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Public Expenditure on Health in Pakistan: A Narrative Summary

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Public Expenditure on Health in Pakistan: A Narrative Summary

This Narrative Summary on Public Expenditure for Health in Pakistan was written by Faraz Salahuddin, Ali Hamandi, and Jewelwayne Salcedo Cain with support from Jahanzaib Sohail and the DRM collaborative facilitation team in the World Bank, comprising Aditi Nigam and Danielle Elena Bloom.

The purpose of this narrative summary is to make the case for an increased level of domestic government resources being allocated towards health in Pakistan. This document analyzes Pakistan's general government expenditures (GGE) on health over the last two decades and places those trends in a wider macro-fiscal context. It argues that a national dialogue on options for improving domestic resource mobilization (DRM) is necessary to help protect and advance population health, especially in the face of the threats posed by the COVID-19 pandemic. The Government of Pakistan (GoP) has historically invested less in health relative to its peer countries; as such, increased DRM is necessary to not only protect previous gains in health outcomes but to also help accumulate new gains.

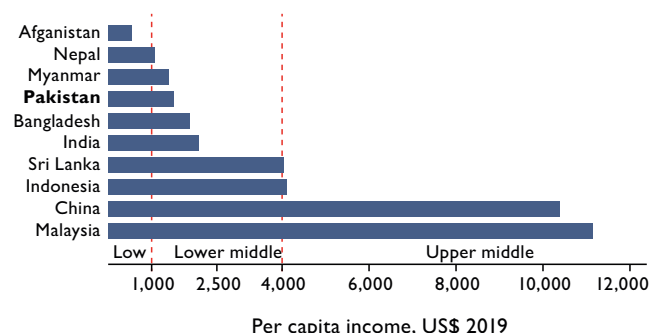
The arguments presented in this narrative summary are meant to be illustrative. They demonstrate how healthcare policymakers can analyze and summarize their historical budgetary data in order to have an informed dialogue on DRM for health with counterparts in the Ministry of Finance and other key stakeholders.

BACKGROUND

Pakistan is a lower-middle income (LMI) country in the World Bank's South Asia Region (SAR). With an estimated population of 216 million, it is the fifth most populous country in the world, and the second most populated country in SAR.¹ Of the total population, 35% live below a US\$3.20 per day poverty threshold, and 75% live below US\$5.50.² Per capita GNI is estimated at US\$1,410—comparable to South Asian countries like Nepal, Bangladesh, and India (Figure 1).

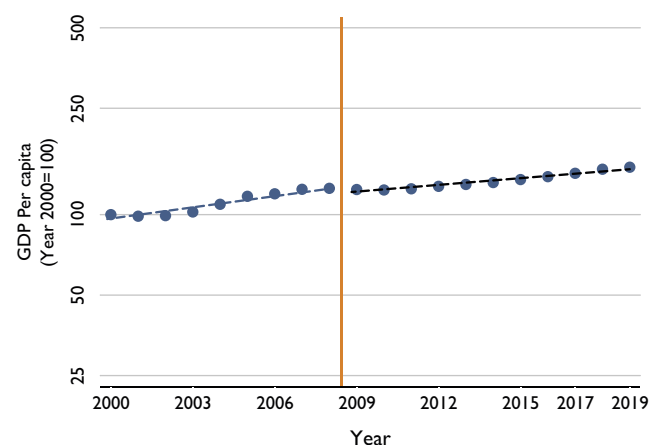
After a period of “rapid but unbalanced” growth since the Global Financial Crisis, where Pakistan saw continuous per capita GDP increase between 2008 and 2018 (Figure 2), Pakistan's macro-economic outlook has worsened in recent years.³ Growth in per capita GDP had started to decline even prior to the onset of the economic crisis induced by the COVID-19 pandemic; growth in 2019 was measured at only 1.4%.⁴ As a result of this new global challenge, greater uncertainty has

Figure 1. Per capita Income by Country in 2019



Source: Estimates are from the World Development Indicators (WDI) 2019.

Figure 2. Per capita GDP in Pakistan



Source: IMF World Economic Outlook (WEO).

Note: The vertical line indicates a structural break and a statistical identifiable year after which there is found to be a significant shift in the growth trend

¹ Estimates are from United Nations Population Division, World Population Prospects: 2019 Revision, and from the World Bank Open Data Portal.

² Estimates are from the World Bank, Development Research Group (September 2020). Poverty headcount ratio at \$3.20 and \$5.50 a day is the percentage of the population living on less than \$3.20 and \$5.50 a day, respectively, at 2011 international prices.

³ International Monetary Fund. 2019. “Pakistan,” IMF Country Report No. 19/380.

⁴ Estimates are from the World Bank national accounts and OECD National Accounts Database 2020.

been introduced into Pakistan's economic trajectory; even as significant structural issues like high inflation and large fiscal imbalances persist.

One of the most important developments to have taken place in Pakistan's political-economy in recent years has been the 18th Constitutional Amendment, signed into law in 2010. The resulting radical process of fiscal and political devolution across many functions of government has had a significant impact on the health sector. In accordance with the sub-national autonomy mandated by the 2010 reform, the Ministry of Health was promptly dissolved, and Pakistan became “the first federal country in the world without a national or a federal health institution.”⁵ In its place a new federal body—the Ministry of National Health Services, Regulation and Coordination (MoNHSRC)—was established in April 2012.

HEALTH SYSTEM

Health is delivered through a mixed system, split between public and private providers. The public health sector is decentralized, and legally and administratively managed by provincial and local governments. At the

federal level, the MoNHSRC plays a stewardship, regulation, and coordination function across the country. The private sector, on the other hand, is comprised of both for-profit providers as well as non-governmental organizations (NGOs); however, its service footprint remains concentrated in Pakistan's urban areas.⁶

Pakistan has made significant improvements in several key health indicators over the last two decades. Since 2000, overall life expectancy at birth had increased from 62 years to 67 years in 2018. Meanwhile, wasting among children aged under 5, measured in terms of weight for height, was 7.1% in 2018—a 50% reduction compared to the wasting prevalence in 2011.⁷ The wasting prevalence rate for 2018 represents the lowest level ever recorded in Pakistan. Likewise, prevalence of stunting, measured as height for age, for children under 5 has also improved, from 45% in 2013 to just above 37% in 2018.

Though significant progress has been made in improving some health indicators, Pakistan lags behind many South Asian and LMI country benchmarks (Table 1). For instance, Pakistan's measure for percentage of people at risk of catastrophic expenditure from surgical care in Pakistan (53%) remains significantly

Table 1: Comparison of Health Outcomes

Country	Population (millions)	Life expectancy	Under-five mortality	Adult survival	Maternal mortality	Childhood stunting
Afghanistan	36	64	62	64	638	41
Bangladesh	165	72	30	76	173	36
China	1,410	76	9	86	29	8
India	1,339	69	37	71	145	38
Indonesia	264	71	25	75	177	36
Myanmar	53	67	46	68	250	29
Nepal	29	70	32	75	186	36
Pakistan	197	67	69	71	140	38
Sri Lanka	21	77	35	75	194	32
SAR average	1,788	71	35	75	194	32
LMI average	2,965	68	39	70	196	27

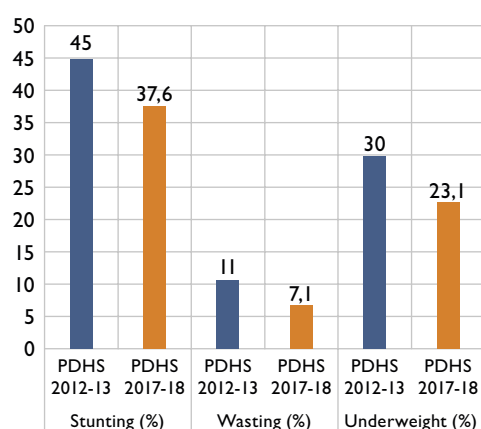
Source: All data are from the World Development Indicators and from the latest year of availability, with the exception of population (millions), which is from the WHO Global Health Expenditure Database (GHED), of which the latest available year for all countries is 2017.

⁵ Sania Nishtar et al. 2013. “Pakistan's health system: performance and prospects after the 18th Constitutional Amendment.” *Lancet* Vol. 381 No. 9884: 2193-206.

⁶ MoNHSRC. 2020. *Situation Analysis 2020—Towards Universal Health Coverage in Pakistan*. Government of Pakistan: vi.

⁷ United Nations Children's Fund (UNICEF), World Health Organization, International Bank for Reconstruction and Development/The World Bank. 2018. *Levels and trends in child malnutrition: key findings of the 2018 Edition of the Joint Child Malnutrition Estimates*. Geneva: World Health Organization.

Figure 3: Under-5 Nutrition in Pakistan



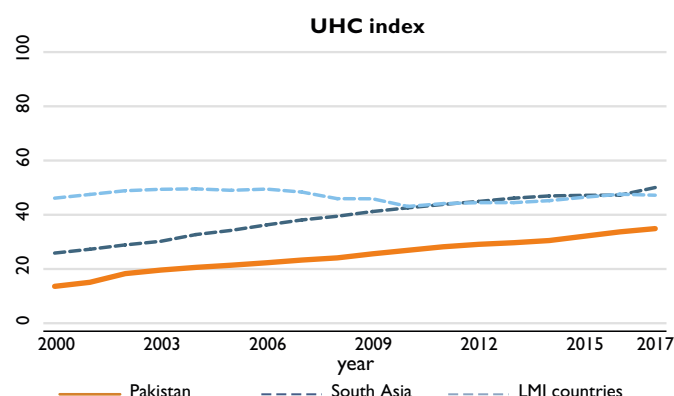
Source: Pakistan Demographic and Health Survey.

higher than the SAR average (36%) and even higher than the LMI average (32%).⁸ Perhaps most concerning are Pakistan's child health indicators: the country continues to suffer from some of the highest rates of under-5 mortality in the world.⁹

Similarly, key indicators for under-5 malnutrition, which were recorded at historic lows in Pakistan in 2018 (Figure 3), remain above even the LIC average—31% for stunting, 11% for wasting, and 21% for underweight children, respectively.

Pakistan scores 35 on the UHC service coverage index, which is a single indicator estimated to monitor coverage of essential health services and is presented on a scale of 0 to 100; Pakistan is well below the South Asia regional and LMI averages of 50 and 47, respectively (Figure 4). Nonetheless, house-hold level survey data suggests that the survey data suggests that the positive UHC index trajectory has been driven in large part by improvements in immunization delivery,

Figure 4: UHC Index



Source: Global Burden of Disease Collaborative Network. 2020.

diarrhea treatments, antenatal care, and the prevalence of skilled birth attendants at delivery.¹⁰ However, despite a positive UHC trajectory, the UHC picture in Pakistan remains far below the average for SAR and LMI countries. Furthermore, considerable acceleration will be required if Pakistan is to achieve its own internal UHC target of 75% by 2030, or to reach the WHO recommended essential service coverage level of 100% in the years to come.¹¹ Partly due to the lagging access to health services and the result outcome indicators described above, Pakistan's Human Capital Index (HCI)—a measure that quantifies the combined impact of health and education on the productivity of the next generation of a country's workers—was only 0.39 for 2019. Pakistan ranks significantly below the other SAR countries of Bangladesh, India, and Nepal, and even further below the comparable middle-income countries like Indonesia and Kenya (Table 2).

Table 2: Human Capital Index Comparison

Country	Human Capital Index
Bangladesh	0.48
Ghana	0.44
India	0.44
Indonesia	0.53
Kenya	0.52
Nepal	0.49
Pakistan	0.39
SAR average	0.50
LMIC average	0.47

Source: Estimates are from the Demographic and Health Surveys 2017-2018.

⁸ Estimates are from The Program in Global Surgery and Social Change at Harvard Medical School.

⁹ United Nations Inter-agency Group for Child Mortality Estimation. 2020. Levels and Trends in Child Mortality Report 2020. New York: The United Nations Children's Fund.

¹⁰ Source: MoNHSRC. 2021. "Towards Universal Health Coverage Through Primary Care: Pakistan Investment Case 2021-2026." p14.

¹¹ Adam Wagstaff and Sven Nielsen. 2020. "A comprehensive assessment of universal health coverage in 111 countries: a retrospective observational study." *Lancet Global Health*, Volume 8, Issue 1:e39-e49.

Table 3: Comparison of Health Spending Across Countries (2017)

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	
Afghanistan	67	11.8	7	46	0	54	75
Bangladesh	36	2.3	7	90	0	11	7
China	441	5.2	250	51	49	0	36
India	69	3.5	19	86	13	1	62
Indonesia	115	3.0	56	73	26	1	35
Malaysia	384	3.9	194	99	1	0	38
Myanmar	58	4.7	10	83	3	14	76
Nepal	48	5.6	12	89	0	11	58
Pakistan	45	2.9	14	97	3	-	60
Sri Lanka	159	3.8	71	96	1	3	50
SAR	191	5.3	116	87	3	12	52
LMI	130	5.3	71	77	14	10	39

Source: The WHO Global Health Expenditure Database (GHED) 2017.

One major factor contributing to the poor health outcomes and lagging human capital status is Pakistan's history of public under-investment in health.^{12 13} Per capita health spending in Pakistan is low, especially when compared to its regional neighbors: only Bangladesh and Afghanistan spend less on health per capita in SAR (Table 3).

Pakistan's chronically low levels of public expenditure on health have produced a situation where the private sector plays a relatively greater role in the wider healthcare system—accounting for nearly 80% of all primary health care service delivery and 70% of total health expenditures.¹⁴ Systemic overreliance on the private sector for health service delivery, combined with almost no risk pooling in public health financing, has implied that Pakistan's OOP expenditures remain higher than most of its comparators (Table 3). To meet regional and development benchmarks, and to put Pakistan onto a health financing trajectory that is capable of equitably delivering against the health-related SDGs, increased public expenditure on health, i.e., DRM, will be essential.

DOMESTIC RESOURCE MOBILIZATION FOR HEALTH EFFORTS

Given that a major aim of the 18th Amendment (2010) was to increase the quantity of resources available for for health service delivery, the next section focuses on trends and changes in national level domestic government expenditures on health.

TRENDS IN GENERAL GOVERNMENT BUDGETARY SPENDING ON HEALTH

As per government budgetary sources, total domestic government spending on health in FY2017/18 amounted to Rs334 billion¹⁵ (~US\$3.1B),¹⁶ a five-fold increase in health expenditure relative to FY2005/06. More generally, Pakistan has seen sustained growth in nominal health spending since 2003 (Figure 5).¹⁷

Analysis of provincial government budgets from FY2017/18 relative to FY2009/10 reveals a four-fold

¹² Khalif B. Mohammed, Assad Hafeez, and Sania Nishtar. 2007. Public Sector health financing in Pakistan: A retrospective study. Journal of the Pakistan Medical Association Vol.57:6.

¹³ Fazal Ather and Akhtar Sharin. 2014. Health System Financing in Pakistan: Reviewing resources and opportunities. Khyber Med Univ Journal Vol 6 No 2:53-55.

¹⁴ Babar T. Shaikh. 2015. "Private Sector in Health Care Delivery: A Reality and a Challenge in Pakistan." Journal of Ayub Medical College Abbottabad 27(2):496-298.

¹⁵ Finance Division, Government of Pakistan. 2019. Chapter 11, Health and Nutrition. Pakistan Economic Survey: 152.

¹⁶ US Dollar estimates are presented in 2017 constant US Dollars, using a USD-PKR exchange rate of 1:104.

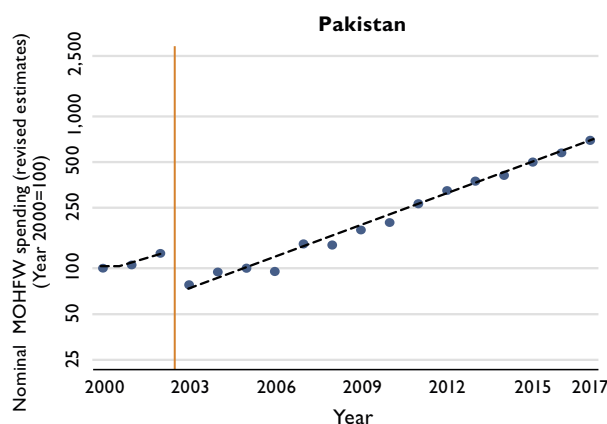
¹⁷ While some countries have experienced consistently steady linear growth in per capita public spending on health, others show

growth in budgetary allocations towards health in Sindh and five-fold increases in every other province.¹⁸ However, given that Pakistan remains in the midst of a population boom, with average annual growth rates above 2%,¹⁹ it is necessary to evaluate general government expenditures not in gross, but in per capita constant, terms.

Growth in per capita public spending on health has not matched the many-fold increase in nominal public health expenditures. Current domestic government spending on health in Pakistan is approximately Rs.1485 per capita (~\$14), representing only a modest increase from ~\$9 per capita expenditure a decade earlier in 2007 (Figure 6). In consequence, Pakistan now lags far behind its income cohort in publicly financed health expenditures—the LMI country average for 2017 was \$27, nearly double that of Pakistan.²⁰

Importantly, Pakistan's population has grown at an average annual rate of 2.2% between 2000 and 2017,²¹ and average annual inflation over the same period has been approximately 7.8%²² (Figure 7). If both population growth and inflation trends continue in this way, domestic government health expenditures will need to increase at an annual rate of 10.0% (ie. population growth + inflation or 2.2% + 7.8%) just for real per capita public health expenditures to not decline. The policy consequence is that if Pakistan seeks to promote faster improvements in health status, nominal public health expenditures must be increased by more than 10% annually.

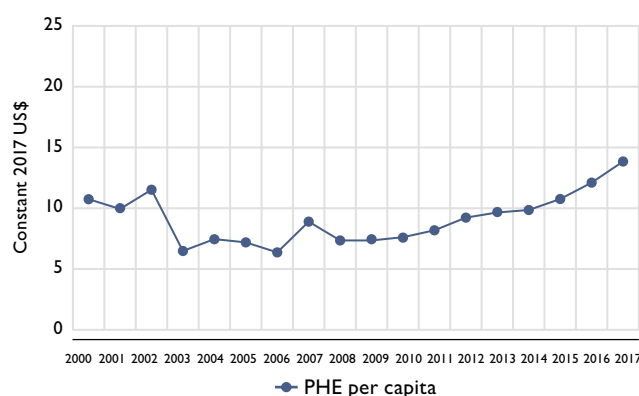
Figure 5: Nominal Public Spending in Pakistan



Source: Estimates are from the WHO GHED 2019.

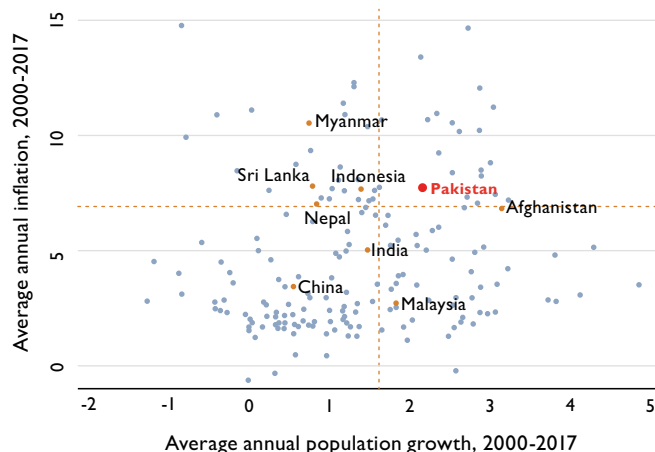
Note: The vertical line indicates a structural break and a statistical identifiable year after which there is found to be a significant shift in the growth trend

Figure 6: Per capita public health expenditure (PHE)



Source: Estimates are from the WHO GHED 2019.

Figure 7: Population Growth and Inflation



Source: Authors' estimates using data from the IMF International Financial Statistics files, and UN World Population Prospects: 2019 Revision.

Note: Dotted lines indicate LMIC averages

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.

¹⁸ Poverty Reduction Strategy Papers and Pakistan Bureau of Statistics. 2019.

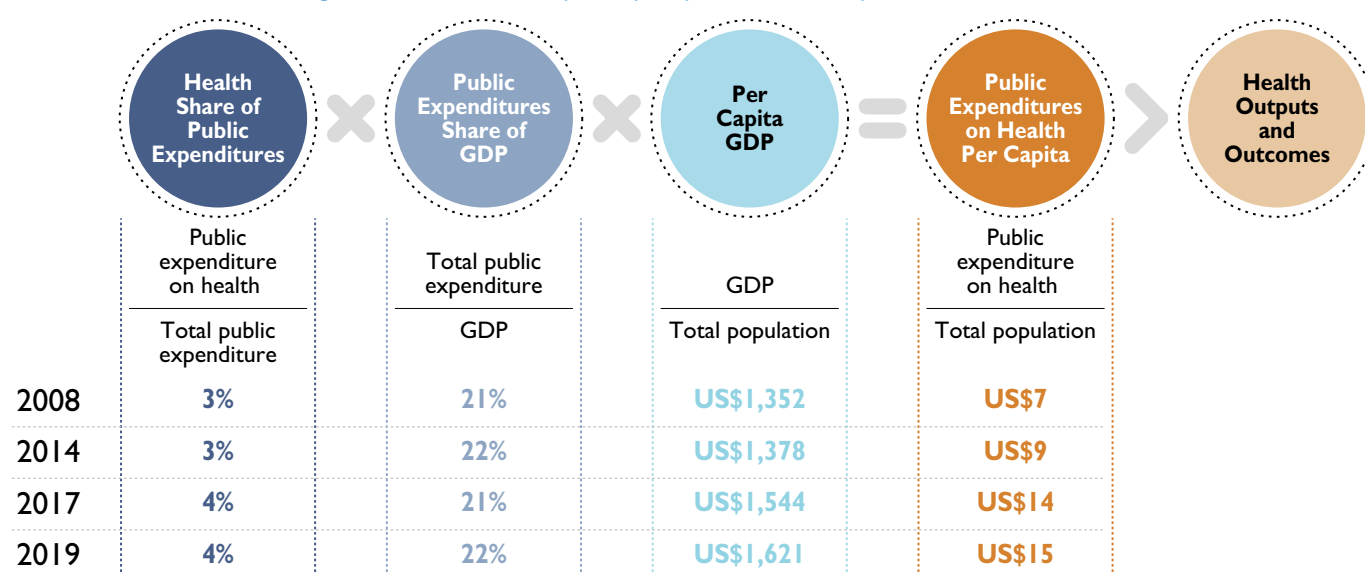
¹⁹ Estimates are from the World Bank Open Data Portal and for the latest available year.

²⁰ Estimates are from the WHO Global Health Expenditure Database 2019.

²¹ Estimates are derived from United Nations Population Division, World Population Prospects: 2019.

²² Author's estimate using data from the International Monetary Fund, International Financial Statistics files.

Figure 8: Calculation of per capita public health expenditure in Pakistan*



* Estimated

Source: Calculations presented in Figure 8 have been estimated using data from the WHO GHED 2019 (health share of GGE), as well as the IMF WEO (GGE as share of GDP, GDP per capita). Any discrepancy apparent in the calculation of per capita public health expenditure is due to rounding of input estimates and simplification for the sake of presentation.

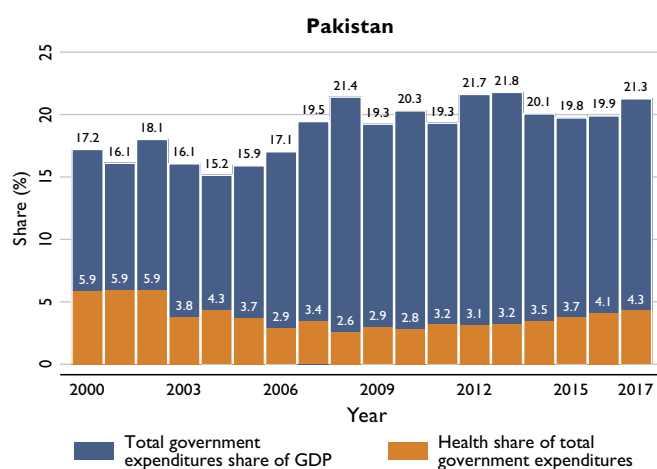
As observed in many other low- and middle-income (LMIC) countries,²³ the growth over the last fifteen years in Pakistan's per capita public expenditure on health—from a low of US\$6 in 2006 to US\$14 in 2017—has been driven primarily by conducive macroeconomic growth rather than other factors such as health sector reprioritization (Figure 8).

There has been little reprioritization of domestic government resources toward health at the national level in recent decades. Even after health sector devolution, Pakistan currently spends approximately 4% of total domestic government expenditures on health (Figure 8). Domestic GGE on health comprised nearly 6% of total GGE in the year 2002 but has not reached that level in almost two decades (Figure 9).

At a national level, the priority given to health spending within government spending is low relative to both Pakistan's past spending levels and relative to the current spending levels of other LMICs. For example,

Nepal's share of government expenditures on health is more than 5%, while Kenya and Indonesia both spend approximately 9% (Table 4).

Figure 9: Health share of Domestic Government Expenditure



Source: Estimates are from the WHO GHED 2019.

²³ Behera, D.K. and U, Dash. 2019. Impact of macro-fiscal determinants on health financing: empirical evidence from low-and middle-income countries. *Global Health Research and Policy* 4, 21.

Sustained prioritization for health in domestic government budgets has been difficult since 2000 and has contributed to lagging health financing indicators when compared with other SAR and LMI countries. Exacerbating an already precarious position, the COVID-19 pandemic has instigated a twin blow of dramatically increasing short- and medium-term health needs while also severely impacting the pool of government resources available to provide necessary services to citizens.

ANTICIPATED IMPACTS OF THE COVID-19 PANDEMIC ON GOVERNMENT HEALTH SPENDING

Analysis of Pakistan's macro-fiscal position prior to 2019 reveals high macro-fiscal vulnerability to the present health and economic crisis brought on by the global COVID-19 pandemic. At the end of 2019, right before the onset of the global pandemic, annual government borrowing as a share of GDP had risen to 9%, the highest level in over thirty years.²⁴ Consistently high annual deficits (Figure 10) also led to total government debt amounting to 75% of national GDP in 2019, nearly 35 percentage points higher than the IMF's Emerging Market and Middle-Income Economy average.²⁵

Prior to the COVID-19 pandemic, Pakistan was facing significant constraints in expansionary fiscal spending, and the COVID-19 crisis further constricted the fiscal space available to Pakistan's domestic government.

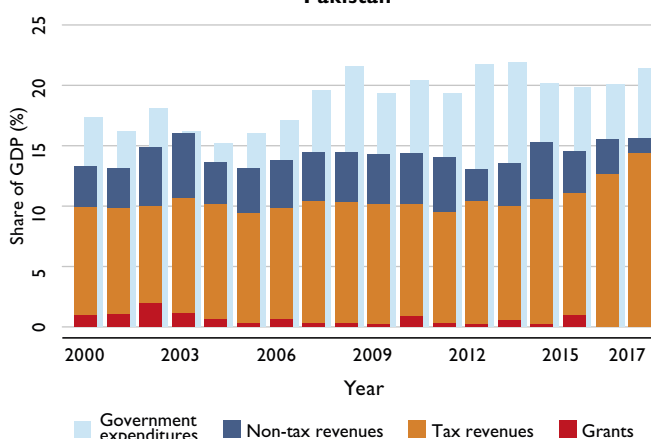
With the COVID-19 pandemic, it is unlikely that Pakistan will be able to rely on macroeconomic growth to increase public financing for health. Recent analyses suggest that in the absence of health sector reprioritization or stimulus spending, per capita public expenditures on health in 2021 may be lower than the pre-crisis expenditure levels observed in 2019 (Figure 11).

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

Country	Share of total government expenditure			
	Health	Education	Military	Debt Service
Afghanistan	5	13	4	0.2
Bangladesh	3	15	11	14
Ghana	7	21	2	29
India	3	14	9	17
Indonesia	9	21	5	10
Kenya	9	17	5	13
Nepal	5	17	6	1
Pakistan	4	15	18	20
Philippines	8	13	6	9
Sierra Leone	16	15	5	9
SAR average	8	15	10	11
LMI average	9	15	7	8

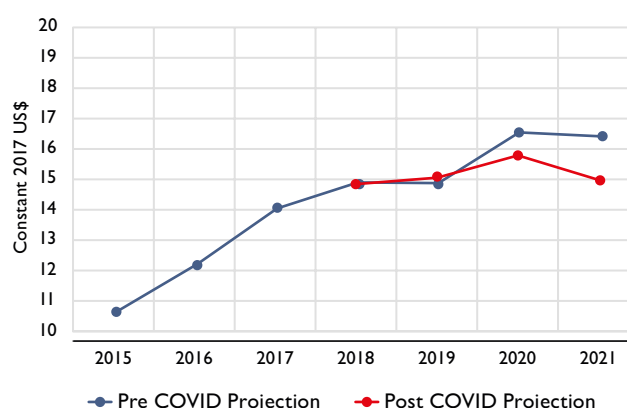
Source: Authors' estimates using data from the World Bank WDI, the IMF WEO, and the WHO GHED.

Figure 10: Government Revenues and Expenditure in Pakistan



Source: The IMF WEO and the IMF World Revenue Longitudinal Data.

Figure 11: Per capita government spending on health in Pakistan Pre- and Post-COVID



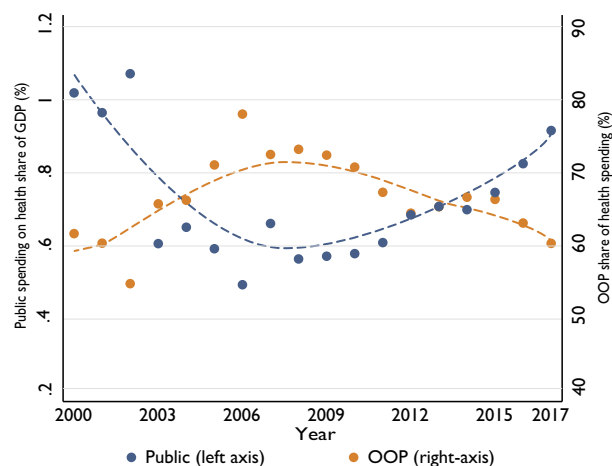
Source: Author's estimates using data from WHO GHED 2019 and IMF WEO 2020.

²⁴ Estimates are from the IMF World Economic Outlook, April 2020.

²⁵ Estimates are from the IMF Fiscal Monitor, April 2020.

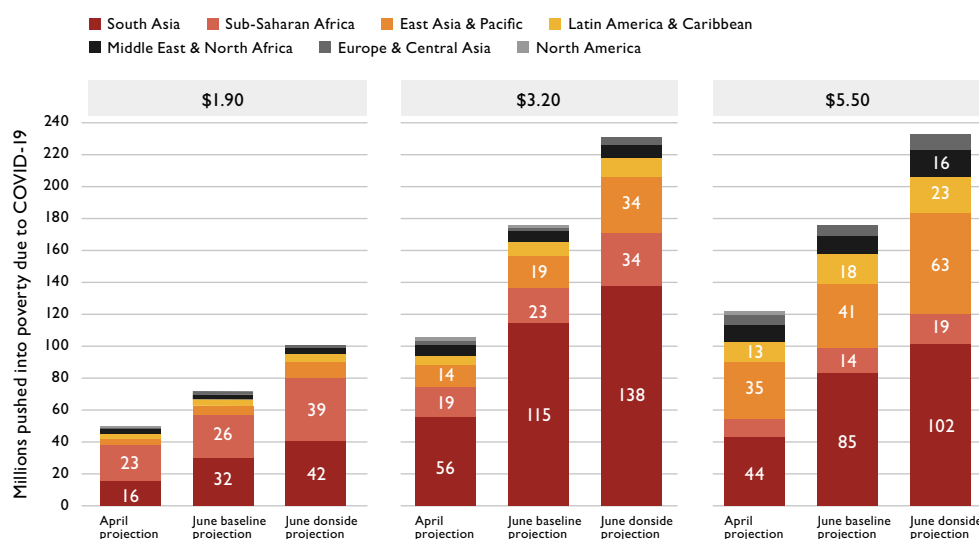
Ultimately, if per capita public health expenditures do not increase, Pakistan's poorest will be impacted the most. Pakistan's own history with health financing indicates that as domestic government expenditures on health decreases, the OOP burden placed on private households to finance necessary healthcare increases (Figure 12). Increasing the health financing burden on vulnerable populations is precisely the reverse of what is required to react to the challenges posed by the COVID-19 pandemic instead governments must work to remove financial barriers to health access.²⁶

Figure 12: Public spending on health versus OOP health spending in Pakistan



Source: WHO GHED 2019.

Figure 13: Estimate poverty impact of COVID-19 by region



Source: Lakner et al, (2020), PovcalNet, Global Economic Prospects.

²⁶ Joe Kutzin. 2020. Priorities for the Health Financing Response to COVID-19. Partners for Health Network. Published: April 2, 2020. Accessed: October 22, 2020.

GLOSSARY & METHODS¹

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):

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

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

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 :

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

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), $t = [t_0, \dots, T]$ 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 \geq & < 3 percent	≥ 3 percent
Steep Valley	< 0 percent	≥ 5 percent
Plateau	≥ 3 percent	0 percent \geq & < 3 percent
Valley	< 0 percent	0 percent \geq & < 3 percent
Plain	0 percent \geq & < 3 percent	0 percent \geq & < 3 percent
Mountain	≥ 3 percent	< 0 percent
Cliff	0 percent \geq & < 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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