119	23.2
Sri Lanka	21.9	77	2	7	84.5	36	16.0
Thailand	69.8	77	2	9	81.3	37	12.3
Vietnam	97.3	75	2	20	79.5	43	22.3
EAP	2,066	71	2.9	27	74	97	24
LMIC	2,965	69	3.1	39	70	196	25

Source: Estimates are from the World Bank World Development Indicators and and are for the latest available year.

[8] Lao PDR Ministry of Health. 2012. Decree on National Health Insurance.

[9] Masaki, E. et al. 2017. "Managing transitions: reaching the vulnerable while pursuing Universal Health Coverage (Vol. 2): health financing system assessment in Lao PDR." Washington, DC: World Bank Group.

PDR scored -0.46 on the WB's human capital index (HCI) indicating that a child born there today would be expected to be only 46% as productive as he/she could have been, and GDP per worker could be double what it is, with complete education and full health.[10, 11]

TRENDS IN PUBLIC SPENDING ON HEALTH

Low and erratic levels of government spending on health and correspondingly high reliance on OOP health expenditure and external assistance for health characterize health financing in Lao PDR.[12] Lao PDR's per capita spending on health is roughly US$68 per capita and about 3% of GDP (Table 3). These numbers are below the regional and low-income country averages. Only 56% of the per capita spending on health is publicly sourced (US$38 per capita), while SHI contributions from enrollees currently account for 2% of public expenditures on health. Out-of-pocket (OOP) spending stands at about 42% of health spending, which is relatively higher than the regional average. Currently external financing for health accounts for 21% of health spending. Between 2000 and 2019, growth in external financing for health channeled through the public sector accounted for 47% of the growth in public spending on health.

DOMESTIC RESOURCE MOBILIZATION FOR HEALTH EFFORTS

With an expected decline in donor funds in the coming years, Lao PDR faces a challenge of high dependency on health financing from external sources . Some key donors have already initiated the process to gradually transition away from donor support and increase domestic financing through co-financing.[13]

Domestic resource mobilization (DRM) for health efforts in Lao PDR have largely focused on the following three areas (i) meeting the health budgetary target of 9% of the total government budget; (ii) expanding the collection of mandatory contributions from the

Table 3: Comparison of Health Spending Across Countries, 2019

Country	Health spending		Public spending on health				OOP share of health spending
	Per capita (US$)	Share of GDP	Per capita (US$)	Share domestic government	Share SHI	Share external	
Lao PDR	**68**	**3**	**38**	**64**	**2**	**34**	**42**
Bangladesh	46	2	10	89	0	11	73
Brazil	853	10	349	98	1	0	25
Cambodia	113	7	33	77	7	16	64
China	535	5	300	50	50	-	35
India	64	3	21	94	5	1	55
Indonesia	120	3	59	71	28	1	35
Mexico	540	5	266	54	46	-	42
Nigeria	71	3	13	74	11	15	71
Pakistan	39	3	14	90	3	7	54
Philippines	142	4	58	83	16	1	49
South Africa	547	9	321	100	0	0	6
Sri Lanka	161	4	78	95	2	3	46
Thailand	296	4	212	91	9	-	9
Vietnam	181	5	80	21	77	1	43
EAP	262	6	198	75	11	16	24
LMIC	130	5	71	77	14	10	39

Source: WHO Global Health Expenditure Database (December 2021 edition).

[10] The World Bank. 2020. Human Capital Index Lao PDR. The Human Capital Project – October 2020.
[11] World Bank. 2020. The Human Capital Index 2020 Update: Human Capital in the Time of COVID-19. World Bank, Washington, DC.
[12] Masaki, E. op cit.
[13] Masako, E. op cit.

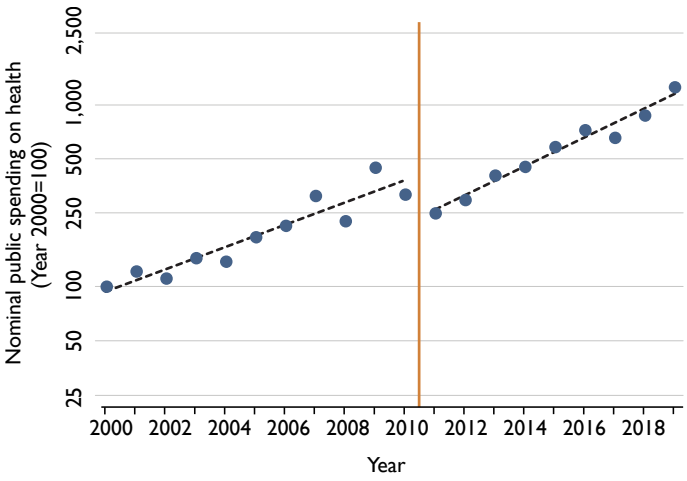
formal sector for NSSF; and (iii) increasing the tobacco tax earmarked for health. These efforts are also expected to improve financial protection and address the challenges of high OOP spending on health. In the meantime, the government has considered revenue and resource mobilization as one of 10 sub-strategies of Vision to 2030 and Public Finance Development Strategy.[14] The mobilization of domestic resources aims to maximize revenue collection to support the government's need for infrastructure expenditure and effective delivery of public services. The priorities of revenue and resource mobilization include: (i) assessing and developing customs and tax policies that promote investment and commercial production as part of a sustainable revenue base; (ii) enhancing the effectiveness of revenue management collection; (iii) reviewing, developing and improving legislation and mechanisms for more efficient domestic fund mobilization; (iv) reviewing and developing legislation and mechanisms for equitization of State assets to explore untapped finance development opportunities and maximize return on capital.

TRENDS IN GOVERNMENT SPENDING ON HEALTH

As per WHO's Global Health Expenditure Database, government spending on health amounted to KIP 2,374 billion (~US$274 million) in 2019, up from KIP 188 billion (~US$24 million) in 2000: representing a more than 12-fold cumulative nominal increase over 2000-2019 and an average annual increase of 18.0% (Figure 4).[15]

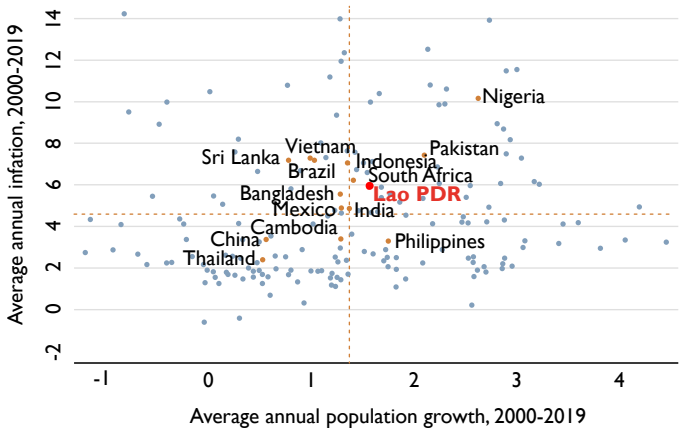
Lao PDR however has faced relatively high levels of inflation in recent decades. Over 2000-2019, the inflation rate was 6.0%, higher than the average across all LMI countries over the same period (Figure 5). At 1.6%, population growth is similar to the average for all LMI countries. Nominal budgetary increases would need to exceed at least 6.0%+1.6%=7.6% per year to keep levels the same in per capita constant terms.

Figure 4: Nominal public spending on health, Lao PDR



Source: WHO Global Health Expenditure Database (December 2021 edition).

Figure 5: Average annual inflation against average annual population growth in Lao PDR and select countries



Source: IMF World Economic Outlook (October 2021 edition).

[14] Government of Lao PDR. 2017. "Vision to 2030 and Public Finance Development Strategy to 2025: the road towards a strong, transparent, modern, and fair Public Finance Management System". Vientiane, Lao PDR.

[15] While some countries have experienced consistently steady linear growth in per capita public spending on health, others show systematic variations in the growth rates over 2000-2017. These large shifts in trends can be captured statistically and a policy-relevant "break-point"—a year when a break in trend for per capita public spending on health—can be identified. Capturing this instability in the growth rates is important in understanding the growth dynamics of public spending for health.

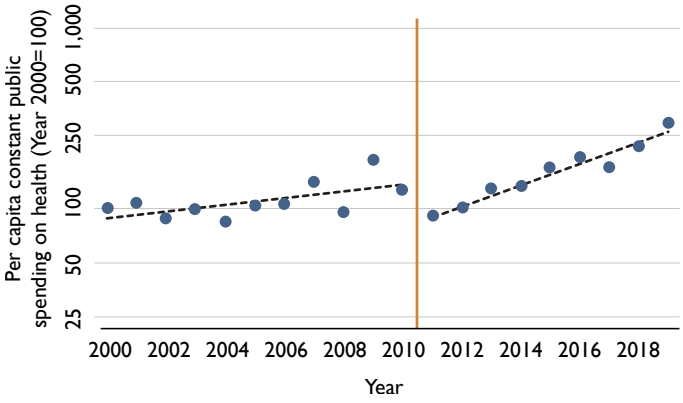
Adjusting for inflation and population growth (Figure 6) shows that, in per capita constant terms, government spending on health in Lao PDR has grown cumulatively by almost tripled since 2000: averaging an annual growth rate of 9.8% per year, more than the increase in the size of the economy over the same period. In 2019, per capita government spending on health amounted to KIP 331 thousand (~US$38 per capita), up from only KIP 110 thousand (~US$13 per capita) in 2000 (using 2019 prices). Lao PDR is also considered a 'steep hill' country for its 'Pritchett Landscape' of per capita public spending on health as growth also exceeded 5% per year before and after its statistically determined breakpoint in 2011.

Per capita government spending on health is the product of three variables: health's share of total government spending, total government spending share of GDP, and per capita GDP. Over 2000-2019, the 9.8% annual increase in per capita constant government spending on health was primarily due to economic growth (91.0% contribution) followed by reprioritization of health's share in government spending (6.1% contribution), and higher central government expenditures as a share of GDP (2.5%) (Figure 7).

BROADER TRENDS IN HEALTH FINANCING AND UHC

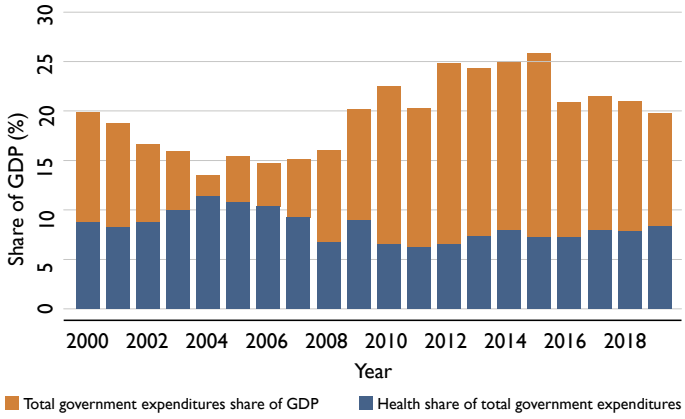
In 2019, Lao PDR's per capita GDP amounted to US$2,704.[16] Of this, 22% (~US$540) was total government spending (representing spending across all sectors, including for health) only 7% of total government spending represented health's share (amounting to ~US$38 per capita) (Figure 8). Back in 2000, Lao PDR's per capita GDP was US$957 in 2019 prices, with having the same share going to total government spending (20% or ~US$190 per capita) of which 7% was the share of health (amounting to ~US$13 per capita).

Figure 6: Per capita constant public spending on health, Lao PDR



Source: WHO Global Health Expenditure Database (December 2021 edition).

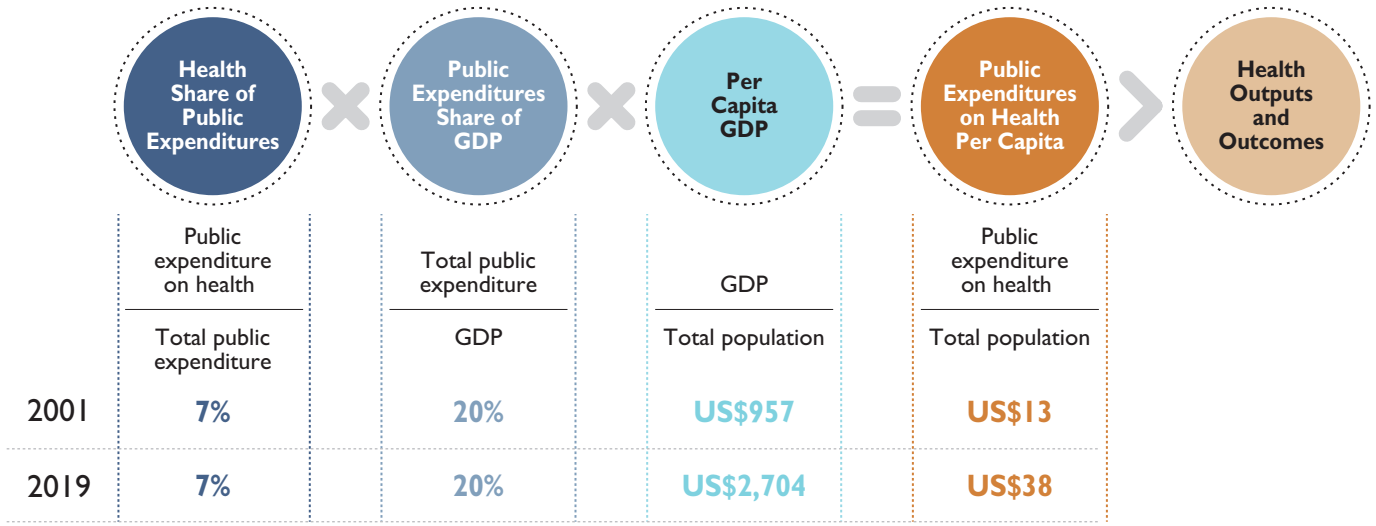
Figure 7: Total government expenditure as share of GDP compared to health share of total government expenditures, Lao PDR, 2000-2019



Source: IMF World Economic Outlook (October 2021 edition) and the WHO Global Health Expenditure Database (December 2021 edition).

[16] Estimates are from the WHO Global Health Expenditure Database.

Figure 8: Calculation of Per Capita Public Expenditure on Health, Lao PDR



	Public expenditure on health / Total public expenditure	Total public expenditure / GDP	GDP / Total population	Public expenditure on health / Total population
2001	7%	20%	US$957	US$13
2019	7%	20%	US$2,704	US$38

Source: Authors' calculations using data from IMF World Economic Outlook (October 2021 edition and the WHO Global Health Expenditure Database (December 2021 edition).
Note: Product may differ due to rounding.

Lao PDR's 7% share of health in total government expenditure is of similar level to that of Cambodia, China, Indonesia, Philippines, and Sri Lanka, and less than the regional average and the average for LMI countries (Table 4). Education's share of total government expenditures is higher at 12%, while the share of debt service payments is equal to the health's share.

More generally, the pace of increase in per capita public spending on health (9.8% per year) has exceeded that of per capita OOP spending on health (3.4% per year); as a result, the OOP share of health spending in more recent years has exhibited a limited downward trend as the public share of health has increased, indicating progress is being made on Lao PDR's 'health financing transition' (Figure 9).[17] With regard to financial protection, preliminary indications are that the proportion of households for whom OOP spending was 10% or higher of consumption has decreased in recent years, although more recent analysis of data is needed to confirm this.

Table 4: Comparison by country of share of total government expenditure

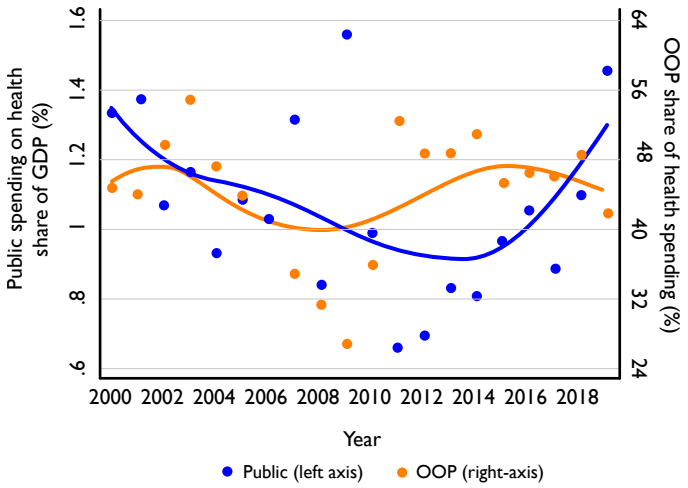
Country	Share of total government expenditure[17]			
	Health	Education	Military	Debt Service
Lao PDR	**7**	**12**	**-**	**7**
Bangladesh	3	12	10	13
Brazil	11	16	4	13
Cambodia	8	9	10	1
China	9	11	5	2
India	3	13	9	16
Indonesia	9	17	5	11
Mexico	10	17	2	14
Nigeria	5	6	4	13
Pakistan	5	12	19	25
Philippines	8	14	4	7
South Africa	15	20	3	10
Sri Lanka	9	11	10	29
Thailand	14	17	6	3
Vietnam	10	14	-	6
Sri Lanka	10	15	6	5
Thailand	9	15	7	8
Vietnam	10	15	8	7
EAP	10	15	6	5
LMI	12	15	7	8

Source: World Development Indicators, IMF World Economic Outlook (October 2021 edition), and the WHO Global Health Expenditure Database (December 2021 edition).

[17] Fan, V. Y., and W. D. Savedoff. 2014. "The Health Financing Transition: A Conceptual Framework and Empirical Evidence." Social Science and Medicine 105: 112–121.

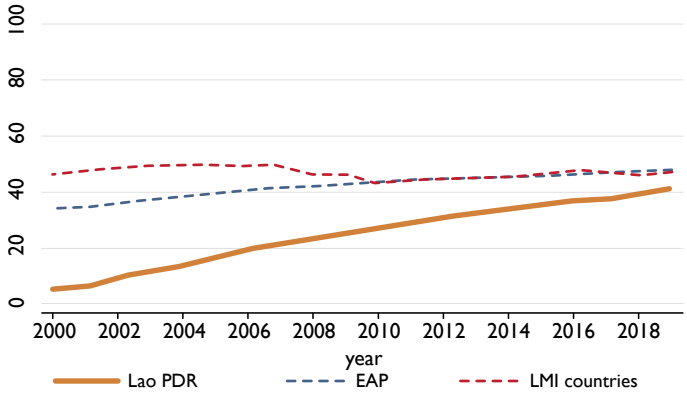
Lao PDR has also made steady progress on its UHC effective coverage index over 2000-2019 (Figure 10)[18]; however, the country is still below the averages for EAP and LMI countries.[19] Additional and sustainable financing to the health system from domestic sources may help to further expand effective coverage of health services and improve financial protection toward UHC.

Figure 9: Public spending on health as share of GDP versus OOP share of health spending, Lao PDR, 2000-2019



Source: WHO Global Health Expenditure Database (December 2021 edition)

Figure 10: UHC Effective Coverage Index



Source: Global Burden of Disease Collaborative Network 2019.

[18] Estimates are from the Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019: UHC Effective Coverage Index 1990-2019. Seattle, USA: Institute for Health Metrics and Evaluation, 2020.

[19] WHO. 2019. Global Monitoring Report 2019: Primary Health Care on the Road to Universal Health Coverage. Geneva: World Health Organization.

GLOSSARY & METHODS[1]

Catastrophic Health Expenditure (CHE): occurs when out-of-pocket health spending exceeds 10% or 25% of total household consumption or income).

Constant: Also referred to as 'real', refers to the value of a monetary variable with adjustments made to remove the impact of changes in prices of goods and services due to inflation. Constant series show the data for each year in the value of a particular base year. Thus, for example, data reported in constant 2017 prices show data for 2000 to 2017 in 2017 prices. Constant series are important as it is used to measure the true growth of a series (i.e., adjusting for the effects of inflation).

How to Convert a Time Series Variable from Nominal to Constant? Nominal time series data can be converted to constant time series data using a GDP deflator. Constant time series data is calculated by dividing nominal time series data by the GDP deflator (expressed in hundredths term):

$$\textit{Constant time series} = \frac{\textit{Nominal time series}}{\textit{GDP deflator (in hundredths)}}$$

Debt Service Payments: Debt service is a type of government expenditure that covers the repayment of interest and principal on a debt or liability by the government for a particular period of time.

Domestic Resource Mobilization (DRM): the willingness and ability of countries to increase domestically-sourced public financing for health, ideally in an efficient, equitable, and sustainable manner.

Government Deficit/Surplus: The difference between total government revenue and expenditure is called government deficit (if expenditure is greater) or government surplus (if revenue is greater). This is an important fiscal account that measures the extent to which general government is lending financing resources (in the case of government surpluses) or borrowing financial resources from other sectors and nonresidents in order to finance government spending (in the case of government deficits).

Gross Domestic Product (GDP): is a monetary measure of the market value of all the final goods and services produced within a country's borders in a specific time period, often annually.

Gross National Income (GNI): is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.

[1] This glossary was adapted from "Glossary & Methods," in the JLN DRM Collaborative. Ministry of Health & Family Welfare Budgetary Spending in Bangladesh. Domestic Resource Mobilization Collaborative. Joint Learning Network for Universal Health Coverage, 2020. Definitions derived from the present text were added. Other sources consulted were the Global Monitoring Report on Financial Protection in Health (2019), the World Health Organization and the International Bank for Reconstruction and Development, and the World Bank World Development Indicators (2019).

Health Financing Transition: An empirically observed phenomenon that shows that as countries grow and develop there is a rise in health spending but that there is also a change in the composition of health spending with a higher share coming from public and other compulsory prepaid sources and a lower share from external and OOP sources.[2]

How to Account for Changes in Per Capita Public Spending on Health Over Time? There are different ways to account for changes in per capita public spending on health.[3] One way is to focus on uncovering the relative contributions from a sub-set of factors by exploiting a key macroeconomic identity that, in any given years t and t+1, the following must hold true:

$$P_t = H_t E_t Y_t$$
$$P_{t+1} = H_{t+1} E_{t+1} Y_{t+1}$$

where P is per capita public financing for health in constant local currency units (LCUs), H is health's share of public expenditure, E is the public expenditure share of GDP, and Y is real GDP per capita in LCUs. Taking the logarithmic difference in t+1 versus t (denoted by lowercase with 'hat') of public spending on health must mathematically equal the sum of the logarithmic growth rates in health's share of public expenditures, of aggregate public expenditures as share of GDP, and of GDP per capita:

$$\hat{p}_t = \hat{h}_t + \hat{e}_t + \hat{y}_t$$

In other terms, this implies that the growth rate of public financing for health ($\hat{p}_t$) over a given time period must be exactly accounted for by changes in GDP per capita (that is, by economic growth, or $\hat{y}_t$), changes in aggregated public expenditures as share of GDP ($\hat{e}_t$), and by changes in health's share in aggregate public expenditure ($\hat{h}_t$).

The log-difference method of calculating growth rates is frequently used in economic growth theory and calculates rates that are a very close approximations to the simple growth rates. The advantage of using this method is that it allows a multiplicative decomposition of the growth rate of a variable into the growth rates of its components.

High Income Countries (HICs): Are currently defined by the World Bank as those countries that in 2018 had per capita income of US$12,376 or higher.

Human Capital Index: A cross-country benchmarking exercise completed in 2018 by the World Bank Group Human Capital Project.[4] The index measures the amount of human capital that the average child born in 2018 expects to achieve.

Inflation: An increase in the prices of goods and services over time (a decline in prices is referred to as 'deflation'). Inflation is typically measured in terms of how prices of a representative basket of goods and services changes over time (referred to as changes in the consumer price index) or changes in the prices

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2 Fan, V. Y., and W. D. Savedoff. 2014. "The Health Financing Transition: A Conceptual Framework and Empirical Evidence." Social Science and Medicine 105: 112–121.

3 Tandon, A., J.S. Cain, C. Kurowski, and I. Postolovska (2018). Intertemporal Dynamics of Public Financing for Universal Health Coverage: Accounting for Fiscal Space Across Countries. HNP Discussion Paper. Washington, D.C.: World Bank Group. Available: http://documents.worldbank.org/curated/en/639541545281356938/Intertemporal-Dynamics-of-Public-Financing-for-Universal-Health-Coverage-Accountingfor-Fiscal-Space-Across-Countries.

4 World Bank Group. 2018. The Human Capital Project. Washington DC: International Bank for Reconstruction and Development.

of actual goods and services consumed in an economy over time (based on changes in the GDP deflator). The GDP deflator is defined as the ratio of the GDP at market prices in current U.S. dollars to the GDP at market prices in constant (2000) U.S. dollars.[5]

Low Income Countries (LICs): Are currently defined as those countries that in 2018 had per capita income of US$1,025 or less.

Lower Middle Income (LMI) Countries: Are currently defined by the World Bank as those countries that in 2018 had per capita income between US$1,026 and US$3,995.

Nominal: Also referred to as 'current', refers to the value of a monetary variable without any adjustments made for changes in prices of goods and services due to inflation.

Non-Tax Revenue: Revenue received by the general government from other revenue sources other than taxes. These include social contributions, grants, and other revenue such as property income, sales of goods and services, and fines, penalties, and forfeits.

Out-of-Pocket (OOP): Households' out-of-pocket expenditure is a direct payment for health care goods and services from the household primary income or savings (no third-party payer is involved). The payment is made by the user at the time of the purchase of goods or use of services.

Pritchett Landscape: is a way of classifying trend patterns in growth rates of any variable inspired by and building upon Pritchett (2000).[6] Statistically identifiable policy-relevant 'break points' are determined using Pritchett's method as the year when a break in trend for a variable can be identified by estimating the equation below and finding the breakpoint year (t^*) that minimizes the sum of squared errors over all t:

$$Y_t = a_1 * I(t \leq t^*) + b_1 t * I_1 \ (t \leq t^*) + a_2 * I(t > t^*) + b_2 t * I(t > t^*) + \varepsilon_t,$$

where Y is any variable of interest such as per capita GDP or per capita public spending on health, I() is an indicator function (1 if the argument holds; 0 otherwise), t=[t_0,…,T] where t_0 is 2000, T is 2017, t^* is the breakpoint year that is chosen subject to the constraint that each segment of the trend covers a minimum of three years (that is, $t^* - t_0 \geq 3$ and $T - t^* \geq 3$) and a and b are the intercept and time-trend slope, respectively, where the suffix 1 or 2 represent the estimates before and after the estimated breakpoint. Once the breakpoint is determined, the landscape of growth patterns is classified as follows:

Pattern	Growth rate	
	Before break	After break
Steep Hill	≥ 5 percent	≥ 5 percent
Hill	≥ 3 percent	≥ 3 percent
Accelerator	0 percent ≥ & < 3 percent	≥ 3 percent
Steep Valley	< 0 percent	≥ 5 percent
Plateau	≥ 3 percent	0 percent ≥ & < 3 percent
Valley	< 0 percent	0 percent ≥ & < 3 percent
Plain	0 percent ≥ & < 3 percent	0 percent ≥ & < 3 percent
Mountain	≥ 3 percent	< 0 percent
Cliff	0 percent ≥ & < 3 percent	< 0 percent
Slippery Slope	< 0 percent	< 0 percent

[5] World Bank Group Data Catalog. https://datacatalog.worldbank.org/gdp-deflator-index-2000100-us-series.

[6] Pritchett, Lant. 2000. "Understanding patterns of economic growth: searching for hills among plateaus, mountains, and plains (English)". The World Bank economic review. -- Vol. 14, no. 2 (May 2000), pp. 221-250.

Social Health Insurance (SHI): Social health insurance is a mandatory financing arrangement that ensures access to health care based on a compulsory payment of a non-risk-related contribution by or on behalf of the eligible person. Contributions are raised mainly through wage-related (and occasionally income-related) contributions that are shared between employers and employees. The social health insurance scheme is established by a specific public law, defining, among others, the eligibility, benefit package and rules for the contribution payment.

Tax Revenue: Revenue received by the general government from taxes. Taxes are compulsory, unrequited amounts receivable by government units from individuals, public enterprises, trade, royalties on natural resources and/or foreign aid.

Total Government Expenditure: Total expense and the net acquisition of nonfinancial assets by the government in order to fulfill their role of providing public goods and services and redistribution of income and wealth.

Total Government Revenue: Taxes, social contributions, grants receivable, and other revenue received by the government. Governments collect revenue in order to finance selected public goods and services that they provide to their citizens and to redistribute income and wealth by means of transfers.

Universal Health Coverage (UHC): As defined by the World Health Organization,[7] means that all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship.[8]

Universal Health Coverage (UHC) Service Coverage Index: Measures the average coverage of essential services that include reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases and service capacity and access, among the general population (as well among the most disadvantaged population).

Upper Middle Income (UMI) Countries: Are currently defined by the World Bank as those countries that in 2018 had per capita income between US$3,996 and US$12,375.

[7] World Health Organization 2019. "Universal Health Coverage" Accessed September 2020. Last updated January 2021.
[8] World Health Organization 2021. WHO Universal Health Coverage data portal. Accessed September 2020. Last updated January 2021.

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