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Expanding Opportunities: Toward Inclusive Growth

WORLD BANK GROUP

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Abbreviations

Abbreviation	Name
3mma	3-Month Moving Average
AC	Adaptation Communication
AE	Advanced Economy
AFG	Afghanistan
ARC	African Risk Capacity
BAU	Business-as-usual
BDT	Bangladeshi Taka
BGD	Bangladesh
BRIC	Brazil, Russia, India, China, and South Africa
BTN	Bhutan
BUR	Biennial Update Report
CAT DDO	Catastrophe Deferred Drawdown Option
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CMIE	Centre for Monitoring Indian Economy
COICOP	Classification of Individual Consumption According to Purpose
CPAT	Climate Policy Assessment Tool
CPHS	Consumer Pyramids Household Surveys
CPI	Consumer Price Index
CPI	Climate Policy Initiative
D-index	Dissimilarity Index
EDF	Export Development Fund
EE	Energy efficiency
EMDEs	Emerging Market and Developing Economies
FDI	Foreign Direct Investment
Fed	U.S. Federal Reserve
FFSR	Fossil Fuel Subsidy Reform
FII	Foreign Institutional Investment
FPI	Foreign Portfolio Investment
FY	Fiscal Year
FYP	Five-Year Plan
GDP	Gross Domestic Product
GHG	Greenhouse Gas (Emissions)
GST	Goods and Services Tax
HBS	Household Budget Surveys

HIES	Household Income and Expenditure Survey
HIY	High Income Country
ICP	International Comparison Program
ICT	Information and Communications Technology
IFC	International Finance Corporation
ILO	International Labor Organization
IMF	International Monetary Fund
IND	India
INR	Indian Rupee
IOp	Inequality of Opportunity
IRENA	International Renewable Energy Agency
LASSO	Least Absolute Shrinkage and Selection Operator
LCs	Letters of Credit
LCU	Local Currency Unit
LEDS	Low Emission Development Strategy
LICs	Low Income Countries
LKA	Sri Lanka
LMICs	Lower and Middle Income Countries
LPG	Liquefied Petroleum Gas
MDB	Multilateral development bank
MDV	Maldives
MFMod	Macroeconomic-Fiscal Model (World Bank)
MFSs	Mobile Financial Services
MSMEs	Micro, Small and Medium Enterprises
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NBFCs	Non-banking financial companies
NC	National Communication
NDC	Nationally Determined Contribution
NEER	Nominal Effective Exchange Rate
NITAs	Non-resident Investor's Taka Accounts
NPL	Nepal
NPL	Non-Performing Loan
NPR	Nepalese rupee
NSO	National Statistical Office
OMS	Open Market Sales
PAK	Pakistan
PDS	Public Distribution System
PforR	Program-for-Results Financing
PMI	Purchasing Managers' Index

PPP	Purchasing Power Parity
PV	Photovoltaic
RBC	Real Business Cycle
RBI	Reserve Bank of India
RHS	Right-hand side
RHS	Right-hand side
SAR	South Asia Region
SARMD	South Asia Regional Micro Database
SDF	Sustainable Development fee
SEADRIF	Southeast Asia Disaster Risk Insurance Facility
SMEs	Small and Medium Enterprises
SOEs	State-Owned Enterprises
TAP	Technology Action Plan

Executive summary

Three months into 2023, the macroeconomic outlook for South Asia presents a balance of good and bad news. To start with the good news, global energy prices, and thus fertilizer prices, have fallen from their peaks, which has eased domestic inflationary pressures, reduced import bills, and reversed some of the large terms-of-trade losses during the past year. China's economy has reopened, reducing disruptions in global value chains and boosting global production potential. Services exports, both tourism and business services, have continued to recover strongly. In Maldives, tourism now exceeds pre-pandemic levels, as tourism from China has increased sharply in recent months. In India, the services sector is the fastest-growing sector, together with the construction sector, which has been boosted by new government priorities. And lastly, most South Asian countries have finally started fiscal consolidation by reducing inefficient subsidies, raising tax revenues, and tightening expenditures. In Bangladesh and Sri Lanka, fiscal consolidation is supported by recently agreed IMF programs, while negotiations in Pakistan are ongoing.

However, these positive developments only mitigate the negative impact of intensified pressures on the balance of payments and the financial sector. Rising global interest rates have caused capital outflows from South Asia, putting downward pressure on the value of their currencies. Uncertainty in global financial markets, with recent bank runs on a few regional banks in the United States and Europe, has the potential to exacerbate imbalances in South Asia's financial markets. Countries in South Asia with latent non-performing loans following forbearance measures during the COVID-19 pandemic are more vulnerable to spillovers from volatile global financial markets. Loan moratorium programs during the pandemic have delayed the recognition of distressed assets. But non-performing loan ratios have started rising, for example in Bangladesh due to high import costs and weak regulatory enforcement, and in Sri Lanka due to rising rates and increased macroeconomic uncertainties. Increased borrowing by the government from domestic banks has crowded out private credit in Pakistan, while rising sovereign-bank linkages in Maldives, Pakistan and Sri Lanka have further increased the financial sector's vulnerability.

Policy makers in South Asia, especially those with large external debt, face difficult tradeoffs as they respond to pressures on their currencies. Letting currencies depreciate seems at first sight an unattractive option, as it increases foreign debt-to-GDP ratios, increases debt-servicing obligations in local currencies, and fuels domestic inflation. Therefore, several countries have used foreign exchange reserves to support their currencies, but such a policy

quickly runs into its own limitations as reserves reach dangerously low levels. Counteracting the pressures by raising domestic interest rates is often not powerful enough by itself. For example, the State Bank of Pakistan has increased its policy rate more than other central banks in South Asia, from 7 to 20 percent, but the currency has still depreciated by 27 percent since June 2022. The depreciation-inflation spiral has kept real interest rates in Pakistan in negative territory. Similarly, in Sri Lanka the real interest rate is still negative, despite an 11-percentage-point increase in the official interest rate.

In an attempt to stabilize currencies, policy makers have resorted to imposing import restrictions and tightening capital controls to reduce balance-of-payments pressures. Analysis in this report shows that these restrictions can be circumvented and can even backfire. Especially in countries that receive large remittances, Hundi or Hawala informal exchange systems can facilitate under-invoicing of imports or informal capital outflows. This attracts remittances to the informal market with an informal exchange rate that has effectively brought about depreciation. For example, analysis shows that in Bangladesh a 1-percent deviation between the formal and informal exchange rate shifts 3.6 percent of remittances from the formal to the informal financial sector. That means that import restrictions and capital controls cannot fully prevent capital outflows and depreciations, while a dual exchange rate creates additional distortions in domestic markets.

Against the balance of positive terms of trade but negative financial market developments, average growth in South Asia is expected to moderate in 2023. Apart from Bhutan, the growth outlook in the current fiscal year has been adjusted downward for all countries. The largest downward adjustment (1.6 percent) is projected for Maldives and Pakistan. The latter is now expected to grow at a mere 0.4 percent in the current fiscal year, implying negative per-capita GDP growth. The contraction of Sri Lanka's economy is expected to continue this year, with a negative GDP growth of 4.3 percent this year after a contraction of 7.8 percent last year. India's growth has been adjusted downward by 0.7 percentage point to 6.3 percent, as rising borrowing costs and the consolidation of current fiscal spending dampen consumption. In Bangladesh, real GDP growth is expected to decelerate to 5.2 percent, a downward adjustment of 0.9 percentage point since our last forecast in October 2022.

At an aggregate level, translating fiscal-year forecasts into the current calendar year, South Asia is now expected to grow by 5.6 percent in 2023, which is 0.5 percentage point slower than expected six months ago. Private consumption and government consumption are the weakest components of this GDP growth. Government consumption is expected to shrink because of the consolidation of current expenditures in several countries. Private consumption is being held back by still elevated food prices, among other factors. The floods in Pakistan and export bans still in place in Afghanistan, Bangladesh India, and Pakistan are keeping prices in regional markets high. This report shows that the elevated food prices hurt

households in lower income deciles more than richer households. The report contains several simulations to illustrate the uncertainty surrounding the forecasts. Further increases in international interest rates, additional financial sector shocks, and renewed increases in energy prices would be most harmful for countries in South Asia.

Going forward, broad reform programs are needed to put countries in South Asia on a more robust growth path. A sustainable fiscal outlook must be at the center of these reform programs, all the while it has become more challenging by the need to respond to disasters that are occurring more frequently and are becoming more devastating.

Fiscal sustainability cannot be achieved merely by reducing subsidies and other expenditures, or increasing tax rates. Ultimately, a sustainable fiscal outlook can only be achieved by broadening the tax base, which means that more people should be given opportunities to participate in the productive economy. In previous issues of the South Asia Economic Focus, we have analyzed why female labor force participation is exceptionally low and why so many people are stuck in an unproductive informal sector in South Asia, both keeping the tax base extraordinarily low.

In the current report, we provide further evidence that South Asia's production potential is not being fully utilized. The analysis shows that inequality of opportunity is significantly higher than in other regions of the world. This means that education and labor-market outcomes in South Asia are more determined by factors outside the control of individuals than in other parts of the world—factors such as the education of parents, geographic location of birth, caste, or other circumstances. It also means that intergenerational mobility is low in South Asia. Not only is inequality of opportunity unfair, but it is also inefficient. It prevents an optimal allocation of resources and fuller utilization of production capacity. Reducing inequality of opportunity and increasing economic mobility is an essential part of broadening the tax base. Therefore, eliminating obstacles to mobility is not merely a long-term agenda, but should be a central part of current reform programs that aim to make the fiscal outlook more sustainable. The focus on more inclusive growth also makes it easier for the population to support current necessary reform programs.

CHAPTER 1

Opportunities amid lingering challenges

Introduction

Global energy prices have fallen from their peaks, which has eased domestic inflationary pressures and improved terms of trade for most South Asian countries. But domestic prices remain high, especially food prices, which have dampened growth in private consumption and worsened consumption inequality. While the global services sector is recovering, goods demand remains weak. The weak demand and shortages of imported inputs, due to import restriction policies and a shortage of foreign currency, have limited activities in South Asia's manufacturing sector. Growth in the region's services sector remains robust aided by the return of tourists. Because of an uneven sectoral recovery, the recovery in employment has been slow and uneven, which could reduce long-term human capital investment.

Tensions in the external sector have intensified. As import restrictions and improving terms of trade have reduced imports more than the fall in exports, the region's trade account balance has improved. But net capital outflows have increased, as uncertainty increases in global financial markets. Although interventions in the foreign exchange markets have helped stabilize exchange rates in many South Asian countries, artificially strong exchange rates and increased capital controls have widened the gap between the official and market exchange rates, leading to declines in official remittance inflows and foreign reserves. In Pakistan, intensifying external sector pressures and economic uncertainty led to rapid currency depreciation in early 2023, contributing to rising inflation and exacerbating external sector pressures.

Weaknesses in the real sectors are reflected in the financial sector. Loan moratorium programs during the pandemic have delayed the recognition of distressed assets. But non-performing loan ratios have started rising, in Bangladesh due to high import costs and weak regulatory enforcement, and in Sri Lanka due to rising rates and increased macroeconomic uncertainties, reflecting a deterioration of asset quality. Increased borrowing by the

government from domestic banks has crowded out private credit in Pakistan, while rising sovereign-bank linkages in Maldives, Pakistan and Sri Lanka have further increased the financial sector's vulnerability.

While the improving global environment may provide opportunities, domestic challenges in the external and financial sectors present difficult policy choices. Import restrictions and exchange market interventions may help reduce short-term fluctuations but tend to hurt long-term growth and competitiveness. Many countries in the region are conducting fiscal consolidation to reduce the fiscal burden. This has included goods and services tax increases and energy subsidy reductions, but it also includes lower budget allocations to programs that support vulnerable households. Monetary tightening that has helped countries contain inflation has also raised domestic borrowing rates, dampened investment, and contributed to financial sector pressures.

The chapter is divided as follows. Section 1.1 puts South Asia in a global context to highlight the challenges and opportunities. Sections 1.2 to 1.4 focus on specific challenges. Section 1.5 views policy choices in the context of these challenges.

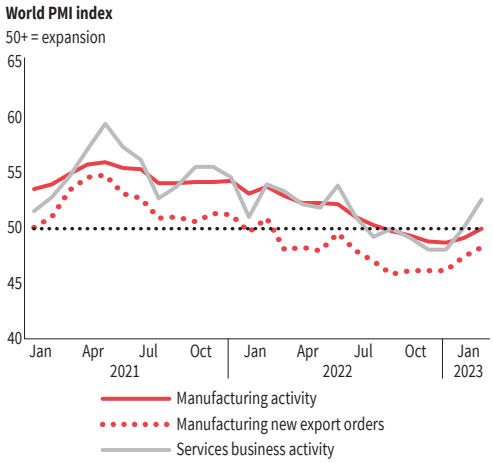
1.1 An uneven recovery amid rising uncertainty

South Asian countries face an uncertain global environment with tightening financial conditions. Global energy and fertilizer prices have fallen from the high levels of mid-2022 (Figure 1.1.B), helping to ease domestic inflationary pressure and improve the terms of trade for net energy-importing countries. The reopening of the Chinese economy from pandemic-related lockdowns has helped reduce global supply disruptions. Accordingly, the global Purchasing Managers' Index (PMI) showed an expansion of overall activities in February 2023, especially in the global services sector, after having remained in contraction territory since August 2022. But the global manufacturing sector has continued to contract as of February 2023, albeit at a slower pace than in previous months (Figure 1.1.A). Owing to weakening global demand for most of 2022, global goods trade fell and continued falling in early 2023. The ongoing monetary tightening in advanced economies and rising stress in the US and European banking sectors since mid-March have contributed to tightening financial conditions and external sector pressures in emerging markets and developing countries (EMDEs).

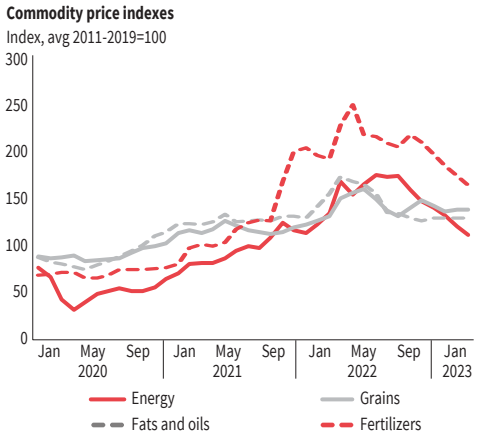
Industrial activity has declined in South Asia, especially in manufacturing. With high input costs and weak external demand, merchandise exports and industrial production fell in late 2022 in India and Pakistan, and industrial production declined in Sri Lanka (Figure 1.2). Production in Pakistan, Sri Lanka and Bangladesh has been curtailed by import compression due to currency depreciation, a shortage of foreign reserves to pay for imports, and

Figure 1.1. Global services sector is recovering while energy prices are falling

A. Global economic activity has stabilized with recovery in services

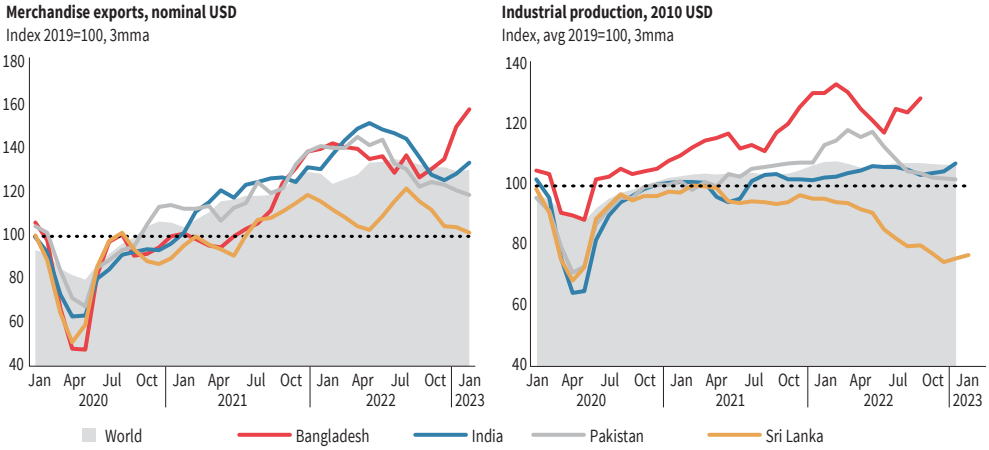


B. Global energy and fertilizer prices have fallen



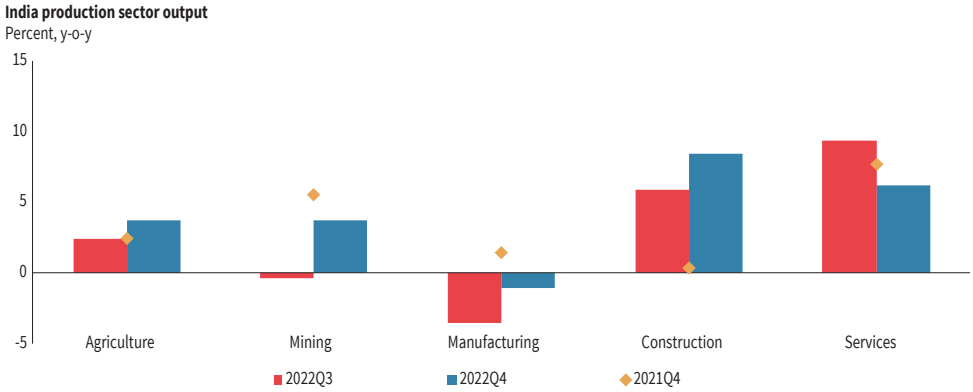
Source: Haver Analytics and World Bank commodity price Pink Sheets.
Note: A. PMI indexes for the world come from IHS Markit and are seasonally adjusted. B. Commodity price indexes are for low- and middle-income countries, an index constructed by the World Bank. Historical average inflation is computed based on monthly inflation levels during 2016-2019 for Afghanistan, and 2015-2019 for the other countries.

Figure 1.2. Activities in the industrial sector and especially manufacturing have declined



Source: CEIC, GEM, and Haver Analytics.
Note: Merchandise exports are in nominal US dollars and not seasonally adjusted; the values are then indexed to the average 2019 value. For industrial production, manufacturing industrial production is used for Bangladesh and Pakistan, while the general index is used for India and Sri Lanka. All industrial production indexes are seasonally adjusted and indexed to the average 2019 value.

Figure 1.3. Construction and services sectors in India expanded in 2022H2, while manufacturing contracted



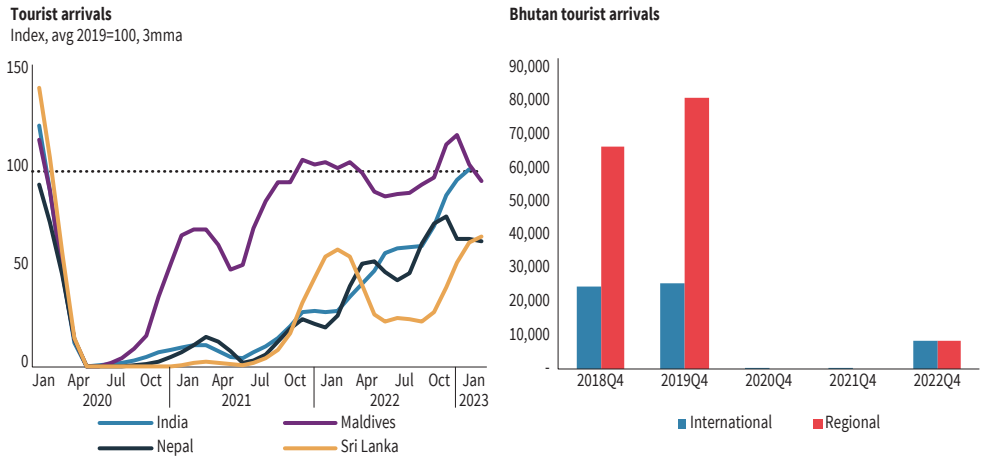
Source: Haver Analytics.
Note: India's sectoral output growth is shown in calendar year quarters.

import restriction policies. Sri Lanka's manufacturing PMI points to continued contraction (month-on-month) in manufacturing from June 2022 to February 2023, especially in new orders and production, due to subdued demand in the food and textiles sectors (Central Bank of Sri Lanka 2023). In Bangladesh, exports and industrial production were disrupted in the summer due to shortages of energy and production inputs. However, as import restrictions were relaxed, activities picked up in late 2022, although a shortage of US dollars still limited imports and production. In India, manufacturing output contracted by 1.1 percent on a year-on-year (y-o-y) basis in 2022Q4 (Q3 of FY2022/23) after a 3.6 percent contraction in 2022Q3 (Figure 1.3). While construction expanded in both quarters, helped by public sector spending on infrastructure (Section 1.5), it is a much smaller share of India's GDP than manufacturing.[1]

In contrast to the industrial sector, the services sector has expanded and remains robust (Figure 1.4)**.** In Maldives, tourist arrivals reached 1.68 million in 2022, only slightly lower than the pre-pandemic high. In the first two months of 2023, tourist arrivals increased 23 percent year-on-year, aided by the return of Chinese tourists, which accounted for 15 percent of the increase in total tourist arrivals for the year (as of early March) compared with a year ago. Tourist arrivals continued to recover in India and Nepal but are still below pre-pandemic levels.[2] Sri Lanka has seen a strong seasonal pick-up in tourist arrivals since December 2022, while the PMI services index shows the country's services sector oscillated between mild expansion and contraction during the period from August 2022 to February 2023 amid

[1] Manufacturing made up 17 percent of India's GDP in FY2020/21, while construction and mining were 7.2 and 2.1 percent, respectively.
[2] Tourist arrival includes only foreign tourists for India.

Figure 1.4. Services sector activity was led by a recovery in tourism



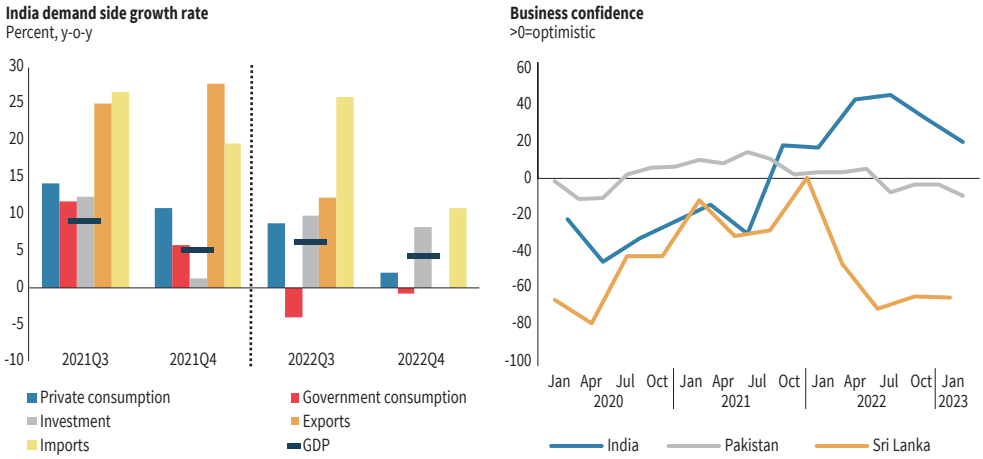
Source: CEIC, Haver Analytics, Maldives government, Tourism Council of Bhutan, and Dolkar (2022).
Note: Tourist arrivals include only foreign tourists for India.

subdued consumer demand. After Bhutan reopened its borders to tourists in September, arrivals picked up in 2022Q4, but levels are still significantly below pre-pandemic levels, especially among within-region arrivals, which are also subject to a lower daily charge than international tourists.[3] The robust tourism sector has supported growth in related sectors such as real estate, transport, and trade. Driven by strong demand for IT and professional services, India's services sector overall continued expanding in 2022Q3 and Q4, with a 6.2 percent y-o-y increase in output in Q4 (Figure 1.3).

Investment growth remains strong in India, while growth in private consumption has moderated. Real GDP grew 4.4 percent in 2022Q4 (FY2022/23 Q3) in India from a year ago, driven by strong growth in investment (Figure 1.5), as the government's capital expenditure push boosted construction activities and crowded in private investment. Business confidence in India has benefited from strong corporate profits and remains optimistic, in contrast to Pakistan (pessimistic) and Sri Lanka (highly pessimistic). Growth in private consumption, which accounts for over 55 percent of India's GDP, slowed down in 2022Q4, as still-high inflation created a drag on consumption, especially among low-income groups. Import growth (y-o-y) slowed in 2022Q4 compared with Q3, due to weak demand for manufacturing inputs, contributing to smaller trade deficits.

[3] Bhutan's tourism levy act 2020 introduced a sustainable development fee (SDF) for regional tourists of BTN1,200 per person per night. This is still significantly lower than the SDF for international arrivals of US$200 per night. This new SDF for regional tourists and the fact that hotels and guest houses below three stars had to close down in line with new tourism regulations, could have deterred regional tourists.

Figure 1.5. Investment and business confidence remain strong in India, whereas business sentiment is weak in Pakistan and Sri Lanka



Source: Haver Analytics.
Note: Business confidence shows deviations from each country's baseline (100 for India and Sri Lanka, and 50 for Pakistan).

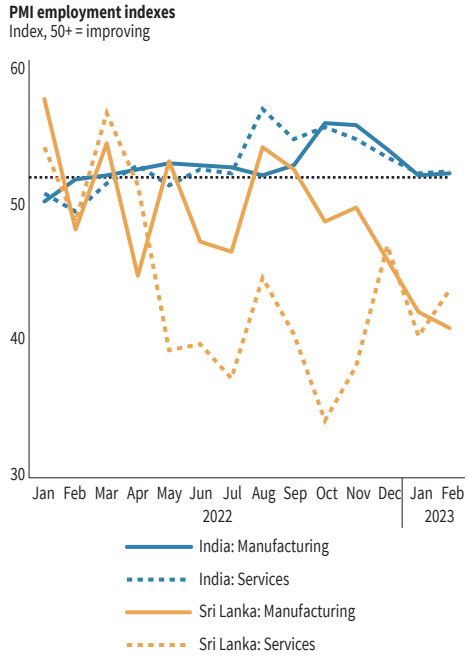
The recovery in employment has remained uneven across sectors and countries. In India, employment expanded month-on-month (m-o-m) in both manufacturing and services in early 2023, albeit at a slower pace than in 2022H2, according to the PMI employment indexes (Figure 1.6). There were also large variations in employment growth across regions and employment types: while employment inched up in urban areas, it stagnated in rural areas according to the latest CMIE data; and while self-employment increased, regular salaried employment fell in 2022, raising concerns about the job quality of new employment. Employment declined in Sri Lanka (Figure 1.6), driven by both subdued economic activities and increased resignations, migrations, and retirements (Central Bank of Sri Lanka 2023). In Afghanistan, the cyclical slowdown of the economy during the winter season translated into a gradual decline in employment and a contraction of income-generating opportunities for self-employed and casual workers (World Bank 2023a). In Bhutan, the youth unemployment rate increased to 29 percent in 2022 from 21 percent in 2021, leading to an increase in outward migration (Drukpa 2022; Tobgay 2022). The slow growth in employment and deterioration in job quality have contributed to slow growth in private consumption. Slow recovery in jobs also tends to reduce human capital investment and could exacerbate the inequality of opportunities in South Asia (Chapter 3).

The nowcast[4] of GDP growth in the most recent quarter also suggests an uneven recovery across countries. The nowcast is based on different high-frequency activity indicators,

[4] Nowcasting refers to the practice of using recently published data to update key economic indicators that are published with a significant lag, such as real GDP.

in which a LASSO statistical model is used to select the most relevant economic activity indicators for each country (World Bank 2020). Using the data available up to March 27, 2023, the model nowcasts one-quarter ahead of the official release of quarterly GDP data—2023Q1 for India and Sri Lanka, and 2022Q4 for Maldives (Figure 1.7). The nowcast suggests a pick-up in India's growth rate in 2023Q1 (Q4 of FY2022/23) compared with the previous quarter, as government consumption growth accelerates as it approaches the end of the fiscal year. Supported by continued recovery in tourism, Maldives is expected to grow by more than 10 percent in 2022Q4 from a year ago. Consistent with the weaknesses reflected in PMI, confidence, and industrial production indicators for January and February 2023, the model suggests a continued contraction in Sri Lanka in 2023Q1, reflecting a contraction in demand and production activities that are limited by input shortages.

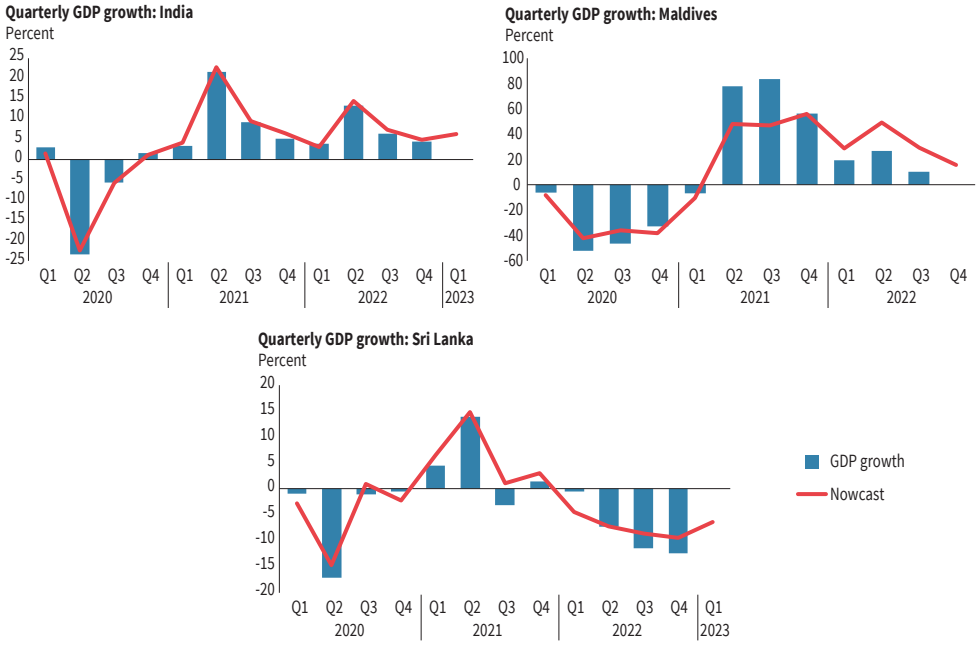
Figure 1.6. Employment has expanded in India, albeit at a slower pace, and has continued to contract in Sri Lanka



Source: Haver Analytics.
Note: PMI indexes for India come from IHS Markit and are seasonally adjusted. Indexes for Sri Lanka are reported by the Central Bank of Sri Lanka and are not seasonally adjusted.

The new global environment provides opportunities, but challenges remain for South Asia. While weak global activities limited export growth in 2022, improving global demand in 2023 could help boost exports. Falling global energy prices help ease domestic inflationary pressures and improve the terms of trade for South Asian countries, most of which are net energy importers, but stubbornly high food price inflation continues to put at risk access to basic food items (Section 1.2). Countries that were battered by the series of shocks over the past three years entered 2023 with high debt levels, diminished foreign reserve buffers and weakened currencies (Section 1.3). Tight global financial conditions have increased debt service costs and can dampen private investments, along with increased sovereign-bank linkages in some countries (Section 1.4). Falling global energy prices also provide an opportunity for countries to reduce or remove fuel subsidies, as many South Asian countries have done.

Figure 1.7. GDP nowcast suggests continued uneven recovery across countries



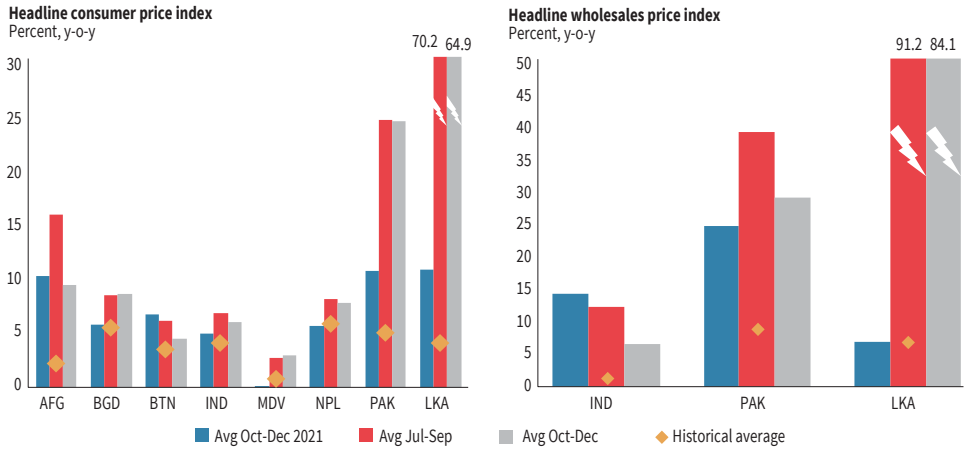
Sources: CEIC and World Bank staff calculations.
Note: Data are shown for the calendar year. The nowcasting index uses the set of variables that provide the most accurate in-sample forecast to nowcast the most recent complete quarter. See Mercer-Blackman et al. (2021) for details on the methodology.

1.2 Slow-falling inflation and elevated food prices

Falling global energy prices have helped to ease domestic inflationary pressures in South Asia, although consumer inflation is sticky in most countries. The decline in global energy and fertilizer prices helped lower both consumer inflation and wholesale inflation in 2022Q4 (October–December), compared with the previous quarter (Figure 1.8). The exception is Pakistan, where consumer inflation has continued rising in recent months, as the floods and currency depreciation have increased inflationary pressures in the country. Despite the general downward trend, consumer inflation has been sticky in most cases and is falling very slowly. In all countries, the average inflation in 2022Q4 was above the historical average, and in all except Bhutan it was above the average in 2021Q4. In India, consumer inflation increased in January and February 2023 to above the Reserve Bank of India's (RBI) tolerance band after falling below the upper threshold (6 percent) in November and December. Similarly, consumer inflation rose in Bangladesh and Nepal in February, breaking the declines seen in the previous months.

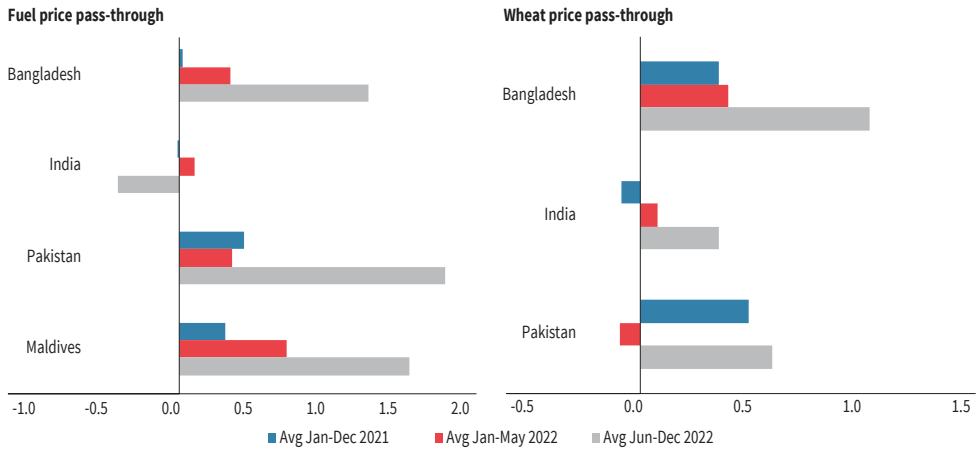
Stronger pass-throughs of global commodity prices in 2022H2 may help explain the slow fall in consumer price inflation. Domestic prices became more responsive to changes in

Figure 1.8. Consumer inflation has fallen but remains sticky in most countries, while wholesale inflation has fallen by more



Source: CEIC, Haver Analytics, and Afghanistan National Statistics and Information Authority.
Note: Historical average is from 2016–2019 for Afghanistan due to data limitation, and 2015–2019 for the other countries. For Afghanistan, the October–December 2022 average includes October and November data only, as December inflation has not been released as of the data cutoff.

Figure 1.9. Commodity price pass-throughs increased during 2022H2



Source: CEIC, Haver Analytics, and World Bank commodity price Pink Sheets.
Note: Pass-through is defined as the percent change (y-o-y) in domestic retail prices divided by the percent change (y-o-y) in international prices of the same commodity with a one-month lag. The negative pass-through reflects rising domestic prices when global prices fall.

global prices in 2022H2: this was the case for domestic fuel prices in Bangladesh, Pakistan, and Maldives, and for wheat prices in Bangladesh, India and Pakistan (Figure 1.9). Currency depreciation, which led to faster increases in domestic than global prices, has contributed to the stronger pass-through. In addition, the reduction or removal of consumer price

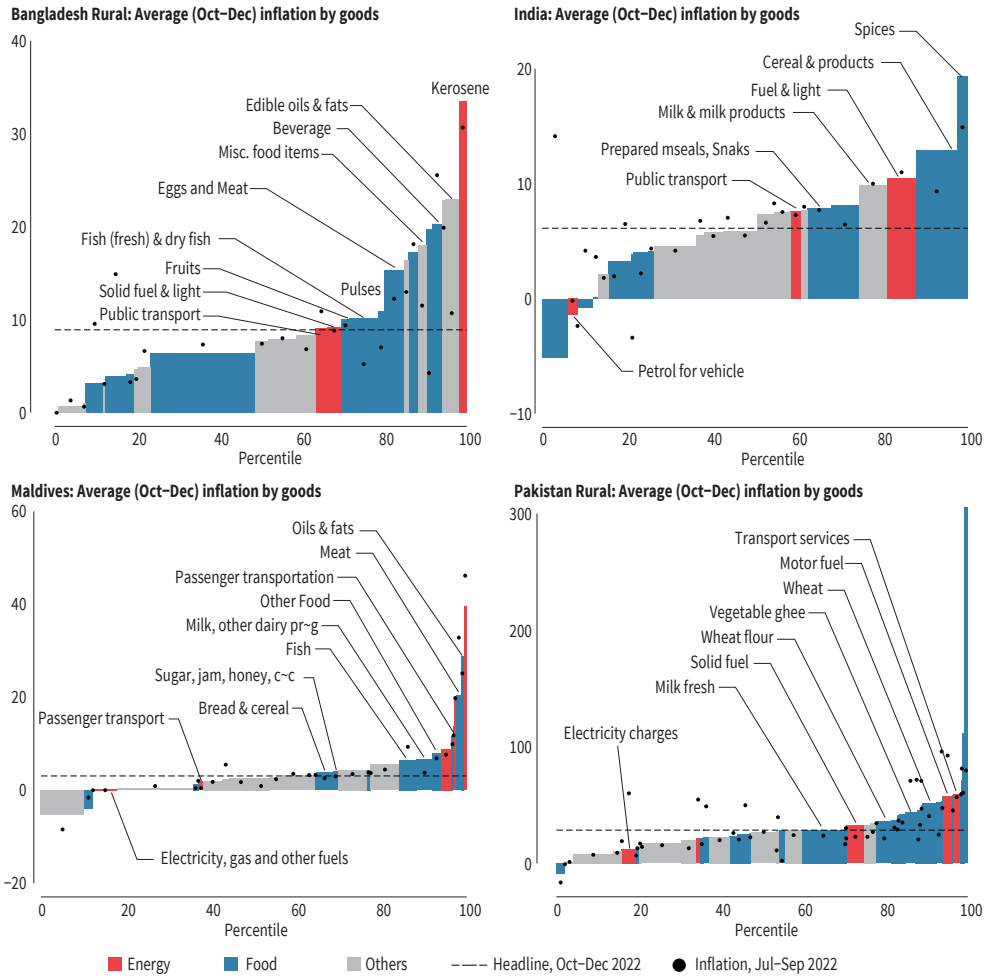
subsidies—in Pakistan (Reuters 2022) and Bangladesh (Raana 2022)—have led to a catching-up of domestic consumer prices to global prices of the same commodity.[5] This catching-up to global prices has slowed down the fall of domestic consumer price inflation, despite falling energy prices.

Across goods categories, inflation of food items has gone up or stayed high, while energy-related inflation has mostly come down more, compared with summer and fall 2022. With falling energy prices in the global market, domestic inflation of many energy-related goods fell in 2022Q4 compared with 2022Q3 (Figure 1.10). Petrol for vehicles in India saw deflation during the period, while the inflation of motor fuel in Pakistan slowed. At the same time, inflation in certain food items went up. In Pakistan, the inflation of onions has reached over 100 percent since October 2022 and increased to over 500 percent in rural areas in January 2023 following drastic rises in global prices of onion. The prices of wheat and other cereals have also increased fast: in India, the average price of cereals has increased at a monthly rate of above 10 percent since September and reached 16 percent in January, while inflation of wheat reached 25 percent in January. In the aftermath of the floods, the inflation of wheat soared in Pakistan, reaching 78 percent in urban areas and over 100 percent in rural places. In addition, the price of meat in Bangladesh and Maldives has also increased faster than the average consumer inflation in recent months. One exception is Bhutan, where both imported and domestic food prices decelerated in the second half of 2022, as the country increased domestic food production.

Continued food export restrictions contribute to high global food price inflation, and elevated food prices contribute to poverty and inequality. As a response to the war in Ukraine and the initial increase in food shortages around the world, many countries implemented food export restrictions (World Bank 2022a). Many of these restrictions have been extended to the end of 2023 and beyond (Table 1.1). These export restrictions threaten to further increase global food prices by restricting the free flow of food products. The brunt of the impact is borne by countries that import these heavily restricted food products, such as wheat for most South Asian countries. In Afghanistan, although food items are reportedly widely available thanks to good weather and harvests, two-thirds of Afghan households cannot afford basic food items due to a collapse of private income (World Bank 2023a). As a result, estimates by the World Food Programme (WFP) show that the share of the population with insufficient food has stayed above 90 percent in Afghanistan. High and persistent food inflation not only increases the cost of living for all households, but it hits the poor especially hard, as Box 1.1 shows.

[5] When global prices fall while domestic prices keep rising, the pass-through can be negative, such as for fuel prices in India between June and December 2022.

Figure 1.10. Inflation in food items has remained high, while energy-related inflation has trended down



Source: Haver Analytics, Bangladesh Bureau of Statistics, and World Bank staff calculations.
Note: Monthly inflation is computed as the y-o-y change in the price index for each month. Energy categories include fuel and lighting used in households and fuels used for transportation. Food items include food and non-alcoholic beverages. Horizontal broken line indicates the average headline inflation during the period.

Supply disruptions at the local level have contributed to consumer price inflation. In India, cereal prices have risen consistently since early 2022, as unfavorable weather conditions led to weak wheat and rice production. In Pakistan, supply-side disruptions from the floods during June–October 2022 contributed to higher food and headline inflation.[6] In Sri Lanka, shortages of fuel and other basic items have continued to contribute to high inflation.

[6] Box 2.1 in Chapter 2 estimates the impact of weather anomalies on countries' inflation.

Table 1.1. Export restrictions on food by South Asian countries and major trading partners

Country	Measure	Expected end date
South Asian countries		
Afghanistan	Export ban on wheat	12/31/2023
Bangladesh	Export ban on rice	12/31/2023
India	Export ban on sugar	10/31/2023
	Export ban on wheat	12/31/2023
	Export licensing on wheat flour	12/31/2023
	Export taxes on rice	12/31/2023
Pakistan	Export ban on sugar	12/31/2023
Major trading partner of SAR		
Russia	Export ban on rice	12/31/2023
	Export taxes on soya beans	8/31/2024
	Export taxes on sunflower oil & meal	12/31/2023
	Export taxes on wheat, barley and corn	12/31/2023

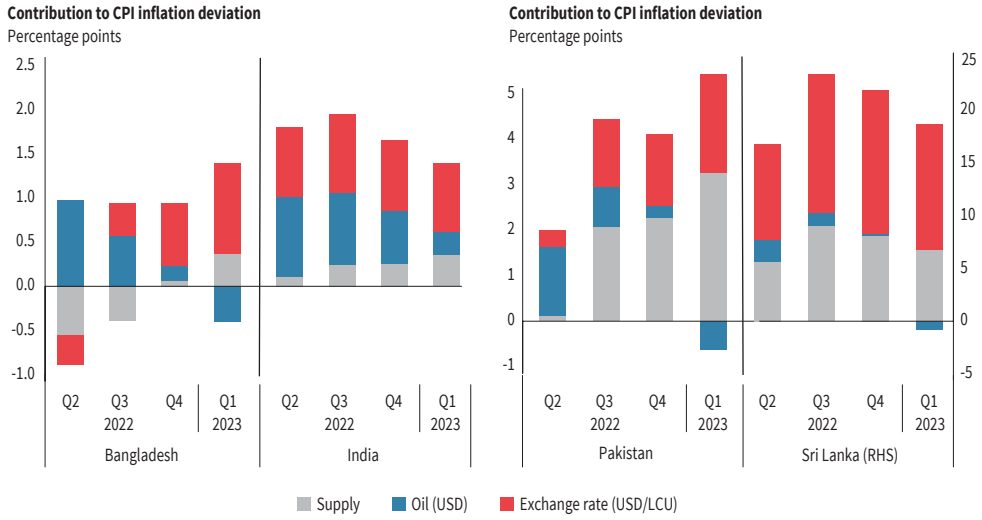
Source: World Bank food security update March 9, 2023 (World Bank 2023b).

Accordingly, a decomposition analysis shows a rising effect from local-level supply constraints on domestic consumer inflation for India, and Pakistan, and an elevated supply-side effect for Sri Lanka (Figure 1.11).

Exchange rate depreciation has had a major impact on domestic inflation, while the effect of global oil prices has declined as global energy prices fall. Compared with early 2022, many South Asian currencies have depreciated against the US dollar, which contributes to domestic inflation through the higher costs of imported goods (Figure 1.11). As the US dollar exchange rate stabilized since late 2022 (Section 1.3), the contribution of the exchange rate to inflation has moderated in India and Sri Lanka. By contrast, the drastic depreciation of the Pakistani rupee since November has increased the contribution of exchange rate fluctuations to domestic inflation. At the same time, the impact of global oil prices on domestic inflation has declined, and turned negative in Bangladesh, Pakistan and Sri Lanka in 2023Q1, as global energy prices fell compared with a year ago.[7]

[7] The contribution of domestic energy prices to headline inflation increased for Pakistan in February as the reduction in energy subsidies drove energy prices up domestically.

Figure 1.11. Local-level supply constraints and exchange rate depreciation have contributed to domestic inflation, while the impact of oil prices has fallen



Source: Haver Analytics and World Bank staff calculations.
Note: Based on a sign-restricted Bayesian vector autoregressive model with stochastic volatility. The exchange rate shock is identified as a shock that depreciates the local currency, increases inflation, but has no contemporaneous impact on output. The supply shock is defined as that which moves output and inflation in opposite directions. See Appendix 1.3 in World Bank (2021) for more details. Bangladesh industry production for 2022Q4 and 2023Q1 are estimated. Oil, exchange rate and supply contributions to inflation are deviations from a longer-run average inflation rate. Variables are modeled in log changes.

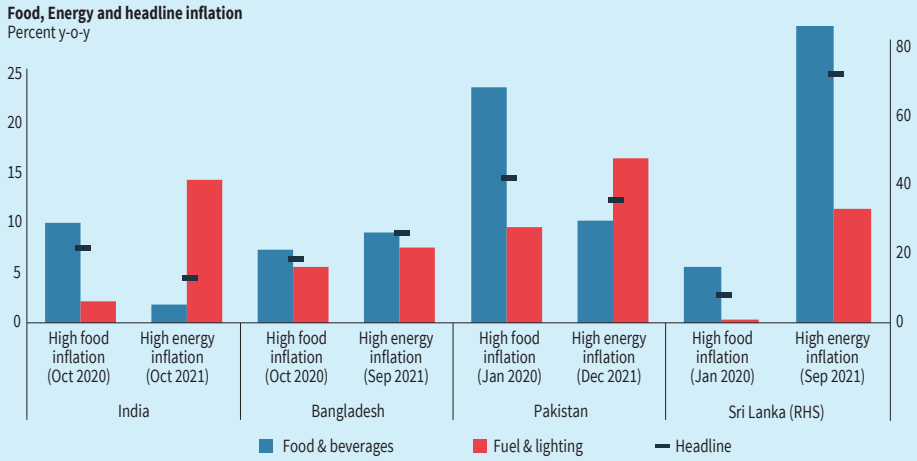
1.3 External sector pressures meet policy distortions

Falling global energy prices and import restrictions contributed to shrinking trade deficits. The value of imported goods started declining in 2022Q3 due to easing energy prices and import restrictions. In Nepal, Pakistan, and Sri Lanka, where extensive import restrictions were in place (World Bank 2022a Table 1.3), the value of goods imports fell in 2022Q4 compared with 2021Q4 (Figure 1.15.A). While merchandise exports also stagnated in the region due to falling global demand, goods imports fell faster, leading to a narrowing goods trade balance (Figure 1.15.B). Services exports have been supported by the robust growth of IT and professional services in India, and by the return of tourists to Nepal (Figure 1.1.4). As a result, the current account balance improved in Bangladesh, Nepal, and Pakistan in 2022Q4 and in Sri Lanka in 2022Q3, compared with the previous quarter and with the same quarter in 2021.

Box 1.1. Distributional impact of high food and energy inflation in South Asia

South Asia has seen a period of high inflation over the past two years, driven successively by high food inflation due to the COVID-19-related supply constraints and the war in Ukraine, and soaring energy inflation as global demand recovered and the war in Ukraine started (Figure 1.12). In India, monthly food inflation reached above 10 percent in 2020, while inflation of fuel and lighting reached 14 percent in late 2021 and stayed high for much of 2022. In Pakistan, food inflation hit 36 percent in October 2022 due to the floods, while transport inflation, which is closely related to energy prices, reached 60 percent in the summer of 2022. The situation in Sri Lanka was even worse, with food inflation reaching over 80 percent during July—October and transport inflation over 100 percent during June—December 2022. In the aggregate, high inflation erodes the real purchasing power of households. In the cross-section, high food inflation and energy inflation impact different groups of households in different ways because of their different budget shares. This box examines the effective inflation rates experienced by different groups of households.

Figure 1.12. Food and fuel inflation in South Asia



Source: Haver Analytics and World Bank staff calculations.

The analysis uses a similar methodology as Nasir, Kishwar, and Meyer (2023) and World Bank (2022b) to construct the consumption expenditure shares by household deciles. Detailed consumption expenditure data from Consumer Pyramids Household Surveys (CPHS) for India (2019), Household Income and Expenditure Survey (HIES) 2016–17 for Bangladesh, 2018–19 for Pakistan and 2016 for Sri Lanka (Table A.1.1) are used to

compute the expenditure shares. Households sometimes produce for their own consumption, especially in rural areas. Although self-produced consumption also has welfare value for households, it is not directly affected by high inflation. For this reason, we choose to focus on expenditure instead of consumption and exclude consumptions reported as self-produced or gifted.[8] Households are then grouped into deciles according to their real consumption expenditure, adjusted for the number of adults equivalent in the household.[9] Monthly price data come from the country's statistical offices. Separate urban and rural prices are used for India, Pakistan, and Bangladesh, which allows the analysis to capture different prices paid in the cross section within a country.[10] See Dovonou and Xie (2023) for details on the methodology.

Households in lower deciles spend proportionally more on food, while richer households spend proportionally more on energy-related goods (power, fuel, transport) in the region. This pattern holds across the four South Asian countries studied here and in both urban and rural areas (Figure 1.13).[11] For example, in India food takes up over 50 percent of consumption expenditure for the households in the lowest decile and only around 36 percent for those in the highest decile. Among food items, the lowest decile spends a much larger share on cereal and products than the highest decile does—15 percent versus 7 percent in rural India. This makes the lowest decile especially vulnerable to price increases in food, especially cereal products.[12] By contrast, households in the highest decile spend proportionally more on energy-related items such as fuel, lighting and transport—21 percent versus 11 percent in rural Pakistan.[13]

[8] The Bangladesh and Pakistan surveys distinguish whether a good is purchased, gifted, paid as wage in kind, or self-produced. The India CPHS data record only consumption that is purchased. By excluding self-produced goods, the analysis also does not capture the effect that higher prices can lead to higher incomes for households that trade self-produced goods.

[9] Because income data are less reliable than consumption expenditure data in developing countries (Meyer and Sullivan 2003), real consumption measures are used to divide households into deciles. Per adult equivalent real consumption is calculated by dividing household's real consumption by the number of adult equivalent members: members under 18 years old are accounted for 0.8 adults. For Bangladesh and Pakistan, all consumption (self-produced and purchased) is used for to build the ranking of the deciles.

[10] For Sri Lanka, although separate price data are available for Colombo in addition to the national-level data, no separate urban/rural price data are available. For Pakistan, expenditure shares and prices are matched by the 12 COICOP consumption groups, except fuel and lighting which is separated from housing rent, water, etc. For India and Bangladesh, finer categories are used for food (e.g., cereals, meat and fish, edible oils and fats), which helps provide a more precise picture.

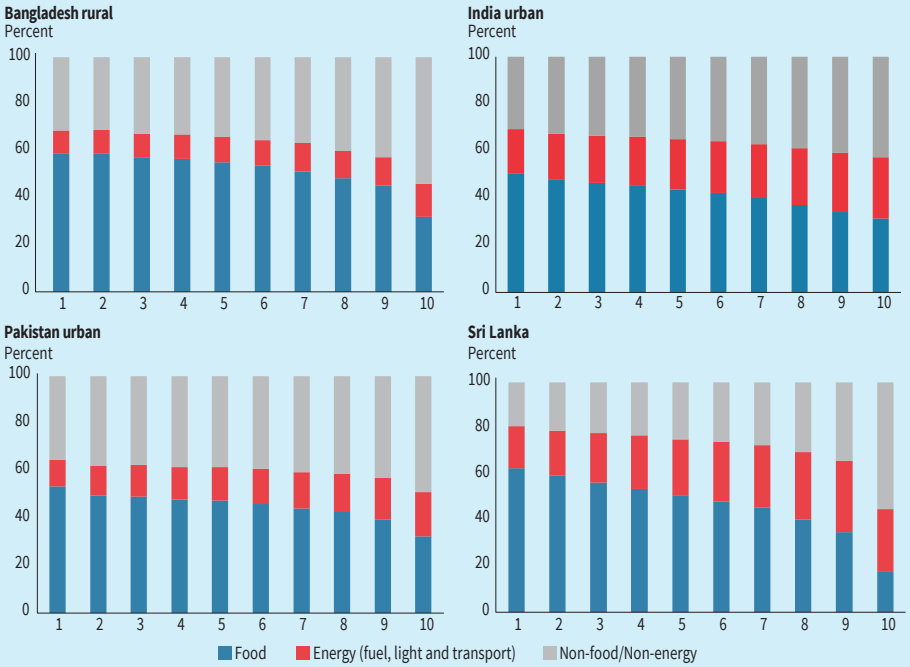
[11] See Dovonou and Xie (2023) for results for other regions (e.g., Bangladesh urban, India and Pakistan rural) in South Asia.

[12] Similarly, the large share of food expenditure among the households in the lower deciles in Bangladesh leaves little room for diversification of consumption on other non-food and non-energy goods and services. By contrast, consumption is more diversified among the upper deciles in Bangladesh. There is also more diversification in India even among those in the bottom decile. Figure A.1.1 shows that over time between 2015 and 2020, as income rose, the average household in India spent less on food and more on non-food and non-energy goods and services, which is consistent with patterns documented in the literature as countries become wealthier (Chai, Rohde, and Silber 2015; Theil and Finke 1983).

[13] Energy-related items include fuel, lighting and transport for India, Pakistan and Sri Lanka; fuel, lighting, transport and communication for Bangladesh.

The energy expenditure pattern is consistent with past studies of low-income countries (Baez, Inan, and Nebiler 2021; Nasir, Kishwar, and Meyer 2023; World Bank 2022b; 2022c) but differs from many high- and middle-income countries. In a recent study, Lokshin, Sajaia, and Torre (2023) find that the rich consume proportionally less housing and energy than the poor in most EMDE Europe and Central Asian countries, although the difference is small (see also World Bank 2023c).

Figure 1.13. Consumption expenditure share by household decile in South Asia

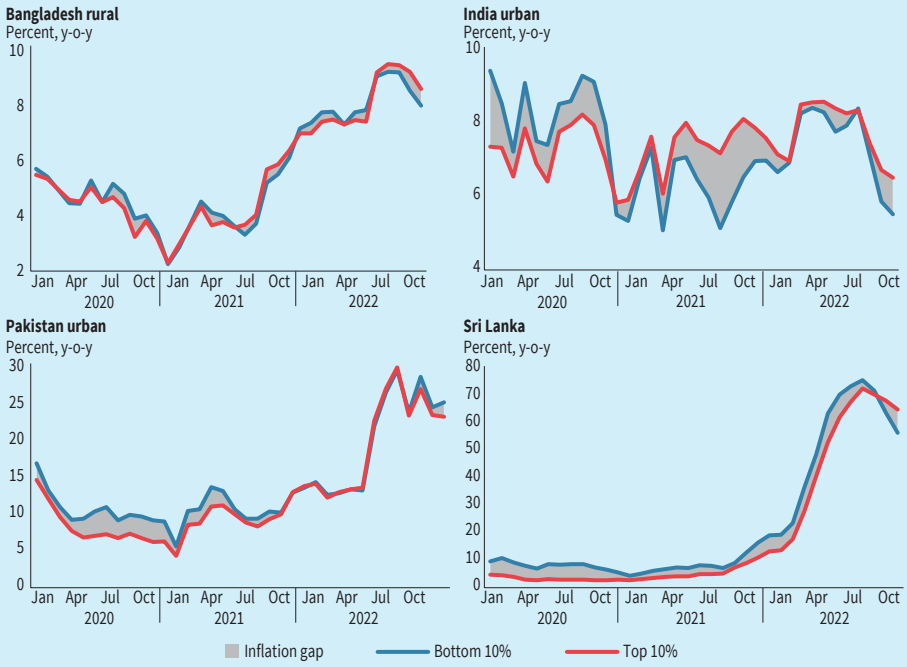


Source: Bangladesh HIES (2016–17), India CPDX (2019), Pakistan HIES (2018–19), Sri Lanka HIES (2016), and World Bank staff calculations.
Note: The energy category in Bangladesh includes fuel, lighting, transport and communication. The food category in Bangladesh includes food, beverage and tobacco. For other countries, energy includes fuel, lighting and transport, and food includes food and non-alcoholic beverages.

Because food is a larger share of total expenditure for households in lower deciles, an increase in the prices of food impact them more than those in upper deciles, while soaring energy prices make a larger contribution to the effective inflation of the rich (Figure A.1.2). Assuming the consumption pattern does not change over time, decile-effective inflation rates are computed by combining the consumption expenditure shares for each household decile and price data for detailed consumption items (Appendix A.1.1). Because of the large shares of food in their total expenditure, households in

the bottom decile experienced higher inflation than those in the top decile when food inflation was high in 2020 (Figure 1.14). But as energy prices rose in 2021, the inflation for those in the top decile became higher, especially in India.

Figure 1.14. Inflation inequality between households in top and bottom deciles



Source: Bangladesh HIES (2016–17), India CPDX (2019), Pakistan HIES (2018–19), Sri Lanka HIES (2016), Haver Analytics, Bangladesh Bureau of Statistics, and World Bank staff calculations.
Note: The deciles are defined based on per adult equivalent real consumption on the household level and using data over 201617 for Bangladesh, 2019 for India, 2018–19 for Pakistan, and 2016 for Sri Lanka.

Over the period 2020–2022, households in lower deciles experienced larger cumulative price increases in Pakistan and Sri Lanka, whereas those in upper deciles saw overall larger price increases in India and Bangladesh. In Pakistan, the larger cumulative inflation for the top decile is driven by higher overall increases in food prices than in energy prices, as energy subsidies dampened domestic energy price increases, while floods in late 2022 pushed up food prices. By contrast, in India and Bangladesh, the converse is driven by larger cumulative price increases in energy than food prices. Higher inflation among the poor is especially detrimental, as these households do not have any buffer savings and are likely to reduce the quality or quantity of consumption or resort to other negative coping mechanisms.

A few caveats apply. First, the analysis assumes that all households in a country/region experience the same inflation for the same goods and services. If, for example, households in lower deciles had lower inflation on cereals than those in upper deciles, because of different types of cereals they consume or different abilities to substitute for other types of cereals, then the decile-effective inflation would not be accurate. Second, it is assumed that households' consumption patterns do not change during the period and hence the analysis abstracts from behavioral responses. But households sometimes do change consumption patterns over time and in response to changing inflations. Because the consumption data are relatively recent—2019 for India and Pakistan and 2016–17 for Bangladesh and Sri Lanka—the changes in consumption patterns are likely small.[14] Third, these results are best interpreted as short-term impacts of relative price changes. In the medium term, higher energy prices can feed into higher food prices and impact households in the lower deciles more. Over the longer term, purchasing power shrinking effect of higher food prices can lead to damage to health, loss of human capital and negative coping (e.g., asset decumulation) for those in the lowest decile.

In addition to the relative price changes, inflation has a distributional impact through other channels. For example, fast-rising prices can impact household incomes differently depending on whether the income is indexed to inflation or fixed or how much bargaining power workers have. If households in the top decile had higher effective inflation than those in the bottom decile but also much higher income growth, then in real terms the top decile may have experienced a greater improvement (or smaller decline) in welfare compared with the bottom decile.[15]

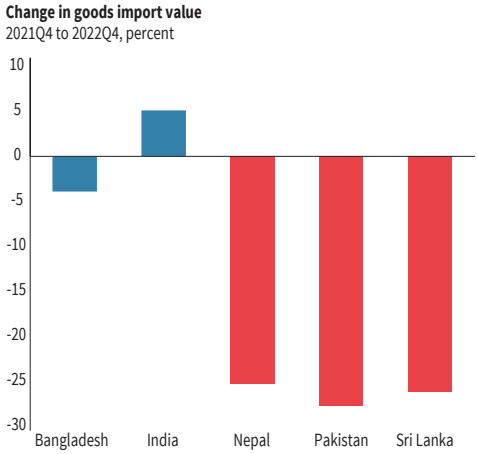
Understanding the distributional impact of relative price changes is important, because macroeconomic policies such as monetary policy often only consider the headline inflation but miss the driver of inflation and its implication on different households across the income distribution. Policies that target the source of inflation—be it food, energy or others—should be considered and could include measures to relax food supply bottlenecks and shift to more sustainable energy sources.

[14] World Bank (2022c) also found similar consumption patterns for Sri Lanka, with most recent consumption data 2019 HIES. Using the CPHS penal data of India, we constructed the expenditure share for the average household over time from January 2015 to July 2020. It shows that food expenditure share peaked in early 2020, consistent with high food prices. But otherwise, expenditure shares have been relatively stable with a gradual long-term trend but little short-term fluctuation.

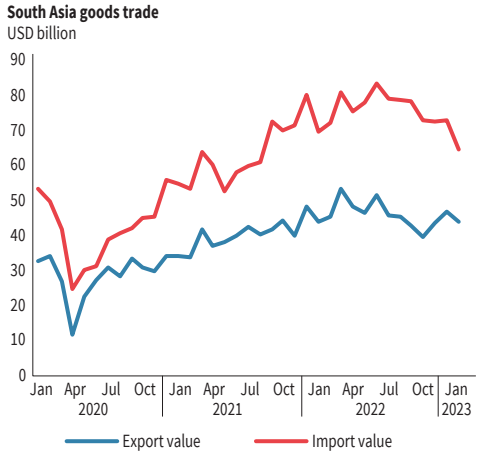
[15] India's CPHS data reveal that over 2016–2019 although households in the top decile experienced slightly higher cumulative inflation than those in the bottom decile, the former also had much higher cumulative growth in nominal wage income per adult member.

Figure 1.15. Falling goods imports have helped improve the goods trade balance in South Asia

A. Goods import value fell in 2022Q4 in some countries



B. Goods trade balance has improved

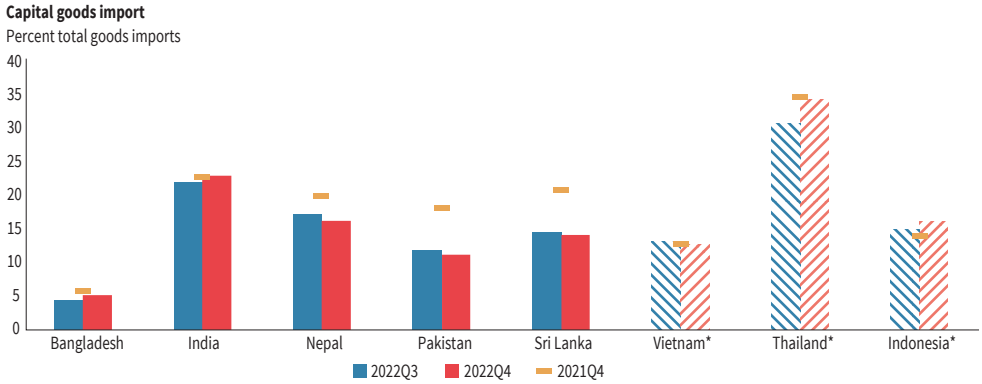


Source: CEIC, Haver Analytics, and World Bank staff calculations.
Note: B. South Asia's import and export values for Dec 2022 and Jan 2023 do not include Afghanistan, Bhutan and Maldives, due to data reporting lags.

Although import restrictions have helped reduce the trade deficit, these measures also limited economic activities by contributing to shortages of imported inputs. Import restrictions, such as import bans and US dollar rationing through delays in the issuance of letters of credit, were used to limit the import of luxury and other "non-essential" goods to preserve foreign reserves. But the non-transparent implementation of these policies could give rise to rent-seeking behaviors (Fernandes et al. 2022; World Bank 2022d), distorting the level playing field and reducing overall productivity. The impact of these policy measures could also spill over to capital and intermediate goods imports, exacerbating already limited capacity for these imports, as countries face a shortage of foreign reserves for big-item imports (Pakistan and Sri Lanka), delays in low-priority projects (Bangladesh), and weak global demand for manufactured goods, which tend to be more capital intensive. The import share of some capital goods, such as machinery and transport equipment, fell in Bangladesh, Nepal, Pakistan, and Sri Lanka in 2022Q4 and 2022Q3 compared with 2021 (Figure 1.16). In comparison, the import share of similar capital goods imports did not fall in India, where import restrictions were not in place, or in comparator countries in Asia. The shortage of imported inputs in turn limited production. Industrial production and goods exports fell in Bangladesh during the summer of 2022 and in Pakistan more recently (Figure 1.2).

As current account pressure eased, Nepal and Bangladesh have relaxed or removed import restrictions in recent months (Table 1.3). In Nepal, all remaining import bans were lifted by December 2022, and the cash deposit requirement for import through letters of credit

Figure 1.16. Import share of some capital goods fell in 2022Q3-Q4 in South Asian countries except India



Source: CEIC, Haver Analytics, and World Bank staff calculations.
Note: Capital goods imports include capital machinery in Bangladesh; equipment imports (optical, electronic, machinery, office, transport, project goods) in India; machinery and transport equipment in Nepal and Pakistan; and investment goods (machinery, transport equipment, building material) in Sri Lanka. *indicates comparator countries: capital goods imports include machines, equipment, tools and instruments in Vietnam; machinery in Thailand; and capital goods in Indonesia.

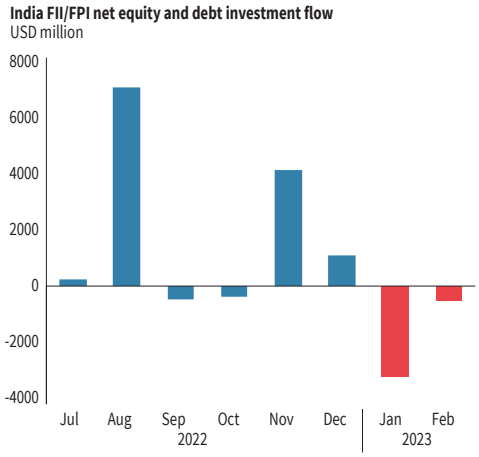
was lifted in January 2023. In Bangladesh, cash margin requirements for letters of credit for certain essential imports (e.g., rice, wheat, lubricant and engine oil, and food items in high demand for Ramadan) were lowered in late December and kept at a minimum level to facilitate imports (Mala 2022). In Pakistan, where official import restrictions were lifted in late December (Siddiqui 2022), they have been substituted by high tariffs, while the rationing of letters of credit remains.

Despite improving current account balances, external sector pressure remains high, as capital outflows have increased and capital inflows have declined. In India, portfolio investment remains volatile and driven by shifts in investor sentiments. In January and February 2023, foreign investors turned net sellers of Indian equities, as capital flew to markets in East Asia following China's post-COVID-19 reopening. The net outflow of foreign institutional and portfolio investment from India's equity and debt markets totaled over US$3.2 billion in January, the largest net outflow since June 2022 (Figure 1.17.A). In Bangladesh, the financial account has deteriorated since 2022Q2, driven by declining net inflows of other investments, such as loan disbursements and trade credit (Figure 1.17.B), as foreign banks held off loan disbursement due to a lack of confidence. The deterioration in the US and European banking sectors since mid-March has likely led to further capital outflows from the region, as global financial conditions have worsened.

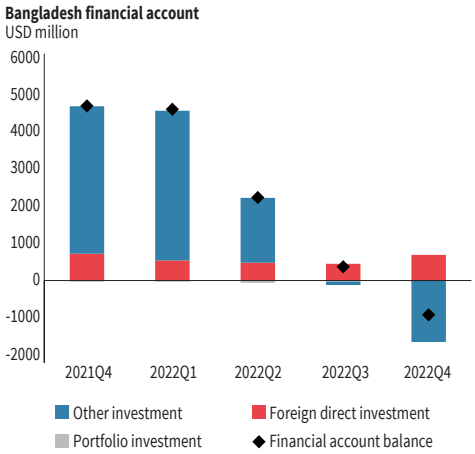
Major currency exchange rates stabilized in late 2022, as countries intervened in the foreign exchange market. Following the rapid currency depreciation in early 2022, major

Figure 1.17. Financial accounts net outflow increased

A. Foreign investors turned net sellers of equities and debt in India



B. Net financial account deficit in Bangladesh was driven by shortfall of debt disbursements

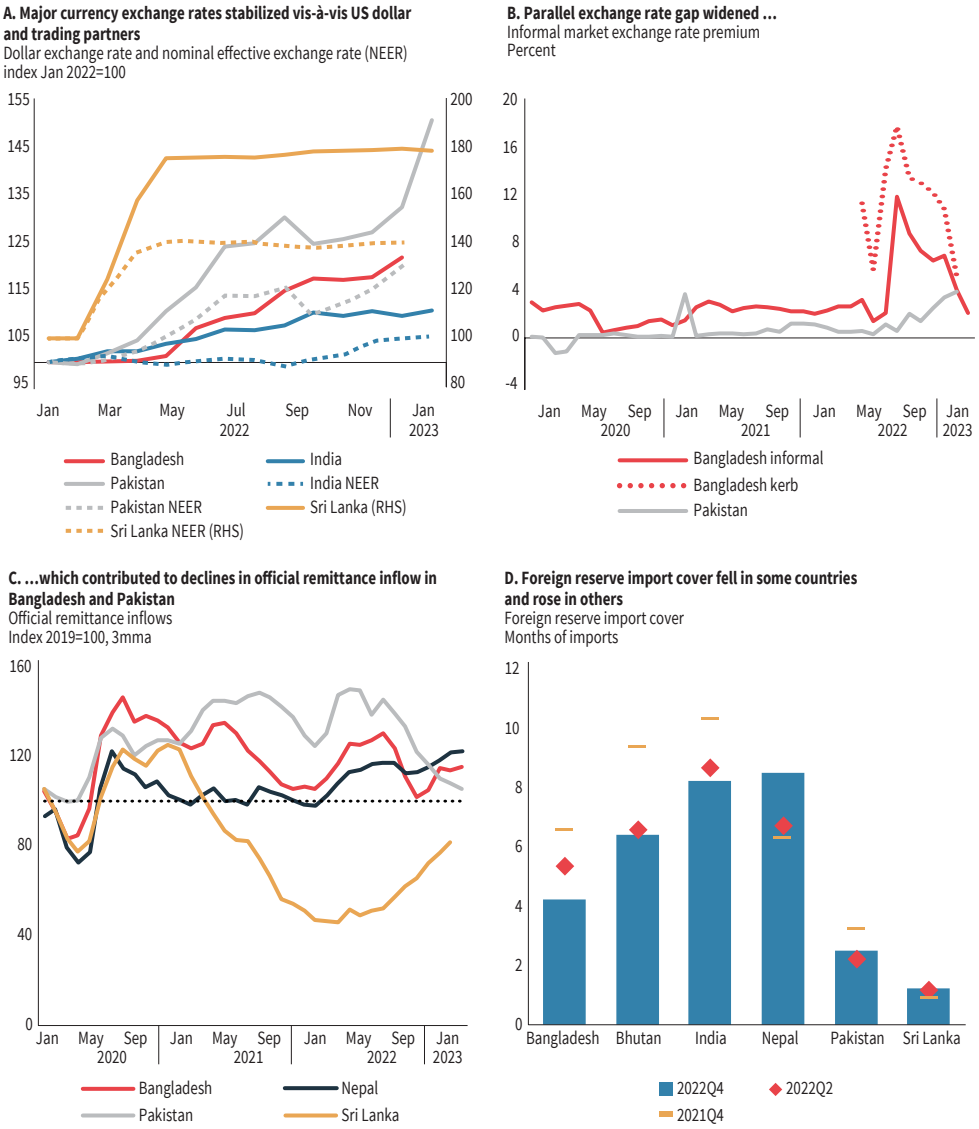


Source: Haver Analytics and World Bank staff calculations.
Note: Other investment in Bangladesh's financial account includes loan disbursements (short, medium, and long term) and trade credits.

currencies in South Asia stabilized in 2022Q4 both against the US dollar and in term of the nominal effective exchange rate (Figure 1.18.A).[16] Behind the stabilizing exchange rates are countries' interventions in the foreign exchange market (Table 1.3). While mild currency depreciation could help improve export competitiveness, rapid and destabilizing depreciation can lead to high imported inflation, a currency mismatch in external debt repayment, and increased costs of production for sectors that depend on imported inputs. To stabilize the exchange rate, India and Bangladesh carried out market operations to sell US dollars, while Pakistan informally implemented an exchange rate cap in late 2022 and Bangladesh created a multiple exchange rate regime in September 2022 (Box 1.2) to slow depreciation. Reflecting deteriorating sentiment, the Pakistani rupee depreciated sharply on two occasions when the cap was relaxed: on January 26 when the rupee depreciated by 9.6 percent against the US dollar on a single day (Shahid and Shahzad 2023), and on March 2 when it depreciated by 5.9 percent. The official exchange rate depreciated by more than 27 percent from end-June 2022 to the beginning of March 2023.

[16] The US dollar exchange rate and the nominal effective exchange rate have moved closer since October 2022 (for example for India), reflecting a weakening US dollar against the euro.

Figure 1.18. Exchange rate has stabilized in most countries, but the gap between the informal and official exchange rates widened, which led to a decline in official remittance inflows and contributed to falling reserves in some countries



Source: CEIC, Haver Analytics, Bangladesh Bank, Bhutan Royal Monetary Authority, Karachi stock exchange, and World Bank staff calculations.

Note: A. Exchange rates vis-à-vis the US dollar are local currency per US dollar, indexed to 100 in January 2022. The nominal effective exchange rate (NEER) is also indexed to 100 in January 2022 and inverted so that a higher value indicates a depreciation of the local currency. B. For Bangladesh, the unofficial exchange rate published by the Bangladesh Bank and the kerb market rate are used. For Pakistan, the kerb market rate is used. The market rate premium is calculated as the percent difference between the monthly average interbank rate and the monthly average unofficial or kerb rate. D. Foreign reserve import covers are computed using the total imports (goods and services) over the past year. For Bhutan, the average foreign reserve import cover in 2022Q4 does not include December 2022, as the data are not yet released as of the data cutoff date.

Box 1.2. Recent changes in exchange rate policy in Bangladesh

Bangladesh operated a de facto stabilized (de jure floating) exchange rate regime before the rise in external pressures over the past two years. Within this system, authorized dealers were allowed to set exchange rates independently, and interventions by Bangladesh Bank (central bank) were mostly limited to reducing large fluctuations in the Bangladeshi taka (BDT) exchange rate. During the pandemic, when a decline in imports and increased official remittance inflows led to appreciation pressures, Bangladesh Bank purchased US dollars to stabilize the exchange rate.

External sector pressures rose in FY2021/2022 due to rising commodity prices, a strengthening US dollar, sharp increases in imports, and declining official remittance inflows. In response, Bangladesh Bank sold US dollars in June 2021 to limit depreciation, which drew down foreign reserves. To address the mounting pressures, Bangladesh Bank floated the exchange rate in early June 2022. But the policy led to a rapid exchange rate depreciation of 11 percent against the US dollar, and was quickly reversed after just two weeks. As a result of the reversal, the gap between official and unofficial exchange rates widened in August 2022 (Figure 1.18.B), which depleted foreign exchange liquidity in banks.

To manage the widened exchange rate gap and slow depreciation, a multiple exchange rate regime was introduced in September 2022. The new exchange rate regime has been strictly enforced, leading to closures of exchange houses for alleged violations of the new regime.

- **Interbank rate**: The interbank rate is set by market forces without any imposition of rates by Bangladesh Bank. The rate has varied between a low of BDT99.6 to BDT107/US$ so far. The flexibility is designed to provide US dollar liquidity to banks.

- **Remittances:** Remittances from exchange houses and banks can be bought by banks at a rate not higher than BDT107/US$. The relatively high remittance exchange rate is designed to attract inflows of remittance through banks.

- **Exporters**: Export proceeds are purchased by banks at a fixed rate of BDT104/US$, which was increased from an initial fixed rate of BDT101/US$.

- **Letters of credit/import bills and outward remittances**: Banks can charge a maximum of BDT1 spread over the 5-day weighted average buying cost of export proceeds and remittances. The exchange rate for importers is set lower than for remitters (and kerb market rate). This is designed to lower the local currency prices of imports and curb imported inflation. For example, if an import costs US$1, and the importer needs BDT105 to purchase the US$1, then he will charge BDT105 plus a margin when selling in the domestic market. If the import exchange rate is set higher, e.g., BDT107/US$, then the importer will charge more in the domestic market.

The multiple exchange rate regime was designed to address US dollar liquidity issues, falling foreign reserves, and the widening informal rate gap. But it created new challenges. The lower-than-market exchange rates for export proceeds exacerbated the pre-existing anti-export bias of an overvalued local currency. Because of the gap between the exchange rates for imports and remittances, importers have incentives to over-invoice imports to buy more US dollars from banks and send the profits back as remittances. This rate arbitrage leads to a further decline in bank US dollar liquidity.

Under the IMF program signed at the end of January 2023, Bangladesh is committed to phase out the official multiple exchange system.

Artificially strong official exchange rates led to widening parallel exchange rate gaps in Bangladesh and Pakistan. As the official (interbank) exchange rate was set at an artificially strong level that is inconsistent with the market, the gap between the interbank and the market (kerb) or informal exchange rate widened in Bangladesh and Pakistan (Figure 1.18.B). In Bangladesh, where the exchange rate gap between the interbank and the unofficial rate is historically between 0 and 2 percent of the interbank rate, it reached an average of 12 percent in August 2022, while the gap between the interbank and the kerb rate, which is more reflective of the real market rate, reached 18 percent (of the interbank rate). In Pakistan, where in recent years the gap between the official and the market rates was close to 0, the exchange gap reached 4 percent of the interbank rate in January 2023. As a result, the interbank market became dysfunctional, as dealers were unwilling to sell US dollars at the overvalued rate.

Parallel exchange rates discouraged the inflow of foreign currencies. The widening of the exchange rate gap and the uncertainty about exchange rates in general diverted remittance

inflows away from official channels, especially as remitters can obtain more favorable market rates through unofficial channels (Spotlight). At the same time, a slowdown in growth in migrant host countries has also contributed to slowing remittance inflows. As a result, official remittance inflows have fallen in Pakistan and Bangladesh since September 2022 (Figure 1.18.C). The exchange rate gap also discouraged the repatriation of export proceeds. As Bangladesh moved to a multiple exchange rate regime in September 2022 with a less favorable rate for export proceeds than for remittances, the policy further discouraged exports and the repatriation of proceeds.

Interventions in the foreign exchange market and declining official remittance inflows have reduced most countries' foreign reserves. As countries sold US dollars to stabilize the exchange rate (India, Bangladesh), they drew down foreign exchange reserves. The decline in official remittance inflows and export proceeds put further downward pressure on countries' foreign reserves. Accordingly, foreign reserves—measured as the number of months of imports covered by the reserves—fell in 2022Q4 in Bangladesh and India compared with 2022Q2. Reserves stayed at low levels in Pakistan and Sri Lanka, barely enough to cover 1–2 months of imports (Figure 1.18.D). The decline of reserve levels in Bangladesh and Pakistan is more drastic in US dollar terms than indicated by the reserve import cover, as imports also declined due to foreign reserve shortages and import restrictions. As of December 2022, reserves have fallen by 27 percent in Bangladesh and 67 percent in Pakistan, compared with a year ago. By contrast, Nepal's foreign reserve level increased slightly in 2022Q4 compared with the previous two quarters, as official remittance inflows remained robust; the increase is larger in months of imports covered, as import restrictions reduced imports considerably. Falling reserves make it harder for countries to afford imports, limit their capability to stabilize exchange rate volatility, and potentially disrupt external debt repayments.

Faced with depleting foreign reserves and mounting balance of payments pressures, Sri Lanka and Bangladesh approached the IMF for loans, while Pakistan is under review for IMF program continuation. Bangladesh secured a US$4.7 billion loan from the IMF at the end of January, making it the first of the three countries to secure funding. On March 20, Sri Lanka finalized a long-awaited US$3 billion bailout loan after receiving assurances from all major bilateral creditors. In Pakistan, a review is underway to unlock the next installment of a US$1.1 billion IMF loan; although loans from China in February and March helped temporarily (Shahzad 2023a; 2023b), a deal with the IMF is urgently needed to help close the financing gap.

Table 1.3. Intervention policies to restore the balance of payments and stabilize exchange rates

	Exchange rate management	Quantity controls	Incentive policies
Bangladesh	Sold foreign currency to contain depreciation; temporarily switched to floating rate in June.	To preserve foreign exchange reserves, Bangladesh Bank announced measures to reduce the size of the Export Development Fund (EDF) and introduce a local currency financing facility. Profit repatriation for foreign investors facing statement.	Interest rate ceiling on non-resident foreign currency deposits withdrawn; ceiling on internet banking transfers and proof of source of income no longer apply for remittances. Remitters exempted from declaration on remittances up to US$20,000 (previously required for remittances over US$10,000). Mobile Financial Services (MFSs) providers allowed to bring in remittances, shortening wait time for remitters. Regulations for the opening of non-resident investor's taka accounts (NITAs) has been relaxed, allowing non-resident to trade securities using foreign exchanges from abroad.
Bhutan	Pegged to INR	Bans on imports of vehicles except utility vehicles and agricultural machinery as of Aug 2022. Foreign exchange quota (e.g., private travel quote) as of Feb 2023.	Remittance incentives scheme extended and enhanced from 1 to 2 percent.
India	Sold foreign currency and operations in the forward and futures markets to contain depreciation.	No existing import quantity controls.	Removed rate cap on non-resident deposits, and banks can freely increase rate to compete for foreign deposits. FPIs can now invest in all-new issuances of G-Secs of 7-year and 14-year tenors
Maldives	Pegged to the US dollar with a narrow band of ± 20 percent	Convertibility measures: residents are subject to limitations to exchange for foreign currency through banking system. However, residents are allowed to open US-dollar-denominated bank accounts. With certain limitations for international transactions, these accounts can be used for international money transfers through internet and mobile banking.	–
Nepal	Pegged to the Indian rupee	Cash margin requirements on imports were removed on Jan 19, 2023. Imports restriction measures were removed from Dec 16, 2022.	Migrant workers are allocated at least 10 percent of IPO; FDI threshold reduced from NPR 50 million to NPR20 million from Oct 2022

Table 1.3. Intervention policies to restore the balance of payments and stabilize exchange rates (continued)

	Exchange rate management	Quantity controls	Incentive policies
Pakistan	Informal cap on official exchange rate since late 2022; the inter-bank exchange rate was permitted to align with the open market rate on two occasions (Jan 26, 2023, March 2, 2023) resulting in sharp depreciations of the official exchange rate	Government officially removed import restrictions for essential items but raised tariffs. The rationing of letters of credit (LCs) and lags in port clearance continue to be unofficial import restrictions. New procedures for bank to ensure timely realization of export proceeds since Feb 2023. Daily maximum limit for purchasing foreign currency in cash or outward remittance reduced to US$5,000 per person.	Digital accounts introduced in Sept 2020 to allow non-resident Pakistanis easy access to banking services to attract foreign currencies; interest paid to US dollar-denominated deposits in the account at 6–7 percent.
Sri Lanka	Managed float since May 12, 2022. Transitioned to flexible exchange rate in March 2023.	Mandatory conversion of foreign exchange inflows (exports and remittances), strict controls on outflows including: (i) a repatriation requirement for exports of goods and services; (ii) a surrender requirement for exporters on proceeds from exports of goods and services; (iii) a surrender requirement for banks on purchases of export proceeds (removed in March 2023); (iv) a surrender requirement for banks on purchases of inward worker remittances (removed in March 2023); (v) suspension of outward remittances on capital transactions; (vi) restrictions on purchases of Sri Lankan Eurobonds by local banks; and (vii) restrictions on outward transfers of funds for emigrants.	Import of electric vehicles is allowed for expat workers who send money through formal channels (currently vehicle imports are temporarily banned).

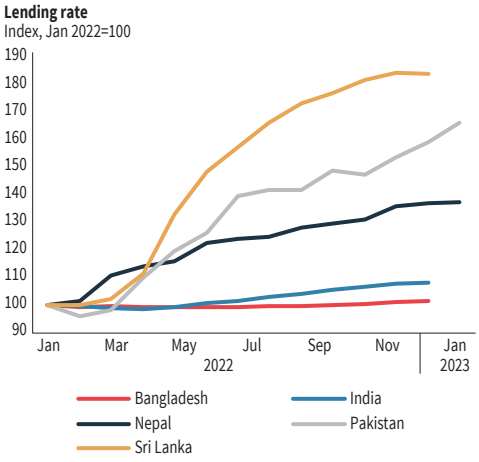
Source: World Bank country economists.

1.4 Rising financial sector vulnerabilities

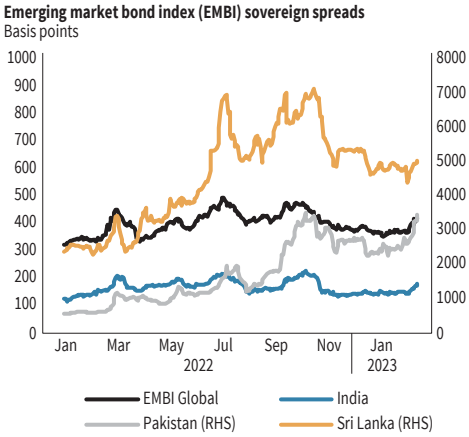
Financial sector vulnerabilities are increasing in South Asia. Monetary tightening by advanced economies, tighter monetary policy in South Asian countries, and increased uncertainty in the US and European banking sectors have led to rising borrowing rates and increased sovereign spreads in South Asia (Figure 1.19). The steady rise in the sovereign

Figure 1.19. Financial sector conditions are worsening in South Asia

A. Bank lending rates have risen rapidly, especially in Pakistan and Sri Lanka



B. Sovereign spreads have increased steadily in Pakistan and Sri Lanka



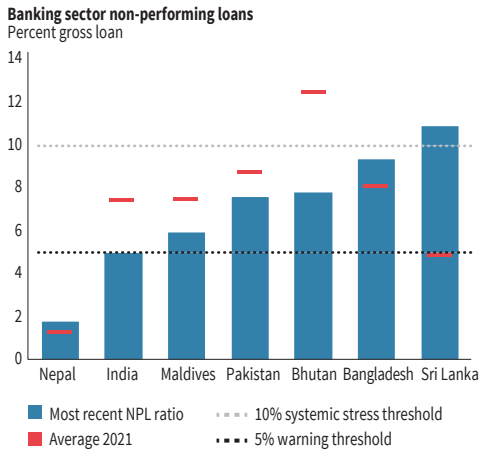
Source: CEIC, Haver Analytics, and JP Morgan Markets.
Note: A. India: weighted average lending rate by scheduled commercial banks on outstanding rupee loans; Pakistan: all bank ending interest rate; Sri Lanka: commercial bank average weighted lending rate; Bangladesh: weighted average interest rates for scheduled bank advances; Nepal: commercial bank average lending rate.

spreads for Pakistan and Sri Lanka over the past year indicates increasing risks for the two countries and their inability to access international credit markets. The sovereign spreads for India and emerging markets have also displayed increased volatility, highlighting increased risks for emerging markets. Underlying the rising risks are deteriorating asset quality and potential constraints on banks' ability to lend, which is exacerbated by increasing sovereign-bank linkages and rising sovereign risk.

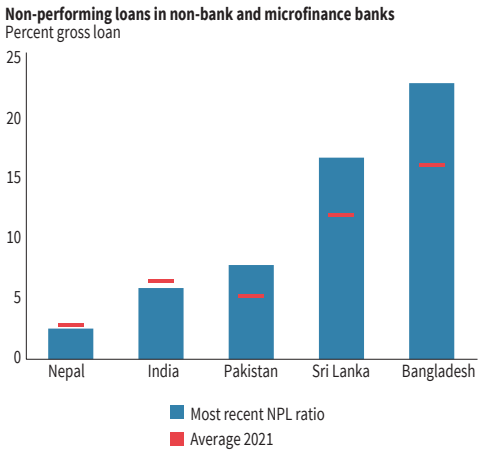
Asset quality has deteriorated in Bangladesh and Sri Lanka. The latest non-performing loan (NPL) ratios remain below 2021 levels and below the 10 percent threshold commonly used to indicate systemic stress in most South Asian countries (Figure 1.20.A). The exceptions are Bangladesh and Sri Lanka, where the NPL ratios reached above the 2021 level—9.4 percent in Bangladesh and 10.9 percent in Sri Lanka in September 2022—suggesting a deterioration in asset quality. In Bangladesh, the NPL ratio has risen due to higher import costs, poor payment discipline of borrowers, and weak regulatory enforcement. The resumption of lax loan rescheduling and asset classification in mid-2022 has delayed the full recognition of distressed assets. In both countries, the NPL ratios among non-bank financial institutions (NBFIs) are even higher than in the banking sector, reaching over 23 percent in June 2022 in Bangladesh and 17 percent in September 2022 in Sri Lanka (Figure 1.20.B).

Figure 1.20. Asset quality has deteriorated in Bangladesh and Sri Lanka and among microfinance banks in Pakistan

A. NPL ratio in banks has increased in Sri Lanka and Bangladesh...



B. ...and among non-bank and microfinance banks in Pakistan, Sri Lanka, and Bangladesh



Source: CEIC and Royal Monetary Authority of Bhutan.
Note: A. The most recent NPL data in banks reported are as of 2022Q4 for Maldives, and 2022Q3 for Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka. B. NPL data reported for microfinance banks in Pakistan, NFBCs in India, and NBFIs in other countries. The most recent data are as of 2022Q3 in India, Nepal, Pakistan and Sri Lanka, and 2022Q2 in Bangladesh.

Distressed loans are concentrated in sectors that have recovered more slowly or were hit by adverse shocks. In India, while most of the pandemic-era loan moratoria have expired, some are still active and are being gradually phased out. As a result, distressed loans that were previously in the moratorium programs are just starting to be recognized. For example, around 16 percent of the total number of loans under the government's Emergency Credit Guarantee Scheme, which provided full credit guarantees to micro, small and medium enterprises (MSMEs), were reported as NPLs in September 2022. In Pakistan, the microfinance sector was hit hard by the inflationary shock and losses due to the floods, with an estimated 1.8 million borrowers from areas affected by the floods in 2022. Accordingly, the NPL ratio in Pakistan's microfinance sector rose in 2022Q3 compared with 2021 (Figure 1.20.B). In Bhutan, the tourism sector has registered high NPLs due to a slow pick-up in tourist arrivals, even though the overall banking sector NPL ratio has declined from over 12 percent in September 2021 to below 8 percent in September 2022.[17]

[17] The decline in Bhutan's banking sector NPL ratio since September 2021 reflects adjustments in NPL accounting, changes in risk-weights for NPLs, and a writeback of provisions as part of the NPL strategy and resolution framework.

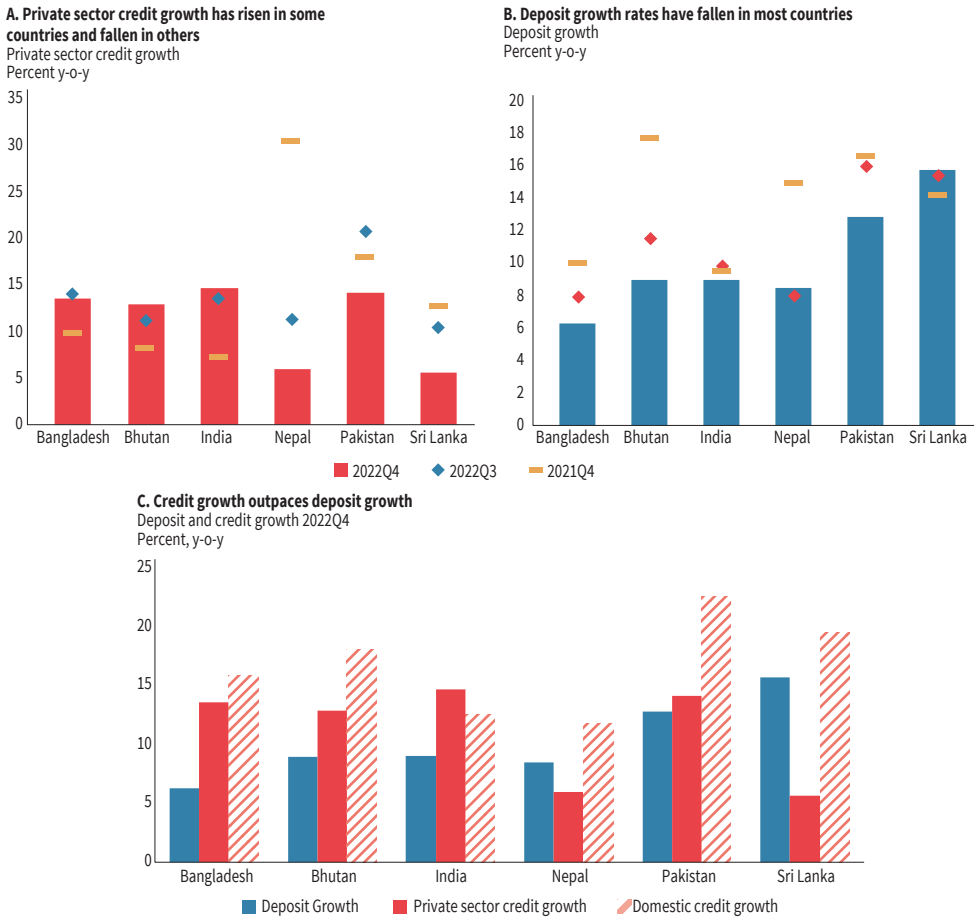
Private sector credit growth has accelerated in Bangladesh, Bhutan, and India (Figure 1.21.A)**, with growth highest in the services sector in India**. In India, private credit growth has helped propel robust growth in private investment (Section 1.1), along with public capital expenditure, which crowds in private investment. This is especially so in the services sector, with credit growth reaching over 20 percent in retail trade and over 30 percent among non-banking financial companies (NBFCs) in January 2023.[18] Credit growth is also high in the mining and quarrying sector, consistent with output expansion in this sector in 2022Q4 (Figure 1.2). In Bangladesh, private credit grew in 2022Q4 at a similar rate as 2022Q3 and faster than a year ago, as borrowers took advantage of a lending rate cap and concessionary financing by Bangladesh Bank.

In three other countries (Nepal, Sri Lanka and Pakistan), private sector credit growth slowed down in 2022Q4 compared with the preceding quarter and the year before. In Nepal, banks have been cautious in taking more credit exposure, while the Nepal Rastra Bank (the central bank) has put in place a new regulation on working capital loans to dampen private sector credit demand. In Sri Lanka, private credit growth continued decelerating due to rising interest rates, macroeconomic uncertainties, and banks' liquidity issues. In Pakistan, credit to the private sector is largely driven by working capital demand as inflation remains high. As growth of government borrowing accelerated in the aftermath of the floods and reached 35 percent (y-o-y) in November 2022 (Box 1.3), growth of credit to the private sector slowed down compared with the previous year. The large investments in the sovereign expose banks to sizable revaluation losses as the policy rate continues to rise in Pakistan.

Deposit growth has declined in most countries and continues to fall behind credit growth. In Bangladesh and Bhutan, the average deposit growth in 2022Q4 fell below the levels in 2022Q3 and in 2021 (Figure 1.21.B). In Nepal, deposit growth decelerated in 2022 compared with 2021. In Pakistan, deposit growth reached a 14-year low. High inflation tends to reduce deposit growth by lowering savings and reducing real deposit rates. A slowdown in remittance growth, which provides an important source of deposits for Bangladesh, has contributed to slow deposit growth. To mobilize deposits, Nepal provided incentives for remittance-linked deposits. As credit growth continued to outpace deposit growth (Figure 1.21.C), countries' credit-to-deposit ratios increased, putting pressure on banks' ability to lend. In Nepal, the ratio reached around 90 percent—the country's regulatory limit—in June 2022, and, as a result, banks had to limit the amount of new lending.

[18] Data on sectoral deployment of bank credit come from the Reserve Bank of India at https://rbi.org.in/Scripts/Data_Sectoral_Deployment.aspx. Last accessed March 23, 2023.

Figure 1.21. Bank credit growth continues to outpace deposit growth in South Asian countries



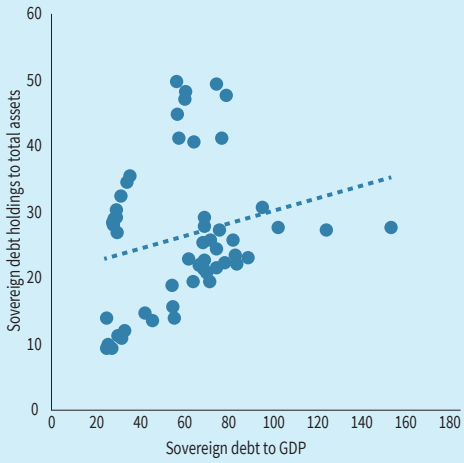
Source: CEIC and Royal Monetary Authority of Bhutan.

Tighter sovereign-bank linkages and foreign exchange market interventions without sterilization reduce banks' capacity to finance private investments. Most South Asian countries lack a well-developed government bond market, and tightening financial conditions have made it harder for governments to borrow. To help finance government debt, domestic banks have increased their holdings of sovereign debt, thus exposing themselves to sovereign risks. As Box 1.3 highlights, larger sovereign exposures are often associated with slower growth in loans, negatively impacting banks' ability to finance the real economy. This is especially concerning given the slowing deposit growth in many countries. In addition, foreign exchange interventions in Bangladesh that sell US dollars and purchase domestic currency have reduced bank liquidity, since the operations were conducted without sterilization, which also leads to a lower capacity for banks to lend.

Box 1.3. The sovereign-bank sector nexus in South Asia

Tightening financial conditions and limited access to international capital markets have increased governments' reliance on the domestic financial sector to meet the sovereigns' borrowing requirements, deepening the sovereign-bank nexus.[19] Countries in South Asia have come out of the pandemic with record public debt and debt servicing levels. The increase in the public debt-to-GDP ratio was particularly pronounced for Sri Lanka, Maldives and Bhutan, exceeding 100 percent of GDP in 2021. Monetary policy tightening in advanced economies and the accompanying risk aversion have affected the availability and cost of financing on international capital markets, particularly affecting Pakistan. Since the pandemic, exposures of the banking sector to the sovereign substantially have increased (Figure 1.23), particularly in countries experiencing increasing sovereign stress (Maldives, Pakistan and Sri Lanka) (Figure 1.22), as governments have come to rely increasingly on the domestic financial sector to finance themselves. For these three countries, exposures of the banking sector to sovereign reached above 30 percent of their total assets.

Figure 1.22. Sovereign debt and banks' holdings of sovereign debt in South Asia, 2013–2021



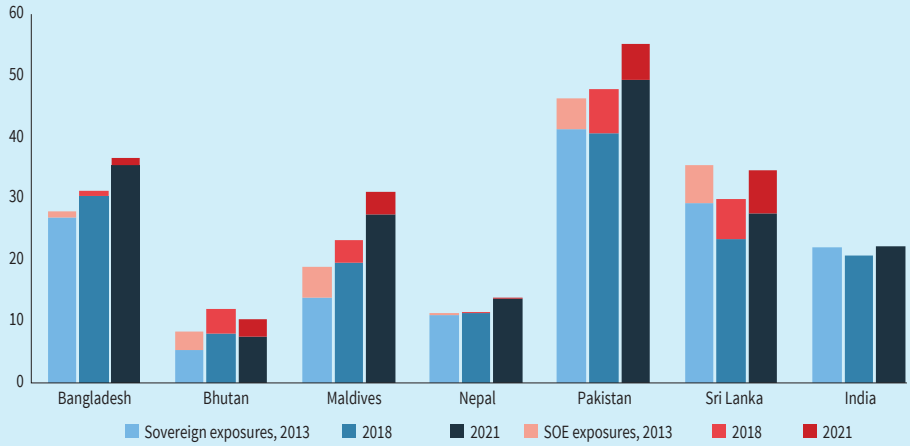
Source: IMF IFS, IMF FCI, respective central banks, World Bank Finstats, and IMF Global Debt Database.
Note: Countries covered are Bangladesh, India, Maldives, Nepal, Pakistan, and Sri Lanka for 2013–2021.

Some banks in the region also have effectively worked as conduits to channel resources to financially weak state-owned enterprises (SOEs). In particular, in Sri Lanka and Pakistan, these exposures are rather high, at above 5 percent of total assets (Figure 1.23). Some SOEs in the region have poor financial performances and weak debt-servicing track records. Loans to these SOEs are often provided by public banks

[19] Sovereign-bank nexus is the interconnectedness of banks and sovereigns (incl. state-owned enterprises), whereby shocks originating in one sector may cause a negative "feedback loop" and amplify the effect of the shock in another sector. Traditionally, the concerns evolve around crowding out by sovereign of lending to the households and corporates that are particularly credit-constrained in South Asian countries. More recently, as sovereign debt stresses in various South Asian countries have started to increase, financial stability prospects have become heavily intertwined with the sovereign's creditworthiness due to heavy exposure of the financial sector to the sovereign debt.

on the basis of government guarantees, with frequent rescheduling and restructuring to postpone the recognition of credit losses. The availability of easy bank credit creates a moral hazard problem, weakening the incentives for SOEs to be run in a commercially and financially sustainable manner (e.g., public debt that builds up in the power sector due to subsidies and unpaid bills in Pakistan).

Figure 1.23. Exposures to sovereign and SOEs (% of total assets)

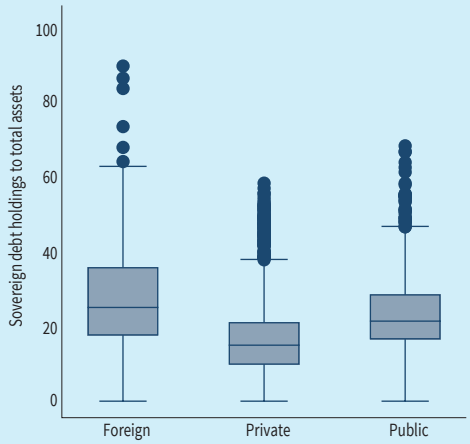


Source: IMF IFS, IMF FCI, respective central banks, and World Bank Finstats.
Note: Data for India do not distinguish between exposures to SOEs and sovereign.

State-owned banks have high sovereign exposures on their balance sheets. When looking at banks with different ownership structures, private banks have the lowest exposure to the sovereign, with a median of around 15 percent of total assets (Figure 1.24). At the same time, public banks have a median sovereign exposure of 21 percent of total assets, with exposures being particularly high in Pakistan and India. Public banks usually respond to the needs of governments, as they are directly controlled by the state and can thus be more easily strong-armed into financing the government. It is worth mentioning that public banks are often also involved in lending to financially weak SOEs, with lending being guaranteed by the state, potentially increasing their indirect exposures to the state. Finally, foreign banks have the highest median exposures to the state of around 25 percent of their assets, with a number of outliers having particularly high exposures of above 60 percent of total assets. High exposures of foreign banks to the sovereign can be explained by their profit-seeking behavior, particularly in a low-interest environment that banks have been operating in over the past decade, as well as shortcomings in the enabling environment for private sector lending

in the host countries. In addition, some foreign banks are regional (often state-owned) banks, from East or South Asia regions, that have investments in government securities as part of their investment strategy.

Figure 1.24. Sovereign debt holdings, by bank ownership



Source: FitchConnect.
Note: Whiskers indicate top and bottom 25 percent of the data. Dots above upper whisker represent banks that are outliers.

Ownership and size of banks are the main determinates of their exposures to the sovereign. The econometric analysis based on bank-level data (see Appendix 1.2 for details) suggests that foreign and public banks have sovereign debt holdings to total assets ratio that is 6 and 5.5 percentage points higher respectively, other things being equal, than that of the private banks. In addition, larger and less liquid banks typically have larger exposures to the sovereign. Banks' other characteristics such as asset quality, capitalization, and profitability do not have a statistically significant impact on banks' exposures to the sovereign (Appendix 1.2, Table A.1.2, column 1). This suggests that in the South Asian country sample, banks' concentration of sovereign debt is not determined by banks' financial health.

Traditionally, concerns about the financial sector's heavy exposure to the sovereign have focused on crowding out lending to households and private companies. Bank lending to the government and SOEs reduces the scope for banks to finance the real economy. Signs of crowding out of private credit are present throughout the region but are most pronounced in Pakistan, where government exposures account for around 60 percent of total bank credit, with the remaining 40 percent concentrated in a comparatively small group of large corporates. The econometric results suggest that growth in lending is lower in banks with larger sovereign exposures, namely an increase in sovereign exposures to total assets by 10 percentage points, is associated with a decrease in loan growth to the private sector by 1.6 percentage points, other things being equal. In addition, larger banks, foreign-owned banks, and banks with worse asset quality have lower growth in financial intermediation (Appendix 1.2, Table A.1.2, column 2). This further exacerbates the difficulties of underserved sectors in the economy, such as MSMEs and lower-income households, in accessing credit.

More recently, pressures on the sovereign's creditworthiness have put the spotlight on the stability challenges associated with a high financial sector exposure to the sovereign. Since central banks across the region increased interest rates in response to heightening inflationary pressure, banks experienced mark-to-market losses on their exposures to the sovereign due to the revaluation of their "held for trading" and "available for sale" portfolios.[20] As was the case for Pakistan, the widening gap between book and market values wiped out banking sector profits. In addition, acute sovereign distress points to the possibility of significant credit losses on banks' holdings of government securities, which banks have been slow to recognize. In line with IFRS 9 (as adopted by some but not all South Asian countries), the increasing sovereign stress should prompt banks to start giving consideration to the possibility of credit losses on their sovereign portfolios, and to provision accordingly. Although cross-country data are not available, the general pattern emerging across the region (but not exclusive to South Asia) is that banks tend not to recognize losses on their government exposures, even when facing significant erosion of the sovereign's debt-servicing capacity (e.g., in Sri Lanka). Loss recognition on SOE loans tends to be limited as well, with banks often restructuring the loans, thus delaying the recognition of inevitable credit losses. The presence of government guarantees reduces the need to make provisions, even when sovereign stress raises questions about the robustness of these guarantees.

Increasing and often unrecognized sovereign-bank sector nexus warrants scrutiny. It is easy to miss the build-up of the sovereign-financial sector nexus, since standard liquidity and solvency indicators do not capture sovereign risks well, as conventional metrics of banking sector liquidity and solvency treat sovereign exposures as the highest quality, risk-free, liquid assets. Thus, there is a need for in-depth financial sector monitoring and analysis that scrutinizes officially reported liquidity and solvency indicators. Going forward, it is important to address the "enabler" role of the financial sector in financing government needs that treats lending to the government as risk-free. In addition, the urgent priority is to start strengthening the financial sector safety net, including bank resolution, deposit insurance, and crisis management coordination, among others.

[20] Accounting standards necessitate that banks classify their securities as held-to-maturity, held-for-trading, or available-for-sale. Available-for-sale securities are reported at fair value and changes in value between accounting periods are included in accumulated other comprehensive income. Held-for-trading securities are reported at fair value, and unrealized gains/losses are included in income statement. Held-to-maturity securities are reported at amortized costs as the securities are held to collect contractual cash flows.

1.5 Monetary tightening and fiscal consolidation

South Asian countries have continued to tighten monetary policy, while fiscal policies have been characterized by fiscal consolidation to reduce fiscal deficits and capital expenditure push to build capacity. To contain inflation, anchor inflation expectations, and counter capital outflows, countries have continued to increase their monetary policy rates. As inflationary pressure has eased following declines in global energy prices last fall, monetary tightening has also slowed down in most South Asian countries. But continued monetary tightening in the United States and Europe has forced EMDEs, including South Asian countries, to increase rates to prevent rapid capital outflows. Higher rates have raised borrowing costs for South Asian governments, increasing the governments' incentives to pursue fiscal consolidation to reduce fiscal burden. At the same time, India and Maldives have increased capital expenditure to finance large infrastructure projects and boost economic capacity for improved future growth prospects.

While most South Asian countries were slower to raise interest rates than other EMDEs, Sri Lanka and Pakistan have been most aggressive in rate hikes to contain inflation and external sector pressure. Since the start of this episode of increasing rates, Sri Lanka and Pakistan have increased the key policy rates by 11 and 13 percentage points, respectively (Table 1.4). Pakistan was also the most active, with nine separate rate increases between September 2021 and March 2023. Bangladesh, India, and Nepal started much later, and the overall sizes of rate hikes were also much smaller. As global inflationary pressures ease, rate hikes have become less frequent in Bangladesh and Nepal and smaller in India (Figure 1.25.A). In Pakistan, a sharp currency depreciation since January 2023 (Section 1.3) has made the country more vulnerable to imported inflation and, in response, the State Bank of Pakistan increased the policy rate by 300 basis points to 20 percent on March 2. The rate increases have helped India contain inflationary pressures and prevented more drastic capital outflows in South Asian countries.

While nominal policy rates are now above pre-pandemic levels, real policy rates remain negative for most countries due to increased inflation expectations. In Bangladesh, India, Pakistan, and Sri Lanka, the average real policy rate computed using the one-year ahead inflation expectation[21] was positive before the pandemic (Figure 1.25.B). With monetary loosening and rate cuts, most real rates remained negative during the pandemic. The recent increases in rates pushed real rates to positive levels in Pakistan in mid-2022 and in India in 2022Q4. Positive real rates indicate that the rate increases have raised the real cost of funds. But with increased inflation expectations, Pakistan's real rate fell back to negative in 2022Q4. In Sri Lanka, the real policy rate remains negative due to high inflation expectations and

[21] One-year ahead inflation expectations are from Consensus Economics.

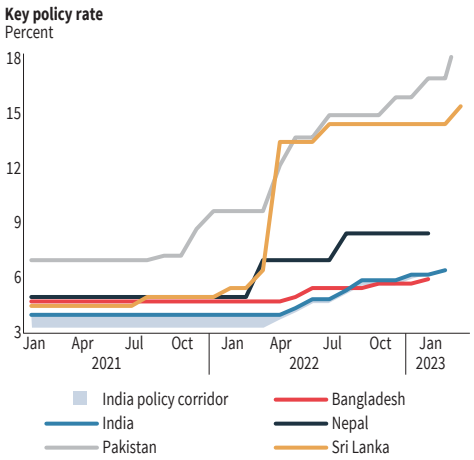
Table 1.4. Monetary policy hikes in South Asia since January 2021

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
Lowest rate since pandemic (percent)	4.75	4.00	5.00	7.00	4.50
Latest key policy rate (percent)	6.00	6.50	8.50	20.00	15.50
Cumulative size of hikes (percentage points)	1.25	2.50	3.50	13.00	11.00
Number of hikes	4	6	2	9	6
First hike	May, 2022	May, 2022	Mar, 2022	Sep, 2021	Aug, 2021
Latest hike	Jan, 2023	Feb, 2023	Aug, 2022	Mar, 2023	Mar, 2023

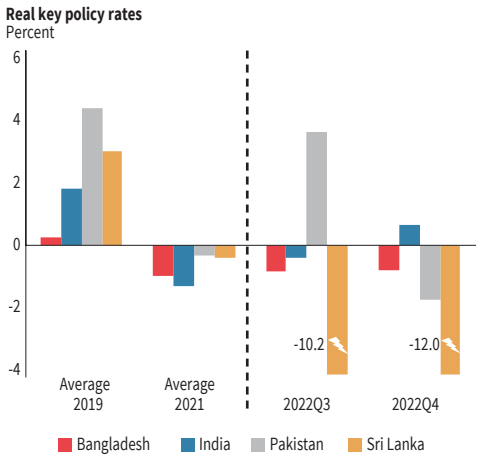
Source: Haver Analytics and World Bank staff calculations.
Note: For Sri Lanka, the rate shown is the standing deposit facility rate.

Figure 1.25. Monetary policy has tightened but real rates remain negative in most countries due to high inflation expectation

A. Monetary policy hikes have continued, albeit at a slower pace in most countries



B. Real policy rates were negative in most countries in 2022Q4



Source: Haver Analytics, CEIC, Consensus Economics, and World Bank staff calculations.
Note: A. India's policy corridor is computed as the difference between the repo rate and a policy floor rate, which was the reverse repo rate before April 2022 and the standing deposit facility rate afterward. For Sri Lanka, the rate shown is the standing deposit facility rate. B. Real rates constructed using one-year ahead inflation expectations from Consensus Economics.

despite the 100-basis-point rate increase in March 2023. The effectiveness of monetary policy rate increases can also be impaired by rate caps. In Bangladesh, interest rate caps introduced in 2020 have prevented banks from passing higher rates to borrowers, undermining the effectiveness of monetary tightening.

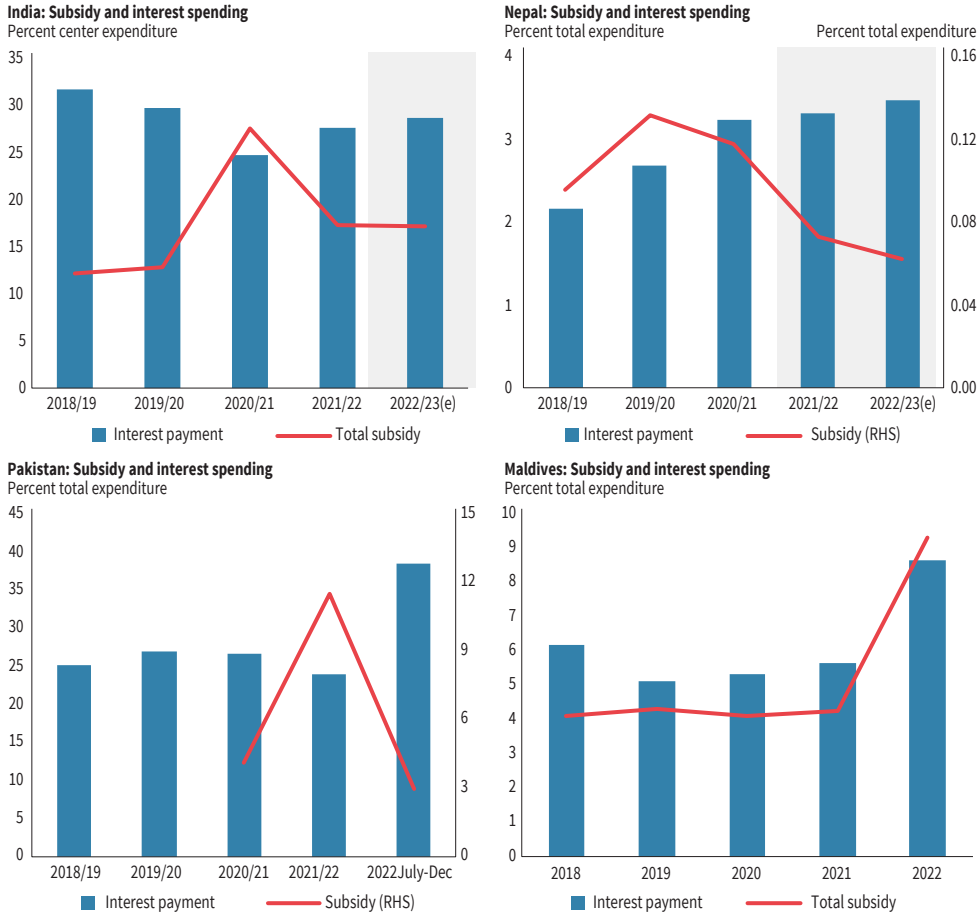
Fiscal consolidation post-pandemic has been aided by policy shifts away from subsidies. To reduce fiscal deficits and as global commodity prices fell, many countries have reduced the subsidies implemented during the pandemic to help vulnerable groups (Table 1.5). Pakistan reduced electricity and petroleum price subsidies through multiple cuts in May–June 2022 (Business Standard 2022). Bangladesh reduced fuel subsidies in August 2022, which led to a 50-percent increase in the fuel price; the price of gas for industrial use was increased by 180 percent, while electricity prices were increased three times and by 5 percent each time. Nepal reduced subsidies on chemical fertilizers from 71 to 59 percent in March 2023, as higher fertilizer prices increased the fiscal burden. The policies have helped reduce subsidy expenditure. In India and Nepal, subsidies as a share of total expenditure (total center expenditure for India) fell starting in FY2021/22,[22] and in Pakistan, the subsidy share is estimated to have fallen in the first six months of FY2022/23 (Figure 1.26). In contrast, in Maldives subsidies are estimated to have doubled as a share of total expenditure, from 4.2 percent in 2021 to about 9 percent in 2022, as the cost of fuel and electricity subsidies increased during 2022; but the government has included fuel subsidy reform in the 2023 budget to reduce the fiscal burden.

Rising interest payments have reduced fiscal space and allocation of spending to productive uses. As interest rates rise around the world, governments in South Asia also face higher borrowing rates both domestically and in external markets. Higher interest rates, together with the large debt stocks accumulated during the pandemic, have led to increased interest payment expenditures. This is especially the case in Maldives and Pakistan (Figure 1.26). In Maldives, interest payments rose from below 6 percent of total expenditure before 2021 to 8.6 percent in 2022. In Pakistan, the estimated interest payment in the first six months of FY2022/23 is 40.3 percent of consolidated government expenditure, driven by higher domestic interest rates and a weaker currency. Increases in interest payments as a share of government expenditure reduce the available resources for more productive uses. In Nepal, interest payments rose due to currency depreciation vis-à-vis the US dollar, making it more costly to service external debt, while domestic borrowing rates also rose.

Larger capital expenditure can boost productive capacity and crowd in private investment, but long gestation periods of infrastructure projects and the crowding-out of private credit can be a drag on small businesses in the short run. To boost growth momentum post-pandemic, countries have increased capital expenditure (e.g., India, Bhutan), which tends to have high multiplier effects on GDP. The Indian government's budget shift toward capital expenditure has encouraged private investment and boosted construction sector activities (Section 1.1). Large infrastructure projects can also boost MSME activities by connecting local businesses to broader markets. But, due to the long gestation periods of

[22] India's Union Budget for FY2023/24 is set to withdraw free food transfers provided during the pandemic, which will help reduce subsidy and transfer costs but could also have adverse welfare and distributional effects.

Figure 1.26. Interest payments have remained high, while spending on subsidies has fallen in most countries

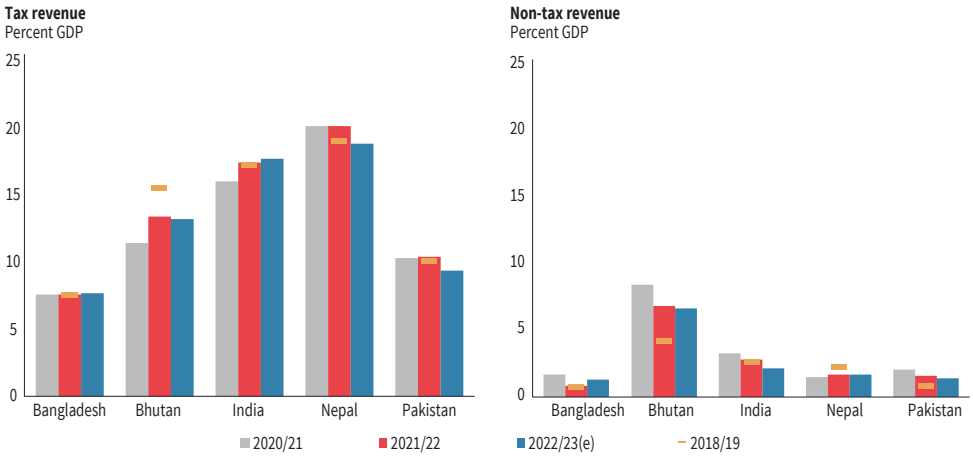


Source: Ministries of Finance of India, Maldives, Nepal, and Pakistan.
Note: e=estimate. Subsidies reported in Nepal's government budget do not capture all subsidies in the country.

infrastructure projects, the positive impact on MSMEs can take a long time to materialize. In the meantime, increased government borrowing through domestic banks to finance spending can crowd out private sector credit (Box 1.3), making it harder for businesses to finance new investments. The positive impact of infrastructure projects on employment is also likely limited in the short term, as most capital expenditure goes into large capital-intensive projects, limiting the capacity for projects to absorb low-skilled labor.

At the same time, long-term public projects also have high uncertainty. In Maldives, about half of all public sector investment spending has gone into large-scale projects, such as the construction and expansion of the international airport (World Bank 2022e),

Figure 1.27. Tax revenue has been slow to pick up in most countries and fallen in others



Source: World Bank Macro Poverty Outlook.
Note: e=estimate.

which have long gestation periods and are financed through short-maturity debts and hence carry rollover risks. The low execution rate of capital expenditure remains an issue. Currency depreciation in Bangladesh and Pakistan makes importing machinery more expensive, while import restrictions in 2022 have spillover effects on capital goods (Section 1.3), limiting the execution of public projects and adding to the uncertainty about project completion.

Tax revenue has been slow to pick up in most countries, while import restrictions and economic slowdown in some South Asian countries led to falling revenues. India has seen tax revenue increase over the past two years, while Bangladesh's revenue has remained flat as a share of GDP (Figure 1.27). Because of a slow increase in tourist arrivals in 2022Q4, Bhutan's revamped tourism tax has not helped to increase tax revenue, while lower electricity generation and a decline in hydro profit transfers have reduced non-tax revenue, which is a larger proportion of the country's total revenue compared with other South Asian countries. Owing to the import restrictions in 2022, Nepal's tax revenue fell in the first half of the current fiscal year, leading to a fiscal deficit in the first half of a fiscal year for the first time in five years for the country. In Pakistan, a slowdown in economic activities due to high inflation, a lack of foreign reserves for imports, and import restrictions is estimated to have reduced tax revenue as a share of GDP.

Table 1.5. Food and fertilizer subsidies in South Asian countries

	Energy subsidy	Food subsidy	Fertilizer subsidy
Bangladesh	Domestic fuel prices fixed and subsidized, adjusted on discretionary basis. Electricity subsidized through SOE. Public transport regulated price. Fuel subsidies reduced since 2022H2: Domestic fuel price increased by more than 40 percent in August 2022; the prices of gas for industrial use increased by 179 percent; electricity prices increased three times within last couple of months (by 5 percent on each occasion).	Through the state-owned Trading Corporation of Bangladesh (TCB), the government is running its Open Market Sales (OMS) operations which provide necessary food items to the poor at a subsidized rate. Food subsidy at BDT55 billion in FY2021/22.	The government recently increased the price of fertilizer in the domestic market marginally, but subsidy payments are expected to remain elevated. Fertilizer subsidy at BDT120 billion in FY2021/22
Bhutan	Fixed quantity of LPG imported at subsidized prices from India, consumer prices for LPG regulated. Electricity and public transport subsidized through SOE.	The government fixed the prices of vegetables and fruits in the beginning of 2022.	Fertilizer imported from India via a special concession; prices of fertilizers in the domestic market are fixed.
India	LPG subsidy, Direct benefit transfer - kerosene; petrol and diesel duties adjusted on discretionary basis. Electricity subsidized through SOE.	Under the Public Distribution System (PDS), grains are procured by the government from farmers at prices above market and sold at subsidized rates or free to vulnerable and poor households. Food subsidies accounted for almost 1.2 percent of GDP in FY2021/22.	100 percent subsidy on various types of fertilizers, paid to fertilizer companies based on sales.
Maldives	Diesel subsidy to electricity providers through SOEs. Electricity subsidized. Price controls on domestic travel (ferries and buses).	Blanket food subsidies mainly on rice, flour, and sugar. Government's purchase price for tuna from fishermen was increased in March 2022 to reflect rising global prices for tuna.	—
Nepal	Consumer prices regulated, and for some (such as LPG), adjusted on discretionary basis. Electricity subsidized for certain segments by usage.	Subsidy on producer side through subsidies on seeds and agricultural equipment and reduced electricity tariff for irrigation. Crop subsidies through minimum support prices, e.g., on rice paddy and sugarcanes.	Subsidies on chemical fertilizers. The subsidy was reduced from 70.8 to 59 percent in mid-March 2023, but was later halted.

Table 1.5. Food and fertilizer subsidies in South Asian countries (continued)

	Energy subsidy	Food subsidy	Fertilizer subsidy
Pakistan	The subsidy and price caps on fuel and electricity prices previously introduced in March 2022 were gradually reversed between May-June 2022. Any remaining electricity subsidies were fully removed to comply with conditions for the IMF-EFF program. But in March 2023, government discussed fuel subsidies for low-income households. Public transport remains subsidized.	Large scheme for wheat (which is largely procured through the government-set prices above market) and sugar (subsidies along the value chain), direct subsidies to farmers.	Multiple subsidies on fertilizers, including direct transfers to fertilizer producers, cheaper gas available to fertilizer companies.
Sri Lanka	Cost-reflective utility and energy pricing implemented since 2022. Bus fares and rail fares regulated.	Price controls on agricultural products in 2021 and early 2022, now still used sporadically such as maximum price on rice and eggs.	Subsidies on chemical fertilizers.

Source: World Bank country economists.

Box 1.4. Voices from South Asia

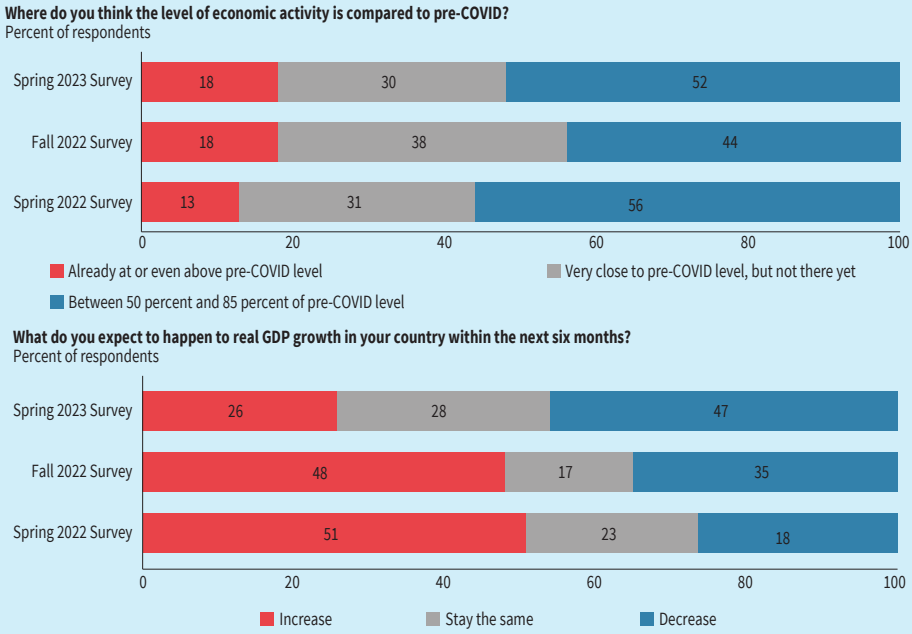
As in the previous eight editions of this report, we conducted an opinion survey among experts and researchers from academia, policymaking and consultancy communities in South Asia. This time, as countries continue to balance policy tradeoffs amid tightening financial conditions and external sector pressures, the survey aims to gain insights into the outlook of economic growth and policy tradeoffs in South Asian economies.[23]

Experts' views suggest that the economic recovery is ongoing in South Asia, but views on the future have become less optimistic. Forty-eight percent of the respondents believe that the level of economic activity is above 85 percent of the pre-COVID-19 level, a moderate decrease from 56 percent in the fall of 2022 (Figure 1.28). However, experts are much less optimistic about the future than they were last fall: only 26 percent believe that real GDP growth will increase in the next six months, a large drop from 48 percent last fall. This is consistent with the downgrade of growth in the most recent regional forecast and reflects continuing pressures on the South Asian economies from elevated inflation and external sector

[23] We received 39 responses from five countries: 31 percent are from Pakistan, 18 percent from Bangladesh, India, and Nepal each, 16 percent from Sri Lanka; 82 percent are men and 18 percent are women; and 82 percent identify as macroeconomists, 77 percent as academic, 56 percent as policy advisors and 13 percent as policy makers.

pressures (Chapter 2). Meanwhile, 69 percent of respondents believe that unemployment will increase in the next six months, which is consistent with the slow recovery of employment and weak performance of the labor-intensive manufacturing sector (Chapter 1).

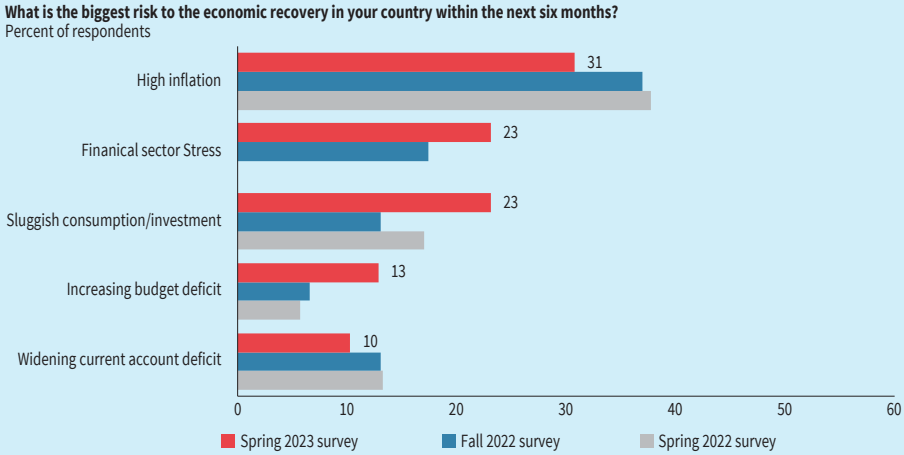
Figure 1.28. Experts see continuing recovery but views on the future are less optimistic



While inflation continues to be the top perceived risk to recovery, concerns have increased over financial sector stress, sluggish consumption and increasing budget deficits. Thirty-one percent of respondents cite high inflation as the biggest risk to economic recovery over the next six months, compared with 37 percent in fall 2022 (Figure 1.29). An increasing proportion of respondents note sluggish consumption and/or investment as the biggest risk (23 percent compared with 13 percent last fall), reflecting pressures from elevated consumer prices, rising borrowing costs, and slower income growth (Chapter 1). Financial sector stress is also perceived as an increasing risk (23 percent of respondents compared with 17 percent last fall). Around 75 percent of experts think a rising NPL ratio is one of the major risks in the banking sector, while around 50 percent believe deteriorating liquidity or domestic banks' holding of

own country's public debt constitute major risks (Figure 1.30). This is consistent with the deteriorating asset quality and the rising sovereign-bank linkages in many South Asian countries (see also Section 1.4).

Figure 1.29. While inflation risk is perceived to be receding, experts note financial sector stress and sluggish consumption as rising risks

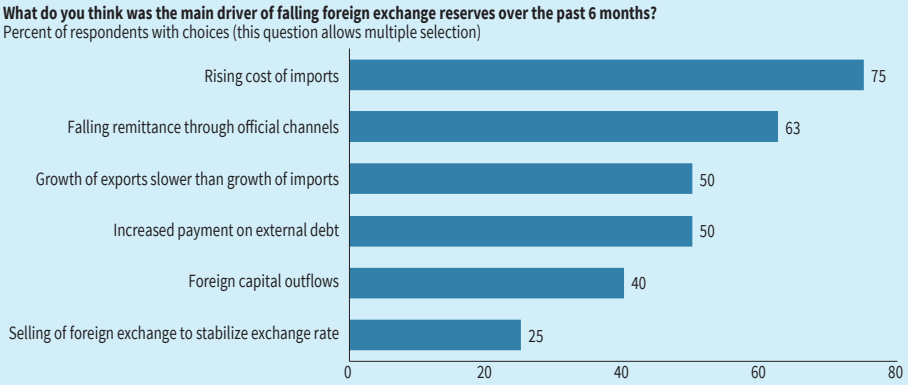


Note: Financial sector stress not included as a potential risk in the spring 2022 surveys.

Figure 1.30. Experts believe major risks in the financial sector come from deteriorating asset quality, liquidity, and the sovereign-bank nexus

Experts believe that the rising cost of imports and falling remittance are the main drivers of declining foreign reserves in South Asia. Amid external sector pressures, countries in South Asia have seen falling foreign reserves as countries face slow-growing remittance inflows and increased capital outflows (Section 1.3). Among the respondents, 75 percent consider the rising cost of imports one of the main drivers of falling foreign reserves over the past six months, the largest share among the potential factors (Figure 1.31). A large proportion thinks falling remittance inflow was one of the main drivers—63 percent this time compared with 30 percent last fall. Slow growth of exports and increased external debt payment are also among the top reasons. To stabilize the exchange rate and preserve foreign reserves, many South Asian countries used capital control measures in 2022, including import controls, restrictions on letters of credit, and foreign currency controls.

Figure 1.31. Drivers of falling foreign reserves



Around half of the respondents recognize the benefits of capital control measures in helping to stabilize the external sector or help conserve foreign reserves (Figure 1.32). Fifty-five percent of respondents believe that capital control measures help build up foreign reserves, and 49 percent of respondents believe they help stabilize the external sector volatility. There is a large cross-country variation in how the respondents perceive capital control measures. Respondents are more likely to agree with the benefits of capital control if their country benefited from the measures. For example, Nepal used import quantitative controls in 2022, which helped increase the foreign reserve import cover from 6.4 months of import in January 2022 to 9.4 months in January 2023. Accordingly, a larger share of respondents (86

percent) from Nepal agrees with the benefits of capital control.[24] In contrast, a much smaller share of respondents from Bangladesh (57 percent), Pakistan (58 percent), and Sri Lanka (67 percent) agrees with the benefits of capital control, likely because import quantitative controls in these countries over the past year did not work as well as intended.

At the same time, respondents express strong concerns about the limitations of using restrictive measures to preserve foreign reserves (Figure 1.32). A majority of respondents believe that capital control measures can discourage remittance inflows from the formal channel (66 percent of respondents) or encourage firms and individuals to move funds abroad (69 percent). Indeed, as the Spotlight highlights, capital and exchange controls can increase the demand for foreign exchange in the informal exchange market, and this in turn can divert remittance inflows away from the formal channel. In addition, around 72 percent of respondents believe that the implementation of capital control measures lacks transparency and consistency, which can discourage trade and give rise to corruption. Instead, experts believe that alternative policy tools can be used to stabilize the external sector. In particular, monetary and fiscal policies are considered better tools to address the balance of payment tension (80 percent of experts), and improving export performance and foreign direct investment attraction are believed to be better tools to build up foreign reserves (87 percent of experts) than capital controls.

Experts view financing as a major hurdle to green development in South Asia. Because of South Asia's vulnerability to climate risks, efforts to promote green and resilient development are crucial to prepare the region for increasingly frequent natural disasters. However, survey results reveal the region faces many hurdles to green development. Various challenges in financing emerge as hurdles for green development (Figure 1.33). For example, 67 percent of respondents believe a lack of public financing for green projects is one of the biggest hurdles, and 59 percent each cite the lack of large-scale private capital and a lack of international funding support as one of the main hurdles. Around half of the respondents believe issues with government policy or data limitations create hurdles.

[24] A respondent "agrees" with the benefit of capital control if they answered "strongly agree" or "agree" to at least one of the sub-questions: "They (capital control measures) help conserve and build up foreign reserves"; "They help stabilize the external sector volatility".

Figure 1.32. Tradeoffs of capital control measures in response to the balance of payment tension

How much do you agree with the following statements about capital control measures (e.g., import controls, restrictions on letter of credit, foreign currency controls) in your country?
Percent of respondents

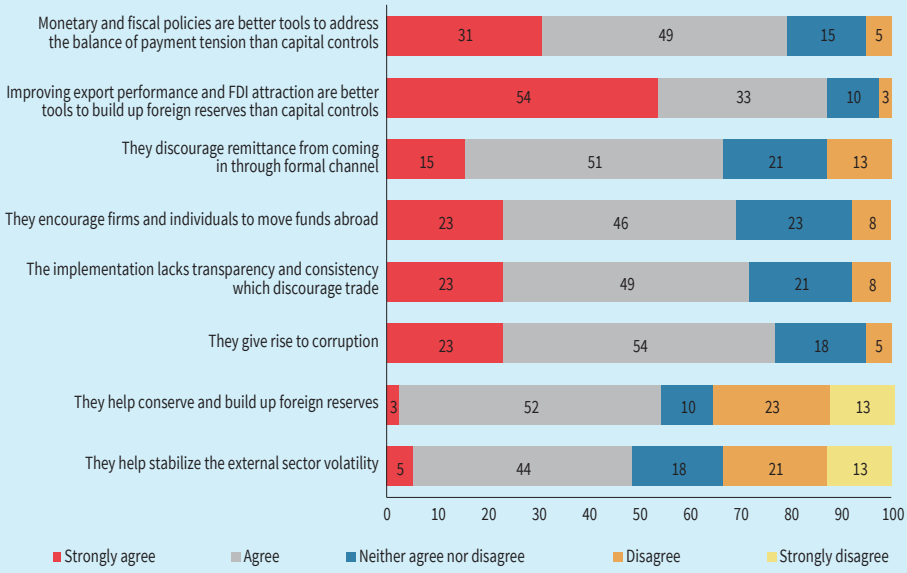
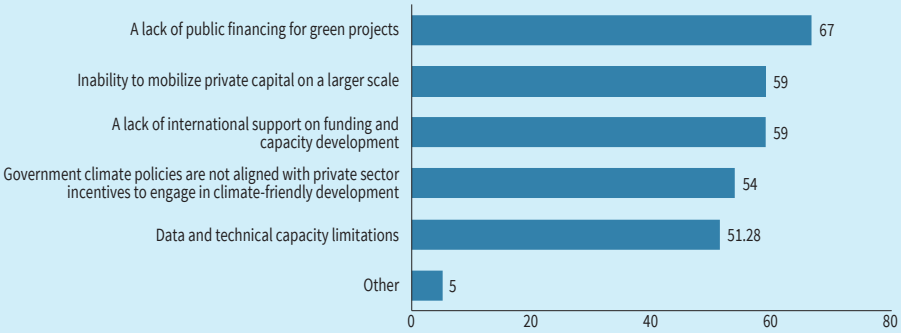


Figure 1.33. Hurdles to green development in South Asia

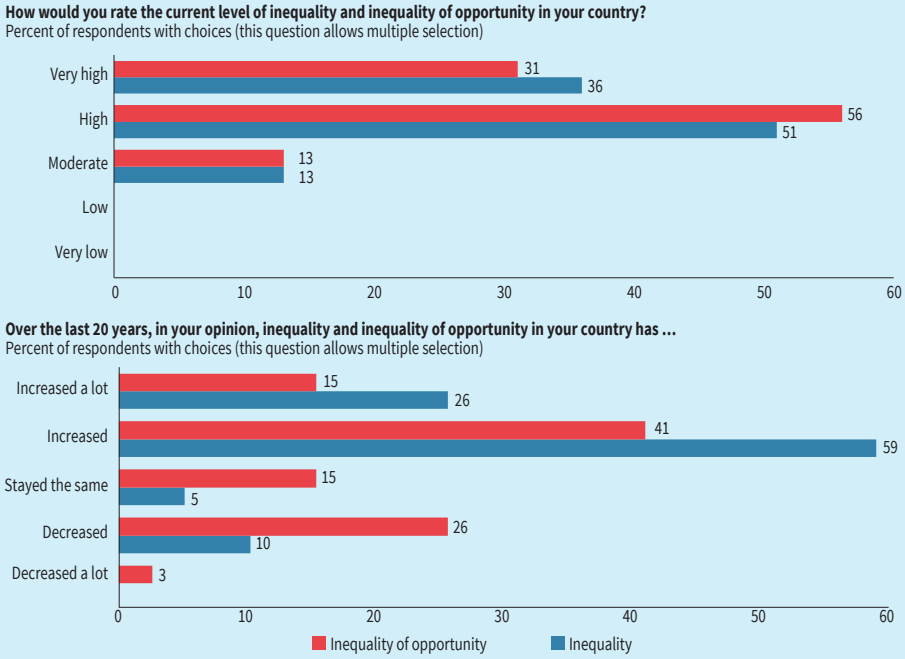
What do you think is the biggest hurdle to green development in your country?
Percent of respondents with choices (this question allows multiple selection)



Reducing economic inequality is another long-term challenge for South Asia. An overwhelming share (87 percent) of respondents believe inequality in their country

is high or very high, and 85 percent of respondents think inequality has increased (or increased significantly) in their country over the past 20 years (Figure 1.34). This is consistent with the evidence suggesting that people in South Asia are increasingly concerned about economic inequality (Chapter 3). Besides the standard measure of inequality, inequality of opportunity measures inequality due to factors outside individuals' control, such as race, gender, socioeconomic status, and geographic location. South Asia has one of the highest levels of inequality of opportunity in the world (Section 3.1). Eighty-seven percent of experts believe that their country's inequality of opportunity is high or very high—consistent with findings in Chapter 3 of high inequality of opportunity in the region—and 56 percent believe it has increased or increased significantly over the past 20 years.

Figure 1.34. Inequality and inequality of opportunity are perceived to be high and rising in South Asia

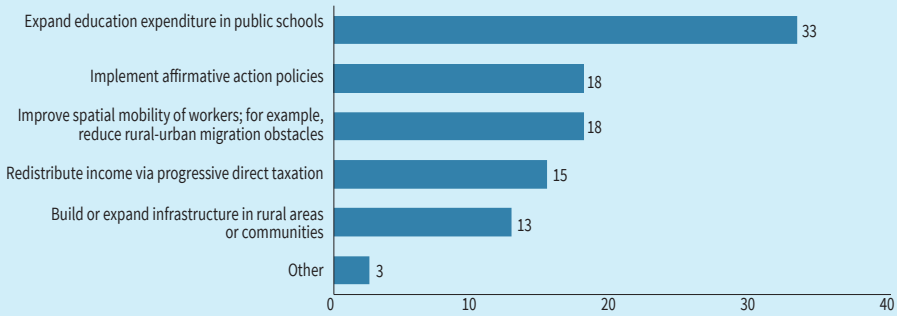


Given the high level of inequality of opportunity in South Asia, experts call for more equal income distribution and public support to promote inclusive growth. Thirty-three percent of experts recommend expanding education expenditure in public schools as a way to improve equality of opportunity for disadvantaged groups (Figure

1.35), consistent with the policy recommended in Chapter 3. In addition, other policies, such as implementing affirmative action policies, improving spatial mobility for workers, redistributing income via progressive direct taxation, and expanding infrastructure in rural areas, also received support from experts.

Figure 1.35. Inequality of opportunity and policy choices

Which of the following policies would you recommend to improve equality of opportunity for disadvantaged groups in your country (such a or religious minorities, women)?
Percent of respondents with choices (this question allows multiple selection)



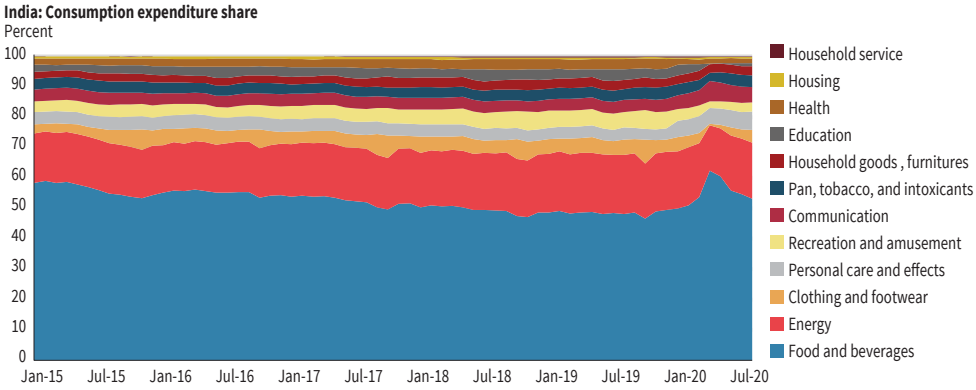
Appendix I

Appendix 1.1 Additional tables and figures for Box 1.1

Table A.1.1. Data sources and coverage

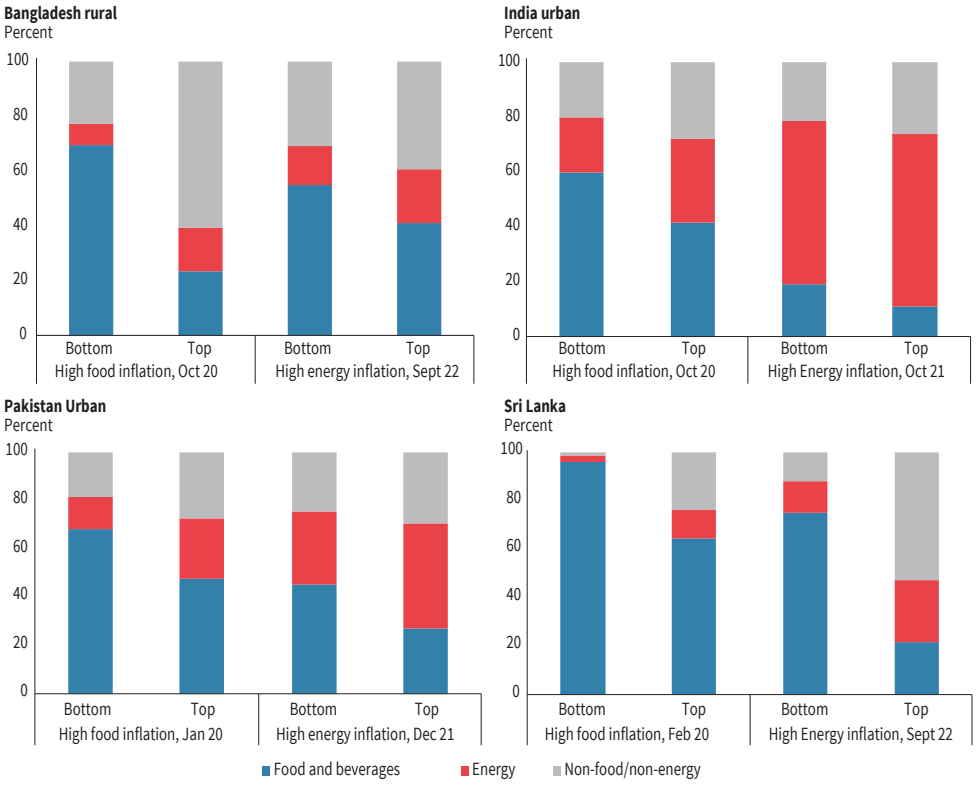
Country	Survey		Price Index	Matched items
	Source	Coverage	Source	
Bangladesh	Household Expenditure and Income Survey	April 2016–March 2017	Bangladesh Bureau of Statistics	Food, beverage, and tobacco (cereals/ grains, fish, eggs and meat, fruits, vegetables...), clothing and footwear, housing, furniture, household equipment, fuel and lighting, health, transport and communication, recreation and culture, education, personal effects, luxury, laundry and cleaning, miscellaneous.
India	Consumer Pyramids Household Surveys	January 2015–August 2020	National Statistical Office (NSO)	Food and non-alcoholic beverages (cereals and products, meat and fish, eggs, milk and milk products, oils and fats, vegetables, fruits…), alcoholic beverages and tobacco, clothing and footwear, housing, fuel and lighting, households goods and services, health, transport and communication, recreation and amusement, education, personal care and effects.
Pakistan	Household Integrated Economic Survey	2018–19	Pakistan Bureau of Statistics	Food and non-alcoholic beverages, alcoholic beverages and tobacco, clothing and footwear, housing, furnishing, fuel and lighting, health, transport, communication, recreation and culture, education, restaurants and hotels, miscellaneous.
Sri Lanka	Household Integrated Economic Survey	2016	Sri Lanka Department of Census and Statistics	Food and non-alcoholic beverages, alcoholic beverages and tobacco, clothing and footwear, furnishing, fuel and lighting, health, transport, communication, recreation and culture, education, miscellaneous.

Figure A.1.1. Aggregate consumption pattern over time



Source: India CPDX (2015–20) and World Bank staff calculations.

Figure A.1.2. Contribution to price changes in the bottom and top deciles



Source: Bangladesh HIES (2016–17), India CPDX (2019), Pakistan HIES (2018–19), Sri Lanka HIES (2016), and World Bank staff calculations.
Note: Bangladesh and India energy include Fuel, lighting, transport and communication. Bangladesh food includes food, beverage and tobacco.

Appendix 1.2 Sample and econometric analysis for Box 1.3

The bank-level data comes from FitchConnect and contains information from bank balance sheet, profit and loss account as well as major prudential ratios. Ownership information (public, foreign, and private) was extracted from the respective Central Banks' websites and/or commercial banks annual reports. The sample covers 248 banks in six countries (Bangladesh, India, Maldives, Nepal, Sri Lanka and Pakistan) for the period of 2013–2022. There are 49 foreign, 69 public and 130 private banks in the sample. The panel is unbalanced meaning that some banks have data available only for some years.

To evaluate the allocation of banks' exposures to the sovereign across banks with different characteristics, the following regression is estimated:

$$SovExposures_{j,t} = = \alpha + \beta_1 Log(Assets)_{j,t} + \beta_1 Log(Assets)_{j,t} + \beta_2 RegCapital_{j,t} + \beta_3 NPL_{j,t} + \beta_4 ROA_{j,t} + \beta_5 LiqAssets_{j,t} + \beta_6 Public_j + \beta_6 Foreign_j + \gamma_t + \gamma_i + \varepsilon_{j,t} \quad (1)$$

where i denotes country, j – bank, and t – year. SovExposures is defined as sovereign debt holdings to total assets, Assets are total assets, RegCapital is a ratio of total regulatory capital to risk-weighted assets, NPL is a ratio of non-performing loans to total loans, ROA is returns on assets, and LiqAssets is a ratio of liquid assets to total assets. Public is a dummy variable taking the value of 1 if bank is fully or majority state-owned, and 0 otherwise. Foreign is a dummy variable taking the value of 1 if bank is a subsidiary or branch of a foreign bank, and 0 otherwise. Standard errors are clustered at bank-level.

To assess the impact of banks' exposures to the sovereign on financial intermediation, the following regression is estimated:

$$LoanGr_{j,t} = = \alpha + \beta_1 SovExposures_{j,t} + \beta_2 Log(Assets)_{j,t} + \beta_3 RegCapital_{j,t} + \beta_4 NPL_{j,t} + \beta_5 LiqAssets_{j,t} + \beta_6 Public_j + \beta_6 Foreign_j + \gamma_t + \gamma_i + \varepsilon_{j,t} \quad (2)$$

where i denotes country, j – bank, and t – year. LoanGr is defined as a year-to-year growth in private sector lending. All other variables are the same as for equation (1). Standard errors are clustered at bank-level.

The estimation results of equations (1) and (2) are presented in Table A.1.2 below.

Table A.1.2. Estimation results

	(1)	(2)
VARIABLES	Sovereign exposures	Growth in loans
Sovereign exposures		-0.160***
		(0.0588)
Log (Assets)	0.876**	-2.111***
	(0.442)	(0.467)
Regulatory capital ratio	0.0187	-0.0855
	(0.0645)	(0.0563)
NPL	0.0800	-0.632***
	(0.100)	(0.0876)
ROA	0.266	
	(0.291)	
Liquid assets ratio	-0.123*	0.0115
	(0.0731)	(0.0977)
Public	5.473***	0.949
	(2.075)	(1.597)
Foreign	6.040**	-4.688**
	(2.324)	(2.078)
Observations	1,487	1,453
R-squared	0.434	0.157

Source: World Bank staff estimations using Fitch Connect data.
Note: All variables are winsorized at 1% of the lowest and highest values. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

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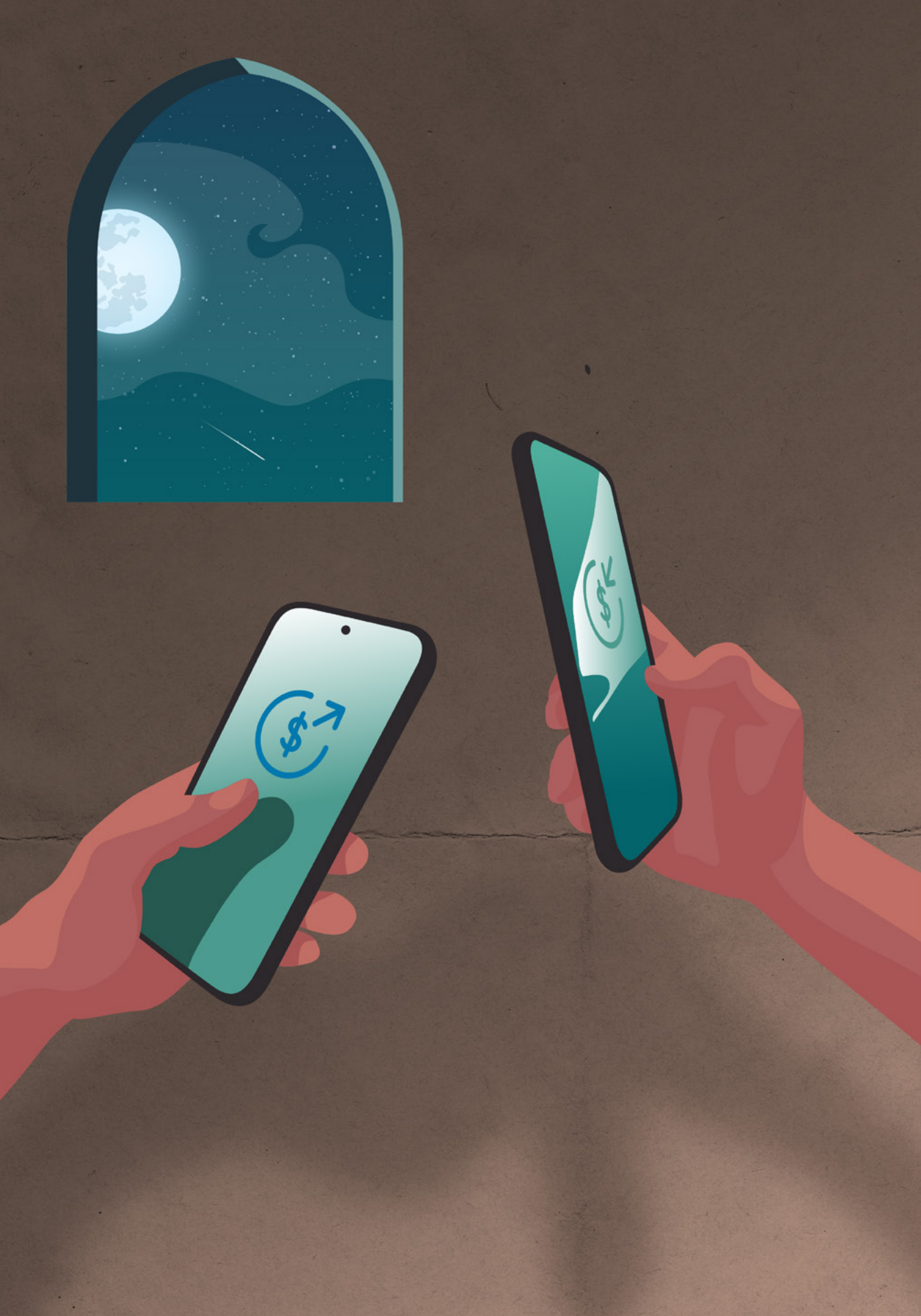


SPOTLIGHT

The informal foreign exchange market and capital controls: A South Asian tale

Over the past two years, South Asia has seen rising external sector pressures due to elevated global commodity prices, monetary tightening by advanced economies, and shifting investor confidence. These movements have contributed to dwindling foreign reserves and currency depreciation pressures. Countries have made efforts to stabilize their exchange rates and preserve vital foreign reserves, including incentives for remittance inflows through official channels.

Many South Asian countries also tightened administrative controls on foreign exchange transactions in 2022. The policy measures included both exchange controls on the current account (e.g., import quantity and financing restrictions) and capital account controls (e.g., stricter approval process for outward flows). Table 1.3 in Chapter 1 and Table 1.3 of World Bank (2022) document the temporary exchange controls used in South Asian countries over the past year.

Even before the current crisis, many South Asian countries had long-standing capital control measures. These measures help countries stabilize the exchange rate by reducing sudden inflows and outflows of capital. As many South Asian countries have a fixed or managed exchange rate,[1] the capital control measures are also intended to help preserve the foreign exchange reserves needed to defend the exchange rate peg and manage exchange rate fluctuations. Table S.2 summarizes these long-term capital control measures in South Asian countries.

While the use of exchange and capital control measures help mitigate acute external sector pressures, such measures can also lead to the increased use of informal markets for

[1] For example, the Maldivian rufiyaa is pegged to the US dollar with a narrow band; both Nepal and Bhutan peg their currencies to the Indian rupee; prior to 2022, Bangladesh had a stabilized official exchange rate that was allowed to fluctuate within a 2 percent band of the US dollar during the reporting period.

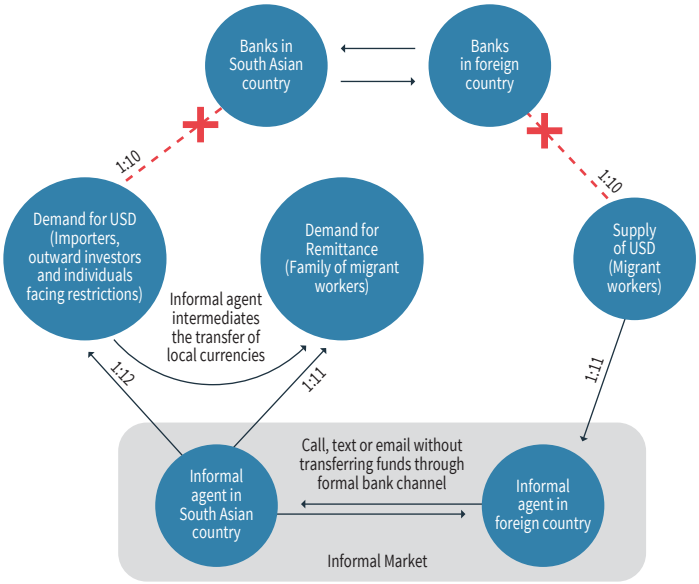
foreign exchange. These informal exchange markets—including the Hundi and Hawala systems present in many developing countries (Khurram Sharif et al. 2023; Maimbo 2003; Mughal et al. 2023)—are prevalent across South Asian countries, partially because of the large remittance inflows in these countries. These informal exchange markets also operate relatively efficiently: they allow migrant workers to send and receive money instantly, and provide cross-border financial services for firms in the informal or shadow economy. The widespread use of these informal markets in turn makes exchange and capital controls less effective.

This spotlight outlines how informal foreign exchange markets operate, examines how exchange and capital controls contribute to their emergence, and discusses the macroeconomic implications.

S1. The operation of the informal foreign exchange market

The operation model of the informal foreign exchange market is illustrated in Figure S.1. A hypothetical official US dollar to rupee exchange rate of 1:10 is assumed for a hypothetical South Asian country.

Figure S.1. Operation model of Hundi/Hawala



Source: World Bank staff.

A natural informal foreign exchange market.

Before the implementation of any restrictions on foreign exchange use, it is not uncommon for small informal foreign exchange markets to exist to serve various purposes, including tax evasion and other illicit activities. For example, importers could evade the full impact of high tariffs in the hypothetical South Asian country by purchasing only a small portion of the required US dollars through commercial banks, obtaining the rest of the needed foreign exchange through informal agents, and invoicing lower imports equal to the amount of US dollars obtained from the banks. Although the importers often have to pay a more expensive rate purchasing US dollars in the informal market, they avoid paying the full import tariffs (Bangladesh Bank 2019; World Customs Organization 2018), but it comes at the cost of lost tax revenue for the government. There is an additional motive, namely that many, mostly small, importers do not have access to letters of credit in US dollars or banking services, and have to resort to the informal foreign exchange market (Rahimi 2020).

Exchange and capital controls create additional demand in the informal exchange market.

When an economy restricts foreign exchange use or the flow of capital, the policy measures can create shortages and uncertainty in the formal foreign exchange market, leading individuals and entities to use informal markets to purchase foreign exchange. This can happen in different ways, depending on the method of control. Importers may seek to evade quantitative controls on imports or restrictions on trade finance in the same way as described above for evading import tariffs: purchasing a portion of the foreign exchange from informal markets and falsifying commercial invoices to the customs authorities (e.g., misrepresentation of the classification and/or the value and volume of an international transaction of goods and services) to reflect only the imports purchased with foreign exchange obtained from the banks. In addition, in countries with controls on outward capital movements, firms investing abroad, together with students and outbound migrant workers traveling abroad may face difficulties obtaining enough US dollars through formal channels (Qorchi, Maibo, and Wilson 2003), while South Asians permanently relocated overseas may not be able to shift their assets abroad through legal channels. Through informal agents, they can purchase the needed US dollars, albeit at a more expensive rate. To complete the transaction, the informal agents instruct other agents in the network to set up funds in the destination country for clients, leaving no trace of cross-border activities in any formal financial system.

Thus, the restrictions in the formal exchange market create additional demand for US dollars in the informal exchange market, which allows the informal agents to charge a premium over the official exchange rate.

Where does the supply of foreign exchange in this informal market come from? The more attractive informal rates divert foreign exchange flows.

The supply side of the exchange rate market consists mostly of firms and individuals sending money into the South Asian country.[2] Because of the higher rate charged on the demand side (for example 1:12), the informal agents can offer the suppliers of foreign exchange a more competitive rate (for example 1:11) than the official exchange rate.[3] To complete the transaction, informal agents in the South Asian country provide the remittance in rupees to the families of migrant workers. This process does not require the remittance in US dollars to move across borders, nor does it trigger any changes in asset or liability positions of the formal banking system in either country. These two agents will then have the settlement process in a third country (Qorchi, Maibo, and Wilson 2003).

Could supply-side measures help close the parallel exchange rate gap and boost official remittance?

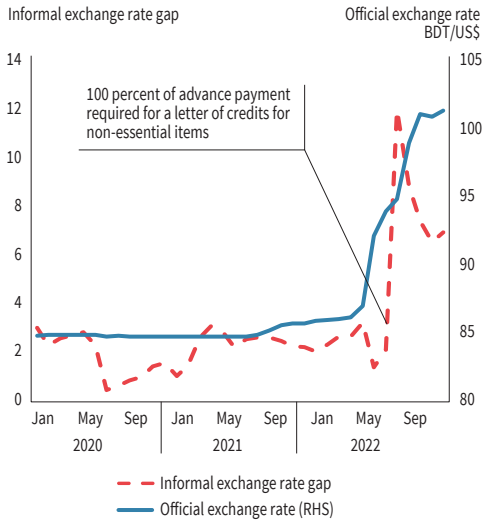
To encourage remittance inflows through formal channels, governments have implemented fiscal incentives, such as reducing remittance fees, increasing interest rates on savings from abroad, and promoting digital technologies. At the same time, some (for example, Habib 2023) suggest that official exchange rate depreciation can help boost formal remittance inflows by making the official rate more attractive to migrant workers. These measures may help temporarily in attracting remittance inflows through the formal channel. But as long as authorities cannot supply sufficient foreign exchange at the official rates due to restrictions, additional demand for foreign exchange that cannot be met in the formal market will shift to the informal market. This demand will continue to allow informal agents to offer a premium to the remitters above the official exchange rate. As a result, the gap between the official and informal rates will persist. For example, Figure S.2 shows the spread between official and informal exchange rates continues to exist in Bangladesh (left panel) and Pakistan (right panel), even after their currencies have depreciated. This parallel exchange market in turn diverts remittances to the informal channel (Adhikari and Katuwal 2015; Central Bank of Sri Lanka 2021).

[2] In addition to remittances in the example, the supply of foreign exchange in the informal market can also come through the under-invoicing of exports and over-invoicing of imports (Agénor 1990; Biswas 2012; Biswas, Marjit, and Sarkar 2019).

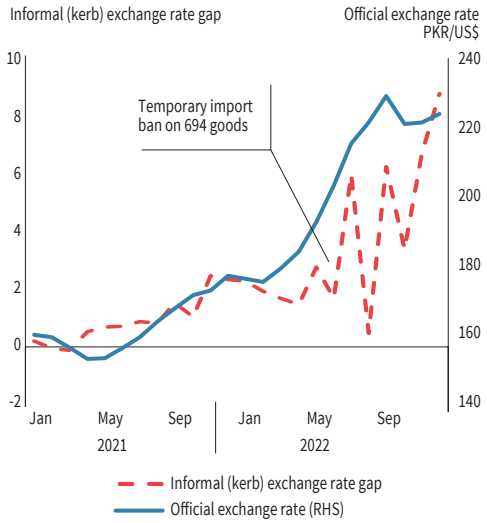
[3] Attractive rates may not be the only reason that migrants choose informal channels. The ability for migrants' family to access formal banking services in the home country, transactional costs in the formal channel, informal credits available to the migrant's family associated with remittance, and long-term client relationship are all important factors. For example, upon emergency, migrants may sometimes borrow from Hundi/Hawala agents to remit to their family.

Figure S.2. Depreciation of the official exchange rate did not narrow the informal exchange rate gap

A. Currency depreciation did not narrow the informal exchange rate gap in Bangladesh



B. Currency depreciation did not narrow the informal exchange rate gap in Pakistan



Source: World Bank country economists, Karachi Stock Exchange, and World Bank staff calculations.

S2. Suggestive evidence

This section presents evidence on the relationship between: (i) exchange and capital controls; and (ii) the demand and supply sides of the informal foreign exchange market. It provides evidence for two related hypotheses: first, facing exchange and capital controls, individuals use informal foreign exchange markets to circumvent restrictions, leading to a widening gap between official and informal exchange rates; and, second, the widening gap leads to a diversion of foreign exchange supply from the formal to the informal exchange market.

1. Facing exchange and capital controls, individuals use informal foreign exchange markets to circumvent restrictions, leading to a widening gap between official and informal exchange rates.

There are multiple ways to implement exchange and capital controls.[4] We focus on the restrictions related to import finance, and proxy for it using a de jure measure of restrictions on commercial credit inflows from the IMF's Annual Report on Exchange Arrangements and

[4] See Table S.2 for the long-term exchange and capital control measures in South Asia. Table 1.3 in Chapter 1 and Table 1.3 of World Bank (2022) document the temporary exchange controls used in South Asian countries over the past year.

Exchange Restrictions (Fernández et al. 2016).[5] There are also multiple forms of capital control evasion. Firms may move foreign exchange abroad through trade mis-invoicing (Biswas 2012; Patnaik, Gupta, and Shah 2011; Steinkamp and Westermann 2022). Individuals may purchase foreign exchange from informal agents for international travel, education, international service, and real estate investment, among other activities. For this analysis, we focus on capital control evasion by firms when they use import mis-invoicing to circumvent import quantitative and financing restrictions:[6]

Import mis-invoicing is computed as

$$Import\ Mis\text{–}invoicing_{i,t} = \left(MR_{i,t} - MM_{i,t}\left(1 + CIF\right)\right)/\mathrm{MR}_{i,t}$$

where $\mathrm{MR}_{i,t}$ is economy i's reported import from the world in period t. $MM_{i,t}$ is world exports to economy i in period t. CIF represents cost, insurance, and freight, which is assumed at 10 percent following the existing methodology (IMF 1993). A negative value indicates import under-invoicing and a positive value indicates import over-invoicing by country i.

There are a few caveats to the import mis-invoicing measure. First, the method used to calculate import mis-invoicing assumes that the manipulation of documents only happens at the import end. If both exporters and importers manipulate invoices, then the mis-invoicing cannot be detected by comparing reported imports and exports data. For example, OECD (Lanz and Miroudot 2011) estimates that about one-third of global trade is intra-firm trade among subsidiaries. Related importers and exporters may agree to record the same (manipulated) values on import and export invoices. Second, import mis-invoicing for services trade is not captured by our data. Third, import mis-invoicing captured using the method may simply reflect limited customs capacity instead of manipulated import values to evade capital controls.[7] Last, the simplified estimation of CIF overlooks the cross-country and over-time variations in costs. Table S.1 summarizes the various purposes of import mis-invoicing. It is also worth noting that we do not attempt to use this proxy to accurately estimate the level of import mis-invoicing. Instead, it is only used to capture the changes in import mis-invoicing behavior in relation to the changes in exchange and capital control measures.

[5] The restrictions on commercial credit inflows usually refer to the restrictions on import finance provided by nonresident institutions to domestic importers, which capture a part of import finance restrictions.

[6] Some have used the net errors and omissions (NEO) in country's balance of payments as a proxy for informal remittance. But because the NEO is affected by changes in both informal remittances and informal trade flows, informal activities on both remittances and trade flows can make the NEO a noisy indicator for informal remittance. In a separate empirical analysis, we find no correlation between NEO and official remittance inflows in South Asian countries.

[7] Due to the limitation of resources and the need for trade facilitation, customs officials may not inspect every shipment. Customs officials may not have up-to-date information on world market prices to help them determine whether the invoiced value is within the normal range (Baker et al. 2014).

Table S.1. Common purposes of import mis-invoicing

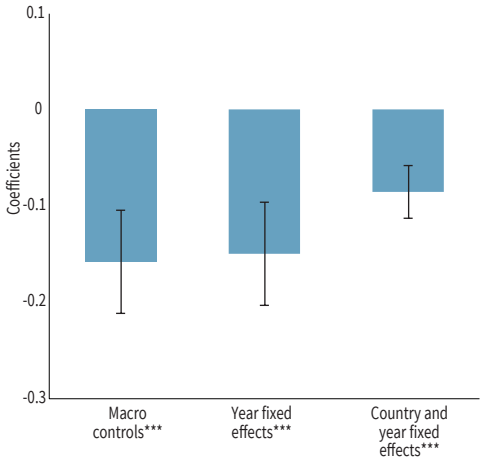
Import under-invoice	Avoid regulatory requirements for imports over a certain value Avoid import restrictions and high tariffs
Import over-invoice	Evade capital controls or shift money into a hard currency Avoid anti-dumping duties

Source: Muryawan (2019); Slany, Chérel-Robson, and Picard (2020).

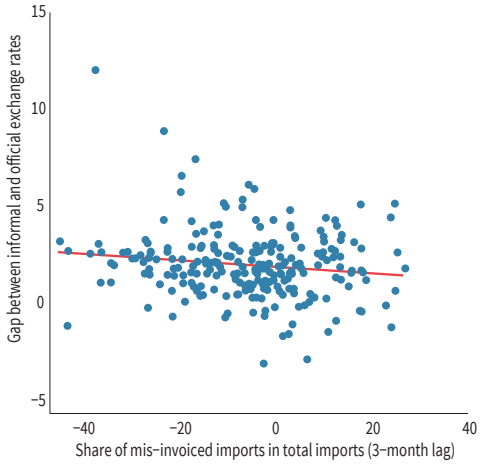
A panel regression of 35 countries is conducted to establish the relationship between restrictions on import finance and import mis-invoicing. Figure S.3.A shows that the panel regression coefficient is negative and statistically significant, and is robust to controlling for macroeconomic variables, and year and country fixed effects. This suggests that, in countries and during periods with tighter controls on import finance, there is a stronger tendency for firms to under-invoice imports.[8]

Figure S.3. Import finance restrictions and import mis-invoicing

A. Effects of restrictions on import finance on import mis-invoicing in the world panel



B. The relationship between import mis-invoicing and the informal exchange rate gap in Bangladesh



Source: A. IMF Direction of Trade Statistics Database, Fernández et al. (2016), World Bank World Development Indicators, and World Bank staff calculations. B. IMF Direction of Trade Statistics Database, Bangladesh Country Office, and World Bank staff calculations.
Note: A. A lag is used on monthly imports to account for the lag between placing an order and goods entering the border. *** p<0.01. B. Line is a linear fit that is significant at the 5 percent level. Each circle shows the exchange rate gap for the month and the monthly (3-month lagged) share of import mis-invoicing between Bangladesh and the rest of the world.

[8] In addition to import under-invoicing, capital controls may also lead to capital flight through import over-invoicing (Patnaik, Gupta, and Shah 2010; Steinkamp and Westermann 2021; World Customs Organization 2018), which can confound the relationship between capital control and import under-invoicing. But the statistically significant and negative finding between import finance control and import mis-invoicing indicates that despite the potential confounding effect, stronger import finance control is still associated with more import under-invoicing.

This increase in under-invoicing may lead to a parallel foreign exchange market. A simple regression analysis is used to investigate the relationship between the import mis-invoicing and the widening gap between official and informal foreign exchange rates in Bangladesh during 2000–2022. As Section 1.3 shows, the informal rate gap in Bangladesh fluctuated between 0 and 2 percent of the interbank rate before 2022, before an artificially strong official exchange rate and tougher exchange controls used to enforce the official exchange rate led to a rapid widening of the informal rate gap. The results from the regression show a statistically significant negative correlation (Figure S.3.B), suggesting an increasing import under-invoicing is associated with a widening informal exchange rate gap.

In Pakistan, the relationship between import mis-invoicing and the exchange rate gap is less clear-cut. This could be because Pakistan has more capital flows than Bangladesh, which allowed stronger capital flight through import over-invoicing when exchange and capital controls tightened. This stronger import over-invoicing would confound the relationship between capital control and import under-invoicing, and make import mis-invoicing noisier.

2. The widening gap between official and informal exchange rates can divert the supply of foreign exchange into the informal market.

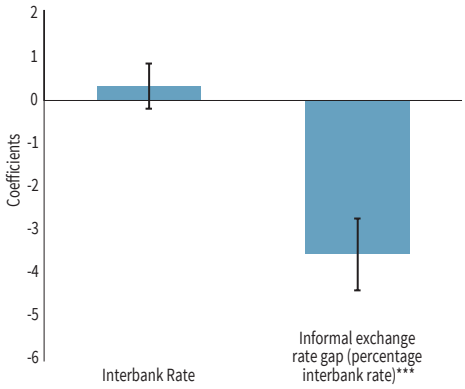
Facing exchange and capital controls, individuals use informal foreign exchange markets to circumvent restrictions. The rising demand helps sustain a gap between official and informal exchange rates. It allows the informal agents to offer attractive rates to potential suppliers of foreign exchanges, which diverts the supply of foreign exchanges to the informal market. To study the diversion of foreign exchange supply, we first look at the changes in official remittance inflows. Remittance inflows are a crucial source of foreign reserves for many South Asian countries, but flows of remittance through informal channels can put downward pressure on the country's foreign reserve level (see also Section 1.3).

To investigate the relationship between the exchange rate gap and official remittance inflows, we conduct a fixed effects regression on the monthly official remittances into Bangladesh between February 2011 and November 2022.[9] The results show that the gap between the official and informal exchange rates has a statistically significant negative correlation with the official remittance inflows (Figure S.4). This is consistent with the hypothesis that a larger rate gap incentivizes remitters to use informal channels and thus diverts foreign exchange supply away from the formal channel. There is no statistically significant relationship between the official (inter-bank) exchange rate and remittance inflow, which suggests that depreciation of the official exchange rate may not have a positive effect on remittance if the informal rate gap does not change.

[9] To account for the government incentives for remittances through the formal channel, a 2-percent incentive starting July 2019 and a 2.5-percent incentive from January 2022 were included for the official foreign exchange channel.

Besides remittances, export proceeds are another major source of foreign exchange reserves for many countries. Stricter exchange and capital controls can lead to a widening informal rate gap, which in turn diverts the repatriation of export proceeds to the informal exchange market. We perform an event study to examine the relationship between import restrictions and weekly export proceeds in Pakistan. In May 2022, Pakistan announced import credit restrictions. The restrictions were rolled back in early January 2023, but the rationing of letters of credit continued to create unofficial import restrictions (Table 1.3). As Figure S.5.A shows, export proceeds coming into Pakistan (shown as deviations from the average of January–May 2022) fell dramatically after the implementation of the import credit restrictions, especially as the informal rate gap increased. During this period, the deviation in export proceeds was negative and statistically significant at the 1 percent level.

Figure S.4. In Bangladesh, the informal-official exchange rate gap and official remittance inflows are negatively correlated, but no correlation between the official exchange rate and remittance



Source: Haver Analytics, Government of Bangladesh, and World Bank staff calculations.
Note: Regression uses log official remittance (in US dollars) level, interbank rate level (BDT/US$) and the difference between the informal and the official rates as a percentage of the interbank rate. Regression includes year fixed effects. Sample period covers February 2011 to November 2022. For easy interpretation, coefficients are converted by exponentiating, then subtracting by one and multiplying by 100. The interbank rate is adjusted with fiscal incentives for remittance starting from July 2019. *** p<0.01, ** p<0.05, * p<0.1.

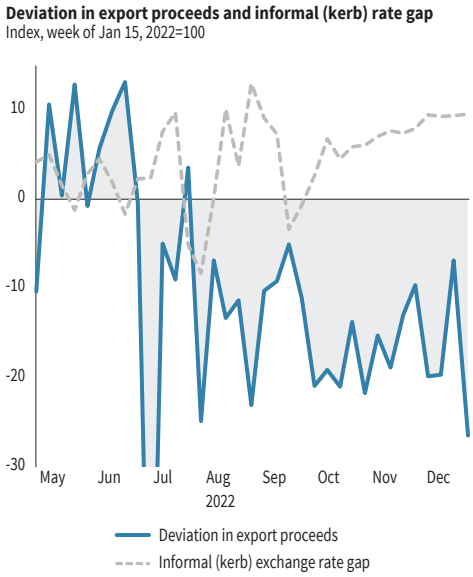
This relationship is not likely driven by seasonality. In fact, export proceeds in 2022 outperformed levels during the same period in 2021 for most months before July, but the 2022 proceeds consistently fell below the 2021 levels after the exchange rate gap started widening in July 2022 (Figure S.5.B).

A caveat for interpreting this result is that export proceeds may fall for other reasons. For example, when the local currency is expected to depreciate, exporters may park proceeds overseas and remit back after the depreciation to capture additional profits in the local currency. But, in this case, the deviation in export proceeds was even larger in January 2023 after the Pakistani rupee had already depreciated against the US dollar.[10] This suggests that delayed repatriation was likely not the reason for the export proceeds shortfall. Pakistan also experienced falling imports starting the second half of 2022, which might affect export performance

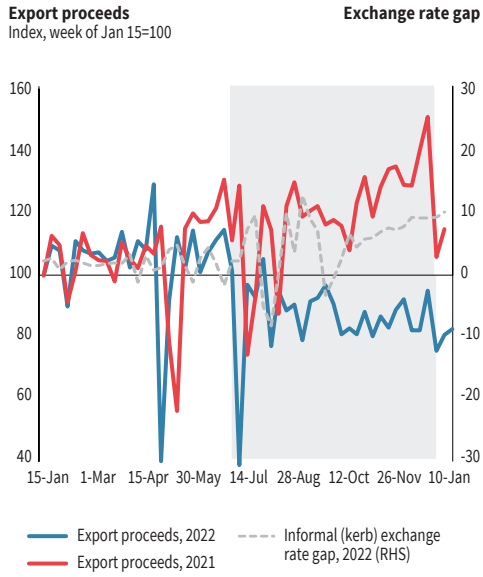
[10] During the weeks of January 29 and February 5 when the Pakistani rupee depreciated against the US dollar by about 20 percent compared with May 2022, the export proceeds were US$489 million and US$508 million, respectively, which were still lower than the average level of weekly export proceeds of US$538 million during the event window.

Figure S.5. Export proceeds inflows into Pakistan during exchange and capital controls

A. Effects of import letters of credits restrictions on deviations in export proceeds in Pakistan



B. As the informal exchange rate gap widened, export proceeds in 2022 underperformed the 2021 level during the same period in Pakistan



Source: Government of Pakistan, Karachi Stock Exchange, and World Bank staff calculations.
Note: A. Daily export proceeds data are aggregated to weekly for this study. The aggregation helps address short-term volatility in export proceeds data. Deviation in export proceeds is with respect to the average export proceeds during January-May 2022. The deviation in export proceeds during the event window was statistically different from zero, at the 5 percent level. B. Shading indicates when the exchange rate gap started rising in 2022.

and reduce export proceeds. However, while exports declined by 20 percent from April 2022 to January 2023, export proceeds had a sharper drop of around 30 percent over the same period. This indicates that the decline in export proceeds may have been larger than can be explained by the impact of lower imports on export performance, suggesting the diversion of export proceeds to the informal exchange market could have played a role.

S3. Macroeconomic implications and conclusion

The combination of limits on the supply of foreign exchange in the formal market and the operation of the informal market can have profound macroeconomic implications, including (but not limited to) the following:

- Competitiveness: Exchange controls such as US dollar rationing often involve priorities given to certain sectors or firms. Firms on the priority list would have access to

foreign exchange through the formal channel and at cheaper rates, while firms not on the list would have to resort to purchasing foreign currency from the informal market at more expensive rates. In the short term, this can distort the level playing field between sectors or firms. Over time, this can lead to the misallocation of resources and undermine the overall competitiveness of the economy.

- Perpetuation of informal trade: Historically, South Asia already had elevated levels of informal trade, which accounted for about 50 percent of its formal trade during 1993–2005 (Taneja 2014). Tighter controls on foreign exchange will push more traders into the informal sector or shadow economy. This can in turn lead to a loss of fiscal revenue.
- Foreign reserve accumulation: As the informal exchange market in South Asia diverts remittances and export proceeds away from official channels, countries' foreign exchange reserves are negatively impacted. As a result, countries have fewer resources to pay import bills, service external debt, and conduct market operations to prevent drastic currency depreciation.

The available evidence suggests that the implementation of exchange and capital controls, while intended to limit the outflows of foreign exchange, may have the unintended consequence of discouraging inflows. This can happen when such measures shift the demand for foreign exchange to the informal exchange market. The additional demand for foreign exchange allows the informal exchange market to charge a premium to parties buying foreign exchange and offer attractive rates to potential suppliers of foreign exchange, which gives rise to an exchange rate gap between the official and informal exchange rates. The rate gap in turn diverts the foreign exchange inflows away from the formal channel. As a result, the informal exchange channel undermines the goal of capital control measures to preserve foreign exchange.

Despite the downside, capital controls can be useful for countries with a fixed or administered exchange rate to regulate capital flows, especially when domestic capital markets and regulations are under-developed (IMF 2012; 2022a). A more transparent and less arbitrary approval process for firms and individuals to use foreign exchange, along with policies to improve export competitiveness, can help to build up foreign reserve buffers.[11] At the same time, it is important for countries to relax capital controls gradually. Lessons from the Asian financial crisis have shown that a sound domestic financial system should be in place before a full liberalization (World Bank 2022). For smaller economies with very restrictive capital control measures, such as Bhutan and Nepal, allowing firms to set up trade offices overseas might be the first step (Kathuria, Yatawara, and Zhu 2021).

[11] For example, until the early 1990s, India had a system of very strong capital controls. During 1990s, significant trade policy reforms led to an increased inflow of cheaper imports, which compelled Indian firms to become more competitive in the global market through using outward FDI (OFDI) to acquire foreign technology/brand names, securing inputs or supporting overseas trade activities. To accommodate firms' evolution, capital control measures were relaxed by gradually expanding the automatic approval route and increasing the limit of OFDI (Kathuria, Yatawara, and Zhu 2021). The foreign reserve import cover increased from 0.5 month in December 1990 to 10 months in January 2023.

Table S.2. Selected long-term capital controls and other foreign exchange restrictions

	Trade-related measures	Capital control measures	Invisible current account measures
Bangladesh	Advance payments of more than US$10,000 for imports require a repayment guarantee.	All outward direct investments require approval. Repatriation of dividends required. Investor required to directly deal with central bank. Residents purchase of capital market securities, money markets instruments, derivatives abroad are not allowed.	Limit for private travel is US$12,000 per year, US$10,000 for medical expenses.
Bhutan	Import license is require for importation of capital and intermediate goods from countries other than India	Outward direct investment not allowed unless approved by Ministry of Finance or Royal Monetary Authority. Investor required to directly deal with central bank. Purchase abroad by residents of all transactions in capital and money market instruments are subject to controls.	Travel allowances to countries other than India are limited to the equivalent of US$3,000 a passenger per year.
India	Advance payments allow unlimited advance remittance. However, importers must provide a standby letter of credit or bank guarantee if the amount is over US$200,000 for goods imports, or if the amount is over US$500,000 for services imports.	Most outward direct investment can go through automatic routes; Resident individuals may remit abroad up to the equivalent of US$250,000 a financial year; SEBI-registered venture capital and alternative investment funds may invest in equity and other instruments up to US$750 million. Repatriation of dividends required. Destination-specific procedures exist.	An overall limit of US$125,000 a financial year for individuals for permitted current and capital account transactions; outward remittance allowed provided all current taxes and other liabilities have been cleared.
Maldives	--	Lack of explicit legislation on outward direct investment. Directly dealing with central bank needed.	--
Nepal	2% for industrial materials and 10% for commercial goods in customs account.	Citizens may not make any type of investment in foreign countries; Outward flow of capital is restricted. Purchase of market securities bonds, other debt instruments, money market instruments, etc., are prohibited. Directly dealing with central bank needed.	Travel allowance is US$1,500 per person. Approval required for foreign investment profit repatriation.
Pakistan	100 percent cash margin requirement on import of items under 423 HS codes and advance payment of up to US$10,000 of invoice or 100 percent of the value of a letter of credit depending on the purpose.	Directly dealing with central bank needed. Repatriation of dividends required.	--
Sri Lanka	--	Automatic approval route exists for outward direct investment. Investors apply through authorized dealers. Repatriation of dividends required.	--

Source: IMF (2022b). Kathuria, Yatawara, and Zhu (2021).

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CHAPTER II

Navigating economic uncertainties

Introduction

Although global energy prices have fallen from their peaks and the global services sector is showing a robust recovery, uncertainty remains high for South Asia. Monetary policy tightening needed to cool down inflation has raised borrowing rates, contributing to intensifying financial sector risks. Stress in the US and European financial sectors has further tightened financial conditions for South Asian economies, exacerbating pressure in the external sector. Amid the heightened uncertainty in the rest of the world, growth in South Asia is expected to slow in 2023. Weak consumption, fiscal consolidation, the still-fragile economic situations in Afghanistan and Sri Lanka, and worsening prospects in Pakistan will contribute to lackluster 5.6 percent annual growth. Growth is expected to pick up slightly to 5.9 percent in 2024, as inflation dies down, creating more favorable conditions for consumption to grow.

Amid the uncertainty and unfavorable macro-financial conditions, growth in private consumption will slow down and government consumption will contract due to fiscal consolidation. Investment growth is expected to stay robust, led especially by large infrastructure projects, and likely followed by private investments. Sectoral shifts toward the services sector which was battered during the pandemic, will come at the cost of weakened growth in the manufacturing sector.

Countries face uncertainties from economic outcomes in high-income countries, from the path of monetary tightening in the United States, from the trend in global commodity prices, and from deteriorating conditions in domestic financial sectors. Climate change-related risks, together with the narrow fiscal space of South Asian governments, will increase countries' climate financing needs.

The chapter is divided as follows. Section 2.1 discusses the outlook for the region's growth, including forecasts on the demand components, inflation, and poverty. Section 2.2 considers

some scenarios to illustrate changes in the external environment. Section 2.3 is dedicated to a discussion of climate financing in South Asia.

2.1 Dimmed outlook amid continued external strains

South Asia's economy is expected to grow by 5.6 percent in 2023 and 5.9 percent in 2024, as growth moderates after the initial post-pandemic recovery in 2021 (Table 2.1). The growth rate forecast for 2023 was revised down by 0.5 percentage point compared with the October 2022 forecast.[1] The Indian economy is expected to grow by 6.3 percent in the fiscal year starting April 2023, a downward revision from both the October 2022 and the January 2023 forecasts driven by moderating consumption and ongoing fiscal consolidation. Sri Lanka's economy will continue to contract in 2023, albeit at a slower pace than in 2022, even with the IMF program that will help close the country's financing gap. The floods in Pakistan in the second half of 2022 continue to take a toll on the economy, just as the country faces a slew of economic challenges and uncertainties over the renewal of the IMF program. As a result, Pakistan's GDP growth rates for the current and the next fiscal year are revised downward by more than 1 percentage point each. Nepal also saw downward revision to growth in the current fiscal year, which reflects the impacts from monetary policy tightening, import restriction measures and post-electoral political uncertainty. Bangladesh's growth forecast is revised downward from October 2022 but kept unchanged from January 2023, as the forecast in January already incorporated the effects from the IMF program and related policy measures signed into effect at the end of January.

Although most regional countries face worsening growth prospects, there are important differences in the sources of the economic challenge. Only two countries in the region are currently reporting GDP figures on a calendar year basis: Maldives and Sri Lanka. No official forecast estimate is reported for Afghanistan, since official data collection halted in 2021.

- **Afghanistan's** economy has settled around a fragile low-level equilibrium, supported by a partial resumption of aid and shipments of cash in US dollar. Under the baseline scenario where the economy continues to receive humanitarian and basic service support, the World Bank estimates that real GDP could move to a low-growth trajectory during 2023–2025 with annual growth of between 2 and 3 percent. Under this scenario, per capita income will not improve due to high population growth and poverty is likely to remain high. The regressive gender policies of the current regime

[1] A new method is adopted for calculating calendar year GDP growth for South Asia in the forecast years. The new method no longer depends on forecast of India's quarterly GDP, but instead uses India's fiscal year forecast. This change in method resulted in updates to the forecast in October 2022. South Asia growth rates in years with official published quarterly GDP data from India are still computed using India's quarterly data.

Table 2.1. Growth in the region downgraded amid continuing pressures

	Country fiscal year	Real GDP growth at constant market prices (percent)				Revision to forecast from October 2022 (percentage point)	
Calendar year basis		2021	2022	2023(f)	2024(f)	2023(f)	2024(f)
South Asia region (excluding Afghanistan)		**8.2**	**5.9**	**5.6**	**5.9**	**-0.5**	**0.0**
Maldives	January to December	41.7	12.3	6.6	5.3	-1.6	-2.8
Sri Lanka	January to December	3.5	-7.8	-4.3	1.2	-0.1	0.2
Fiscal year basis		FY21/22	FY22/23(e)	FY23/24(f)	FY24/25(f)	FY23/24(f)	FY24/25(f)
India	April to March	9.1	6.9	6.3	6.4	-0.7	0.3
		FY20/21	FY21/22	FY22/23(e)	FY23/24(f)	FY22/23(f)	FY23/24(f)
Bangladesh	July to June	6.9	7.1	5.2	6.2	-0.9	0.0
Bhutan	July to June	-3.3	4.3	4.5	3.1	0.4	-0.6
Nepal	mid-July to mid-July	4.2	5.8	4.1	4.9	-1.0	0.0
Pakistan*	July to June	5.7	6.0	0.4	2.0	-1.6	-1.2

Sources: World Bank Macro Poverty Outlook and World Bank staff calculations.
Note: (e)=estimate, (f)=forecast. GDP measured in 2015 prices and market exchange rates. Pakistan (*) is reported at factor cost. Afghanistan is not producing national accounts statistics since August 2022, so its data are excluded from the table. To estimate regional aggregates in the calendar year, fiscal year data is converted to calendar year data by taking the average of two consecutive fiscal years for Bangladesh, Bhutan, Nepal, and Pakistan at 2015 constant US dollar, for which quarterly GDP data are not available. A new method is used for calculating calendar year South Asia GDP growth for the forecast years. The October 2022 forecasts of 2023 and 2024 GDP growth are updated using this new method.

could reduce external support and lead to a loss of human capital, adversely impacting future growth prospects of the economy. A stoppage of US dollar cash shipments, an inability to finance the current account deficit, and instability in the banking sector pose significant downside risks in the immediate term.

- **Maldives** is expected to grow by 6.6 percent in 2023 and 5.3 percent in 2024, supported by a robust tourism performance. The downward revisions in the growth rate forecasts for 2023 and 2024 compared with previous forecasts mainly reflect an adjustment in the 2021 growth rate. The return of tourists from China, together with arrivals from India and the Russian Federation will support increased tourist arrivals in the near term, while increased capacity in the tourism sector, including the expansion of Velana International Airport (expected completion by 2025) and investments

in new resorts will boost the tourism sector going forward. Although the fiscal deficit is expected to narrow on the back of the recent goods and services tax (GST) rate hike, public debt levels remain high and debt-servicing costs are rising. Tourism-shrinking global shocks remain a potential downside risk, and high external debt and tightening global financing conditions pose risks to the fiscal and external accounts.

- **Sri Lanka's** real GDP is expected to contract by 4.3 percent in 2023 following a sharp contraction in 2022, as its ongoing economic crisis continues. Starting 2024, real GDP is projected to expand slowly, growing by 1.2 percent in 2024, supported by upcoming debt restructuring and growth-enhancing structural reforms. Inflation is projected to come down from a high base as monetization of fiscal deficits is reined in. The fluid political situation and heightened fiscal, external, and financial sector imbalances will continue to make growth prospects uncertain. The acute impact of the crisis on poverty could worsen due to policy adjustments needed for stabilization, while rising non-performing loans (NPLs) in the financial sector and spillover from the public sector due to sovereign-bank linkages (Box 1.3) increase financial sector risks.

Bangladesh, Bhutan, and Pakistan report GDP in fiscal years that run from July 1 to June 30, while Nepal reports from mid-July to mid-July of the following year. This means that there is more certainty about the forecast for the fiscal year ending in mid-2023.

- In **Bangladesh**, real GDP growth is expected to decelerate to 5.2 percent in FY2022/23, as still-high inflation, tight financial conditions, disruptive import restrictions, and rising global economic uncertainty weigh on growth. Growth is projected to accelerate starting in FY2023/24, supported by an expected easing of inflationary pressures and anticipated acceleration of reform implementation. Exports are expected to sustain modest growth in FY2022/23 on the back of an increasing market share of ready-made garments, and growth is projected to slow over the next few years. Key downside risks include rising commodity prices, increasing external sector pressures, and a sharp global economic slowdown. The complex multiple exchange rate system (Box 1.2) may discourage exports and remittance inflows.
- **Bhutan's** economy is expected to grow by 4.5 percent in FY2022/23, supported by the further reopening of borders in September 2022. However, tourist arrivals are expected to remain subdued because of slow global growth and the introduction of the new tourism levy. As a result, growth is expected to remain subdued in FY2023/24. Over the medium term, growth is expected to be supported by recoveries in non-hydro industry and the services sector, and by the commissioning of a new hydropower plant. Vulnerabilities in the country's financial sector, which has tight links with the public sector,[2] and delays in fiscal consolidation could impair the government's ability to support a robust recovery.

[2] About 60 percent of assets of Bhutan's financial sector are controlled by the country's public sector.

- In **Nepal**, real GDP growth is expected to decelerate to 4.1 percent in FY2022/23 before rising to 4.9 percent in FY2023/24. Slower growth in FY2022/23 reflects impacts from import restrictions during the first half of FY2022/23, monetary policy tightening, political turbulence related to elections and changes of government, and shrinking government expenditure due to lower revenue. Remittances—a major source of income and driver of growth—are expected to remain strong through FY2024/25 on the back of strong migration outflows. But the expected drop in oil prices and the growth slowdown in the Gulf countries will put downward pressure on remittance inflows (World Bank 2022a), while high reliance on remittances hinders the development of an export sector. Risks to the forecast tilt to the downside and include higher-than-expected inflation, which will dampen consumption and growth, continued political instability, and slow recovery in human capital loss during the pandemic.
- In **Pakistan**, real GDP growth in FY2022/23 is downgraded to 0.4 percent, reflecting tighter fiscal policy, the impacts of the floods in the first half of the fiscal year, high energy prices and import controls. Agricultural output is expected to contract due to the floods—the first time in more than 20 years—while the industry sector is expected to shrink due to supply chain disruptions from energy and import shortages, deteriorating investor confidence due to increased economic uncertainty, and higher borrowing and input costs. Spillovers from the industry sector are expected to lead to sharply slower growth in the services sector. Growth is projected to recover but remain low at 2 percent in FY2023/24 as low foreign reserves curtail economic activities. The forecast assumes that the IMF program remains on track but is subject to substantial downside risk from non-completion. Additional downside risks include uncertainty in debt rollovers and external financing, political instability, and spillover of public sector risk to the financial sector due to the deepening sovereign-bank nexus (Box 1.3).

Finally, India's current fiscal year (FY2023/24) runs from April 1, 2023, to March 31, 2024.

- **India's** real GDP growth is projected to moderate to 6.3 percent in FY2023/24 and 6.4 percent in FY2024/25, as rising borrowing costs, slower income growth, and fiscal consolidation especially on the current spending side dampen consumption, while the global slowdown weighs on exports growth. Investment is expected to continue expanding at high rates, supported by the government's capital expenditure and despite still-high input and borrowing costs. The planned withdrawal of food support and the shrinking of work programs in the Union Budget for FY2023/24 could worsen the situation for vulnerable households.

Table 2.2. Private consumption impacted by still-high inflation, while investment outperforms expectation

	South Asia real GDP and demand component growth (percent)				Revision to forecast from October 2022 (percentage point)	
Calendar year basis	2021	2022	2023(f)	2024(f)	2023(f)	2024(f)
GDP (excluding Afghanistan)	8.2	5.9	5.6	5.9	-0.5	0.0
Private consumption	10.9	7.1	5.8	5.4	-0.3	-0.6
Government consumption	7.3	1.3	-0.4	3.5	-5.6	-2.6
Investment	15.9	8.5	7.9	7.3	0.4	-0.1
Exports	22.5	15.1	8.7	7.7	-0.4	-0.6
Imports	22.1	15.1	9.8	7.1	0.4	-3.0
Net exports' contribution to GDP growth (percentage points)	-0.9	-0.8	-0.7	-0.3	0.1	0.9

Source: World Bank Macro Poverty Outlook and World Bank staff calculations.
Note: (e)=estimate, (f)=forecast. South Asia GDP and its components are calculated using country-level fiscal year numbers converted to calendar year. Net exports' contribution to GDP growth is calculated as change in net exports divided by lagged GDP. Afghanistan is not included in the regional aggregates. A new method is used for calculating calendar year South Asia GDP growth for the forecast years. The October 2022 forecasts of 2023 and 2024 GDP growth are updated using this new method.

Real private consumption will be constrained by elevated inflation, rising borrowing costs, and slower income growth. Although falling global energy prices (Figure 1.1.1) will ease domestic inflationary pressure, global food prices remain elevated and are projected to decline only gradually. Accordingly, inflation will not fall as fast as previously forecast (Figure 2.1.2) and weakened consumer purchasing power will continue to weigh on private consumption growth. Rising borrowing costs as global financial conditions continue to tighten and slow the recovery in employment and income are other factors that are unfavorable for private consumption. Private consumption is expected to expand by 5.8 percent in 2023 (Table 2.2), which is a slight downward revision from the forecast in October 2022, and below the region's pre-pandemic average growth of private consumption.[3] Real import growth is expected to slow down in 2023 compared with the previous two years. Although a few countries have reduced or removed import restrictions implemented in 2022, restrictions in Pakistan and Sri Lanka, along with a shortage of foreign exchange, will constrain imports. Sri Lanka's imports will contract by 3.9 percent in 2023, while in Pakistan import volumes are expected to shrink by 15.3 in the current fiscal year.

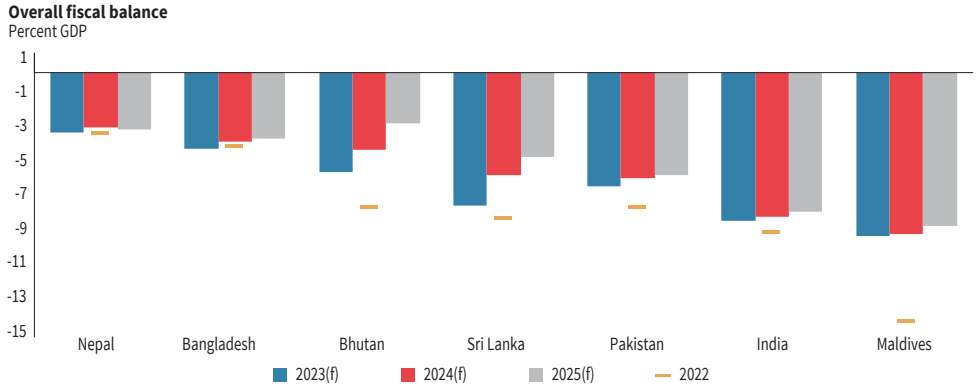
[3] South Asia's private consumption growth averaged 6.8 percent between 2015 and 2019.

Growth in real government consumption will fall due to fiscal consolidation. Government consumption is expected to shrink by 0.4 percent in 2023 due to fiscal consolidation. In India, the Union Budget for the fiscal year starting in April is set to shrink current expenditure, which will reduce government consumption by 1.1 percent in FY2023/24. For Pakistan, government consumption will shrink by 16.1 percent in FY2022/23 as the government undertakes fiscal consolidation to rein in the deficit. Sri Lanka's newly signed IMF program will involve fiscal austerity, which will lead to a shrinking of government consumption. In contrast, Maldives is expected to increase government consumption by 11 percent in 2023, as the country faces large debt-servicing costs, and the success of fuel subsidy reform proposed for 2023—aimed to reduce the fiscal burden—is subject to political uncertainty.

Real investment growth in the region is expected to remain strong amid capital expenditure increases in India and Maldives, despite high borrowing rates and unfavorable investor sentiment. Ongoing and future monetary tightening and reduced investor risk appetite will keep borrowing rates high, which will dampen investment growth in countries with weak macro-financial conditions, such as Pakistan and Sri Lanka. In addition, Pakistan faces increased economic uncertainty from rising prices and rapid exchange rate depreciation, which will also dampen investment, especially in the tradable sector. In Sri Lanka, while investment is expected to contract in 2023, anticipated debt restructuring and reforms could boost investor confidence in 2024. Capital spending is expected to decline in Bhutan in FY2022/23 and further decline in FY2023/24 due to lower public investment in the first year of the new Five-Year Plan (FYP). In Bangladesh, declining subsidy expenditure is expected to create fiscal space to sustain public investment. Despite the unfavorable external conditions, capital expenditure on large infrastructure projects will help propel investment growth for the region as a whole. For example, India's capital expenditure is expected to increase by 33 percent over last year's budget estimates, with the allocation primarily going toward large infrastructure projects. Maldives' airport expansion, along with other projects that boost connectivity, will contribute to the country's projected 6.1 percent growth of investment in 2023. Large public investment could crowd in private investment in the short term through contracts assigned to the private sector, and in the medium term through improved infrastructure that helps connect businesses to larger markets. But public investment financed by the domestic financial sector could also crowd out private credit (Section 1.4).

Overall fiscal deficit is projected to narrow for South Asian countries driven by fiscal consolidation (Figure 2.1). Countries fall broadly into two groups. In Bangladesh and Nepal—two countries with relatively low fiscal deficits as a percentage of GDP—the fiscal deficit is expected to remain steady in FY2022/23. In the other countries, the fiscal consolidation is expected to lead to more dramatic narrowing of fiscal deficits. In Bhutan, fiscal deficit is expected to decline in FY2022/23 driven by lower capital spending, while measures to rationalize current expenditure and mobilize domestic revenues will support further declines

Figure 2.1. Fiscal consolidation will lead to narrowing fiscal deficits, but deficits will remain high in some countries

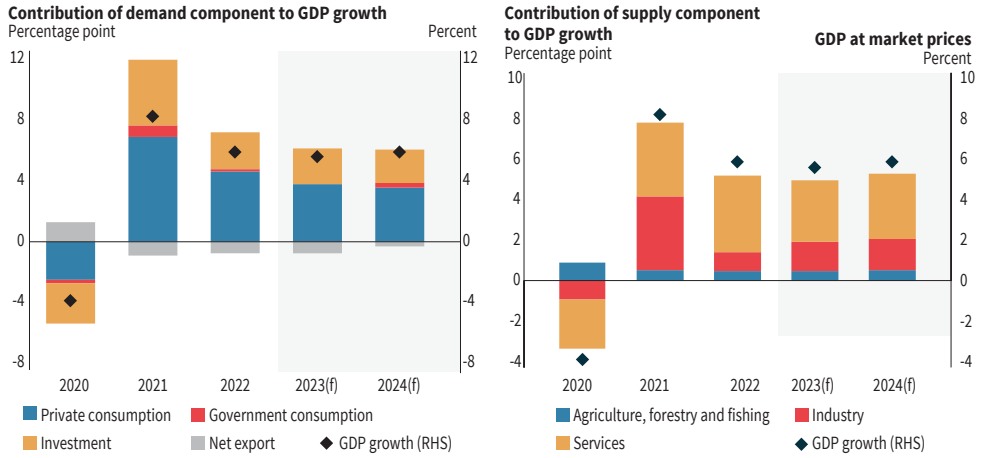


Source: World Bank Macro Poverty Outlook and World Bank staff calculations.
Note: Year 2023 is FY2022/23 for Nepal, Bangladesh, Bhutan, and Pakistan. It is FY2023/24 for India.

through FY2024/25. Much-needed fiscal consolidation in Sri Lanka will shrink the fiscal deficit considerably from 12 percent in 2021 to 7.8 percent in 2023 and 5 percent in 2025. Ongoing fiscal consolidation is expected to narrow Pakistan's fiscal deficit in the current fiscal year, through reduced spending on subsidies and grants (see also Section 1.5) and increased revenue from GST hikes, and is projected to further reduce the fiscal deficit in the medium term. In India, while the government's fiscal consolidation on current spending will contribute to narrowing fiscal deficits, the sustained capital expenditure push will limit the reduction in fiscal deficits in the near term, as the fiscal deficit is expected to stay in the 8 percent range from FY2023/24 to FY2025/26. Similarly in Maldives, while robust revenue growth due to a GST hike and increased economic activity are expected to narrow the fiscal deficit substantially in 2023, continued high levels of capital expenditure will keep the fiscal deficit at above 9 percent over the next three years.

The current account balance will improve gradually in 2023 and 2024 due to strong growth in services exports and improving terms of trade. Tourism is expected to support growth in services exports in Maldives, where investment in new resorts and the airport expansion will help accommodate and attract an increase in tourist arrivals. India's service exports will be boosted by strong performances in business and IT services. Remittance inflows to Nepal and Bangladesh are expected to rise having experienced strong outflows of migrant workers. Higher import prices due to weaker currencies will continue to dampen imports in Pakistan and Sri Lanka. Improving terms of trade, as global commodity prices fall, will contribute to stronger growth of exports than imports by 2024. As a result, countries' current account deficits will shrink or remain low. The exception is Maldives, where the current account deficit is expected to remain elevated due to necessary capital imports for infrastructure projects.

Figure 2.2. Growth of private consumption and investment will drive GDP growth, while on the supply side services sector growth will remain robust

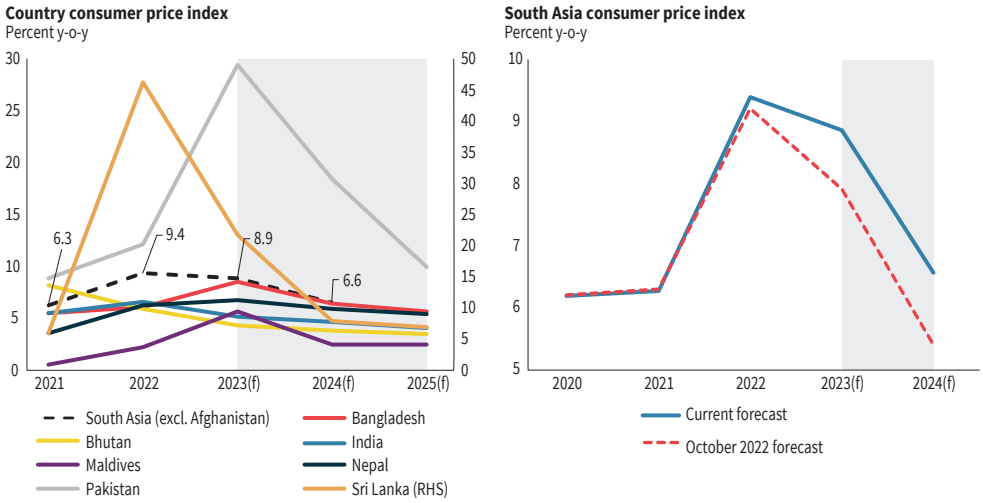


Source: World Bank Macro Poverty Outlook and World Bank staff calculations.
Note: The components in Figure 2.1 left panel are measured at factor costs. Their sum does not add up to the GDP at market prices.

On the supply side, forecast growth of the industry sector has been downgraded and is mixed across countries, while services sector growth is expected to remain relatively robust (Figure 2.2). Growth of the manufacturing sector will be limited by elevated input costs and weak global demand for goods exports, contributing to a downgrade in the broader industry sector. In Pakistan and Sri Lanka, the industry sector will shrink in 2023, as import shortages will constrain production. Growth in the industry sector is expected to be strong in Bangladesh as demand for its goods exports has proven to be robust, but growth is expected to slow down in FY2022/23 compared with previous years, due to difficulties in importing inputs and disruptions in energy supply. In India, although the industry sector underperformed in FY2022/23, it is expected to return to a higher growth rate supported by growth of construction. In contrast to the industry sector, South Asia's services sector will sustain robust growth in 2023 and 2024, contributing an increasing share to the overall GDP growth. Although weakness in the industry sector can spill over into services sub-sectors that support industry, such as wholesale and transportation services, the services sector as a whole is expected to be resilient. In Pakistan, where both agriculture and industry sectors are expected to shrink in FY2022/23, the services sector is expected to expand at an annual rate of around 2 percent in FY2022/23 and FY2023/24.

Inflation in South Asia is expected to have peaked in 2022, but the decline starting in 2023 will be slower than previously expected (Figure 2.3). As global commodity prices decline and consumption growth is expected to remain weak, domestic inflationary pressure will also ease in the region. The annual average inflation rate will fall to 8.9 percent in 2023 and

Figure 2.3. Inflation will fall more slowly than previously expected



Source: World Bank Macro Poverty Outlook and World Bank staff calculations.
Note: Individual-country inflation shown in corresponding fiscal years. South Asia average inflation is computed using average price index weighted by countries' shares of the region's private consumption in 2021. Afghanistan is excluded due to the lack of country forecasts.

below 7 percent in 2024, after reaching 9.4 percent in 2022. Yet not all countries expect to see inflation fall in 2023, as weaker currencies, policy changes and natural disasters contribute to elevated inflation. In Maldives, the GST rate hike is expected to keep inflation high in 2023, while growth of consumption (mainly government consumption) will increase demand. Inflation is expected to peak in FY2022/23 in Bangladesh, as domestic inflation was driven up by increases in domestic energy prices as subsidies were reduced on gas and electricity prices in the first half of the fiscal year (July to December 2022, see also Section 1.5). A weaker currency, a post-flood scarcity of agricultural products, and a goods GST hike are contributing to higher inflation in Pakistan. Climate change will continue to bring more frequent extreme weather events and anomalies, which will contribute to higher prices. Box 2.1 estimates the impact of weather anomalies on countries' price stability.

Per capita real GDP is expected to grow at about half a percentage point slower in 2023 than previously expected. Because of upward revisions to India's official GDP for FY2020/21 and FY2021/22, the region's real GDP growth for those years is also revised up.[4] As a result, the region's forecast of the 2023 real GDP level is slightly higher than previously forecast,

[4] India revised the official GDP growth rate for FY2020/21 from -6.6 to -5.8 percent, reflecting a smaller contraction from the pandemic, and the growth rate for FY2021/22 from 8.7 to 9.1 percent, reflecting sharper consumption growth on the demand side and higher manufacturing output than previously estimated. Maldives also revised upward the GDP growth for 2021 from 37 to 41.7 percent, as later released data capture a stronger recovery from the 2020 impact of the pandemic, although the revisions have a relatively small effect on the region's GDP growth. Because of these revisions to historical GDP estimates, the region's growth rate in 2020 is revised from -4.5 to -3.9 percent, and the growth rate in 2021 is revised from 7.8 to 8.2 percent.

Box 2.1. Weather extremes and price stability

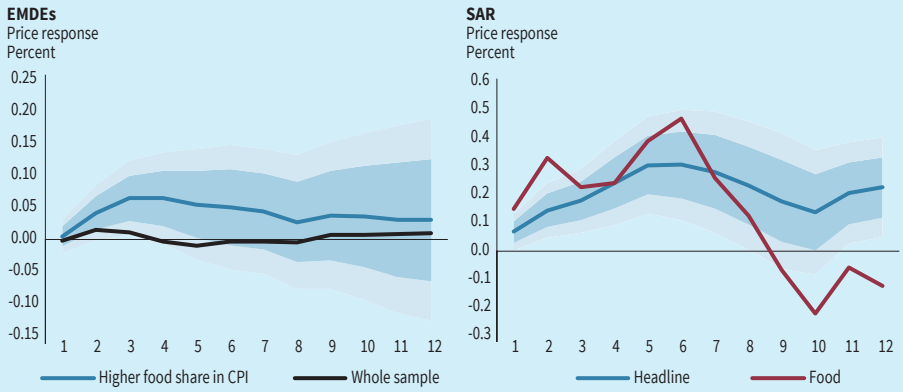
Climate change matters for price stability. Climatic patterns can affect prices through several channels (Faccia et al. 2021). Global warming is associated with a greater incidence of damaging climatic events, such as windstorms, floods, and extremes of precipitation and temperature (IPCC 2018). Such events may impact specific prices, notably food prices (Faccia et al. 2021; Crofils et al. 2023), and hamper the implementation of macroeconomic policies. In addition, the net zero carbon emission transition is likely to involve sharp increases in the price of carbon. That in turn is likely to affect consumer prices directly through higher electricity, gas, and petrol prices, and indirectly through increased costs of production for firms across a broad range of sectors. In the long run, higher temperatures may reduce labor productivity and growth potential, leading to lower equilibrium interest rates and less space for conventional monetary policy.

This box focuses on extreme and unpredictable weather phenomena that could drive short-term price developments in several ways, including a fall in agricultural output and changes in energy demand (Mukherjee and Ouattara 2021). For example, in India, more erratic monsoon rains have translated into more volatile food prices, destabilizing households' inflation expectations, undermining the ability to forecast inflation, and muddling the formulation of monetary policy (Singh et al. 2022; Dilip and Kundu 2020). Food prices in Pakistan skyrocketed partly as a result of catastrophic floods last year, with certain food product prices increasing more than five times (Deutsche Welle 2022). Weather extremes may also lead to higher prices when there is an increased demand for energy, but also affect energy supply by reducing the productive efficiency of the infrastructure that produces the energy. Such an imbalance in energy demand and supply could lead to higher prices.

At a macro level, weather extremes could affect price stability. The following analysis considers the price responses to temperature anomalies. The potential effects of precipitation anomalies or weather-related natural disasters are left for future studies. The charts below show the impulse responses based on Jordà's (2005) local projections method and Brandao-Marques et al.'s (2020) approach (see Appendix for more details).

Temperature anomalies play a negligible role in driving prices in the EMDEs sample (Figure 2.4, left panel). However, the impact is more significant in the economies with a higher share of food in the overall consumption basket. The agriculture sector is probably most vulnerable to fluctuations in weather conditions and has a relatively higher contribution to GDP in such economies, implying that weather extremes could have wider

Figure 2.4. Prices respond significantly to temperature anomalies in South Asia



Source: Data from Brandao-Marques et al. (2020) and World Bank staff estimations.
Note: Results come from a local projection model (Jordà 2005) with Driscoll and Kraay (1998) standard errors that are robust to heteroskedasticity and to serial and spatial correlation. The unbalanced panel comprises monthly data from 2003 to 2017 for 40 EMDEs (the whole sample) and four South Asian economies (Bangladesh, India, Pakistan, and Sri Lanka). Dependent variables are the logarithms of the price levels, while temperature anomalies are defined as deviations from the respective monthly averages. Shaded areas show 68 and 90 percent confidence intervals.

economic consequences (Mendelsohn 2009). Also, many small-scale farmers in developing countries have limited access to risk management tools, such as insurance and irrigation infrastructure, which makes them particularly vulnerable to exogenous shifts in weather conditions (Aragón et al. 2021). This could lead to disproportionate impacts on livelihoods and food security (Crofils et al. 2023). The results for South Asia indicate even stronger effects that remain significant for almost the whole year after the shock (Figure 2.4, right panel). The impact on food prices is initially higher but dissipates faster.

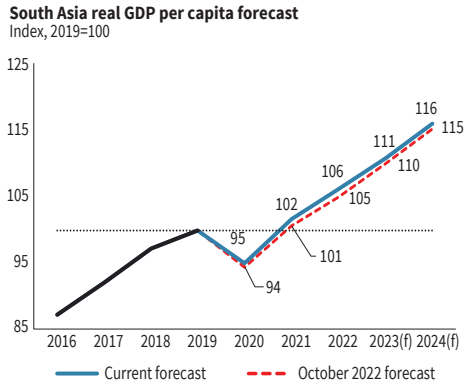
The contemporaneous increase in headline and food prices could be explained by hot summers reducing food production, resulting in supply shortages (Faccia et al. 2021). Sectoral shocks entail relative price adjustments that could eventually contribute to headline inflation variability (Reis and Watson 2010). Extreme events affect local production, then local prices and, depending on the country's engagement in global trade, potentially global prices. For example, in 2019, India experienced a heatwave, with temperatures reaching over 50 degrees Celsius in some areas. The heatwave affected many crops, including wheat, which is a staple food for millions of people in India. The reduced wheat production led to a 7-percent increase in the price of wheat flour, the ingredient in many other food products (The Hindu 2019).

It is critically important for policy makers to anticipate the potential effects of weather extremes and implement adequate stabilization policies. Importing agricultural

products from other regions could mitigate the detrimental effects (Crofils et al. 2023). For this to work better, it would be helpful if food prices and import quantities are market-determined rather than government-administered, such that prices signal to firms and suppliers when to import from other countries. Intra-regional trade can also help by ensuring a consistent supply of food. While intra-regional trade is small, it can contribute to reducing price volatility, increasing competition, and promoting specialization. In line with this, it will be necessary to identify crops and regions that are most weather-sensitive and diversify agricultural supply toward crops that are more resistant to droughts or flooded conditions. In addition, developing insurance and commodity derivatives markets could provide a strategy for hedging price risks in the face of uncertainty (Dilip and Kundu 2020). By dampening local fluctuations, such policies could be beneficial at a macroeconomic level, in particular for central bank efforts to maintain price stability. Of course, the credibility of the monetary policy regime remains one of the main factors that determine the impact of relative price adjustments, the associated temporary rise in actual inflation, and its influence on inflation expectations.

even though the GDP growth rate in 2023 has been revised down. Accordingly, the region's per capita real GDP level has been revised up compared with the October 2022 forecast, even though per capita GDP is expected to grow more slowly than previously forecast. Countries in the region follow diverging development paths, with per capita real GDP expected to grow fastest in Maldives and India between 2019 and 2023, due to a strong recovery, steady growth since the pandemic, and modest population growth. Per capita real GDP in 2023 is estimated to have fallen below the 2019 level in Afghanistan and Sri Lanka, as unstable political situations and macroeconomic crises have beleaguered these economies. In Pakistan, as GDP growth is expected to be slower than population growth in calendar year 2023 due to the ongoing economic crisis, per capita real GDP is expected to fall compared with 2022.

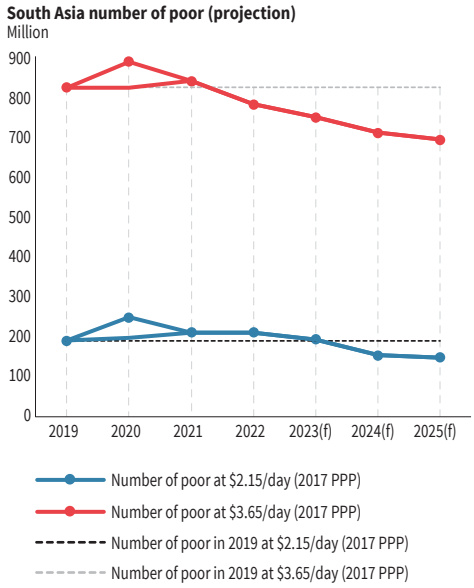
Figure 2.5. Per capita real GDP will grow at about half of a percentage point slower in 2023 than previously expected



Source: World Bank Macro Poverty Outlook and World Bank staff calculations.
Note: Afghanistan is excluded from the calculation due to data availability issues since 2021. Because of upward revisions in India's official GDP for FY20/21 and FY21/22, South Asia's real GDP per capita for calendar years 2020 and 2021 are also revised upward.

Poverty in the region will not fall as quickly as previously expected, given that elevated inflation, a slow recovery of employment and incomes, and the withdrawal of pandemic-era food programs impact the poor the hardest. As global food prices are only expected to fall slowly, and weather anomalies and natural disasters will continue to reduce local-level food production, food prices are expected to remain high. Because of their large share of food consumption, the poor are hit the hardest by elevated food prices (see also Box 1.1). As recovery of employment and income remains slow, opportunities for the poor to escape from poverty will be limited. As Sri Lanka starts the necessary reforms and transition to correct external imbalances, poverty will likely rise initially, and better-targeted social assistance programs will be needed to limit the impact of reforms on poverty. In India, poverty is expected to decline, but the withdrawal of the additional free food transfers that were made available during the pandemic will increase the vulnerability of the poor and likely negatively impact poverty reduction, especially if food inflation remains elevated. In Pakistan, agricultural output is expected to contract due to the floods, and the industry sector will shrink due to input shortages, rising borrowing costs, and weak investor confidence. With limited fiscal space to provide social assistance, the economic contraction will worsen poverty, as the poverty rate is expected to rise in Pakistan in 2023. As a result, the number of poor in the region at the low-income threshold (US$2.15/day, 2017 PPP) will only fall below its 2019 level by 2024.

Figure 2.6. The number of poor at the low-income threshold of US$2.15/day will only fall below its 2019 level by 2024



Source: World Bank Macro Poverty Outlook and World Bank staff calculations.
Notes: Nowcast until 2022. Forecast from 2023 on. For India, the latest estimates based on official data are from 2011. Estimations for later years up to 2021 are based on imputed consumption using the Consumer Pyramid Household Surveys and following Sinha Roy and van der Weide (2022). From 2022 onward, a microsimulation using growth rates for five sectors and a pass-through factor of 0.65. As Afghanistan did not participate in the ICP exercise, the number of poor is adjusted with the rest of the region's poverty rate and Afghanistan's population projection.

2.2 Outlook subject to risks and uncertainties

Risks to the outlook are tilted to the downside, and include both external and internal risks. External risks include lower-than-expected growth in high-income countries, higher commodity price inflation, and faster monetary tightening by the United States and other

Table 2.3. Assumptions behind alternative scenarios

Scenario	Description	Assumption behind scenario relative to baseline forecasts
(i) Uncertainty about high-income country growth, with spillovers to South Asian countries	Monetary tightening, banking sector risks could dampen growth in high-income countries more than expected; yet, stabilizing global environment could lead to higher-than-expected growth.	Thirty-four high-income countries see growth at 0.25 percent lower (or higher) than baseline in 2023 and 2024. Declines in growth are distributed uniformly across high-income countries (generalized malaise). In 2025 no deviation from baseline growth is assumed.
(ii) Commodity prices remain high	Impact of higher oil and metal (China reopening) prices on South Asia construction, manufacturing, import and export.	Higher-than-expected prices of metal in 2023–2025, impacting construction sector. Ramp-up of energy prices during 2023–2025, as global economy recovers, impacting the manufacturing sector, and import and exports.
(iii) US monetary policy tightening	Impact of US monetary policy tightening on exports to four SAR countries, and in turn on consumption, investment and import for the whole region.	US policy rate increases by 25 basis points more than expected in 2023 and 2024, reducing and US dollar real exports.
(iv) Financial and banking sector crisis in select South Asian countries, with spillovers to the real sector and to other regional countries	Rise in loan delinquency and banking sector liquidity problems	NPL ratio increases by 2.5 or 5 percentage points in 2023 and 2024 in some SAR countries, dampening investment.

Source: World Bank staff using MFMod.

advanced economies. Uncertainty in the global economy is on the rise. The turmoil in the US and European financial sectors that started in March 2023, although localized for now, could spill over into the broader financial market and adversely impact the global economy. But swift reactions by the US and European central banks could also avert the potential crisis and strengthen monitoring of the banking sector, which can create upside to the global economy. Internally, financial risks are on the rise, as a result of rising borrowing costs, increasing sovereign risks, and the slow recognition of non-performing assets. In addition, the outlook for Pakistan and Sri Lanka depends on their ability to secure foreign exchange funding and resolve balance-of-payments pressures.

Several alternative scenarios are considered to understand the scale of these risks and uncertainties for the South Asian economies. The simulations of these alternative scenarios are carried out using the World Bank's Macro-Fiscal Model (MFMod). The model consists of 155 individual countries and allows South Asian countries to be impacted by other countries through various linkages, such as import-export, remittance flows, exchange rates, and commodity prices (Burns et al. 2019). Table 2.3 describes the scenarios and assumptions behind

them. For each scenario, a shock is applied to the model that represents deviations in sectors or countries from the individual country's baseline forecast presented in Section 2.1.

(i) Uncertainty about growth rates in high-income countries

This scenario looks at the impact of upside or downside surprises in the growth rates of 34 high-income countries. After a steady deceleration in 2022, the global economy stabilized in early 2023, aided by the reopening of the Chinese economy. But the shock to the US and European banking sector that started with the demise of Silicon Valley Bank in March 2023 injected further instability into the global economy. Given this backdrop, growth of high-income countries could surprise on either the upside or the downside. In this scenario, high-income country growth rates are assumed to be 25 basis points higher/lower than the baseline in 2023 and 2024, and there is no change from the baseline in 2025. To isolate the effect of growth rate deviations in high-income countries, commodity prices are held unchanged for this exercise; in other words, the price effect is shut down.[5] The positive/negative shock would increase/decrease South Asia's GDP growth in 2023 and 2024. The higher/lower growth rates would lead to a persistent effect on the GDP level, raising/lowering GDP by 0.07 percent in 2023, 0.13 percent in 2024 and 0.1 percent in 2025, compared with the baseline (Figure 2.7.A). The upside and downside risks together create a confidence band around the baseline forecast of South Asia GDP, with a width of up to 0.26 percent of GDP in 2024.

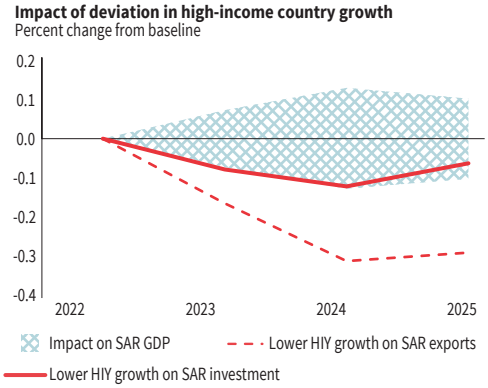
In the downside scenario, the slowdown in high-income growth would hit the exports sector the hardest, as weakened consumption in high-income countries reduces demand for South Asian exports. Real exports would be 0.17 percent lower in 2023 and about 0.3 percent lower in 2024 and 2025. Imports would be much less affected, as only imports of inputs for export production would be directly affected by the shrinking external demand, while imports for consumption would be only indirectly impacted. This would lead to deteriorating current account deficits, exacerbating the region's external sector pressures. Investment and government consumption would also be impacted, although to a lesser extent, as lower production reduces investment needs and shrinks governments' revenue collection.

Across countries, those with tighter links to the rest of the world or in more fragile macroeconomic conditions are impacted more severely by a slowdown in high-income country growth. The exports of Bangladesh, Sri Lanka, Pakistan, Maldives, and India would be most impacted by a slowdown in high-income countries. Bangladesh and Pakistan are major manufacturing exporters with Europe among the largest sources of export demand; Sri Lanka and Maldives receive tourists from Europe and are hence vulnerable to a negative demand

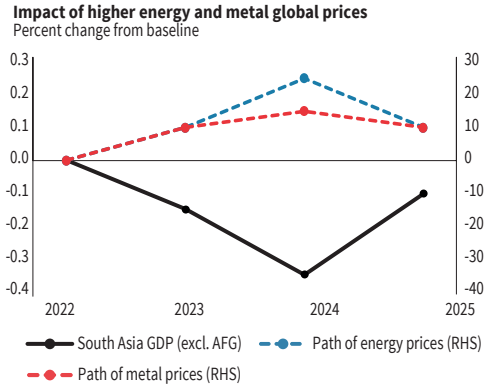
[5] By shutting off the price effect, the scenario does not allow growth-induced price effect, such as the impact of lower commodity prices on South Asia's external balances. It also does not consider the potential changes in interest rate and exchange rate from a slowdown driven by either a financial sector crisis or a weak demand.

Figure 2.7. External developments pose uncertainty and risks to South Asia's outlook

A. Uncertainty about high-income country growth could be an upside or downside to South Asia



B. Higher energy and metal prices could derail recovery in the region



Source: World Bank staff calculations based on MFMod simulation output.
Note: See Table 2.3 for the scenario assumptions.

shock originating from Europe; and India is linked to the United States and Europe through exports of business and IT services. Overall, Maldives would experience the largest drop in real GDP because of its high dependence on the tourism sector.[6] Sri Lanka would also see a sizable impact on GDP because of the effects on both investment and exports.

(ii) Commodity prices remain high

This scenario looks at the impact of higher energy and metal prices in 2023–2025. After peaking in 2022, energy (e.g., crude oil, coal) prices are expected to fall through 2025 in the baseline, and metal (e.g., aluminum and copper) prices are expected to stay high after falling slightly in 2023. The projections for energy prices represent a significant downward revision from forecasts in the fall of 2022, as a milder-than-expected winter in Europe and increased inventories helped relieve price pressures (World Bank 2023). But the geopolitical situation could shift quickly to increase pressures once again on energy, while the push for renewable energies could reduce supplies of non-renewable energy leading to higher energy prices in the short term. Metal prices could increase more than forecast, if China's reopening generates more rapid economic recovery than expected, especially in construction, or if supply bottlenecks in certain metals affect global prices. To account for these possibilities, this scenario assumes that energy prices would be higher than the baseline by 10, 25, and 10 percent in 2023, 2024, and 2025, respectively, and key metal prices would be 10, 15, and 10 percent higher than baseline during the same years (shown by dotted lines in Figure 2.7.B). Similar

[6] Exports of goods and services represent 85 percent of Maldives' economy in 2022.

to the last scenario, all other global factors are assumed to remain unchanged to isolate the impact of deviations in energy and metal prices. As such, the scenario does not account for spillovers of higher energy prices to the prices of food and fertilizers or the dampening effect of higher prices on countries outside of South Asia.

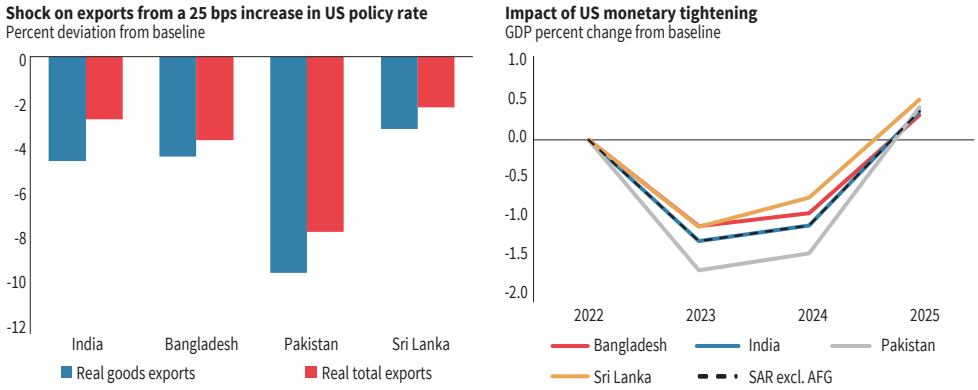
Higher global energy and metal prices would lower South Asia's GDP growth through lower consumption and investment. South Asia's GDP would be lower compared with the baseline, by 0.15 percent in 2023, 0.35 percent in 2024, and 0.1 percent in 2025 (Figure 2.7.B). The Indian economy would be the most heavily impacted, followed by Bhutan and Maldives. Both India and Maldives rely on energy imports, while Bhutan imports all fuel products. All three countries have large infrastructure projects that would be adversely impacted by higher metal prices, although metal exports from Bhutan and India could partially offset the impact. In India, the impact would be strongest on consumption (both private and public) and investment, as higher energy prices reduce consumption and higher metal prices could delay investments in infrastructure projects. In Bhutan and Maldives, because the infrastructure projects are linked to exports—hydropower exports for Bhutan and tourism for Maldives—the exports sector would see sizable impacts, while imports would also fall in response to higher prices.

(iii) Faster tightening of US monetary policy

This scenario studies the impact of faster-than-expected tightening of US monetary policy. Since the United States started increasing interest rates in 2022, borrowing rates have soared, investors have moved capital away from South Asia, and a strengthened US dollar has increased import prices for South Asian countries. Although global energy prices have fallen since late-2022, consumer inflation has been sticky in the United States and Europe, leading to more aggressive tightening. Although the recent financial sector turmoil could reduce the pace, the downside risk from more rapid tightening can be substantial for South Asian countries.

The scenario considers an unexpected shock where the United States would tighten monetary policy by 25 basis points more than expected in 2023 and 2024. Box 2.2 estimates the impact of US monetary policy on South Asian countries and isolates the effects through three different channels based on the reasons for tightening. In this scenario, it is assumed that more rapid tightening would be driven by a shift in the U.S. Federal Reserve's reaction function toward more aggressive actions (the "reaction shock" identified in Box 2.2). Using estimates from Box 2.2, the shocks on real goods exports are constructed for India, Bangladesh, Pakistan and Sri Lanka (Figure 2.8 left panel), allowing more aggressive US monetary tightening to dampen demand for South Asian goods exports. Tighter US monetary policy would also lead to capital outflows from South Asian countries. While this effect is not directly modeled here, the impact on exports incorporates the effect of

Figure 2.8. Impact of faster-than-expected US monetary policy tightening



Source: World Bank staff calculations based on MFMod simulation output.
Note: The size of the shock on real goods exports comes from Box 2.2. The shock on real total exports is computed using country's average share of real goods exports in total exports over 2018–2021.

the capital outflow on exchange rate and exports. The shocks on real total exports are then estimated by assuming a constant share of goods exports in total exports, using the average share over 2018–2021 for each country.[7] The constructed shock is largest for Pakistan because of the large estimated impacts from US monetary tightening and its larger share of goods exports.

Although the initial shock is on the export sector, the effect spills over to all demand sectors in the impact countries and to smaller countries in the region. The shock on exports would reduce imports through input-output linkages, although the reduction of imports is much smaller, which leads to a reduced contribution of net exports to growth. Government and private consumption would be lower due to lower income from exports, while investment would be lower due to the impact of lower exports on investor sentiment. The impact on GDP would be largest for Pakistan, as the estimated export response is largest for the country. Among the other South Asian countries, Bhutan would be impacted the most through lower demand for its non-hydro exports from India.[8] Overall, through the exports channel, the higher US policy rate shock in 2023 and 2024 would lower South Asia's GDP by 1.3 and 1.1 percent in 2023 and 2024, respectively, compared with the baseline.

[7] The scenario only considers direct effect from the rest of the world on the four South Asian countries. The impact on South Asian countries is assumed to only go through spillover from these four direct-impact countries. A more comprehensive treatment that allows direct impact on other countries would likely yield sizeable impact on Maldives due to the country's connection with the rest of the world through tourism. But the overall impact this more comprehensive approach on the region would be small due to the small size of Maldives' economy.

[8] All surplus electricity generated by Bhutan's hydro plants is exported to India, and so Bhutan's hydro exports are not linked to demand.

Box 2.2. Estimating the spillovers from US monetary policy

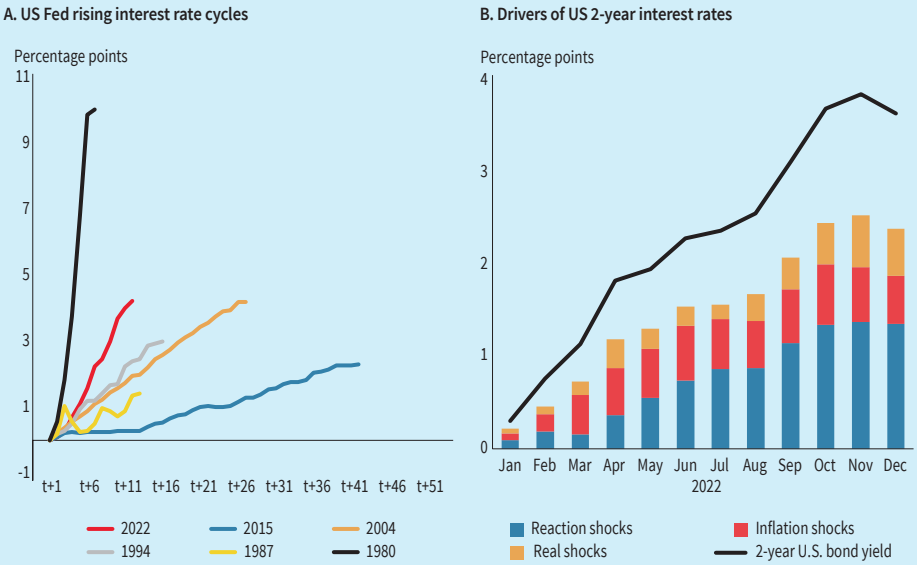
The U.S. Federal Reserve (the Fed) embarked in early 2022 on its steepest and fastest interest rate increases since the late 1980s (Figure 2.9.A). While higher interest rates generally affect all global economies given the role of the US economy in global activity and the US dollar in trade and finance, there is evidence that not all interest rate cycles are created equal (Arteta, Kamin, and Ruch 2022). That is, the underlying drivers of the increase in US interest rates matter for how these higher interest rates affect South Asian economies. Previous cycles that the Fed embarked on, starting in 2004 and 2015, were mainly driven by expectations of higher economic activity.[9] The current interest rate cycle through 2022, however, was mainly driven by a shift in the Fed's reaction function, pivoting toward more aggressive action to rein in inflation (Figure 2.9.B). When interest rates rise because of expectations of higher economic activity, they tend to have more benign consequences for South Asian economies as the economies benefit from more trade and milder shifts in risk tolerance. The current cycle will be particularly injurious to the region, however, as US import demand slows and shifts in global risk perceptions hammer these economies.

To study how different underlying drivers of US interest rate increases affect economies in South Asia, local projection models for Bangladesh, India, Pakistan, and Sri Lanka are estimated on monthly financial and economic data (see Appendix 2.2 for details). This box focuses on two underlying drivers of US interest rate moves: (i) "real shocks," which are prompted by improved prospects for US economic activity; and (ii) "reaction shocks," which reflect investors' assessments that the Fed's reaction function has become more hawkish.

South Asian countries face significant financial and economic spillovers from changes in US interest rates, but these differ depending on the countries integration into global financial markets and policy choices. The overall impact of real and reaction shocks, however, generally reflect detrimental impacts from reaction shocks and more benign outcomes from real shocks (Arteta, Kamin, and Ruch 2022).

[9] This is based on a decomposition of the two-year US bond yield in Arteta, Kamin, and Ruch (2022) into inflation shocks which are prompted by rising expectations of US inflation; reaction shocks which are prompted by investors' assessments that the U.S. Federal Reserve has shifted toward a more hawkish stance; and real shocks which are prompted by anticipation of improving US economic activity.

Figure 2.9. US interest rates

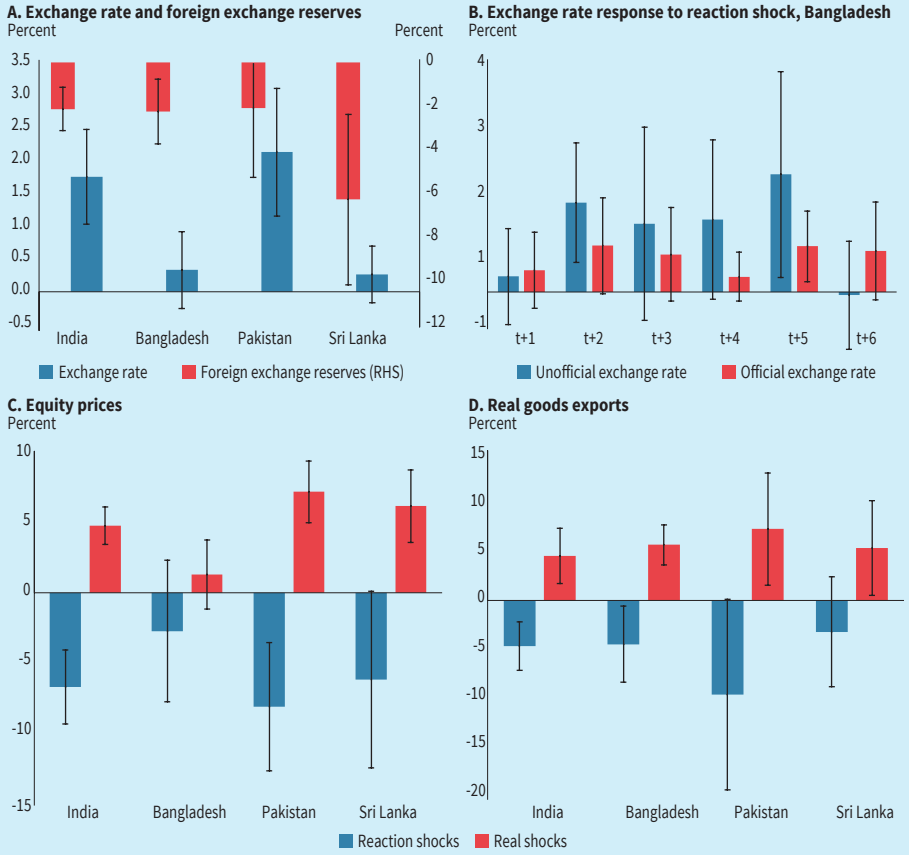


Sources: Arteta, Kamin, and Ruch (2022) and the Federal Reserve Bank of St. Louis.
Note: A. Based on monthly data of the effective federal fund rate. B. Shocks are estimated from a sign-restricted Bayesian vector autoregression (VAR) model with stochastic volatility. Figure shows cumulative change in underlying shocks and yields since January 2022. Inflation shocks are prompted by rising expectations of US inflation. Reaction shocks are prompted by investors' assessments that the Federal Reserve has shifted toward a more hawkish stance. Real shocks are prompted by anticipation of improving US economic activity.

Reaction shocks—which reflect investors' assessments that the Fed's reaction function has become more hawkish—tend to depreciate local currencies relative to the US dollar. Across South Asian countries, the impact is larger in India and Pakistan: a 25-basis point increase in the two-year US Treasury bond yields driven by a reaction shock is associated with about a 2-percent depreciation in the local currency in these two countries within one month (Figure 2.10.A).[10] The larger impacts reflect closer ties with the rest of the world and more free-floating exchange rates, compared with other countries in the region. In Bangladesh and Sri Lanka, in contrast, the initial impact is much smaller, with currency depreciation of less than 1 percent for all periods. In these two countries, the currency is generally stabilized through market intervention. In Bangladesh, despite the small impact on the official exchange rate, its unofficial exchange rate experiences a statistically significant depreciation after two months, and the cumulative depreciation after six months is almost twice as large as that of

[10] In another study published in the India Development Update (World Bank 2022b), it is found that a Fed policy shock (following Jarocinski and Karadi 2020), which is similar to the reaction shock here, leads to depreciation in India's currency against the US dollar of a similar size.

Figure 2.10. Impact of a 25-basis-point increase of US interest rate on South Asia



Sources: Haver Analytics and, World Bank staff estimates.
Note: Results from local projection models for each country, to reaction-function shocks (for example, a pivot toward a more hawkish monetary policy stance) and real shocks (for example, positive news about US economic activity). Shocks are estimated from a sign-restricted Bayesian vector autoregression (VAR) model with stochastic volatility. Local projection models include monthly data from as long as June 2001 to September 2022 for short- and long-term interest rates, equity prices, exchange rate to the US dollar, real exports, consumer inflation, and foreign exchange reserves. Dummies for the global financial crisis and COVID-19 pandemic included. Orange whiskers reflect 90 percent confidence intervals. A. First month response. Exchange rate is local currency per US dollar with positive values reflecting a depreciation. Official exchange rate in Bangladesh. C. First month response. D. Peak response.

the official exchange rate (Figure 2.10.B). In Sri Lanka, the limited response of the exchange rate reflects periods of intervention with the currency reflecting a crawl-like arrangement. Accordingly, declines in foreign exchange reserves in response to reaction shocks are most notable in Sri Lanka.

Equity prices in the region decrease in response to changes in US interest rates driven by a reaction shock, as monetary tightening in the United States leads to capital outflows from developing markets (Figure 2.10.C). Reaction shocks are associated with an average decrease of 6 percent in equity prices in the region, with Pakistan experiencing the largest declines. In contrast, an increase in the US interest rate due to improved economic activity in the United States (real shock) raise equity prices in the region, although the magnitude is smaller than responses from the reaction shock.

US interest rate moves also impact domestic economic activity. Real merchandize exports (in US dollars) significantly decline in response to reaction shocks (Figure 2.10.D), as perceived more aggressive monetary tightening by the United States decreases external demand for South Asian exports.[11] In contrast, higher US interest rates driven by improved economic activity increase real exports in the region.

Most SAR economies tend to see a significant decrease in consumer inflation from reaction shocks in response to tightening global financial conditions and changes in inflation expectations, despite exchange rate deprecation. Real shocks, in contrast, raise consumer inflation.

In conclusion, the spillover impact from higher US interest rates depends on the perceived reason for the rate hike. Reaction shocks are detrimental to the financial and economic health of economies while real shocks provide some support to domestic activity through the trade channel. Countries more closely connected with the rest of the world, through trade or capital flows, tend to see larger impacts, while a country's exchange rate regime matters for spillovers to the exchange rate and its foreign reserves.

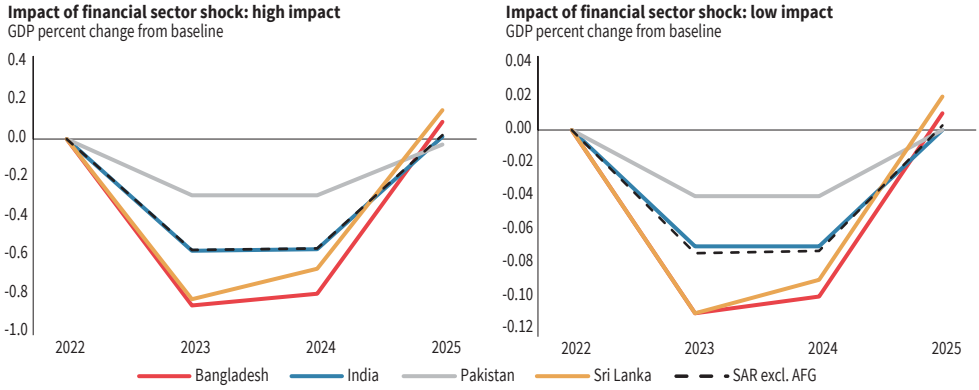
(iv) Rising financial sector risk

This scenario studies the impact of a deterioration in financial market conditions in South Asia. As discussed in Section 1.4, several factors have increased financial sector stress in South Asia, including rising NPLs in certain sectors, reduced liquidity in the banking system, and rising sovereign-bank linkages and sovereign risk. But because of loan moratorium programs that started during the pandemic, asset quality issues are not yet fully realized. At the same time, global and local financial conditions have worsened, as monetary tightening leads to

[11] In analyses not shown here, reaction shocks are associated with a decrease in industrial production in India and Sri Lanka, and in tourist arrivals in Maldives.

rising borrowing rates. This scenario assumes that the NPL ratio would increase by 2.5 to 5 percentage points each year during 2023–2024, in Bangladesh, India, Pakistan and Sri Lanka. As of 2022Q3 (latest data), the NPL ratio is around 5 percent in India, 7.5 percent in Pakistan and around 10 percent in Bangladesh and Sri Lanka. A 2.5-percentage-point increase would push India and Pakistan close to the level in 2022Q3, and Bangladesh close to the 2019Q3 level. The impact of this shock on banks' balance sheets would shrink credit and investment. The size of the impact on private investment depends on the elasticity of response, which is taken from the literature and in a range of between -0.233 and -0.9 (SenGupta 2020; Schnattinger 2021). Figure 2.11 shows the impact on GDP under the high impact (left panel) and low impact (right panel) scenarios for the largest and smallest impacts given the assumptions.[12]

Figure 2.11. Impact of worsening financial sector conditions depends on size of shock and elasticity assumption



Source: World Bank staff calculations based on MFMod simulation output.
Note: The shock on private investment is constructed by assuming a 5 ("high impact") or 2.5 ("low impact") percentage point increase in NPL ratios, and a higher or low elasticity of investment response. The shock is applied to total investment in Sri Lanka as the country does not have a split between private and public investment in the model.

As in the previous scenario, the initial shock would spill into other sectors of the impacted countries and affect other countries through trade. Lower private investment would lead to lower consumption due to lower total returns to investment. Imports would be lower both because of lower demand for consumption and lower capital imports due to lower investment. In turn, exports would also be lower compared with the baseline. Among the countries, Bangladesh and Sri Lanka would see the largest overall impacts, as the response of consumption to changes in investment is largest in these countries. Bhutan would again see sizable spillover effects from India through non-hydro exports. The overall impact on the region would be to reduce GDP by 0.07 (low impact) to 0.57 (high impact) percent in 2023 and 2024, relative to the baseline.

[12] The "high impact" scenario assumes a 5-percentage-point increase in the NPL ratios, and an elasticity of -0.9 for the investment response to rising of NPL ratios. The "low impact" scenario assumes a 2.5-percentage-point increase in NPL ratios, and a lower elasticity of -0.233.

2.3 Climate financing needs and opportunities

South Asian countries have come out of the pandemic with record public debt and tight fiscal space, and the tightening global financial conditions since 2022 have put additional pressure on governments' budgets. Fiscal consolidation is needed to create conditions for robust long-term growth. At the same time, the region's vulnerability to climate hazards and rising energy demand will require substantial investments to build climate resilience and accelerate the green transition in the coming years. These new challenges warrant further fiscal adjustments in three crucial directions: (i) more than in the past, fiscal buffers and insurance mechanisms must be put in place to prepare for future disasters; (ii) new infrastructure investment must be planned to make South Asia's economies more resilient and greener, while the international community should mobilize more concessional finance; and (iii) taxes and subsidies must be adjusted to incentivize the private sector to invest in climate-adaptation solutions and in greener technologies. Apart from the greening of taxes and subsidies, governments should improve the business climate, while ensuring that the greener technologies are accessible to the poorest and most vulnerable parts of the population. This section subsequently discusses these three adjustments.

2.3.1 The need for buffers and insurance

South Asia is one of the most vulnerable regions to climate risks and is regularly devastated by climate-related disasters (World Bank Group 2021a)**.** The most recent major example is the 2022 Pakistan floods, which are estimated to have affected 33 million people, and caused more than 1,730 deaths and economic losses of US$15.2 billion (Government of Pakistan 2022). These impacts illustrate the imperative of preparation for future shocks. The primary climate-related risks in South Asia are extreme temperatures, extreme precipitation, and delays and weakening of the monsoon circulation, resulting in flood damage and food and water insecurity (IPCC 2022). The changing climate could sharply diminish living conditions for up to 800 million people in a region that already has some of the world's poorest and most vulnerable populations (Mani et al. 2018). Projected losses from climate change in GDP per capita for South Asian countries are higher than the global average of about 7 percent, with Bhutan facing a potential loss of 18 percent, Nepal 13 percent, India 10 percent, and Pakistan 10 percent by 2100 (Kahn et al. 2021).

Disaster risk management requires fiscal buffers, for two reasons. First, funds are immediately needed after disasters. Second, Box 2.3 shows the importance of sound fiscal conditions during relief efforts. In the case of already fragile fiscal balances, disasters tend to exacerbate macroeconomic problems. Conditional finance could support the creation of buffers and insurance mechanism to ensure that the most vulnerable, who tend to be underinsured

by markets, are covered. Moreover, as the climate risks have been predominantly caused by high-income countries, there is a moral obligation to support South Asia in coping with intensified natural disasters. Financial risk management instruments (such as pooled investment funds, credit guarantees, public-private partnerships, or catastrophe bonds) can further create the necessary buffers.

A variety of financial risk management instruments for financing resilience have been successfully tested in South Asia. Climate and disaster risk insurance is a proven instrument that can mobilize private capital and protect households, firms, banks, and governments from climate-related and other natural hazards. Public-private partnerships are also an effective approach for developing climate risk insurance (World Bank Group 2022a). Regional insurance pools such as the Caribbean Catastrophe Risk Insurance Facility (CCRIF), the African Risk Capacity (ARC), and the Southeast Asia Disaster Risk Insurance Facility (SEADRIF) allow countries to pool their risks together and significantly reduce coverage costs. There is also the potential to scale up climate and disaster risk insurance in Bangladesh, Nepal, and Pakistan, due to the countries' high vulnerability and low insurance penetration (World Bank Group 2022b; 2022c; 2022d). Exchange rate risk can be addressed via innovative mechanisms such as the Currency Exchange Fund (TCX), which provides borrowers with financing in their local currency via swaps or forward contracts, while shifting risks to TCX.[13] Sovereign disaster risk finance instruments such as credits or loans with a catastrophe deferred drawdown option (CAT DDO) have been successfully developed and activated in Bhutan, Nepal, Maldives, and Sri Lanka. This instrument is usually embedded in broader frameworks for strengthening resilience and can increase governments' capacity to respond quickly to shocks without undermining fiscal balances and development objectives, thereby contributing to enhance the adaptive capacity of countries and people.

2.3.2 The need for infrastructure investment

Tailored infrastructure investment in South Asia is key for adapting to climate change. These investments are in many cases public goods, to be provided by governments. This is in large part due to the non-monetary and localized nature of many resilience-building activities that make them less attractive to the private sector. Deficit spending for adaptation should be balanced between investing in resilience and avoiding the buildup of debt and maintaining fiscal flexibility in disaster situations. Similar to the case of disaster preparedness, there is a role for the international community to finance or even fund part of these investments.

[13] https://www.tcxfund.com/about-the-fund/. Last accessed March 24, 2023.

Box 2.3. Fiscal space and disaster resilience

Fiscal management in South Asia is facing additional challenges due to climate change. Economic losses from more frequent and severe natural disasters may have adverse impacts, not only on investments and growth potential, but also government budgets and debt sustainability. Post-disaster relief and reconstruction spending entails fiscal costs that could limit fiscal space, emphasizing the need to supplement future fiscal assessments within the context of climate change (Heller 2020). Strengthening fiscal resilience is therefore essential. Larger fiscal space available before a disaster can support post-disaster recovery efforts through infrastructure rebuilding, social assistance, and demand stimulus, reducing potential scarring effects.

Numerous studies show that natural disasters have significant adverse effects on economic growth (Felbermayr and Groeschl 2014; Fomby et al. 2013; Klomp and Valckx 2014; Loayza et al. 2012; Rasmussen 2004). A fiscal response to address economic and distributional effects may lead to a debt increase, which carries downside risks of its own. Indeed, reduced economic activity shrinks fiscal revenues, while post-disaster response requires a rise in public expenditures, leading to an increase in government debt (Feyen et al. 2020; Koetsier 2017; Milivojevic 2023). Disaster episodes are also followed by lower sovereign credit ratings (Cevik and Jalles 2020a) and a higher probability of sovereign debt default (Klomp 2017; Cevik and Jalles 2020b).

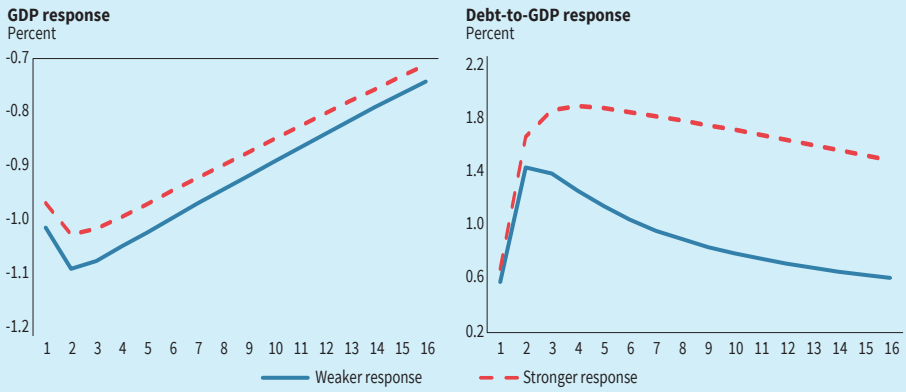
Analysis by the World Bank (2021) looks at the marginal effects of pre-disaster fiscal balances on GDP growth rates in South Asia for each of the three years after the disaster. Estimates from the regression based on extreme disasters[14] in the region from 1980 to 2019 show that more fiscal space helps boost GDP growth in the first year post-disaster. Although these point estimates should be interpreted cautiously, the exercise nevertheless demonstrates that countries with limited capacity to react may experience greater distress.

Modeling exercises can illustrate the importance of the relationship between climate and fiscal policy. The model used in this box explains the propagation mechanism of a natural disaster shock that affects agricultural productivity (see Milivojevic 2023 for more details). Based on Gallic and Vermandel (2020), it features farmers endowed with land with time-varying productivity subject to economic and weather conditions,

[14] A disaster is considered extreme when its economic costs exceed 1 percent of GDP.

with a more detailed government sector to account for fiscal implications. The model is calibrated to resemble the economy of Bangladesh, a country particularly sensitive to frequent weather-related natural disasters.

Figure 2.12. Stronger fiscal response mitigates economic distress but puts pressure on public finance

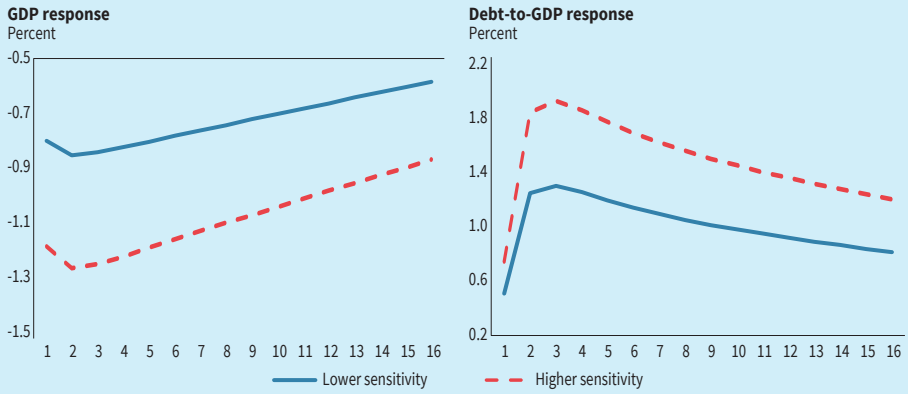


Source: Milivojevic (2023).
Note: Figure is mostly illustrative, showing the model simulated impulse responses under different fiscal reaction parameters. The model is based on the standard Real Business Cycle (RBC) framework (King et al. 1988; King and Rebelo 1999; Kydland and Prescott 1982), extended with Gallic and Vermandel's (2020) agriculture sector, and a more detailed fiscal sector. Fiscal reaction parameter controls fiscal response to output deviations from its potential. Horizontal axis shows quarters.

The stronger the government's stimulus to the economy, reflected in the higher value of the fiscal reaction parameter, the smaller the economic distress (Figure 2.12, left panel). However, the pressure on public finances could be elevated (Figure 2.12, right panel), emphasizing the need for the buildup of fiscal buffers in good times. In other words, the more fiscal space is available, the higher is the capacity of the government to mitigate the adverse effects of disaster episodes.

Model simulations can also illustrate the importance of building stronger resilience, for example, by investing in both "hard" policy measures (e.g., physical infrastructure) and "soft" measures such as establishing early warning systems (IMF 2019). The resulting impulse responses in Figure 2.13 suggest that both economic activity and public debt are less affected when land productivity is more resilient, that is, when the land sensitivity is lower, highlighting the need for adaptation policies.

Figure 2.13. Both economic activity and debt are less affected under stronger structural resilience



Source: Milivojevic (2023).
Note: Figure is mostly illustrative, showing the model simulated impulse responses under different land sensitivity to weather conditions. The model is based on the standard Real Business Cycle (RBC) framework (Kydland and Prescott 1982; King et al. 1988; King and Rebelo 1999), extended with Gallic and Vermandel's (2020) agriculture sector, and a more detailed fiscal sector. Sensitivity parameter controls agricultural productivity sensitivity to weather shocks. Horizontal axis shows quarters.

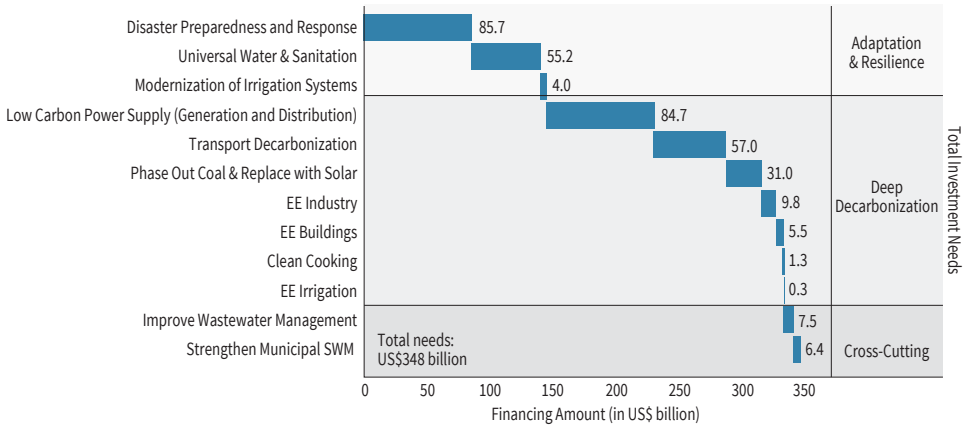
Climate change is inevitable, but better policy management should help to cope with its consequences for public finance in particular and economic development in general (Feyen et al. 2020). Credible fiscal management and structural resilience should reduce economic and fiscal risks. Disaster-prone countries may be characterized by a limited capacity to respond to disasters and to build up the necessary structural resilience (Milivojevic 2023). In the World Economic Forum in Davos this year, Pakistan's climate change minister Sherry Rehman warned of "recovery traps." Given that rebuilding takes time and money, Rehman says that, "by the time you do that, the next crisis in on you" (Parkin and Hodgson 2023). Without more international support that would complement country-specific climate-related efforts, developing countries could indeed become caught in a cycle of disasters and poverty.

At the same time, there is a need for the financing of investments in areas with climate mitigation and development synergies. Examples of such synergies are renewable energy investments to reduce air pollution and increase productivity. Total greenhouse gas (GHG) emissions in the region are rising rapidly, with 63 percent of regional GHG emissions coming from the energy sector (Chen 2022). The energy transition stands out among climate-smart financing opportunities that can at the same time reduce poverty, create jobs, cut emissions,

and boost resilience by reducing reliance on energy imports. Given that energy production in South Asia is still largely based on fossil fuels, transforming the energy sector will require phasing down coal power and retiring coal-fired power plants, while scaling up renewable energy. Part of these investments can be undertaken profitably by the private sector. Part are public goods to be provided by governments, while ensuring that this transition is just and protects affected communities and livelihoods.

South Asian countries estimate total climate financing needs of over US$5 trillion.[15] According to data submitted by South Asian countries to the United Nations Framework Convention on Climate Change (UNFCCC), US$5.4 trillion is needed to achieve around 47.1 percent of self-reported climate needs in the region, comprising of planned activities, strategic directions, national priorities, and action plans (UNFCCC 2022, see Appendix 2.2).[16] However, this self-reported estimate is inconsistent and incomplete, and countries have used different approaches to estimate financing needs. Furthermore, where data are available, they are usually not backed by transparent methodologies that would allow for verification,

Figure 2.14. Indicative estimation of total investment needs for climate-resilient and low-carbon development in Pakistan for up to 2030



Source: World Bank Group (2022d).
Note: The detailed methodology is published in Annex 6 of the report.

[15] This estimate is based on the methodology adopted by the United Nations Framework Convention on Climate Change (UNFCCC) Standing Committee on Finance that for the first-time compiled data from nine different types of reports submitted by Parties to the UNFCCC to determine the financing needs of developing country parties. UNFCCC Standing Committee on Finance. 2022. First Report on the Determination of the Needs of Developing Country Parties.

[16] The reports submitted and analyzed include the following: Adaptation Communication (AC), Biennial Update Report (BUR), Low Emission Development Strategy (LEDS), National Adaptation Plan (NAP), National Adaptation Programme of Action (NAPA), National Communication (NC), Nationally Determined Contribution (NDC), Technology Action Plan (TAP), and Technology Needs Assessment (TNA). However, South Asian countries have only submitted 32 From a total possible number of 72 reports (9 reports per country); this low number of total reports submitted by countries is indicative of the incomplete nature of the data and resulting needs (see Appendix 2.2).

comparison, and analysis. Sectoral breakdowns are also often missing. The fact that more than half of the needs identified have not been costed out confirms the importance of improving the availability of data to credibly identify climate-investment needs. For example, Pakistan self-reported between US$180 billion and US$320 billion of investment needs (UNFCCC 2022) whereas the World Bank estimated that around US$348 billion will be needed between 2023 and 2030 to comprehensively address climate and development challenges (World Bank Group 2022d, see Figure 2.14). Again, it is paramount to distinguish between public goods and investments that can profitably be undertaken by the private sector once taxes and subsidies have created the relative prices that internalize environmental externalities.

Sustainable debt instruments such as green bonds are still limited in South Asia but have significant additional potential. A prominent recent example is India's maiden green bond sale, which raised INR80 billion (US$1 billion) in January 2023 for five- and 10-year debt. India achieved a "greenium" of 6 basis points on these bonds, which means that the borrowing costs were slightly lower than for comparable conventional bonds (Reed 2023). Pakistan launched the first green bond in 2021 and has received a positive market response with US$500 million raised to date. While these initial green bonds in Pakistan were launched to support hydropower generation, they could also be expanded to cover other sectors. This expansion has been facilitated by the establishment of national guidelines for the issuance of green bonds by the Securities and Exchange Commission of Pakistan (World Bank Group 2022d). Globally, the issuance of green bonds increased by almost 50 percent during 2016–2021, with annual issuance expected to exceed US$1 trillion by 2030 (World Bank Group 2021b). Sustainability-linked financing is another innovative approach to reducing financing costs and attracting new investors by linking financing terms to the achievement of climate or environmental targets (de la Orden and de Calonje 2022). Uruguay, for instance, has recently issued bonds worth US$1.5 billion for which interest rates will rise or fall depending on the achievement of forest protection and emission reduction targets (Stewart and Caputo Silva 2022). The positive initial experience with green bonds in South Asia combined with a very positive global market outlook for sustainable debt instruments showcase the potential for further scaling up green bonds in the region.

2.3.3 The need for private investment

There are many climate-smart investment opportunities. Rising temperatures, lethal heat waves, heat-related productivity losses and food losses make climate-smart cooling and thermal comfort a key investment area. A recent World Bank study found that meeting the space cooling needs of India will represent a US$1.6 trillion investment opportunity by 2040 (World Bank Group 2022e). This climate-smart investment has the potential to significantly reduce GHG emissions and create nearly 3.7 million jobs. According to a 2017 IFC study, fully meeting national climate commitments under the Paris Agreement in six countries in the region—Bangladesh, Bhutan, India, Maldives, Nepal, and Sri Lanka—could unlock a total of

US$3.4 trillion in climate-smart investments. The two most promising sectors—green buildings and green transport (infrastructure and electric vehicles)—have an investment potential of US$1.5 trillion and over US$950 billion to 2030, respectively (IFC 2017).

The economic benefits from public climate investments significantly outweigh upfront costs. However, the cost-effectiveness of investments differs across sectors and types of investments. On the resilience side, the Global Commission on Adaptation estimated the overall rate of return on investments in improved resilience to range between 2:1 and 10:1. A 2019 World Bank study found that the average net benefit of investing US$1 in resilient infrastructure in low- and middle-income countries is US$4. On the mitigation side, the International Renewable Energy Agency (IRENA) calculated that replacing the costliest 500GW of coal capacity with solar and wind could reduce annual costs by up to US$23 billion and provide a US$940 billion or 1 percent of global GDP stimulus (IRENA 2019). While raising this level of investment is highly unlikely, public procurement—worth US$13 trillion or 12 percent of global GDP every year (Rattia 2022)—can play a major role in driving down the costs of critical technologies, such as solar PV and battery storage.

There are significant constraints to scaling up private investment in South Asia. Financial repression that is used to finance fiscal deficits, and often unconducive policy environments for the mobilization of private investments are the key challenges to enhancing private climate investments. Capacity constraints to access, implement, and monitor international climate finance, as well as a limited pipeline of investable projects, are additional challenges. Inefficient subsidies (e.g., for chemical fertilizers in Nepal and for fossil fuels in Bangladesh and Pakistan) could free up significant public resources for climate investment and improve incentives for the private sector (World Bank Group 2022b; 2022c; 2022d). Box 2.4 illustrates the potential benefits of a fossil fuel subsidy reform in the region. Introduction of a carbon tax could help mobilize resources and encourage climate-friendly investments. On the private sector side, a low-risk appetite due to a lack of awareness and a lack of available financing options for climate investment opportunities are the key challenges (World Bank Group 2022a). Foreign exchange risk is another constraint.

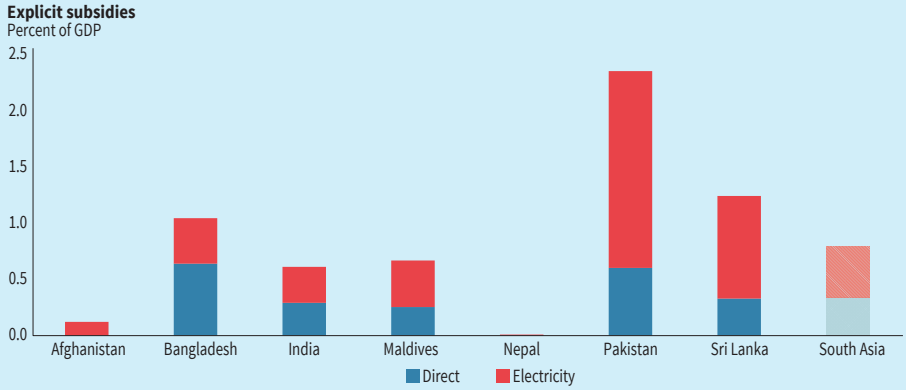
The financial sector has a key role to play in financing the climate transition in South Asia, but its potential remains largely untapped. Some of the key challenges include the lack of green taxonomies that guide sustainable investments and underdeveloped capital markets with limited products and investors (World Bank Group 2022b; 2022c; 2022d). The banking sectors are often weak and struggle to provide the private sector, and in particular SMEs, with access to affordable, long-term finance for green investments. While some initial policy steps have been taken to strengthen the banking sector and incorporate climate-related risks, regulatory and monitoring frameworks for such risks in the financial sector and their implementation tend to be weak.

Box 2.4. The turning point – fossil fuel subsidy reform in South Asia

Under-investment in climate infrastructure will likely persist without adequate pricing mechanisms for climate externalities. Governments should rely on regulations, taxation, and green subsidies to align incentives with climate objectives and ensure structural shifts in their economies. Climate policies, such as fossil fuel subsidy reform (FFSR) and carbon taxes, could mobilize significant domestic resources but also incentivize private investment in low-carbon technologies in South Asia (Mercer-Blackman, Milivojevic, and Mylonas 2023). A gradual phaseout of existing subsidies would be a first step in that direction and should be initiated already given that energy prices are falling, as many South Asian countries have done (Section 1.5).

Many countries in the region have some form of fossil fuel subsidy, either directly or on electricity and public transport, although there are tendencies to slowly move toward better-targeted cash transfers (World Bank 2022c). These subsidies are usually adjusted on a discretionary basis and take many forms, for example proportional subsidies on retail prices, regulated price caps, and subsidized energy import prices (World Bank 2022c). They are typically untargeted and benefit wealthy households more in absolute terms (Abdallah et al. 2015; Coady et al. 2015). They also constitute a direct burden or hidden liability on governments' budgets, which could increase fiscal vulnerabilities going forward. Moreover, subsidies prevent volume adjustments of imported fuels and increase balance-of-payment pressures. Explicit subsidies, calculated as the difference between the consumer price and producer cost, in 2021

Figure 2.15. Explicit fossil fuel subsidies vary widely in the region

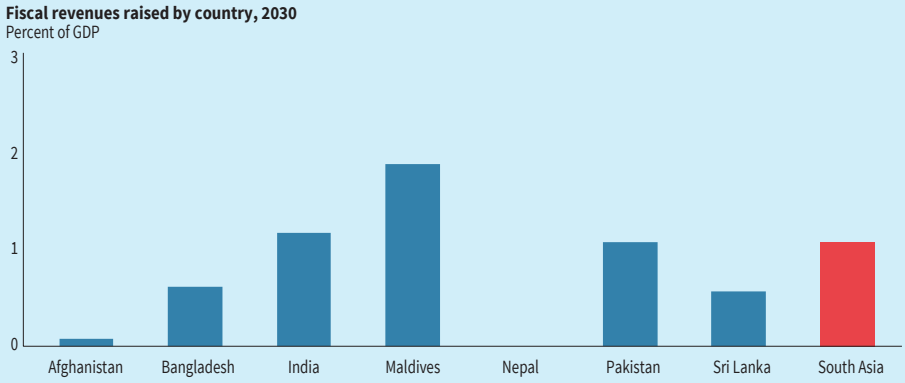


Source: IMF subsidies database and methodology in Black, Parry, and Vernon (2021).
Note: The explicit subsidy for a fuel, within a sector, in a country, is defined as a difference between sectoral unit supply costs and prices paid by end-users, multiplied by sectoral fossil fuel/electricity consumption.

averaged 0.8 percent of GDP in South Asia, varying from insignificant amounts in Nepal to 2.5 percent of GDP in Pakistan (Figure 2.15). Pakistan's government is expected to reduce subsidies as a part of the IMF program, but the negotiations are in jeopardy due to the government's recently proposed fuel subsidy scheme (Rana 2023).

The analysis in this box employs the Climate Policy Assessment Tool (CPAT) to illustrate the potential impact of the FFSR (see Mercer-Blackman, Milivojevic, and Mylonas 2023 for more details). The policy scenario assumes a gradual phaseout of producer and consumer fossil fuel subsidies and price controls by 2030. In addition, government revenues raised from the FFSR are equally distributed toward public investments in household infrastructure access, and targeted cash transfers to address distributional concerns and the political economy aspects of the reform. In terms of fiscal revenues, South Asia could free up an additional 1.1 percentage points of GDP, on average (Figure 2.16). The effects seem to be negligible in Nepal and Afghanistan, given minor direct fuel subsidies. Pakistan and the Maldives, both of which are considering a reduction in fossil fuel subsidies, see significant revenue gains by 2030.

Figure 2.16. Fiscal revenues from the fossil fuel subsidy reform are significant in some countries



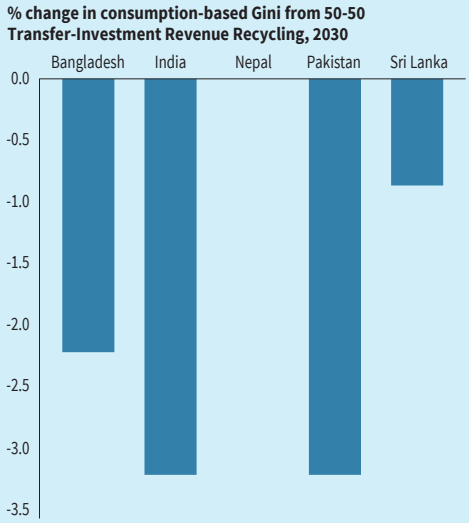
Source: Mercer-Blackman, Milivojevic, and Mylonas (2023) and World Bank staff calculations.
Note: The figure shows changes in fiscal revenues in percent of GDP for each country following the phaseout of fossil fuel subsidies (FFSR). The deviations are calculated relative to a business-as-usual (BAU) scenario where no new carbon tax or fossil fuel subsidy phaseout applies.

It is also possible to examine the impacts of the FFSR on the consumption-based Gini coefficient using data on the distribution of household consumption pre- vs. post-FFSR from Household Budget Surveys (HBS). FFSR effects seem to be progressive in selected countries in the region except for Nepal, which does not currently grant fossil

fuel subsidies (Figure 2.17). India and Pakistan benefit the most, implying that such reform (post-revenue recycling) could potentially decrease the overall level of inequality in those countries.

The CPAT simulations show that gradual FFSR could free up additional public resources and also have positive distributional outcomes, given the appropriate use of the resources generated. Moreover, the FFSR could have positive overall welfare (e.g., due to improved health from reduced local air pollution) and economic growth effects (Mercer-Blackman, Milivojevic, and Mylonas 2023). Eliminating these subsidies, however, needs to be part of a broader policy package that includes infrastructure funding and compensation for the most vulnerable households. This could increase public support and political buy-in for the reforms, which is necessary for appropriate carbon pricing, improved private sector incentives, and climate-friendly investment generation.

Figure 2.17. The fossil fuel subsidy reform leads to progressive distributional outcomes



Source: Mercer-Blackman, Milivojevic, and Mylonas (2023) and World Bank staff calculations based on national HBSs.
Note: The figure shows percent changes in the household consumption-based Gini coefficient for each country following the FFSR. Percent changes are calculated relative to a business-as-usual (BAU) scenario where no new carbon tax or fossil fuel subsidy phaseout applies. Deviations in the consumption-based Gini coefficient are calculated assuming that all revenues are redistributed: (i) half in the form of public investment in water, sanitation, electricity, information and communication technology (ICT), and public transport infrastructure; and (ii) half in the form of targeted cash transfers to the bottom 70 percent of the household consumption distribution.

The largest opportunities to attract private investments are in the transitioning of the energy sector from fossil fuel-based sources to renewable energy. Energy demand in South Asia has increased by over 50 percent since 2000 and electricity demand is expected to double in this decade. Expanding energy access and reliable, affordable power is a key regional priority. The region is highly dependent on imported energy sources, and fossil fuels account for about 80 percent of total primary energy production. Recent energy price increases have driven concerns regarding energy security and interest in further expanding renewable energy sources, which would also help drive down regional GHG emissions.

South Asian countries have made significant investments in renewable energy sources, including solar, hydro, and wind power, but scaled-up and more affordable financing is required to meet the energy mix needed to support regional development, growth, and decarbonization. Bhutan and Nepal rely on hydropower as their primary electricity source, although Bhutan's and Nepal's transportation sectors are still dependent on imported petroleum. India's solar and wind markets have developed quickly, and all renewable energy sources (including hydro) now account for nearly 41 percent of installed generation capacity (Government of India 2021). India still depends heavily on coal, however, with almost 50 percent of installed capacity. Bangladesh and Pakistan have considerable solar potential (World Bank Group 2022b; 2022d), and India and Sri Lanka have strong solar and wind potential (Triyana and Li 2022). Renewable energy sources can reduce the costs of energy in the long term compared with fossil fuels because of their lower operating costs. The upfront investments in renewable energy and flexible and resilient grids, however, face high costs of capital. Financing is also needed for newer technologies such as battery storage systems, which allow renewable energy to be stored until customers need it.

Some countries in South Asia are highly dependent on coal power and will need financial support to manage the costs of retiring and repurposing coal power plants and closing coal mines. India is the second-largest global coal producer, importer, and consumer (IEA 2022). Accelerating the phase-down of coal power requires a just energy transition that accounts for the impacts on industries and jobs, and provides support for lost livelihoods and the development of alternative sources of employment. The costs of the coal transition in developing countries include between US$3 billion and US$35 billion per year of compensation for coal plant owners, US$60 billion per year for funds to address the social costs from closing coal power plants and mines, and US$100 billion per year in grant-equivalent financial support to increase the implementation of renewable energy projects to replace coal power generation (World Bank Group 2022f).

Governments have a key role in the power sector transition by creating the enabling regulatory environment that can increase access to and lower the costs of capital. Governments can consider reforming policies and regulations to open renewable energy markets, including power generation public-private partnerships and unbundling transmission and distribution networks. Direct government investments in distribution networks are warranted given the public-good nature of such networks. Governments can also use tools such as auctions to lower the cost to consumers of clean energy procurement. On the fiscal side, governments can consider repurposing costly fossil fuel subsidies, introducing effective carbon pricing mechanisms, and reforming state-owned enterprises that are critical to the power sector transition.

Governments, domestic and international investors, and multilateral development banks can work together to finance renewable energy investments to make long-tenor debt affordable and mitigate policy, political, and regulatory risks. For example, in India, the government, private financiers, and the World Bank Group have collaborated to scale up renewable energy in support of India's NDC goal of having 50 percent of the country's installed electric power capacity based on non-fossil-fuel-based resources. On the policy side, the Indian government improved the regulatory and fiscal environment to incentivize private investment by increasing the requirements for large-scale consumers to source renewable energy and raising taxes on coal-powered energy. One result of this collaboration and policy implementation is the establishment of a large-scale solar park project—the 750MW Rewa Solar Park—to channel domestic and international investment.

International public and philanthropic finance is needed to accelerate the power sector's transition. Early coal power retirement will require development partner funds to address the social and financial costs of retiring assets and scaling renewable energy several years, if not decades, sooner than planned. International public finance is also needed to enable private investments by providing project preparation funds, and program and sector planning. Furthermore, crowding in private investment for scaled-up renewable energy and energy efficiency investments will require blended finance and credit enhancement solutions that improve the affordability of capital. International donors and multilateral development banks can also support the development of carbon markets to promote the power sector transition, which can in turn leverage private capital. Transparent and liquid carbon markets can provide revenue to improve the commercial viability and affordability of renewable energy and energy efficiency projects, and potentially mobilize funds for coal decommissioning.

In conclusion, the adjustment to climate hazards warrants changes in fiscal policies, but it requires more than additional government expenditure. It requires changes in taxes and subsidies, and thus changes in relative prices to incentivize green investments by the private sector. And both governments and the private sector should explore innovative sources for climate financing, such as results-based financing instruments (e.g., climate impact bonds or payment for ecosystem services) and debt instruments (e.g., green bonds and sustainability-linked loans and bonds), and include mature, emerging, or pilot approaches, depending on how well they are established for financing resilience globally and in South Asia (IISD 2023). Table 2.4 provides examples of several innovative financing instruments that address different fundamental challenges and therefore have different applications.

Table 2.4. Selected innovative financial instruments for climate finance

	Structured Finance and EMDE (Closed-End) Fixed-Income Funds	Blended Finance for Infrastructure and Other Complex Projects	Outcome-Based Sustainable Debt Instruments	Private Finance for Public Sector Projects ("Pay for Success")
Description	Green bonds issued by EMDE banks (against green loans) are securitized into green bonds with the public sector providing credit risk reduction	MDBs or the public sector make an equity or mezzanine investment, or provide a guarantee to de-risk and crowd in private investors	Issuer receives a bonus (pays a penalty) if sustainability target agreed on in advance (based on clearly defined indicators) is met (missed)	Contract with a public sector authority that pays if predefined environmental outcomes are achieved
Application	Emerging markets with existing bank loans to green projects	New infrastructure projects (for example, in the energy sector); use of new types of technologies with potentially higher risks; agriculture	Support firm-level or government-level alignment with sustainability targets (such as GHG emission reductions)	Adaptation finance, non-bankable transition finance
Examples	Green bond funds: IFC-Amundi; Axa's Blue Like an Orange (in progress)	Equity, mezzanine (first-loss) finance for infrastructure projects	Sustainability-linked instruments (bonds, loans, commercial paper, etc.)	Environmental impact "bonds"
Fundamental challenges addressed	Reduction in credit risk (through elevation to investment-grade finance), scaling, diversification, potential currency risk reduction through pooling	Mitigation of credit and political risks; mitigation of information asymmetry problems	Information asymmetry ("greenwashing")	Capacity limits in developing complex green projects (such as in infrastructure); potential inefficiencies in public sector investment
Targeted private investors	Institutional investors, including pension funds and insurance companies	Specialist investors and investment funds; local investors	All	Specialized funds, donor funds, MDBs
Public sector/ MDB involvement	De-risking (purchase equity tranche/ provide first-loss guarantee); technical assistance	Own resources for equity/mezzanine investment and guarantees; provide specialized expertise for project design	None. Sovereigns could issue to support market development and set standards	Direct investment; technical assistance

Table 2.4 Selected innovative financial instruments for climate financ (continued)

	Structured Finance and EMDE (Closed-End) Fixed-Income Funds	Blended Finance for Infrastructure and Other Complex Projects	Outcome-Based Sustainable Debt Instruments	Private Finance for Public Sector Projects ("Pay for Success")
Design/incentive issues	Requires existing bank loans and technical assistance for banks to issue green bonds	Complex contractual agreements; extensive equity/ mezzanine investment and guarantees can create moral hazard; limits the returns for other equity investors	Sustainability targets may not be sufficiently ambitious; penalties need to be high enough to motivate issuer to achieve target	High financial and political risks for private investors
Potential to scale up finance	High	Limited by public sector MDB resources	Limited by issuer characteristics	Limited by fiscal resources

Source: IMF (2022)

Appendix II

Appendix 2.1 Methodology for Box 2.1

The analysis in the box is based on Jordà's (2005) local projections method and Brandao-Marques et al. (2020) approach and directly estimates the response of prices to temperature anomalies for each horizon k:

$$p_{it+k} = \mu_i^k + \gamma_k^h \hat{t}_{it} F(e_{it}) + \gamma_k^l \hat{t}_{it}\left(1 - F(e_{it})\right) + \sum_{j=0}^{2} \beta_{1j}^k Z_{it-j} + \boldsymbol{x_{it}} \lambda^{\boldsymbol{k}} + \varepsilon_{it}^k$$

$$F(e_{it}) = \frac{\exp\left(-\theta e_{it}\right)}{1 + \exp\left(-\theta e_{it}\right)} \quad , \theta > 0$$

where p is the logarithm of price level in country i at time t, γ stands for the cumulative response of p in each k month after temperature deviation from the respective monthly average ($\hat{t}$), whereas μ stands for country fixed effects. The vector Z includes contemporaneous and lagged values of output, prices, nominal exchange rates (all in logs), changes in policy rates, and lagged temperature anomalies. The vector $\boldsymbol{x}$ contains global and country-specific controls, including the VIX, a commodity price index, the first principal component of the United States', euro area's, and Japan's shadow policy rates, and country-level monthly precipitation anomalies. The control variables help to identify the sources of price fluctuations that are unrelated to the temperature and therefore isolate the effect of temperature anomalies. $F(e)$ is the smooth transition function[17] that allows for the interaction with the continuum of states of the food weight in the consumption basket, based on Auerbach and Gorodnichenko (2012). Although price indices are I(1) processes, this should not be problematic given that we use lag-augmented local projections. Montiel Olea and Plagborg-Møller (2021) have found that lag-augmented local projections are asymptotically valid uniformly over both stationary and non-stationary data, as well as over different response horizons. To address the serial correlation in the error term due to the inclusion of lagged values of the dependent variable, we use Driscoll and Kraay (1998) standard errors robust to heteroskedasticity, autocorrelation and cross-sectional dependence.

[17] Equals 1 in the benchmark case.

Appendix 2.2 Methodology for Box 2.2

The local projection model, following Jorda (2005), identifies impulse response functions through consecutive regression models at different horizons (h):

$$y_{t+h} = \alpha_h + x_t \delta_h + shock_t \beta_h + \mu_{t+h}$$

where α_h is a horizon-specific constant, x_t are a vector of control variables, and $shock_t$ are the US interest rate shocks. The models are estimated six months ahead on monthly data from as far back as June 2001 to September 2022. The variables by country vary depending on availability but generally include short- and long-term interest rates, equity prices, exchange rate to the US dollar, real exports, consumer inflation, and foreign exchange reserves. Models include four lags, a dummy for the global financial crisis (January 2008 to December 2009), and a dummy for the COVID-19 pandemic.

Movements in the two-year US interest rate is decomposed into different types of shocks using a sign-restricted Bayesian vector autoregressive (VAR) model with stochastic volatility. Three potential drivers of rising US interest rates are identified. “Real shocks” are prompted by improved prospects for US economic activity. “Inflation shocks” reflect expectations of rising US inflation. “Reaction shocks” reflect investors’ assessments that the U.S. Federal Reserve’s reaction function has become more hawkish. See Arteta, Kamin, and Ruch (2022) for details.

Appendix 2.3 Additional table for Section 2.3

Table A.2.1. Summary of key data on financial needs contained in South Asian countries' national reports submitted as part of the UNFCCC

Country	Number of reports submitted	Number of needs identified	Number of needs quantified	Total expressed amount as needs (in US$ billion)	
				Low range	High range
Afghanistan	4	99	99	22.866	22.866
Bangladesh	5	360	283	151.904	160.464
Bhutan	5	301	111	0.946	0.946
India	3	338	177	5,000	5,000
Maldives	4	114	12	0.108	0.108
Nepal	3	184	122	26.095	26.095
Pakistan	4	219	74	180.318	320.318
Sri Lanka	4	855	286	10.901	10.901
Total	**32**	**2,470**	**1,164**	**5,393.138**	**5,541.698**

Source: UNFCCC (2022).

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CHAPTER III

Expanding opportunities: A map for equitable growth in South Asia

Introduction

Among South Asians, calls for re-distribution—i.e., support for the statement that "incomes should be made more equal"—are among the highest in the world. And, over the past three decades, these calls have also increased more in this region than elsewhere.

One possible reason behind this striking fact is that "unfair inequality" in South Asia is higher than in other parts of the world. Building on two background papers (Bussolo et al. 2023; Asher et al. 2023), this chapter uses two measures of inequality—inequality of opportunity and intergenerational education mobility—across seven countries in South Asia (India, Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka, and Afghanistan) over multiple decades to analyze unfair inequality. Inequality of opportunity is measured as the share of inequality of outcomes, such as years of schooling, incomes, and standards of living, that arises from factors outside of one's control. Intergenerational mobility is achieved when children's educational attainments are independent from the level of education of their parents.

Leveraging a large data-harmonizing effort across scores of nationally representative household surveys spanning millions of South Asian individuals, this chapter establishes multiple previously unknown facts about inequality of opportunity and intergenerational education mobility across South Asia. The underlying measures have been constructed specifically to allow for comparison across population groups in data-constrained developing country contexts.

The results provide an understanding of why South Asian countries have higher-than-expected inequality of opportunity given their levels of observed total inequality. The results beg the attention of policy makers across the region, since inequality of opportunity and stagnant

intergenerational mobility are more detrimental to growth and societal cohesion than inequality of outcomes (Marrero and Rodriguez 2013; Van der Weide and Milanovic 2014; Marrero et al. 2016; Ferreira et al. 2018) through the following channels: (i) lower incentives to invest in human capital; and (ii) the misallocation of talent. These results are also relevant when considering the short-term macroeconomic situation for two reasons. Governments adjusting to declining fiscal space run the risk of cutting programs that achieved equality of opportunity in some areas, such as basic education. This may help rebalancing the fiscal accounts, but it may create new pressures, and fissures, in the future. In addition, while long-run supply-side investments may be expensive and not possible in the current macroeconomic context, policies to improve the business climate for small and medium enterprises, or to support a level playing field in the labor market should still be implementable with contained fiscal implications. The second reason is that macroeconomic adjustments are more successful if they have strong public support, and this is more likely obtained if they are perceived as fair.

3.1 Social progress in South Asia

More than two decades of sustained economic growth across most of South Asia has brought significant poverty reduction, yet inclusive social progress has remained elusive. Sustained economic growth over the past two decades in the South Asian region has lifted some 250 million people out of extreme poverty and improved average living standards considerably. However, economic growth has not benefited all groups equally. This chapter shows that, while there has been some improvement in closing the gaps between different groups, there is still very little mobility in South Asian societies. Circumstances at birth—i.e., the family background, whether a person was born in a certain region or belongs to a certain ethnic group, caste, or gender—remain important constraints to economic and social achievements in the lives of people of the South Asia region.

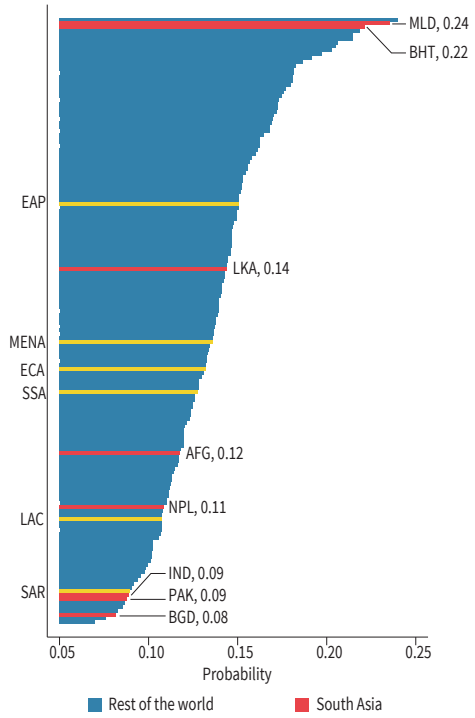
Inequality of opportunity in South Asia is one of the highest in the world. Data for comparing inequality between countries are scarce and this problem is even worse in the case of inequality of opportunity or mobility (see Box 3.1). The Fair Progress report (Narayan et al. 2018)[1] and The Equal Chances Database[2] are two of the few exceptions of data sources that can be used to reasonably benchmark South Asia in the global context. Figure 3.1 shows, for example, that in South Asia educational achievement is heavily dependent on the education of one's parents: less than 9 percent of individuals whose parents' education level was in the bottom half of the population reach levels of education of those in the highest educated 25 percent. Figure 3.1 also shows that, while some countries in the South Asia region do better than others, the

[1] See also, for more recent data and analysis, Van der Weide et al. 2021.
[2] See Equalchances.org

regional average is nonetheless the lowest in the world. In the Europe and Central Asia region, mobility is almost twice as high as in South Asia. These 'sticky' disparities in education translate into disparities in incomes and are extremely difficult to diminish.

Inequality of opportunity matters because it highlights the unfair process that generates and maintains disparities. In South Asia, disparities across groups account for a large part of overall inequality of outcomes. This makes the inequality both unfair and inefficient. Gaps between women and men, as discussed by a large body of literature and also in Chapter 3 of our Spring 2022 edition of the South Asia Economic Focus (World Bank 2022), are well known, but this chapter documents large disparities among other groups. Being born in a rural area, or a specific region, or simply coming from poorer and less educated parents, matters for one's social and economic standing (educational attainment, access to jobs, earnings, level of consumption, and welfare) as an adult. Low intergenerational mobility and high inequality of opportunity have remained stubbornly unchanged across generations.[3]

Figure 3.1. Mobility in education is very low in South Asia and lower than any other region



Source: Global Database on Intergenerational Mobility (GDIM), 2023.
Note: Regional probabilities are weighted by population shares.

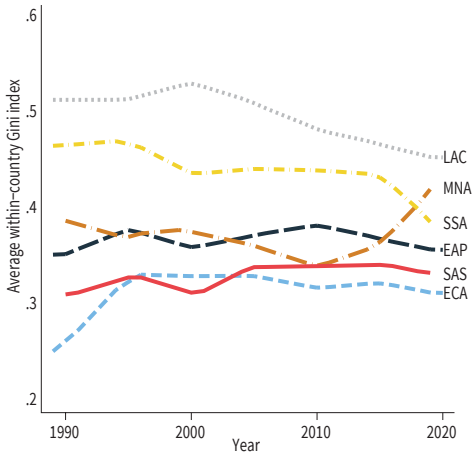
A re-focus of the discussion from inequality of outcomes to inequality of opportunity and intergenerational mobility is useful for three reasons, two of which are specific to South Asia and a third that is more general: (i) inequality of outcomes in South Asia tends to be underestimated; (ii) South Asia's inequality of opportunity is high when seen from a global perspective; and (iii) inequality of opportunity is more harmful than inequality of outcomes.

International comparisons of inequality, while providing benchmarking, may also paint an inaccurately rosy picture for the case of South Asia. Indeed, inequality in South Asia,

[3] For a formal definition of Inequality of Opportunity see Roemer 1993; van de Gaer 1993; Fleurbaey 2008, among others. For a formal definition of intergenerational mobility see Solon 1999; Van der Weide et al. 2021, Box 1 and Appendix 3.1.

measured by averaging the Gini coefficients for countries belonging to each region, is one of the lowest in the world (Figure 3.2). Even if the trend is concerning, as inequality has been increasing in recent decades, this low level is probably one of the reasons why inequality has not often figured in the debates about development challenges in South Asia[4] or, at least, not as often as in the cases of Latin America and the Caribbean, or Sub-Saharan Africa. However, this impression of inequality being at low levels in South Asia is mainly the result of assessing inequality in the distribution of consumption per capita for countries in South Asia, rather than using incomes as in Latin America and other regions. Consumption-based inequality is always lower than income-based inequality (which in turn is lower than wealth-based inequality), as the former is calculated assuming that consumption is the same across all members of the household. Crucially, this eliminates gender disparities, which is a key source of inequality in South Asia.[5]

Figure 3.2. Regional inequality as measured by the Gini coefficient is moderate in South Asia compared with other world regions



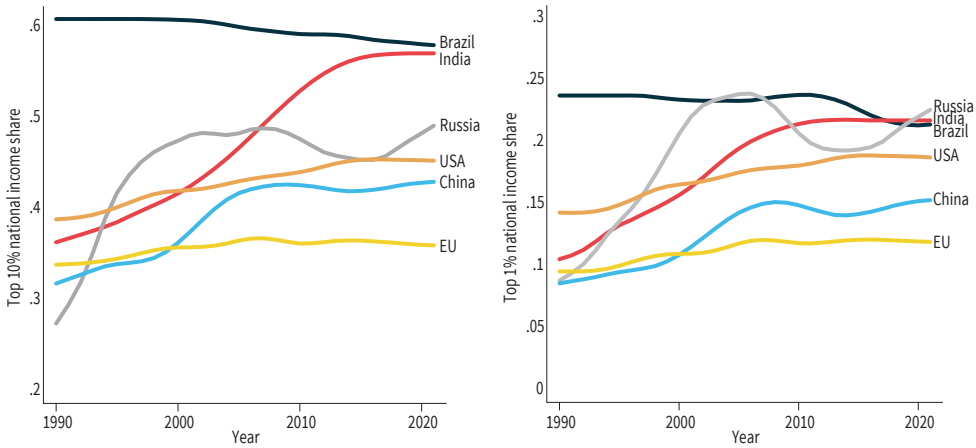
Source: Poverty and Shared Prosperity Report (World Bank, 2018), updated by authors using data from the World Banks Poverty and Inequality Platform.
Note: Regional trends are calculated as the average within-country Gini coefficient. Survey data used to calculate country level Gini coefficients are not necessarily comparable, as some countries rely on consumption data while others use income data. As a result, direct regional comparison of the average Gini coefficient remains limited (see Box 3.1).

An important source of increases of inequality of incomes (and consumption) is the concentration of wealth at the top of the income distribution. This has increased in the South Asia region but has not been captured by the Gini indices measured on the standard datasets. Household survey data used to calculate the Gini index fail to properly capture inequality dynamics at the top of the income distribution due to under-reporting and under-sampling of the very rich (Atkinson and Piketty 2007). As a result, estimates of within-country inequality based on household surveys most likely underestimate the true level of inequality. Recent innovations in measurement and the availability of alternative data sources now make it

[4] Referring to the case of India, Sriram Balasubramanian writes: "Debate and discussion on *inequality* in India have been largely centered around two key themes: one, focus on the top 1 percent 'billionaire class' and its exponential growth over the last few decades; two, on those residing below poverty levels. However, the real pertinent question resides in the space occupied in between—what are the *inequality dynamics* for the person who is trying to transition from rural to urban India in search of a better future?" (The Economic Times Mar 11, 2).

[5] There is also another important reason explaining why inequality in consumption levels, even when these levels are directly measured for each individual in a household, is lower than inequality of incomes. This is because, when income flows change because of shocks, individuals tend to smooth consumption. In some cases, economists consider inequality in permanent incomes which will be closer to consumption inequality.

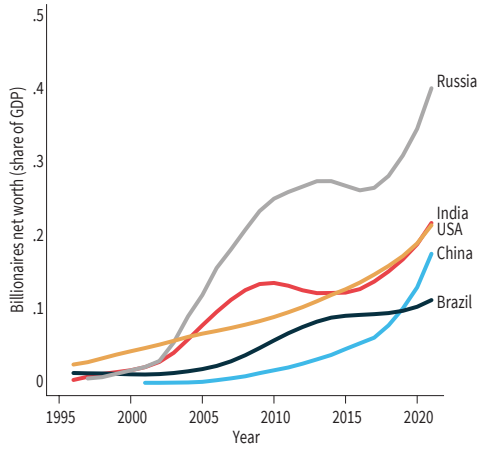
Figure 3.3. Inequality at the top end of the income distribution has increased significantly in India since the 1990s



Source: Worldwide Inequality Database (WID).
Note: Figures show the evolution of the national income share held by the 10 percent richest people (left panel) and the 1 percent richest people (right panel) in all BRIC countries, the United States, and the European Union.

possible to study inequality dynamics at the top of the income distribution (Atkinson and Piketty 2010). Estimates from the Worldwide Inequality Database (WID) find a significant rise in top income shares in India since the 1990s (Figure 3.3). In 2020, the national income share held by the richest 1 percent Indians was more than 20 percent, making India one of the countries with the highest concentrations of wealth in the world. Data from the Forbes Rich List[6] confirm this trend of concentration of wealth at the very top of the income distribution in India. The net worth of Indian billionaires increased substantially from 2 percent of GDP in 2000 to 20 percent in 2020 (Figure 3.4).[7] Note also that concentration of assets signals that the growth process is not inclusive and, in

Figure 3.4. Wealth concentration by billionaires in the BRIC countries and the United States



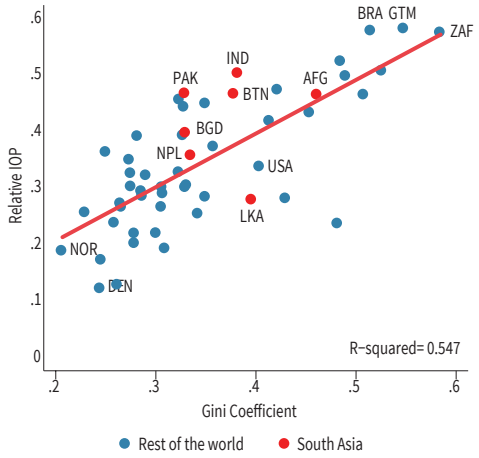
Source: Forbes List of billionaires.
Note: Figure shows the trend in annual net worth held by billionaires in all BRIC countries and the United States as a share of GDP (constant 2015 US dollars).

[6] Forbes magazine annually publishes a list of individuals and families whose total net worth exceeds US$1 billion.
[7] South Asian billionaires are concentrated in India. In 2021, the Forbes Rich List counted 140 billionaires in India, and one in Nepal.

a context of low direct taxation and almost absent inheritance taxes, this concentration hinders social mobility.

A second reason for the focus on inequality of opportunity is because it reveals that South Asia is a special, and potentially concerning, case when seen from a global perspective. At a given level of inequality of incomes (at a given level of the Gini inequality index), South Asian countries appear to have higher-than-average inequality of opportunity. Research has estimated the relationship between income inequality, equality of opportunity and intergenerational mobility, and labeled this relationship the "Great Gatsby Curve".[8] A version of such a curve is shown in Figure 3.5. The curve illustrates that countries with low income inequality also tend to have fewer inequality traps. In other words, when income inequality is low, people's position in the income distribution is not so dependent on their circumstances at birth. Alternatively, in countries where income inequality is high, people's position in the economic ladder is largely predetermined by their circumstances at birth. People starting in disadvantaged positions are trapped in those positions. In mobility terms, and paraphrasing Corak (2013), this means that someone born in the bottom economic class may have a slim chance of moving up to a better economic situation than their parents. Figure 3.5 highlights two important points: South Asian countries seem to be toward the middle of the graph (at least in terms of income inequality), but also these countries are above the curve, so that their inequality of opportunity is higher than would be expected given their levels of income inequality. This means that they are affected by more severe inequality traps, their inequalities in opportunities are reproduced over time and across generations.

Figure 3.5. The Great Gatsby Curve of inequality of opportunity versus total inequality[9]



Source: Bussolo et al. 2023 and Equal Chances Database.
Note: This figure shows, on the vertical axis, IOp in household consumption per capita for the latest available cross-section in South Asia from Bussolo et al. 2023 or IOp in consumption or in income per capita in the rest of the world from the Equal Chances Database and, on the horizontal axis, the Gini coefficients for the corresponding countries.

[8] See Corak (2013) and Durlauf et al. (2022).
[9] Note that the traditional Great Gatsby curve refers to a relationship between inequality measured by a Gini index and intergenerational mobility across geographic units. The figure presented in this chapter is a modified version where inequality of opportunity has been shown instead of intergenerational mobility. A detailed explanation of what inequality of opportunity represents can be found in Box 1.

Box 3.1. Measuring inequality, inequality of opportunity and intergenerational mobility in South Asia

This chapter describes trends and characteristics of inequality of the distribution of two specific outcomes—education attainment and consumption per capita—across seven countries in South Asia.

Comparing inequality across countries and over time is fraught with difficulties as, unfortunately, household surveys do vary across countries in what they measure as the main welfare variable and how they measure it. In most Latin American countries, as well as in high-income countries, surveys capture income flows accruing to each individual member of the household, whereas in South Asia they capture consumption, which is measured for the whole household. Individuals' consumption levels are then obtained by dividing household consumption by the number of its members. Clearly, inequalities within the household, chiefly disparities between men and women, are eliminated when everyone in the household is assigned the same consumption value. There are additional issues. Most surveys under-sample households at the top of the distribution, missing an important source of asset concentration and income (or consumption) inequality. And there is also substantial disagreement in terms of the trends of consumption that are derived from household surveys versus those obtained from national accounts (Deaton and Kozel 2005).

While these problems are well known (World Development Report (World Bank 2006); Poverty and Shared Prosperity (World Bank 2018), the remedies—using administrative data or collecting new surveys—take time and resources. Thus, most international comparisons of inequality tend to mix consumption and income inequality measures. Note also that these problems also affect international comparisons of inequality of opportunity and intergenerational mobility. An additional data limitation that affects specifically the measurement of inequality of opportunity and intergenerational mobility is the absence of information on parental background. So, one is left to either consider a limited set of circumstances or focus on the sub-sample of co-resident individuals (i.e., those from households where two or more generations live under the same roof).

Inequality of Opportunity

In simplest terms, inequality of opportunity (IOp hereafter) can be described as the portion of inequality of a specific outcome that arises from circumstances. In essence, measures of IOp aim at separating the factors determining the distribution of social

outcomes (e.g., education, consumption) for a given population into two categories. The first category represents a person's effort, while the second represents circumstances that are beyond their control. These circumstances include, but are not limited to, gender, race, ethnicity, religion, and place of birth. Each one of these circumstances have been incorporated in the IOp measures presented in this report. For additional information on how variables such as ethnicity and place of birth have been coded, see Appendix 3.1.2. Note that data limitations prevented the inclusion of parental background, so the estimates of Section 3.2 below underestimate the full extent of IOp.

As an illustrative example, consider the outcome of years of schooling. To construct the IOp measure in the South Asian context, Bussolo et al. 2023 first estimate inequality in years of schooling for a country under the assumption that all individuals in a particular group have the same years of schooling. For simplicity, in a world with a single circumstance—gender—this approach would first calculate inequality in years of schooling in the population under the assumption that there is no individual heterogeneity *within* the two groups of men and women. In this *counterfactual* distribution, the entirety of the inequality observed in years of schooling in the population is accounted for by inequality *between* men and women. As a next step, the authors calculate the ratio of this counterfactual inequality over total inequality in years of schooling, i.e., the inequality observed for the whole population (which clearly includes also the inequality within the two groups of men and women). This ratio can be interpreted as the share of total inequality that can be attributed to circumstances beyond an individual's control, which was gender in the case of this illustrative example. Note that this attribution is not causal, but simply descriptive. The results presented in this report incorporate a range of circumstances to isolate IOp (circumstance-driven inequality) from total inequality. Appendix 3.1 provides precise methodological details of the estimation approach.

Intergenerational Mobility

Intergenerational mobility is captured by two distinct approaches. The first, *absolute* mobility, measures the degree to which living standards improve across generations. This measure is closely associated with changes in economic growth and poverty levels in a society. However, growth in absolute mobility does not necessarily guarantee an increase in *relative* mobility across generations. A society where standards of living improve across generations for everyone and yet, relative status (in terms of wealth, education, or social ranks) is preserved across generations, has high absolute mobility but low relative mobility. In other words, relative mobility captures the extent to which

an individual's position in the economic distribution is independent of their parents' relative position in the economic distribution.

Relative mobility is lower in societies where inequality of opportunity is high, that is, where individual life outcomes are determined by circumstances allotted at birth. This report presents results from Asher et al. (2023) wherein a novel measure—bottom-half mobility—is constructed to measure *relative* intergenerational education mobility across and within South Asia over time. Bottom-half mobility is the average rank of the education attainment of an individual within their birth cohort conditional on being born to a parent who is in the bottom half of the education attainment distribution within their own birth cohort. Note that education attainment ranks were calculated separately within gender and decadal birth cohort groups for both parents and individuals. The bottom-half mobility was developed by Asher, Novosad and Rafkin (2023) in their study of intergenerational education mobility in India. The advantage of using the bottom half mobility measure for a comparative study of mobility in South Asia is twofold. First, the measure allows for calculation of precise bounds on mobility despite data limitations in developing country settings. Second, the measure has a standardized interpretation (in the spirit of the mobility measure in Card et al. 2022) across time periods and countries, allowing for the isolation of rank persistence from growth in education attainment. The bottom half mobility measures presented in this report represent intergenerational education mobility of *father*-child and not *mother*-child pairs. Appendix 3.1.2 describes steps taken to account for co-residence bias in the estimation of bottom half mobility.

Inequality of opportunity and intergenerational mobility are interconnected concepts, as both reflect how external factors beyond an individual's control impact long-term life outcomes. In societies where inequality of opportunity is high, some individuals have more favorable opportunities to realize their potential, despite possessing similar talents and abilities as others. Conversely, in societies with high intergenerational mobility, an individual's own efforts and abilities play a greater role in determining their social and economic status, regardless of their family background. Policies designed to reduce inequality of opportunity will, by design, facilitate greater intergenerational mobility by enabling individuals to realize their potential more fully.

A third and final reason for a re-focus is that inequality of opportunity is more detrimental to growth and societal cohesion than inequality of outcomes. In societies with low equality of opportunity, talented individuals may not reach their full potential because they are constrained by circumstances rather than by their lack of effort. Low equality of opportunity reduces

incentives to invest in human capital, as one's outcomes in the labor market are more dependent on factors outside one's control, such as the education and socio-economic background of one's parents. Low equality of opportunity is also linked to misallocation of talent (Hsieh et al. 2019, discuss this for the United States, and Cuberes and Teignier 2016, show that for the case of South Asia gender gaps, and specifically occupational segregation between men and women, produce large income losses). While the impact of overall inequality on growth is ambiguous, there is growing evidence that *inequality of opportunity* is detrimental for economic growth (Marrero and Rodriguez 2013; Van der Weide and Milanovic 2014; Marrero et al. 2016; Ferreira et al. 2018). Besides hampering economic growth, low equality of opportunity also leads to a sense of unfairness, which can threaten social cohesion in a society (Bussolo et al. 2018).

Notably, calls for a more equal income distribution are higher in South Asia than in any other region and have increased significantly since the 1990s, suggesting that public support for policies to promote inclusive growth and opportunity in the region is rising. Understanding people's perceptions of inequality is important because these perceptions have implications for social cohesion, and can serve as an indicator of public support for redistributive policies. Support for reducing inequality in South Asia is discussed in more detail in the final section on policy recommendations.

3.2 Inequality of opportunity and intergenerational mobility in South Asia

Until recently, the research landscape on inequality of opportunity and intergenerational mobility has not examined in detail the South Asian region.[10] The set of mobility measures developed by Solon (1992) and Chetty et al. (2014a) could not be replicated easily in South Asia, as reliable income data that can be linked across generations are non-existent or very limited. Likewise, estimating inequality of opportunity requires rich databases, containing information not only on the individual's economic achievements but also on circumstances—data that are rarely available for developing countries and the South Asia region in particular.

The set of country-specific databases harmonized both in terms of circumstances and outcomes constructed for this chapter fills this gap in empirical analyses of inequality of opportunity and intergenerational mobility for the case of South Asia. Using this new dataset, this chapter provides comparable estimates of unfair disparities for seven countries in the region: Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka. Moreover, it investigates the evolution of these disparities over time, as it uses a cohort-based analysis. For each country,

[10] IOp estimates are available for Brazil (Bourguignon, Ferreira and Menendez, 2007) and several other countries in Latin America (de Barros et al., 2009). Nandini et al. (2016) provide estimates of IOp in the Middle East and North Africa while Brunori, Palmisano and Peragine (2019) study IOp in Sub-Saharan Africa. Singh (2012) and Chaudhary et al. (2019) provide IOp estimates for India. Alesina, Hohmann and Papaioannou (2021) examine intergenerational mobility in Africa.

it follows the trends of inequality and mobility from the cohort of individuals born in the 1960s to the cohort born in the 1990s (the earliest and most recent cohorts can differ across countries and across outcomes; see Appendix 3.1 for a detailed description of the database).

The analysis based on this harmonized dataset establishes the following previously unknown facts:

1. On average for the region, inherited circumstances explain a large portion, ranging between 40 and 60 percent of inequality of the distribution of *consumption per capita*; these circumstances explain a similar, but slightly lower, share of inequality of the distribution of *education attainments*.

2. Intergenerational mobility in education is also low. The average education attainment rank of a child born to parents in the bottom half of the education attainment distribution is the 37th percentile. This is substantially lower than the corresponding measure in the United States (the 42nd percentile), which already has lower intergenerational mobility compared with other developed countries (Black and Devereaux 2011).

3. While the region as a whole experiences unfair disparities, there is considerable variation between countries in the region. Broadly, three groups can be identified: a first, comprising India and Pakistan, displays high inequality of opportunity and, correspondingly, low intergenerational mobility; a second, Nepal and Afghanistan, with intermediates levels; and a third, Bangladesh, Sri Lanka and Bhutan, with somewhat better mobility and equality of opportunity (Table 3.1).

4. Within countries, an urban premium (favoring girls more strongly than boys) is uncovered. Being born in a city translates into higher chances to move further ahead than one's own parents (in terms of education) and, more generally, other inherited circumstances do not constrain achievement as tightly as in rural areas. Nonetheless, some countries show convergence in opportunity gaps between rural and urban areas.

5. Not all circumstances matter equally: geography (region of birth and, within it, city or rural area) plays the largest role in all countries, followed by socio-demographic factors such as caste, ethnicity, and then gender.

6. In terms of trends, and considering a period of about three decades, inequality of opportunity of education has reduced in most countries, even if intergenerational mobility remained low and relatively stable. This apparent paradox can be explained by the fact that the two concepts—inequality of opportunity and intergenerational

Table 3.1. Intergenerational mobility and inequality of opportunity in South Asia

Country	Education		Consumption
	(1) Bottom half mobility	(2) Relative IOp (Years of Schooling)	(3) Relative IOp (Consumption, 35–55-year-olds)
Pakistan	38.82	0.41	0.54
India	38.83	0.39	0.57
Nepal	40.73	0.55	0.41
Afghanistan	41.99	0.54	0.45
Bangladesh	43.24	0.14	0.44
Sri Lanka	45.23	0.34	0.31
Bhutan	47.93	0.37	0.39

Source: Asher et al. (2023) and Bussolo et al. (2023).
Note: Columns (1) and (2) present estimates for bottom half education mobility and inequality of opportunity (in years of education) for individuals born around 1990. Note that we use decadal birth cohorts (i.e., people born between 1990 and 2000) for the estimation of bottom half mobility, and 5-year birth cohorts for the estimation of IOp. Column (3) represents IOp in the distribution of per capita consumption for individuals born around 1980. In contrast with education, consumption per capita follows an age pattern, so it is important to compare cohorts at the same age. This would be straightforward if we had frequently repeated cross sections for all countries collected in the same year, but since this is not the case, we are comparing cohorts when they are in the age range of 35- to 55-year-old, assuming that the age effect in this segment of the life cycle is minimal.

mobility—assess different features of the distribution of educational achievements. (Relative) inequality of opportunity measures how much of the overall inequality is accounted for by disparities among groups, when the groups are formed according to circumstances. (Relative) intergenerational mobility measures whether the ranking of the current generation is explained by that of the previous (parents) generation. So, what happened in South Asia is that education opportunities have improved for groups that were initially disadvantaged (such as women from rural areas and certain socio-economic groups). However, there has not been much reshuffling in the ranking of the distribution. And, specifically, being born from a father who is at the bottom rank means that his offspring are also likely to be in the same (or close to the) bottom rank. This is the case even if the top and low ranks are less distant from one another.

7. Remarkably, the reduction of inequality of opportunity in *education* has not translated into a reduction of inequality in the distribution of welfare measured by the level of *consumption*. This could be due to three factors: (i) there has been equalization of opportunity in obtaining basic levels of education, but not so much for higher levels of education, which are those that matter for incomes; (ii) this equalization of basic education does not account for quality; i.e. inequality in learning outcomes remains and

this matters for advancement to higher levels of education and ultimately for incomes; and (iii) the labor markets could remunerate the same education level in a differential way according to other circumstances. A salient example for the region is the one of different earnings for equally qualified men and women, or of women having much lower engagement in market activities *vis-à-vis* men with comparable human capital.

8. Finally, the trend of a stagnant inequality of opportunity for consumption of the past three decades is particularly concerning when contrasted with the sustained economic growth for the same period. While at the aggregate level it is impossible to establish causation, this contrast in trends signals that economic growth is not automatically accompanied by increasing opportunities for all and, as argued in Section 3.1, a high level of inequality of opportunity can, in turn, damage growth prospects.

The remainder of this section is organized as follows: Section 3.2.1 analyzes the evolution of inequality of opportunity of education; Section 3.2.2 discusses inequality of opportunity of consumption; and Section 3.2.3 considers intergenerational mobility.

Inequality of opportunity in education

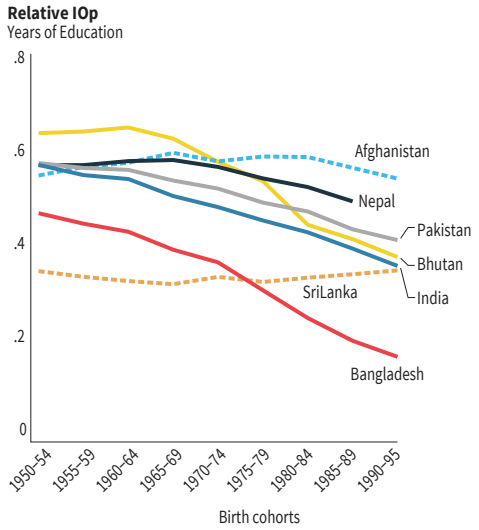
Education has both an intrinsic and an instrumental value for a person's wellbeing, as it is highly correlated with individual economic achievements such as income, consumption and wealth. Analogously, inequality of educational opportunities is relevant *per se*, as education is an important sphere of individual and social life, and it is also important because an unfair educational system typically generates unfairness in the labor market and, ultimately, in the distribution of economic resources in the society. In this section, education itself is considered as an outcome.

In recent decades there has been a clear improvement in equality of educational opportunities in the region (Figure 3.6). The number of years of formal education that an individual attains have become less and less dependent on inherited circumstances such as caste, ethnic group, area of birth, and gender. Taking the average of the region, for the cohort of individuals born in the (first half of) the 1960s, about 50 percent of total education inequality is explained by circumstances, while this percentage reduces to 35 percent for the cohort of individuals born in the early 1990s.

This overall regional trend is not followed by all countries. Bangladesh and Bhutan had the fastest reduction in IOp in the region, Pakistan and India also experienced a strong equalization of opportunities, while Sri Lanka is relatively stable but also has, at least for the earliest cohort, the lowest level of IOp. For the cohort born in the 1990s, Afghanistan and Nepal have the highest levels of IOp, while Bangladesh has the lowest level.

A factor explaining the reduction of inequality of opportunity in (years of) education is the large expansion of basic education. In most countries in the South Asia region, shares of primary education have increased substantially (Figure 3.7). However, there is also some heterogeneity in this case, with Pakistan and, in particular Afghanistan, that are lagging behind this educational expansion. This general trend in the area is not surprising, as basic education has been at the center of attention in recent decades for promoting development and significant advances have been made. Given that people without primary education are more likely found in disadvantaged groups, increasing basic education tends to be a progressive policy (conversely, expansion of tertiary education risks being regressive). This is clearly reflected in the declining pattern of the relative IOp (measured by the dissimilarity index).

Figure 3.6. Inequality of opportunity in years of schooling has decreased for most countries in the region

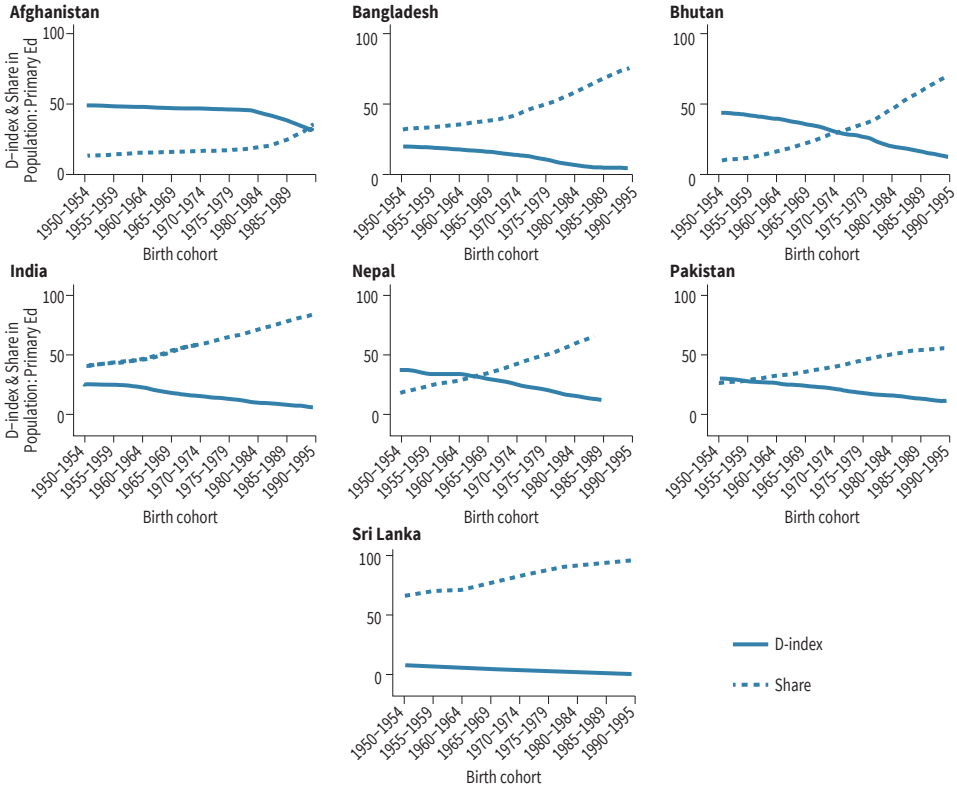


Source: Bussolo et al. 2023.
Note: The figure shows the relative inequality of opportunity of the years of education attained by the individuals of the corresponding birth cohort. Years of education range from 0 to 16 years.

The commitment to equality of the education system is an important factor. This commitment is summarized in the starting points of inequality of opportunity. Contrast, for example, Nepal and Bangladesh. About one third of the cohorts born in the early 1960s attained primary education in both countries. This share goes up to about two thirds for the recent cohorts in both countries. However, in Nepal some groups did not have access to basic education, as reflected by an initial dissimilarity index of 37, which is about double the initial dissimilarity index observed in Bangladesh. These gaps in how education is delivered are not automatically eliminated by the simple expansion of the system. Indeed, the elasticities of inequality with respect to the expansion of education are quite different across countries, as shown in Table 3.2. In Nepal, a 1 percent increase in primary education share translates into a 0.44 percent reduction of the inequality index, while in Bangladesh that same increase produces a decrease in inequality of 0.83 percent. Remarkably, India and Sri Lanka have the highest elasticities of about 1 and 2, respectively.

For each of the seven South Asian countries considered in this chapter, Box 3.2 shows in detail what happened to different groups in terms of their opportunity of obtaining primary education. Different groups have different opportunity profiles. For example, the probability

Figure 3.7. Primary education in South Asia: coverage has increased and inequality has decreased



Source: Bussolo et al. 2023
Note: The figure shows the share of individuals in each birth cohort that have attained primary education (dashed lines); and the inequality of opportunity (measured using the dissimilarity index) of the distribution of primary education across groups of the population.

Table 3.2. Elasticity of IOp with respect to expansion in Primary Education

	% Δ in literacy	% Δ in IOp	Elasticity
Afghanistan	61.6	-17.1	-0.28
Bangladesh	94.1	-78.3	-0.83
Bhutan	274.2	-61.0	-0.22
India	63.2	-65.5	-1.04
Nepal	137.9	-60.8	-0.44
Pakistan	67.6	-49.0	-0.73
Sri Lanka	31.4	-70.8	-2.25

Source: Bussolo et al. 2023.

Box 3.2. In South Asia, opportunity gaps in primary education have been shrinking but not at the same pace for all countries.

Inequality of opportunity is an aggregate index that summarizes how much circumstances matter in accounting for total inequality in the distribution of primary education. To illustrate what this inequality means for an individual belonging to a specific group, one can use the concept of opportunity profile (Ferreira and Gignoux 2011). Given certain circumstances that define a group—gender, location of birth, ethno-linguistic group—how likely is it that an individual from that group will have primary education? For Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka, Table 3.3 focuses on two groups: a socio-economic geographically advantaged ('high-opportunity') group and a disadvantaged ('low-opportunity') group. The table shows the difference in opportunity profiles between these two groups, and it clearly highlights that, at least for the cohorts born in the 1950s, women faced much lower opportunities to attain primary education than men. Being a woman is a circumstance common in all countries for the low-opportunity groups. Similarly, being born in a rural area always carries a disadvantage.

In addition, by comparing individuals belonging to these two groups but born in different times—namely, by comparing the cohorts born in the 1950s and those born in the 1970s—this table reveals the pace at which the opportunity gaps are closing, or not, between the two groups.

Across countries, the reduction in disparity between a high-opportunity and low-opportunity group over time (moving from earlier cohorts to more recent cohorts) is driven by *progressive* increases in primary education rates. Improvements are higher for low-opportunity groups *vis-à-vis* high opportunity groups. The degree of progressivity is not the same across countries. To investigate this progressivity more fully, it is useful to consider the incidence curve of the growth in opportunities (a concept equivalent to that of the growth incidence curve but where groups are ranked according to the initial opportunity levels instead of initial levels of income or consumption, see Ravallion and Chen 2003; Peragine, Brunori and Palmisano 2014). An example of this incidence curve is shown in Figure 3.8 for Pakistan. The opportunity groups (also called "types" in the inequality of opportunity literature) have been ordered on the x-axis by their baseline primary education shares in the 1950s. The y-axis illustrates the growth in primary education share for each opportunity group between the 1950s birth cohort and the 1970s birth cohort. The red points indicate the high- and low-opportunity groups discussed in detail in Table 3.3.

Table 3.3. Primary education profiles for 'high-opportunity' and 'low-opportunity' groups

	"High-Opportunity" Group	"Low-Opportunity" Group	Birth Cohort	Primary Education Share Ratio	Description
Bangladesh	Male Urban Barisal Muslim	Female Rural Sylhet Muslim	1950	9 (0.67/0.07)	A Muslim male from urban Barisal born in the 1950s, was 9 times as likely to have primary education than a Muslim female from rural parts of Sylhet. Twenty years later, the disparity has narrowed substantially.
			1970	3 (0.74/0.23)	
Bhutan*	Male Urban West Central	Female Rural East	1950	19 (0.77/0.04)	A man from urban west central Bhutan born in the 1950s, was 19 times as likely to be literate than a female from rural parts of East Bhutan. Twenty years later, the disparity has narrowed but remains very high, as progress for women in the low opportunity group has been very slow.
			1970	4 (0.82/0.20)	
India	Male Urban North Others**	Female Rural Central Scheduled Tribes	1950	28 (0.84/0.03)	An upper caste Hindu male from north India born in the 1950s, was 28 times as likely to have primary education than a rural Scheduled Tribe woman from Central India. Twenty years later, the disparity has narrowed substantially.
			1970	6 (0.87/0.15)	
Nepal	Male Urban Eastern Khas	Female Rural Eastern Muslim	1950	121 (0.73/0.006	A Khas Hindu male from urban parts of eastern Nepal born in the 1950s, was 121 times as likely to have a primary education than a rural Muslim woman from eastern Nepal. As in India, twenty years later, the disparity has narrowed substantially.
			1970	30 (0.90/0.03)	

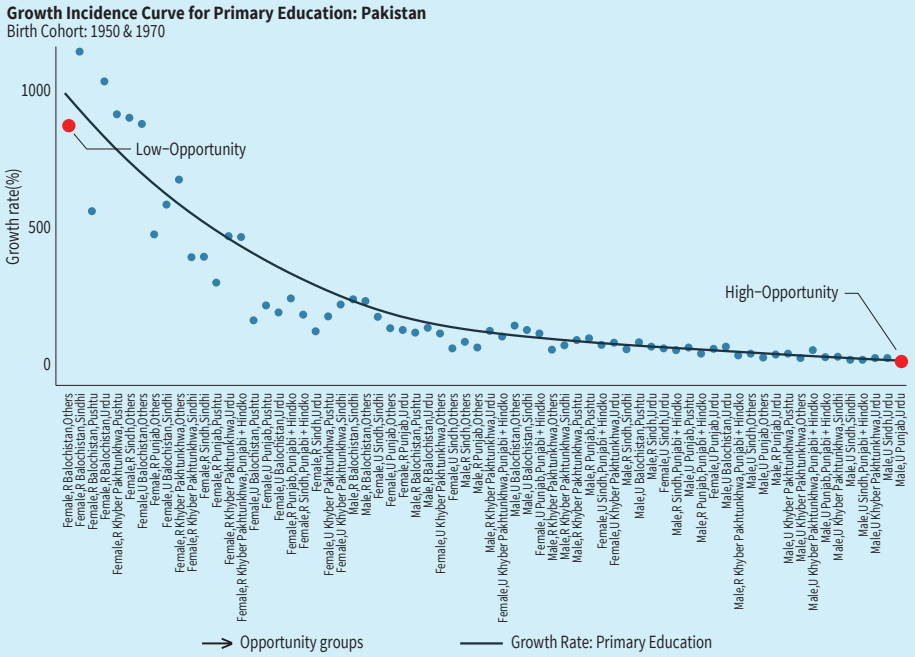
Table 3.3. Primary education profiles for 'high-opportunity' and 'low-opportunity' groups

	"High-Opportunity" Group	"Low-Opportunity" Group	Birth Cohort	Primary Education Share Ratio	Description
Pakistan	Male Urban Punjab Urdu	Female Rural Baluchistan Others***	1950	800 (0.80/0.001)	Female Pashtuns in Rural Baluchistan born in the 1950s, were 800 times less likely to have primary education than a male Urdu speaking urban Punjabi resident born in the 1950s. Two decades later, the disparity has narrowed substantially.
			1970	40 (0.81/0.02)	
Sri Lanka	Male Urban East Sinhalese	Female Rural South Sri Lankan Tamil	1950	9 (1.00/0.11)	Sinhalese males from urban parts of eastern Sri Lanka born in the 1950s are 9 times more likely to have primary education than Sri Lankan Tamil females in rural parts of south Sri Lanka. Twenty years later, disparity has narrowed marginally, and the low opportunity group continues to have substantially lower primary education rates.
			1970	6.7 (0.95/0.14)	

***Note:** The literacy shares for Bhutan have been used instead of primary education shares. It should be noted that the low opportunity groups in both countries had no primary education in the 1950s.**Others: Hindu Forward Caste (India), ***Others: Individuals whose main language is Balti + Siraiki + Balochi + Kashmiri + Others.
The selection of the low and high-opportunity groups is based on two criteria: lowest primary education share at baseline and group size of at least 15.

In Pakistan, the negative slope of the incidence curve indicates that growth in opportunities has been progressive. In fact, the curve is steeper for the most disadvantaged groups at baseline and flatter toward the right tail signaling that the largest gains were made by the lowest opportunity groups, such as females in rural Baluchistan. This incidence pattern *suggests* that the efforts to promote primary education in Pakistan have been successful in reaching the most marginalized communities, which have historically had limited access to education.

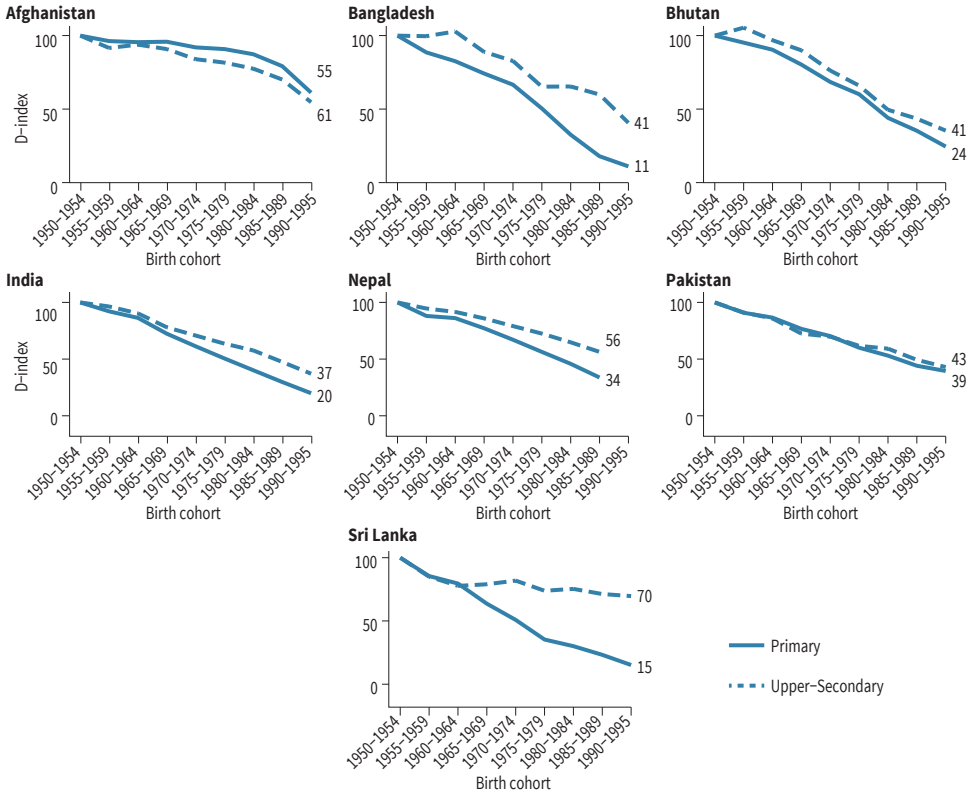
Figure 3.8. Opportunity growth incidence of primary education across opportunity groups in Pakistan



of obtaining primary education (or even just literacy) is much higher for a man who is born in an urban area in the western part of Afghanistan than the corresponding probability for a woman born in a rural area from the south. Inequality of opportunity reduces when the opportunity gaps between different groups go down or, in other words, when the opportunity profiles become similar across groups.

The expansion of secondary and higher levels of education has also been impressive in the region but it has not been as egalitarian as that of primary education or of literacy. The share of individuals enrolled at the different stages of the education process has substantially increased everywhere across the region. However, despite this progress, the extent to which circumstances influence the chances of obtaining lower-secondary, upper-secondary, or tertiary education remains significant and higher than that for basic education. On average, inequality of opportunity in the region increases the higher the level of education considered. Correspondingly, the reduction of inequality has been stronger for the lower levels of education (Figure 3.9), which compares the trends for primary with upper-secondary education.

Figure 3.9. Relative inequality of opportunity of primary education completion goes down faster than that of upper secondary education completion



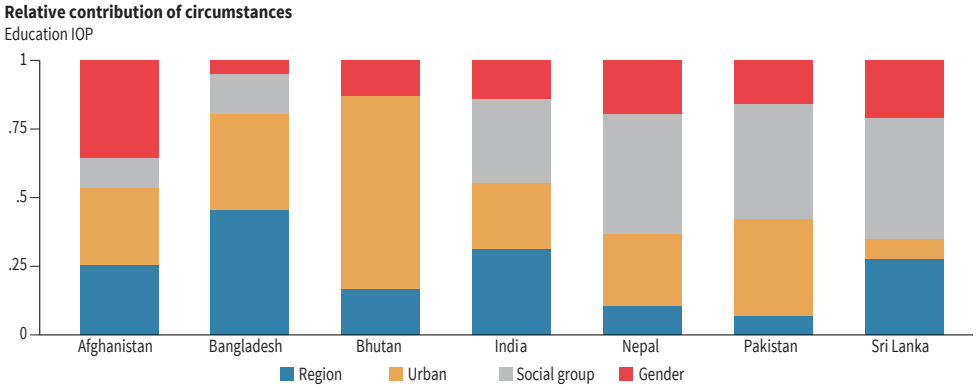
Source: Bussolo et al. 2023.
Note: The figure shows the change in IOp in primary and upper-secondary school attainment over time with respect to IOp levels calculated for the baseline birth cohort (individuals born in 1950–1955). Upper secondary is defined as completion of 12th grade whereas primary is defined as completion of 5th grade.

In sum, the expansive programs to increase literacy and primary education across populations have produced positive results in the region, at least in terms of quantity of basic education. However, the structural features of education systems and, likely, the remaining disparities in terms of quality of education influence their impact on equity. Even when countries reach levels of coverage close to 75 percent, this does not mean that the opportunity to access basic and good quality education is available to everyone to the same degree. This is even more so for secondary and higher levels of education.

An analysis of the circumstances

Which factors count for more in determining inequality of educational opportunities and its evolution in the different countries? The relative contributions that specific circumstances

Figure 3.10. Not all circumstances matter the same for IOp in years of education



Source: Bussolo et al. 2023.
Note: This chart indicates the percentage of the variation in education in each country that is explained by each individual circumstance. The relative contributions of the circumstances are calculated by using the Shapley decomposition. Cohort: Individuals born in 1990–99 (except Nepal where most recent birth cohort is 1980–89)

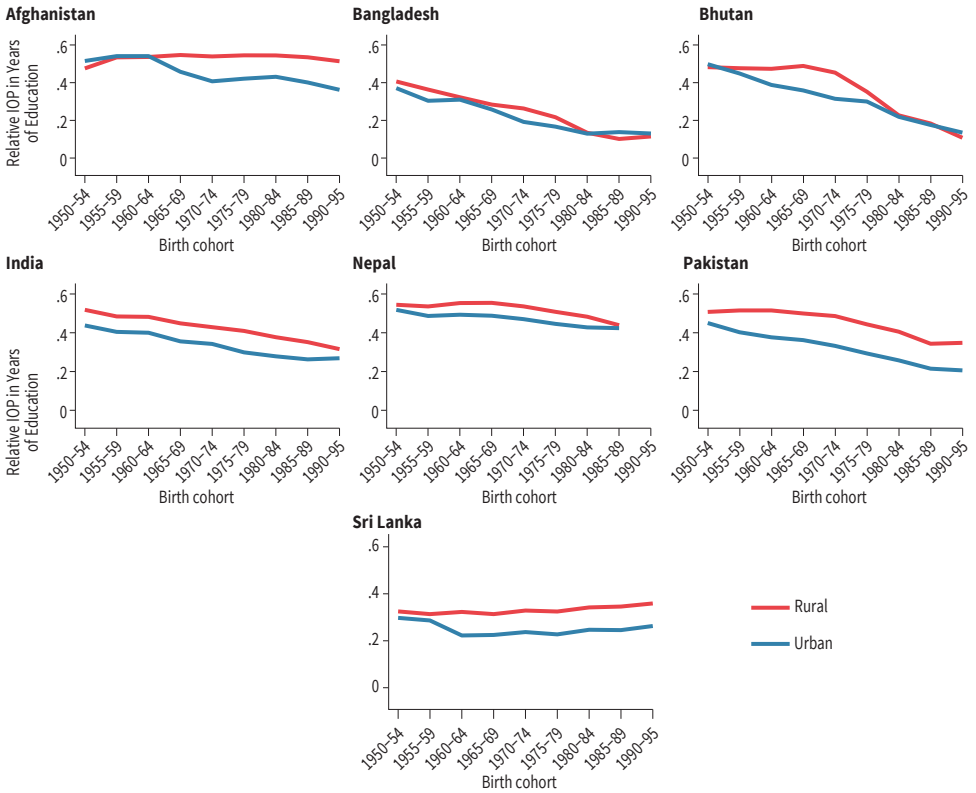
such as gender or place of birth make to overall inequality of opportunity vary greatly across countries and cohorts, but some patterns do emerge (Figure 3.10).

Geography is a key barrier to opportunities in South Asia. A large percentage of inequality of opportunity can be traced back to a person's location of birth, both with respect to the urban/rural divide and with respect to the region of birth.[11] Taken together, these two factors account for more than 50 percent of overall inequality of opportunity in most of the countries (the range goes from 30 to about 80 percent). The socio-demographic circumstance (a composite variable taking into account caste, ethnicity, and religious group) tends to be the second-most-important factor, explaining between one-quarter and half of overall inequality of opportunity in most countries. Gender is also an important factor for most countries in the region.

The evolution across different cohorts shows that, while there has been a constant and substantial improvement in terms of gender gap in education, the geographical differences remain somewhat important in most countries, particularly with respect to the gap between rural and urban areas. The relevance of the urban/rural divide also emerges by considering the extent of inequality of opportunity separately for the different groups (Figure 3.11).

[11] Note that region of birth, which is the circumstance beyond the control of the individual, is not always available as a variable in the surveys of the countries analyzed here. When not available, region of residence has been used as a proxy. Note also that, as described in detail in Bussolo et al. 2023, within country migration is quite limited in most South Asian countries, so region of residence is, in most cases, a valid proxy for region of birth.

Figure 3.11. There is an urban premium in IOp in years of education



Source: Bussolo et al. 2023.
Note: The figure shows the IOp (Gini index) in education for a given birth cohort for urban and rural population.

An urban premium is present in the inequality of opportunity of education in South Asia. The share of inequality in years of education that is explained by circumstances is lower in urban areas than in rural areas for all the countries in the South Asia region. In terms of trends, in Bhutan and Bangladesh there is convergence as inequality of opportunity shrinks slightly faster in rural areas. However, it remains sizable in India, Pakistan and Nepal, and actually widens in Afghanistan and Sri Lanka.

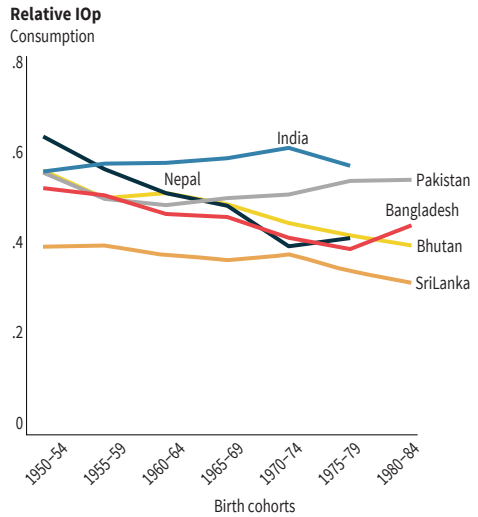
Inequality of opportunity for consumption

When moving from education to consumption, the data (Figure 3.12) show that the burden of inherited circumstances on the individual economic achievements remains heavy in the region, with some heterogeneity suggesting a distinct hierarchy of countries.

The predetermined circumstances explain a portion of total consumption inequality, which ranges between about 40 and 60 percent, with India at the highest point in the range and Sri Lanka at the lowest point. India displays one of the highest values of inequality of opportunity in the region for all the cohorts, and also exibits an increasing trend over time. For the cohort of individuals born in more recent cohorts, more than 60 percent of total consumption inequality is driven by circumstances at birth.[12]

The evolution of inequality of opportunity in consumption over time in the region shows, on average, a relatively stable pattern, particularly compared with the analogous evolution of IOp in education, but again with some heterogeneity. While Bhutan, Bangladesh and Sri Lanka show a (slight) reduction in the role of circumstances, countries such as Pakistan, in addition to India, show an increasing trend.

Figure 3.12. IOp in consuption goes down but less than IOp in education



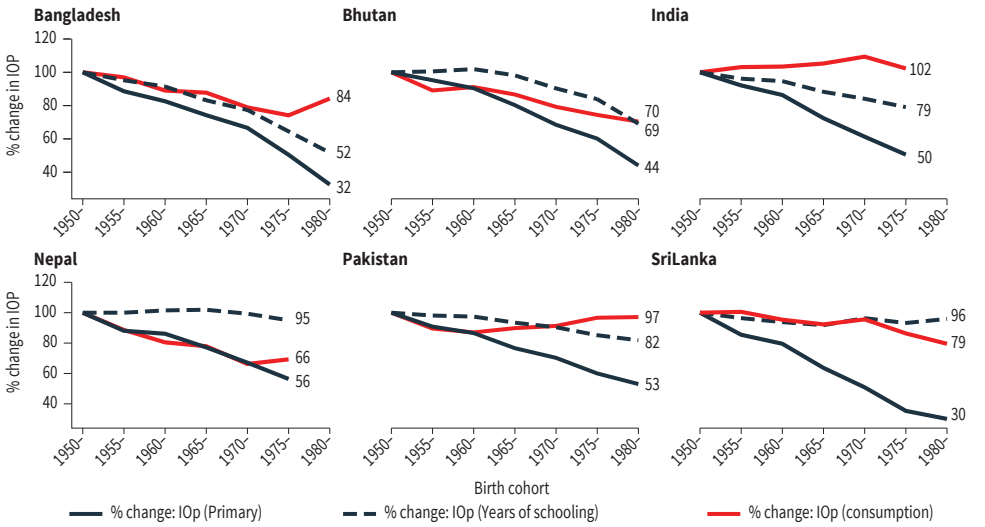
Source: Bussolo et al. 2023.
Note: The figure shows the relative IOp (computed by Gini index) in consumption. The figure is restricted to individuals who were between 35 and 55 years of age at the time of data collection.

Hence, the analysis uncovers a puzzling divergence in the evolution of the inequality: the increase in equality of educational opportunities that, with different degrees and intensities, has characterized the region in the recent decades, has not been followed by a similar reduction in inequality of opportunities in other relevant individual economic achievements.

This disturbing divergence is illustrated in Figure 3.13. This figure shows a clear divergence when the trends in inequality of opportunity of consumption are contrasted with those of inequality of opportunity of primary education. However, when the trends of IOp of years of education are considered, the divergence remains pronounced only for India, Pakistan, and Bangladesh. This confirms the previously discussed features of the evolution of the educational opportunities and, in particular, the fact that the decrease of IOp in education is mostly driven by changes at the lower education levels and mainly in terms of quantity of primary education and not necessarily its quality. If, as documented recently for many countries,[13] income gains accrue almost exclusively to those with high skills and tertiary education, while

[12] Note that the latest surveys for India and Nepal used to estimate consumption per capita date from 2011. New surveys are currently underway and estimates of IOp for more recent cohorts would be possible when data will be released.
[13] See for example Raveh and Reshef (2016) and Pi and Zhang (2018).

Figure 3.13. The evolution of IOp in primary education, years of schooling and consumption



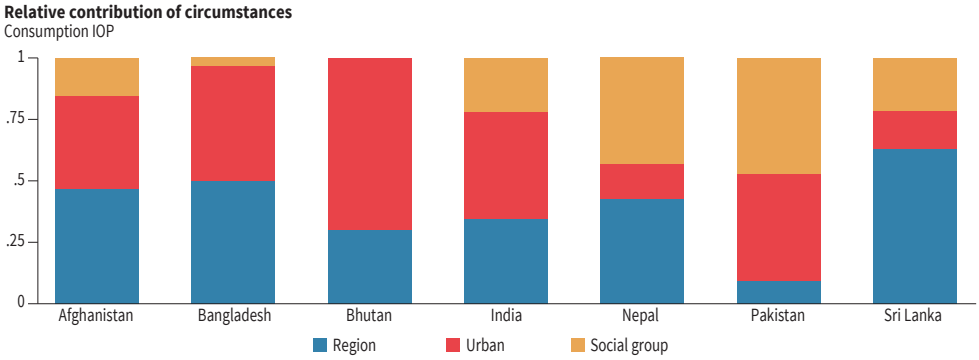
Source: Bussolo et al. 2023.
Note: The figure shows the change in IOp in consumption, primary education and years of schooling using the IOp values for the earliest birth cohort as a baseline. The consumption IOp measure is restricted to individuals who were between 35 and 55 years of age at the time of data collection.

lower-skilled workers do not see real wage increases, then in the presence of a limited or unfair access to higher levels of education, which itself depends on the quality of primary education, the educational system can itself contribute substantially to overall income or consumption inequality. South Asian countries do not have many examples of data on learning that are comparable to countries in other regions. However, Angrist et al. (2021) construct an authoritative and globally comparable dataset of learning that covers 164 countries for the period 2000 to 2017. According to their dataset, South Asia is the region with the lowest learning score (at 335[14]) below that of Sub-Saharan Africa (342) and far from those of the other regions. While these data do not directly speak to the inequality of learning, these large gaps in learning still suggest that even if South Asia countries were to reach 100 percent primary education attainment, i.e., a situation where there is zero inequality in the distribution of the quantity of primary education, a gap between the trends of IOp of education and IOp of consumption would likely still remain.

The divergence between IOp in education and IOp in consumption could also depend on additional and independent factors that could induce the labor market to remunerate the

[14] Angrist et al. (2021) harmonize international and regional learning assessment test data for 164 countries to construct a Harmonized Learning Outcome (HLO) measure which can be used for global comparison of learning outcomes. A score of 625 on the HLO is equivalent to advanced proficiency in international assessment tests.

Figure 3.14. The contribution of the different circumstances to IOp in consumption



Source: Bussolo et al. 2023.
Note: This chart indicates the percentage of the variation in consumption in each country that is explained by each individual circumstances. The relative contributions of the circumstances are calculated using Shapley decompositions. Cohort: Individuals born in 1980–84 (in India, Afghanistan and Nepal) and in 1985–89 elsewhere

same education level in a differential way, according to some predetermined characteristics.[15] That is to say, the inherited circumstances could have a first channel of influence, through educational attainments which, in turn, would affect the individual economic achievements later in life (income, consumption), and an additional channel by which they affect directly the remuneration of the acquired education in the labor market (for example, the network effect exercised by parents in the labor market).

The relative contributions of specific circumstances to overall consumption opportunity inequality vary greatly across countries and cohorts, but some patterns do emerge. A large percentage of inequality of opportunity can be traced back to a person's location of birth, both with respect to the urban/rural divide and with respect to the region of residence. The demographic group (a composite variable taking into account caste, ethnicity and religious group) is the second-most-important factor and is particularly important in Pakistan and India, although its importance is weakening in both countries.

As for the case of inequality of opportunity of education, Box 3.3 describes examples of opportunity profiles for the case of consumption, providing a nuanced and differentiated narrative across the seven countries of the region.

[15] See along this line Bussolo et al. (2023) who propose a decomposition model of IOP in which the evolution of IOp in income is shown to be driven by three different factors: (i) equality of opportunity in education; (ii) returns to education; and (iii) a residual, factor called 'networking effect'.

Box 3.3. Are opportunity gaps closing? A stylized version of the opportunity growth incidence curve

This box first presents a stylized version of an opportunity growth incidence curve (Peragine, Brunori and Palmisano 2014). This is a concept similar to that of the growth incidence curve used to assess whether the growth process is progressive, regressive, or has other distributional impacts. In an opportunity growth incidence curve, rather than ordering individuals according to their incomes into percentiles and then comparing what happens in terms of income growth to each percentile, individuals are grouped according to their inherited circumstances and these groups ranked according to their average incomes. Then, the levels of income (or consumption) for each group are compared in two moments in time and the growth of each group is a point of the opportunity growth incidence curve. This box focuses on two groups that are likely to be at different points of the income (or consumption) distribution. The opportunity gap between these two groups is represented by the difference (or the ratio) in the average consumption of the two groups. Considering these two groups (a high-opportunity and a low-opportunity group) for two cohorts, one born in 1950–1955 and another in 1970–1975, it is possible to assess whether the opportunity gap has closed or not. In other words, it is possible to see whether the opportunity growth has been "progressive" or not. Table 3.4 reveals a persistent disparity between advantaged and disadvantaged groups across countries. The selection of which of the many different circumstances-based groupings has been labeled high- or low-opportunity has been guided by available empirical literature and data in the surveys, but it should be considered as illustrative.

Among middle-aged "high-opportunity" individuals identified in the 1950s, on average, the baseline consumption per capita levels are at least twice and at most four times as large as middle-aged individuals in "low-opportunity" circumstances across each one of the seven South Asian countries in Table 3.4., except for Nepal. While the baseline differences are large, it is concerning to note that, decades later, some of the opportunity gaps remain significant, even if there has been progress in their reduction.

Across countries, the disparity between a high-opportunity and low-opportunity group over time has remained stagnant among low-opportunity groups across countries (Table 3.4). Table 3.4 also suggests that the convergence in consumption shares across advantaged and disadvantaged groups occurred at different rates across different countries. To investigate the evolution of opportunity gaps further, we use a growth incidence curve to illustrate the distribution of growth in mean consumption across opportunity groups in each country.

Table 3.4. Consumption profiles for "high-opportunity" and "low-opportunity" groups

	"High-Opportunity" Group	"Low-Opportunity" Group	Birth Cohort	Consumption Ratio*	Description
Bangladesh	Urban Dhaka Muslims	Rural Rangpur Hindu + Others**	1950	3	Middle-aged Muslims from urban parts of Dhaka born in the 1950s are likely to have three times higher consumption than Hindus in rural Rangpur. Twenty years later, the consumption gap has narrowed marginally.
			1970	2	
Bhutan	Urban West	Rural East	1950	4	Individuals in urban parts of western Bhutan born in the 1950s are likely to consume four times more than those in rural parts of eastern Bhutan. Twenty years later, this gap has narrowed substantially.
			1970	2	
India	Urban North Others***	Rural Central Scheduled Caste	1950	3.6	A middle-aged individual belonging to the Scheduled Caste of rural central India born in the 1950s, consumes four times less than upper caste Hindus from northern India. Twenty years later, the gap has narrowed marginally.
			1970	2.9	
Nepal	Urban Western Janajati	Rural Western Muslim	1950	9	A Janajati born in the 1950s residing in urban western Nepal has a standard of living roughly nine times higher than a Muslim born in rural western Nepal. This stark difference between consumption levels decreases substantially 20 years later.
			1970	2.1	
Pakistan	Urban Punjab Urdu	Rural Punjab Others ****	1950	4	Balti/Siraiki/Balochi/Kashmiri speakers born in the 1950s, consume four times less than a middle-aged Urdu-speaking individuals from Punjab. Twenty years later, the difference in consumption levels between the groups decreased marginally.
			1970	2.3	

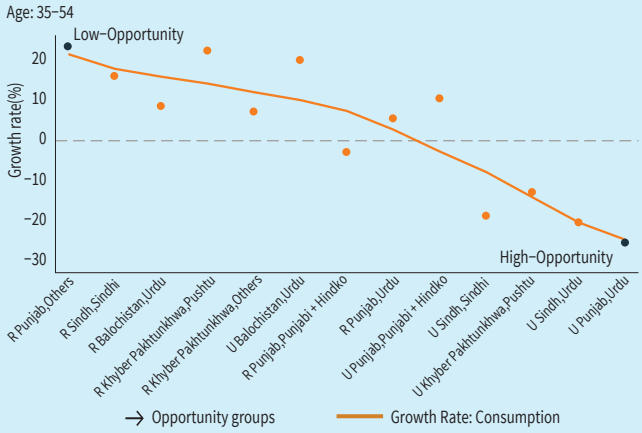
Table 3.4. Consumption profiles for "high-opportunity" and "low-opportunity" groups (continued)

	"High-Opportunity" Group	"Low-Opportunity" Group	Birth Cohort	Consumption Ratio*	Description
Sri Lanka	Urban North Central Sinhalese	Rural Sabaragamuwa Indian Tamils	1950	4.5	Sinhalese in urban north central Sri Lanka consume 4.5 more than Indian Tamils in rural Sabaragamuwa Sri Lanka. In the past 20 years, the difference in their consumption levels declined marginally.
			1970	2.9	

* The consumption ratios represent the ratio of household monthly consumption per capita for high and low opportunity groups for each country across two birth cohorts, namely 1950–1955 and 1970–1975. The consumption estimates have been calculated using consumption data of individuals who were 35–54 years old at the time of data collection in each country-survey round. The selection of the low and high-opportunity groups is based on two criteria: lowest consumption at baseline and group size of at least 15. ** The "Hindu + Others" group in Bangladesh comprises of Hindus (primarily), Buddhists and Christians. *** The "Others" group comprises of all caste groups except Scheduled Castes, Scheduled Tribes, Muslims, and Other Backward Classes. **** The "Others" group in Pakistan comprises of individuals whose primary language is not Urdu/Punjabi/Sindhi or Pashto (i.e. Balti/Siraiki/Balochi/Kashmiri speakers).

Figure 3.15 shows the result of this exercise for Pakistan. The opportunity groups have been ordered on the x-axis by their baseline mean consumption in the 1950s. The y-axis illustrates the growth in mean consumption for each opportunity group between 1950 and 1970. The black points indicate the high- and low-opportunity groups selected to estimate consumption ratios across groups for Pakistan in Table 3.4.

Figure 3.15. Opportunity growth incidence of consumption across opportunity groups in Pakistan

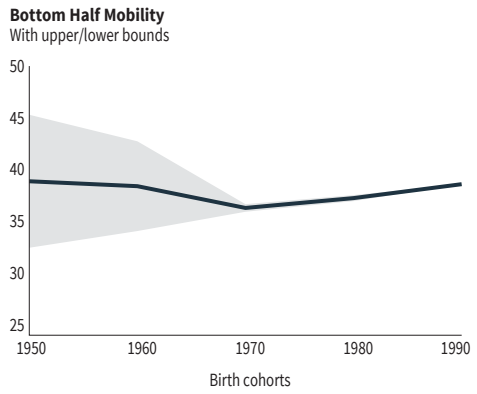


Intergenerational mobility in South Asia

High and persistent inequality of opportunity across South Asian countries suggests an oversized role played by the "lottery of birth" compared with other parts of the world. Most of these circumstances—caste, gender, place of birth—beyond the control of an individual, are passed onto individuals through parents. In societies with low social mobility, these inherited circumstances dominate long-term life outcomes irrespective of individual effort. This is a perverse equilibrium where growth is hindered due to misallocation of talent and a poverty of aspirations. Relying on findings from a background paper on intergenerational education mobility in South Asia (Asher et al. 2023), this section develops a deeper understanding of patterns of upward mobility across space, time and communities within the South Asia region.

Bottom-half mobility was low and stagnant across much of South Asia over the latter half of the 20th century, despite rapid economic growth during the same period. In order to better understand the bottom-half mobility measure in Figure 3.16, consider a country with perfect intergenerational mobility. In such a setting, the education attainment ranks of individuals do not depend on the ranks of their parents at all. The average rank of an individual born to fathers in the bottom half of the distribution would be the 50th percentile in this fictional society. Now consider the other extreme where one's education attainment rank is equal to the rank of their parent irrespective of their abilities or the environmental changes that they have been exposed to in their own generation. In such a society, the average rank of an individual born to fathers in the bottom half would be the 25th percentile.

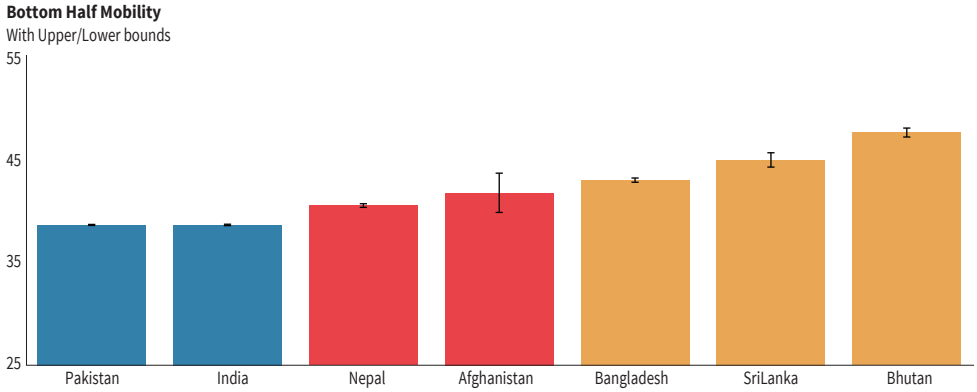
Figure 3.16. Bottom-half mobility has been stagnant across generations in South Asia



Source: Asher et al. (2023).
Note: The figure shows bounds on bottom-half mobility which is the average education rank attained by children to fathers who are in the bottom half of the education distribution. These measures have been calculated using matched education attainment ranks across generations for 525,015 father-child pairs across seven countries in South Asia. The x-axis represents decadal birth cohorts of children. The y-axis shows upper and lower bounds on bottom-half mobility for each birth cohort. The gray area represents the region between upward and lower bounds. The blue line is the mid-way point between upper and lower bounds of bottom-half mobility.

Figure 3.16 suggests that the average South Asian individual born in the 1980–1990 birth cohort to fathers who were in the bottom half of the education distribution in their own generation has an education attainment rank of the 37th percentile. As a benchmark, the corresponding ranks of individuals born

Figure 3.17. There is a distinct hierarchy of countries in terms of mobility in South Asia



Source: Asher et al. (2023).
Note: The figure shows bounds on bottom half mobility, which is the average education rank attained by children to parents who are in the bottom half of the education distribution, separately by country. The black lines above each bar represent the interval between upper and lower bounds. The bars represent the midway point between upper and lower bounds on bottom half mobility.

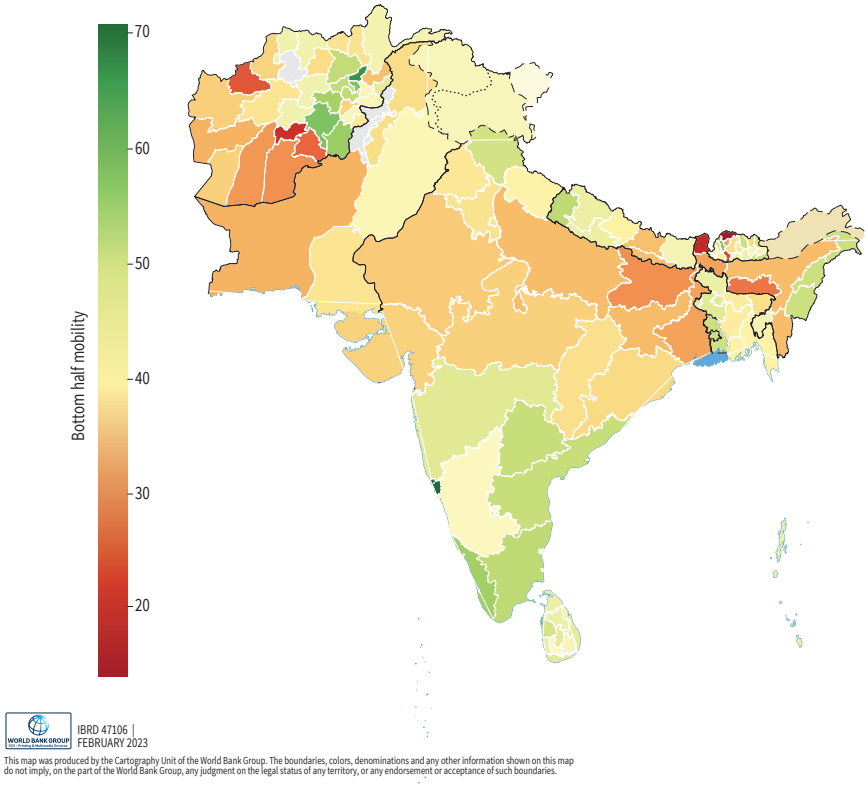
to fathers in the bottom half of the income distribution are the 46th and 42nd percentile for Denmark and the United States, respectively.

There is substantial heterogeneity in terms of intergenerational mobility within South Asian countries. Figure 3.17 suggest a distinct hierarchy of countries in terms of intergenerational education mobility in the region. Consider the cohort of individuals born to fathers in the bottom half of the education distribution in the 1990–2001 decade. During this same decade, each of the countries in the figure below (except Afghanistan[16]) witnessed an interrupted substantial increase in economic growth per capita. However, this overall economic growth did not translate into dramatic reshuffling of social status ranks across generations, measured by bottom-half education mobility in most countries. Among the 1990–2001 generation of South Asian children born to parents in the bottom half, the average rank of a Bhutanese and Sri Lankan child is the 47th and 45th percentile, respectively, within their own lifetime. However, children born to parents in the bottom half in low-mobility countries, such as India and Pakistan, only end up at the 38th percentile within their own cohort.

Bottom-half mobility has been stagnant over time in low-mobility countries. Figure 3.17 establishes that the mobility gap between countries in South Asia is widening. Insofar as there was an increase in intergenerational mobility in the 20th century, this was concentrated in countries that are at the top of the intergenerational mobility hierarchy (Bhutan, Sri Lanka and Bangladesh).

[16] We do not have data on GDP growth per capita or overall GDP growth in Afghanistan for 1991–2001 time period.

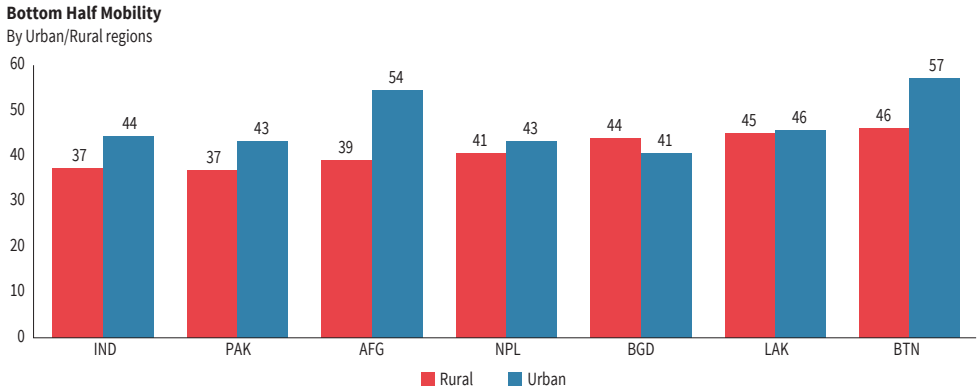
Figure 3.18. Geographic heterogeneity in bottom-half mobility at the province level across South Asia



Source: Asher et al. (2023).
Note: The figure shows bottom-half mobility, which is the average education rank attained by individuals born to fathers who are in the bottom half of the education distribution, for each province across South Asia. Bottom-half mobility was calculated at the country-birth cohort level.

The heterogeneity in upward mobility by place is stark, both between and within countries in South Asia. Figure 3.18 illustrates bottom-half mobility for father-son pairs calculated at the country-birth cohort level and aggregated at the subnational level. National mobility measures in each country obscures the underlying geographic diversity in bottom-half mobility. For instance, in India, certain states such as Kerala, Goa, and Arunachal Pradesh display the highest levels of bottom-half mobility throughout the entire South Asian region. Yet, the Indian state of Bihar is one of the provinces with the lowest bottom-half mobility measures in the region, at levels similar to those of southern Afghanistan, Mid–western Nepal, Central Nepal, and Balochistan. Note that regions and sector (urban/rural) do not represent the entire gamut of spatial variation in intergenerational mobility. For instance, Asher, Novosad and Rafkin (2023), illustrate dramatic variation in bottom-half mobility at the neighborhood level using high-resolution census data suggesting that location matters for

Figure 3.19. There is an urban premium in terms of bottom-half mobility across most countries in South Asia



Source: Asher et al. (2023).
Note: The figure shows bottom-half mobility, which is the average education rank attained by individuals born in the 1990s to parents who are in the bottom half of the education distribution, by urban and rural sectors for each country in the sample.

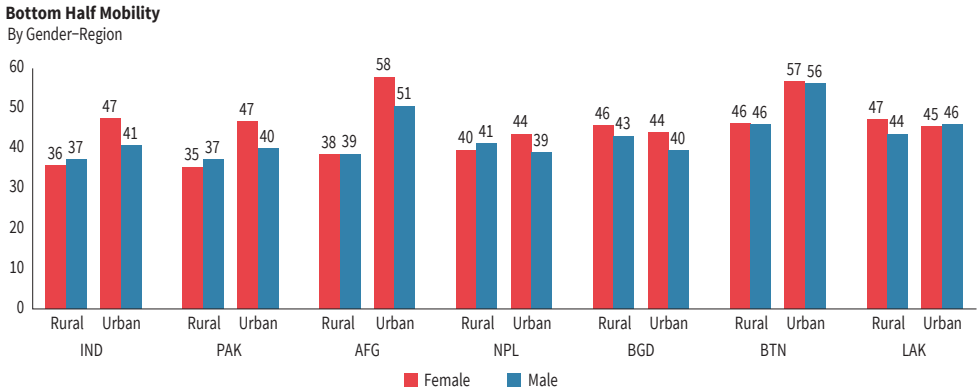
intergenerational mobility right from the country down to the granular zip-code level, across developed and developing countries.

Importantly, the geographical heterogeneity observed in bottom-half mobility within countries follows a distinct urban-rural pattern. Across most countries in South Asia, children of fathers born to the bottom half are more likely to progress in terms of ranks in their own generation if born in urban areas as opposed to rural areas. This is consistent with the findings of Bussolo et al. (2023), illustrating a greater role played by circumstances in inequality of outcomes in rural areas compared with urban areas across South Asian countries.

Figure 3.19 echoes prior evidence establishing the vast differences in upward mobility prospects of urban and rural residents across India.[17] The urban premium in upward mobility is likely driven by access to a wider range of economic opportunities in formal, non-agricultural sectors, which mediate the adverse effects of identity group-based hierarchies (Deshpande 2007). The central idea is that cities not only improve economic opportunities but also erode social norms, such as patriarchal ideologies. Motivated by this theory, Asher et al. (2023) study the interaction of gender gaps in intergenerational education mobility and the observed urban premium in mobility across South Asia. Figure 3.20 presents the findings.

[17] Vast differences exist in upward mobility prospects across urban and rural India (Iversen et al. 2015). Yamamoto et al. (2019) find that a widening of disparities in terms of access to opportunity between rural and urban areas in Nepal. In parts of rural Pakistan, there is evidence that historical inequality, in the form of land ownership and social status, continues to shape educational opportunities and outcomes for individuals (Cheema et al. 2013; Ashgar et al. 2018).

Figure 3.20. In most South Asian countries, the urban premium is driven higher upward mobility of women in urban areas



Source: Asher et al. (2023).
Note: The figure shows bottom half mobility, which is the average education rank attained by individuals born in the 1990s to parents who are in the bottom half of the education distribution, by urban and rural sectors for each country in the sample. Note that Afghanistan has not been illustrated in the figure above due to the particularly coarse education attainment distribution of women in Afghanistan compared with the rest of the region.

Figure 3.20 illustrates that, wherever a prominent urban premium is observed in terms of intergenerational education mobility, it is driven by the higher mobility of women in urban areas. In other words, the urban premium is predominantly a story of the interaction of urbanization and gender. The underlying mechanism is likely that, in addition to providing greater access to economic opportunity, cities potentially erode patriarchal norms on women's participation in society beyond the household. Several studies show rural-urban gaps in attitudes around women's work and domestic violence (Boudet et al. 2012; Uthman et al. 2009; Snow et al. 2013; Alesina et al. 2021), likelihood of harmful practices (UNICEF 2013), and women's participation in household decisions (Head et al. 2015). This is a particularly important result for South Asia considering the region's low levels of female labor force participation, given the region's levels of economic development (World Bank 2022).

Informal social institutions, such as caste hierarchies and patriarchal norms, are likely to govern socio-economic behavior and decisions in the absence of formal institutions, such as widely accessible public education and formal labor market opportunities. Urbanization can counter the reliance on informal institutions by widening access to formal economic opportunity, which would obviate reliance on informal institutions. While the drivers and consequences of structural transformation is a critical area of research within development economics, empirical evidence remains nascent on the extent to which and how urbanization interacts with caste hierarchies, ethnic-group affinities and patriarchal norms to ultimately impact economic mobility and inequality of opportunity.

3.3 Policies

The previous sections of this chapter document the variation and limitations in the scope for upward mobility in South Asia, alongside the growing perception of inequality in the population. Addressing existing social and economic divides in South Asia is crucial for the region to fully realize its economic potential. Over the next two decades, South Asia is expected to be the fastest-growing region in the world. Unless this economic growth is inclusive, existing social divides will widen and increase overall inequality which, in turn, will limit the growth potential of the region.

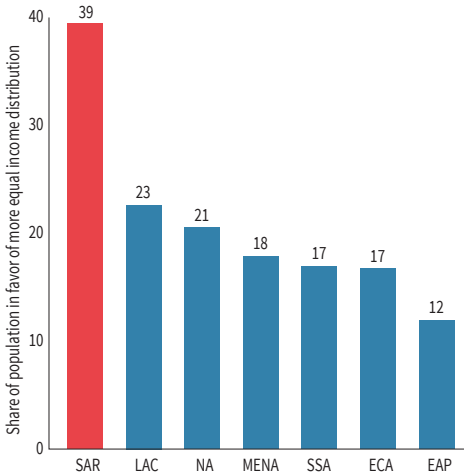
Calls for a more equal income distribution are higher in South Asia than in any other region and have increased significantly since the 1990s, suggesting that public support for policies to promote inclusive growth in the region is rising. The share of people in favor of a more equal income distribution is nearly twice as high in South Asia compared with other regions, according to data from the World Values Survey (Figure 3.21). Calls for more equality have been rising in South Asia since the 1990s. For example, between 2000 and 2016, the share of people strongly in favor of the idea that incomes should be more equally distributed increased from 30 to 38 percent—a significantly higher increase than in any other region (Figure 3.22).

Among countries in South Asia, support for reducing inequality is especially high in India[18] (Figure 3.23). On average, people in India appear to be significantly more supportive of a relatively even distribution of income compared with people in neighboring Bangladesh and Pakistan. Strikingly, support for greater equality extends across the income distribution. Based on a large nationwide survey of 116,061 households conducted in India,[19] Bussolo and Dixit (2023) find that over 80 percent of people believe that inequality is a problem for society. Even among people who perceive themselves to be in the top decile of the income distribution, more than 80 percent view inequality as a concern. This concern with inequality is visible across caste, religious and regional lines.

The demand for greater equality is accompanied by support for state intervention to bring about more equitable outcomes. Figure 3.24 shows that the average World Values Survey (WVS) respondent in India, Bangladesh and Pakistan leans toward believing that their governments bear primary responsibility for ensuring that everyone is provided for, rather than the individual. While the belief in the role of government is prevalent in each country, it is

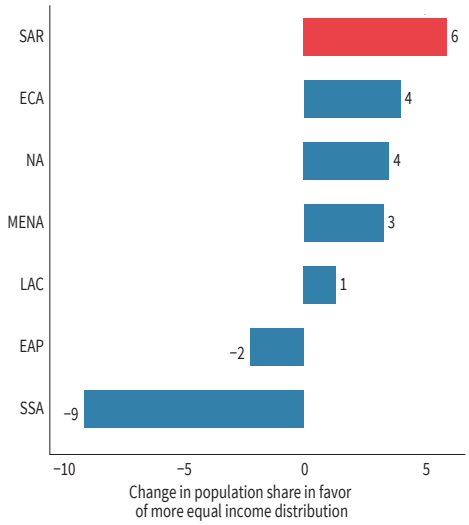
[18] The lower support for redistributive policies in Pakistan may be related to lower trust in the national government authorities' ability and willingness to implement them. This may signal that the social contract is under strain and people are opting for informal forms of redistribution (such as the Zakat system). This interesting hypothesis is worth further research. For an example of such a study see Bussolo et al (2018).
[19] This is the Consumer Pyramids Household Survey conducted by the Centre for the Monitoring of the Indian Economy.

Figure 3.21. The demand for a more equal income distribution is higher in South Asia than in any other region



Source: World Values Survey (WVS).
Note: Regional averages based on latest available data for each country. South Asian countries included are Bangladesh, Pakistan and India. Respondents are asked on a scale from 1 to 10 how much they agree with following statement: "1=People should take more responsibility to provide for themselves" versus "10=Government should take more responsibility to make sure that everyone is provided for". Population shares are calculated based on the percentage of respondents that agree strongly with "Incomes should be made more equal" (i.e., they select option 1 or 2 in their replies).

Figure 3.22. The demand for a more equal income distribution has increased significantly since the 1990s and more so for South Asia than in other regions

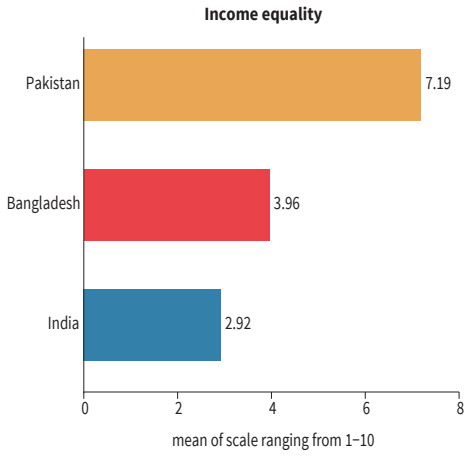


Source: World Values Survey (WVS).
Note: Figure shows the difference in the share of respondents that strongly agree that income should be made more equal between 1995 and 2004 (wave 3–4) and 2010–2022 (wave 6–7). South Asian countries included are Bangladesh, Pakistan and India. Respondents are asked on a scale from 1 to 10 how much they agree with following statement: "1=People should take more responsibility to provide for themselves" versus "10=Government should take more responsibility to make sure that everyone is provided for". Population shares are calculated based on the percentage of respondents that agree strongly with "Incomes should be made more equal. (i.e., they select option 1 or 2 in their replies)

especially high in India, in line with the relatively higher support for reducing inequality. Based on findings from India by Bussolo and Dixit (2023), the belief that inequality is a problem for society is near synonymous with the belief that the government should reduce the gap between the rich and the poor.

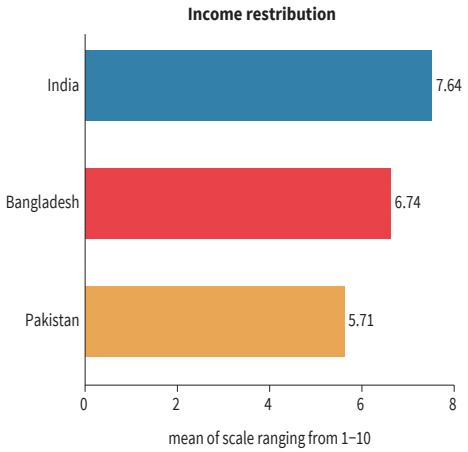
Perceptions or subjective measures of inequality are important because of their implications for social cohesion, as well as their implications for public support for redistributive policies, even if perceptions are not necessarily an accurate measure of the extent of inequality. People's perceptions likely go beyond their income or economic circumstances, and reflect their experiences relating to economic insecurity, dignity, beliefs about fairness and social mobility, and ideology. In that sense, perceptions offer a window into social aspects of

Figure 3.23. Support for reducing inequality is higher in India relative to Bangladesh and Pakistan



Source: World Values Survey (WVS).
Note: Figure based on data collected between 2010 and 2022 (wave 6–7). Respondents are asked on a scale from 1–10 how much they agree with following statement: *"1=Incomes should be made more equal"* versus *"10=There should be greater incentives for individual effort"*.

Figure 3.24. Support for state intervention in welfare is high in South Asia



Source: World Values Survey (WVS).
Note: Figure based on data collected between 2010 and 2022 (wave 6–7). Respondents are asked on a scale from 1 to 10 how much they agree with following statement: *"1=People should take more responsibility to provide for themselves"* versus *"10=Government should take more responsibility to make sure that everyone is provided for"*.

inequality that income- or asset-based measures cannot capture. Bussolo and Dixit (2023), for instance, show that people's views of their economic standing in society reflect not just their household income, but also the sharing of resources within communities implicit in religious and social goods such as places of worship, religious ceremonies, cultural events, community kitchens, and so on. The implication is that policy measures that aim to bring about a more equitable distribution of income must also be attentive to their impacts on the provision of informal public goods within communities.

Overall, these data suggest that people in South Asia are increasingly concerned about economic inequality, and that policies to promote inclusive growth are likely to find widespread public approval. The remainder of this section outlines areas where effective policies can help foster inclusive growth.

Building an opportunity-egalitarian society is not an easy task and requires interventions both on the supply and demand side of both factor and product markets. The discussion that follows in this section highlights some policy areas that deserve attention to achieve this goal. Some will require considerable long-term investments and may not be immediately possible in the current macroeconomic context, while others may not have

large fiscal costs and could be pursued right away. When thinking of policies, it may be useful to keep in mind the conceptual framework put together by the international panel on social progress (www.ipsp.org), which classifies policies in three groups: (i) pre-market (or pre-distribution), a group which includes policies preparing individuals such as education, training policies, but even inheritance; (ii) in-market which affects the rules of how the market (and even society) functions and includes competition policies, technology policies, labor market regulations, electoral system rules amongst others; and (iii) post-market (or redistribution) which includes safety nets as well as progressive taxation. An opportunity-egalitarian society rests it foundation on all these three groups of policies. However, the remaining of this section describes just a subset of policies, linking them to the findings of the previous sections: education policies (considering interventions on both the supply and demand side), affirmative action policies, labor mobility interventions, as well as support to small and medium enterprises.

Achieving an inclusive set of education policies requires interventions on both the supply and the demand side. On the supply side, South Asia has witnessed success in increasing literacy and expanding enrolment in primary schooling. In recent years, all countries in the region have made considerable strides toward achieving universal or near-universal enrolment in primary school. However, enrolment in secondary school lags far behind. Based on statistics reported by UNESCO Institute of Statistics[20] in 2018–2019, gross enrolment in primary school in India, Bangladesh and Pakistan exceeded 95 percent, while gross enrolment in secondary school was 74, 73 and 44 percent, respectively, in the three countries. This points to a massive gap in educational opportunities, which can be addressed with greater public investments in education. However, such investments are lacking. As of 2019–20, government spending on education in South Asia was less than 3 percent of GDP, well below the global average of 4.3 percent and well short of the quantum of investment necessary to meet the aspirations of an overwhelmingly young population. As a percentage of per capita GDP, government expenditure per student on secondary education is relatively low, at 12 percent in South Asia, compared with a global average that exceeds 20 percent. Educational investments hold the key to expanding equality of opportunity and must be ramped up significantly. However, it is important to qualify this supply-side expansion. First, the focus on primary schools, and especially on improving the quality of basic education should not be neglected. In fact, successful progression to secondary and higher education is dependent on learning the basic skills of primary education. Measurements of learning in South Asian countries are available but, with few exceptions (see Angrist et al 2021), learning scores are not internationally comparable. This makes it difficult to compare and assess policies aimed at improving education in the region. Second, the system of government might impact a country's capacity to deliver equitable education opportunities. In countries with a federal

[20] Visit http://uis.unesco.org/ for more details.

government system, such as India, the provision of (some) public goods is the responsibility of individual states. In this case, policies and policy implementation can be different across states and, if these differences persist, reductions of inequality of opportunity may be slower than those for a country with a more unitary government system (Asadullah and Yalonetzky 2012). In fact, as shown in Section 3.2, Bangladesh, which has a more unitary government system, achieved a more equitable education expansion. A related and third qualifier is that if increased investment in secondary education is to remedy spatial and social inequalities, and translate into a more equitable society, resources would need to be earmarked in a progressive fashion targeting, among others, the 'low-opportunity' groups identified in Box 3.2, Table 3.3.[21]

Interventions to achieve inclusive education are also needed on the demand side. Social norms can affect both decisions regarding girls' education and influence employment outcomes of women. For example, in Nepal, Vogel and Korinek (2012) find that households are more willing to invest in boys' than girls' education based on norms about their role in society. Another study in Pakistan (Sawada and Lokshin 2009) finds that lack of (local) schools affects female education more strongly than male education but also that sociocultural factors, such as the risk of violating the purdah if girls have to go far from home to reach a distant school, exacerbate the supply-side constraint of lack of schools (or absence of female teachers). In Sri Lanka, Malhotra and DeGraff (1997), and Gunatilaka (2013), find that the labor market behavior of educated young women is shaped by family expectations about their role as daughters in the household, cultural differences in the acceptability of young women working, marital status, and more. The case of Afghanistan is particularly significant in terms of the restrictions on education for girls and policies, both on the demand and supply side. Hence, improving the situation will have to be tailored to the specific countries.

Among policies specifically designed for the 'low-opportunity groups', affirmative action deserves renewed consideration. Commonly referred to as quotas or reservations, affirmative action includes programs or policies to redress past and present inequalities through preferential treatment of members of marginalized groups. Nepal's affirmative action policy, which reserves public jobs for disadvantaged groups, has significantly improved educational and labor markets by incentivizing younger eligible candidates to invest more in their human capital (Subedi et al. 2022). Similarly, affirmative action policies for scheduled castes have increased educational attainment in secondary schooling and literacy in India (Cassan 2019). Hence, the appropriate implementation of affirmative action policies can serve to reduce the opportunity gaps discussed in this report. Simultaneously, inequality has multiple dimensions, and affirmative action policies that work effectively along one dimension

[21] In case of tertiary education, an important policy is access to funding (including credits). Other relevant policy measures include: network considerations (access to nearby institutions and dorms, especially for women); bridging programs supporting transition from secondary to tertiary; flexible learning pathways (which can be supported by modularization), among others.

may neglect another. Policies for scheduled castes in India significantly enhanced education outcomes for boys, but not so for girls from scheduled castes (Cassan 2019). This suggests that such policies must be complemented by measures to promote gender equity in the allocation of their benefits (see Box 3.4 for more details).

While improving access to education, public institutions need to pay attention to the economic and social mechanisms that allow individuals to translate their educational skills into earning abilities. As shown in Section 3.2, inequalities in education and inequalities in consumption follow different patterns. Hence, alongside more investment in secondary education, there is a need for avenues that make it more feasible for people to productively pursue income-generating work. In part, this requires employment creation. Alarmingly, estimates from the International Labor Organization (ILO) suggest that the labor force participation rate in South Asia declined steadily between 2005 and 2019, from nearly 60 percent to just over 53 percent.[22] Over the same period, the population in the region grew by about 300 million, and the share of the population aged 15–64 grew by 6 percentage points,[23] with millions of young adults added to the labor force every year. Policies to foster the growth of micro, small and medium enterprises (MSMEs) are essential. MSMEs account for a large fraction of employment in South Asia's predominantly informal labor markets and suffered a serious setback from pandemic restrictions. Investing in MSME growth would help create the jobs to productively employ a larger population in pursuit of upward mobility. To promote equality of opportunity, a renewed policy emphasis on MSMEs would also need measures to enable more individuals from underrepresented groups to join the labor force. An important example of this is the gender gaps in labor force participation in the region, which point to the need to facilitate women's involvement in labor markets. For instance, policies that enhance women's mobility and autonomy, making it easier and safer for women to travel and engage in paid labor outside the household, could go a long way toward reducing the documented gender inequalities in upward mobility.

Enabling individuals to move to places with greater scope for mobility would also help reduce inequality of opportunity. The report highlights the 'urban premium' in South Asia, whereby the share of inequality in years of education that is explained by one's circumstances is lower in urban areas than in rural areas for all the countries in the region. Urban areas are also known to offer a significant wage premium. Alongside urban-rural differences, there is also a significant geographic variation in upward mobility, as visualized in Figure 3.18. While some countries have been able to shrink such gaps, it is also worth exploring policies that enable people to migrate to higher-opportunity areas. Many of the constraints on migration are well-known. People often lack information about where to migrate, underestimate the

[22] Visit https://ilostat.ilo.org/data/ for more details.
[23] Visit https://data.worldbank.org for more details.

Box 3.4. Affirmative action policies in South Asia

Broadly defined, affirmative action involves programs or policies developed to redress past and present inequalities through preferential treatment of members of groups that have been excluded, or restricted, from accessing specific social and political spheres. Affirmative action policies are also commonly referred to as reservations, quotas, preferential treatment, or positive discrimination. Affirmative action policies have been used extensively by several governments in South Asia to level the playing field in political representation and create opportunities in education and the labor market.

Political reservation policy can be an effective redistribution tool

Political reservation policies typically reserve a certain percentage of political positions or seats in elected bodies for groups that are under-represented. The rationale behind these policies is that increased representation of these groups in political decision-making will lead to improved opportunities, such as access to education, employment, and other public goods. On the other hand, reservations restrict the electorate's choice and, hence, introduce distortions. Restricting the pool of political candidates to groups that have been historically disadvantaged and might have less education and experience could reduce the quality of public service delivery.

Findings from empirical studies conducted in South Asia suggest that the benefits of political reservation policies outweigh the costs (Duflo 2005). Reservation policies have increased the political participation of discriminated groups in the political decision-making process in South Asia. In India, political reservations have led to a sharp increase in the participation of women, scheduled castes, and scheduled tribes (Chattopadhyay and Duflo 2004; Cassan and Vandewalle 2021).

Reservation policies have also been found to shift policy decisions and public good provisions in favor of discriminated groups. In India, village councils reserved for women are found to invest more in public infrastructure directly relevant to women's needs (Chattopadhyay and Duflo 2004). Reservations of seats for scheduled castes and scheduled tribes in the state legislative assemblies are found to increase welfare transfers to these groups (Pande 2003). Similarly, political reservations at Indian village councils are found to increase access to local public goods such as toilets, electricity and private water connections for scheduled tribes and scheduled caste households (Besley et al. 2004).

While reservation policies do bring to power a group of relatively less experienced and less educated politicians, there is no empirical evidence that links reservation policies to reduced public services quality. For example, contrary to public perceptions, village councils reserved for women provide more public goods and those goods are of better quality (Duflo 2005).

Affirmative Action Policies in Education and Public Employment

In addition to increasing political participation, one can also design policies that directly improve opportunities for discriminated groups in the labor market. Through a quota system, a share of public sector jobs can be reserved for disadvantaged groups. Borooah et al. (2007) find that public job reservations in India increase the share of scheduled castes and scheduled tribes in regular salaried employment. Besides the direct opportunities for those who become employed in these public sector jobs, quotas also increase the returns to education for disadvantaged groups. Recent research on affirmative action policies in South Asia shows that these indirect effects can be important in improving overall educational attainment and labor market outcomes for discriminated groups by incentivizing younger eligible candidates to invest more in their human capital (Khanna 2020; Subedi et al. 2022). For example, Nepal's affirmative action policy, which reserves quotas in public jobs for women and disadvantaged castes, significantly improves monthly earnings and educational attainment for these targeted groups (Subedi et al. 2022). In India, affirmative action policies incentivize students from targeted groups to take up around one extra year of schooling (Khanna 2020).

Affirmative action policies in education can range from quotas in higher education institutions to various policies that reduce the cost of education for discriminated groups through free secondary schooling, scholarships, and free school meals. Reducing the cost of education can incentivize parents to keep students in education for longer by altering the cost-benefit considerations of their human capital investment decision. Quotas in higher education institutions can increase both the quantity and quality of schooling target groups receive. For example, Badge et al. (2016) show that an admission policy that fixes quotas for lower castes and women in Indian engineering colleges increases college attendance of targeted students in higher-quality colleges and, as a result, increases their educational achievement. Quotas in higher education can also indirectly benefit the targeted groups more generally by increasing the returns to education in primary and secondary schooling. For example, Cassan et al. (2019) find that affirmative action policies increased literacy and secondary schooling for boys of

scheduled castes in India. In Sri Lanka, an affirmative action policy based on region-based targeting of university students increases representation of students from disadvantaged regions (de Silva et al. 2021).

While affirmative action policy can be an effective tool for redistribution, not all targeted groups benefit equally from these policies. For example, Cassan and Vandewalle (2021) find that gender quotas for political office mostly improve the representation of lower caste women. Social norms around the mobility of women and female labor force participation are more restrictive within higher caste groups preventing women from these groups from taking up these opportunities. Similarly, while affirmative action policies improve educational opportunities in secondary schooling for boys from scheduled castes in India, girls did not benefit from these policies (Cassan et al. 2019). Hence, individuals at the intersection of discriminated groups may not be sufficiently protected by policies that ignore cumulative disadvantage. Moreover, some groups in South Asia are left out of current affirmative action policies, while also facing considerable disadvantages. For example, findings from a recent study in India suggest that affirmative action policies can explain the widening opportunity gap between scheduled castes and Muslims who did not benefit from these policies (Asher, Novosad and Rafkin 2023).

In sum, the devil is in the details. While the literature suggests that the benefits of affirmative action policies outweigh their costs, the design and implementation of such policies vary considerably across countries and most empirical evidence available for South Asia is concentrated in India. More research into the effectiveness of these policies in Bangladesh, Pakistan, Nepal, and Sri Lanka is therefore needed. Also, the ultimate objective of effective affirmative action policies should be the long-term eradication of discrimination. However, we do not yet have empirical evidence of this long-term impact, namely of the impact once the policies have stopped.

income gains from migration, and are unable to afford the costs of relocation (McKenzie, forthcoming). They may also lack access to a safety net that could shield them from the uncertainties of looking for work and living in an unfamiliar place. Furthermore, they may be hesitant to move because they rely on the informal safety nets of extended family and community in their place of origin (Munshi and Rosenzweig 2016). Following Bussolo and Dixit (2023), individuals who benefit from the sharing of resources within their community may also be reluctant to let go of the benefits of community-provided public goods, which would only be compounded by the fear of moving to a place where they do not know anyone

(McKenzie, forthcoming). Policy solutions could be devised to effectively address these constraints. Programs that help finance travel costs, provide accurate information to individuals about where to migrate in search of opportunities, and enable individuals to understand what life might be like if they migrated could be impactful. The expansion of state safety nets to include the urban poor, for instance by extending unemployment insurance programs to the informal sector, may also alleviate the risks that individuals take in moving to an unfamiliar labor market. Such policies could greatly facilitate the movement of human capital to regions offering higher scope for upward mobility. They constitute potential tools for any government aiming to help people defy the 'lottery of birth'.

Appendix III

Appendix 3.1: Underlying Data, Constructed variables, and Methodology

3.1.1 Data

The analyses in Bussolo et al. (2023) and Asher et al. (2023) form the foundation of the present chapter on Social Progress in South Asia. The underlying dataset for the two papers draws on 39 national household surveys conducted across seven countries in South Asia, namely Pakistan, Afghanistan, India, Bangladesh, Sri Lanka, Bhutan, and Nepal. The details of each survey, such as its name and year of conduct, and sample size, are presented in Table A1.

Beyond the analytical contributions of the underlying studies supporting the present chapter, the harmonized data backbone spanning millions of individuals across South Asia between 1950 and the 2000s will be released as a digital public good to support future research on inequality of opportunity and upward mobility in South Asia.

Table A3.1. Data harmonized for the underlying analyses in Bussolo et al. (2023); Asher et al. (2023)

Country	Survey	Name	Survey years used in analysis for	
			Education	Consumption
Afghanistan	ALCS	Afghanistan Living Conditions Survey	2013, 2016	
Afghanistan	IELFS	Integrated Expenditure and Labor Force Survey	2019	
Afghanistan	NRVA	National Risk and Vulnerability Assessment	2007, 2011	2007, 2011
Bangladesh	HIES	Household Income and Expenditure Survey	2000, 2005, 2010, 2016	2005, 2010, 2016
Bhutan	BLSS	Bhutan Living Standards Survey	2003, 2007, 2012, 2017	2003, 2007, 2012, 2017
India	DHS	Demographic and Health Surveys	1998, 2005, 2015, 2019	
India	IHDS	India Human Development Survey	2005, 2011	

Table A3.1. Data harmonized for the underlying analyses in Bussolo et al. (2023); Asher et al. (2023) (continuation)

Country	Survey	Name	Survey years used in analysis for	
			Education	Consumption
India	NSS	National Sample Survey	1993, 2004, 2009, 2011	2004, 2009, 2011
Nepal	NLSS	Nepal Living Standards Survey	1995, 2003, 2011	1995, 2003, 2011
Nepal	NPHC	Nepal Population and Housing Census	2011	
Pakistan	HIES	Household Integrated Economic Survey	2007, 2010, 2011, 2013, 2015, 2018	2007, 2010, 2011, 2013, 2015, 2018
Pakistan	PIHS	Pakistan Integrated Household Survey	1991	
Pakistan	PSLM	Pakistan Social and Living Standards Measurement	2010, 2012, 2014, 2019	
Sri Lanka	HIES	Household Income and Expenditure Survey	1990, 1995, 2002, 2006, 2009, 2012, 2016	2002, 2006, 2009, 2012, 2016

3.1.2 Constructed Variables and Methodology

Inequality of Opportunity Bussolo et al. (2023)

Bussolo et al. (2023) focus on two outcome variables of interest: education attainment and economic well-being.

The primary outcome of interest to measure inequality of opportunity in education attainment is years of schooling recorded at the individual level. This variable ranges from 0 to 16 years. The variable is top-coded at 16 years to curtail outliers and misreporting. Furthermore, the analysis focuses on individuals who are at least 21 years of age to ensure that education attainment is complete at the time of data collection. Additional analyses have also been presented using measures of education levels, such as literacy, primary school, middle school, and so on.

To measure economic well-being, the analysis in Bussolo et al. (2023) use household consumption per capita as the primary measure, following the literature on IOp in developing countries (Brunori et al. 2019; Hufe 2021; Hufe et al. 2022).

The circumstances incorporated in the estimation of IOp are gender, place of birth, and demographic/ethnic group. While the educational attainment IOp estimation incorporate

gender (male/female), the variable is excluded from the consumption analysis as the outcome is determined on the household level. Place of birth is subdivided into two dimensions: urban/rural status and geographic location (e.g., region, state). While a subsample of surveys directly record place of birth, Bussolo et al. (2023) proxy it by the place of residence at the time of survey and provide supportive evidence for this approximation through estimates for migration between place of residence and place of birth. The geographic location follows salient divisions in the given countries and ranges, in terms of granularity, from four regions in Bhutan to nine states in Sri Lanka.

The demographic/ethnic group is a composite variable that takes into account data limitations. For Afghanistan, the variable is constructed based on the largest demographic group in the province of residence reported in the Asia Foundation's "Survey for Afghan people 2006–2019". If a group has a population share of more than 70 percent in a given region, the individual residing there is attributed to this demographic group. If there is no such clear majority group the individual is assigned to the residual other category. In this manner, five demographic groups are formed: Pashtun, Tajik, Uzbek, Nuristani, Others + Mixed Area. In Bangladesh, a binary classification in Muslim (majority population) and non-Muslim is utilized. For Bhutan, no demographic/ethnic group variable could be found across surveys. For India, caste and religion are combined into a salient classification of five groups: Scheduled Caste, Scheduled Tribe, Other Backward Class, Muslim and Others. In Nepal, a similar compound classification of caste and religion is derived: Janajati, Khas, Muslim and Others. For Pakistan, the language of the interview is used for classifying demographic groups: Urdu, Punjabi/Hindko, Sindhi, Pushtu and Others. Ethnicity is directly reported in Sri Lanka and renders distinction into five groups: Sinhalese, Sri Lanka Tamil, Indian Tamil, Sri Lanka Moors and Others.

All analyses are performed at a cohort level. To attain sufficient sample size, observations are pooled across surveys and survey years. Such pooling for educational outcomes is non-problematic due to educational attainment not (rarely) changing after the completion of the individual's initial educational career. For the consumption analysis, the World Banks PPP in private consumption is applied to the year-specific outcomes to establish comparability across survey years and the data are limited to harmonized estimates based on the World Bank's SARMD database. In addition, the consumption analysis is based on individuals who are between the ages of 35–55 years at the time of data collection to account for dynamic income-age effects. The table below illustrates the cohorts and age-groups of a single country as an example of the underlying analysis sample. The shaded area indicates the restricted sample for estimation of consumption IOp.

Table A3.2. India: Age-birth cohort table (Bussolo et al. 2023)

Age & Birth Cohort cross-tabulation: India	Years of survey data: 1993 1998 2004 2005 2009 2011 2015 2019															
Age	1920-	1925-	1930-	1935-	1940-	1945-	1950-	1955-	1960-	1965-	1970-	1975-	1980-	1985-	1990-	Total
20-24	0	0	0	0	0	0	0	0	0	8,390	34,912	25,885	89,412	64,627	206,626	429,852
25-29	0	0	0	0	0	0	0	0	3,792	46,677	39,272	91,816	87,502	200,953	301,286	771,298
30-34	0	0	0	0	0	0	0	4,242	40,154	31,462	74,937	81,975	155,605	273,096	0	661,471
35-39	0	0	0	0	0	0	2,632	37,187	30,348	72,072	80,292	148,190	263,728	0	0	634,449
40-44	0	0	0	0	0	2,290	30,024	22,797	56,289	70,627	121,144	225,098	0	0	0	528,269
45-49	0	0	0	0	1,703	27,067	19,863	50,255	61,211	117,613	225,925	0	0	0	0	503,637
50-54	0	0	0	1,818	21,306	14,643	41,936	46,865	108,836	175,544	0	0	0	0	0	410,948
55-59	0	0	886	16,855	13,664	32,789	38,611	85,634	178,230	0	0	0	0	0	0	366,669
60-64	0	806	14,730	13,829	24,165	37,340	64,502	170,259	0	0	0	0	0	0	0	325,631
65-69	390	9,806	9,349	16,987	25,761	42,612	126,077	0	0	0	0	0	0	0	0	230,982
70-74	6,988	7,391	11,510	18,208	26,436	84,988	0	0	0	0	0	0	0	0	0	155,521
75-79	3,150	5,520	8,459	14,434	43,707	0	0	0	0	0	0	0	0	0	0	75,270
Total	10,528	23,523	44,934	82,131	156,742	241,729	323,645	417,239	478,860	522,385	576,482	572,964	596,247	538,676	507,912	5,093,997

Note: The table above illustrates sample sizes at the intersection of each five-year birth cohort and age group drawn from pooled survey rounds in India. The shaded area indicates the restricted analysis sample for the consumption IOp analysis.

Measuring inequality of opportunity (IOp): The Empirical Model

Consider the distribution of outcome **Y** (education, income, consumption) in a given population. Suppose that all determinants of individual income *Y*, including luck, can be classified into either a set of circumstances *C* that lie beyond individual control or as individual-specific mutable characteristics, summarized by a variable *F*, denoting effort. Following Ferreira and Peragine (2016), the simplified outcome generating process can be described by a function *g* such that

$$Y = g(C, F) \tag{1}$$

In this model, income is exclusively determined by circumstances and effort, such that all individuals having the same circumstances and the same effort obtain the same income. The source of unfairness in this model is given by the effect that circumstance variables have on individual outcomes. The main methodological challenge for quantifying IOp is quantifying this unfair part of outcome inequality. In the literature, this is usually done by constructing suitable counterfactual distributions, Y^c. By construction, Y^c is able capture the variability in the outcome uniquely arising from the differences in the circumstance variables, *C*, while ignoring the differences resulting from different *F*.

Following Ferreira and Gignoux (2011), a parametric set up is adopted to estimate the counterfactual distribution Y^c, denoted $\hat{Y}$, which allows us to approximate the outcome of circumstance-based groups with few observations. It assumes a linear relationship between the outcome and the circumstance/effort variables. The outcome generating process can be written as:

$$Y_i = b C_i + c F_i + u_i \tag{2}$$

with u_i being an error term. As recognized by the literature (see for example Roemer 1998), effort, the so-called legitimate source of inequality, can itself be partially determined by the existing social circumstances. Effort variables themselves are often assumed to be a function of circumstances as below:

$$F_i = dC_i + v_i \tag{3}$$

with v_i being another error term uncorrelated with u_i. Hence, the outcome generating process in equation (1) can be reformulated as a reduced form equation, as follows:

$$Y_i = b C_i + c(d C_i + v_i) + u_i = (b + cd) C_i + (cv_i + u_i) = \beta C_i + \epsilon_i \tag{4}$$

From the OLS estimates of equation (4), inequality of opportunity is then measured as the value of a given inequality measure $I(\cdot)$ applied to the distribution of the predicted values $\hat{Y}_i$,

where $\hat{Y}_i = \hat{\beta} C_i$. For a given inequality measure I, the value of absolute inequality of opportunity is given by $I(\hat{Y})$. The value of relative inequality of opportunity (IOp) as the share of unfair inequality in the total outcome inequality, is given by $I(\hat{Y})/I(Y)$. In Bussolo et al. (2023) the inequality measures used is the Gini index (see Brunori et al. 2019 for a discussion of the most suitable inequality measure in the context of equality of opportunity).

In the case of a binary outcome (e.g. literacy), equation (2) is instead estimated via a PROBIT regression. In this case, a suitable measure of inequality is the dissimilarity index (D-index), which is given by the average distance between predicted outcomes and the mean predicted outcome. Formally:

$$D = \frac{1}{2N\hat{Y}} \sum_{i=1}^{N} \left| \hat{Y}_i - \overline{\hat{Y}} \right| \tag{4}$$

The interpretation of this index is very similar to the Gini coefficient: a D-index equal to 0 means that opportunities are equally distributed across individuals. A D-index approaching 1 indicates that all opportunities are concentrated on one individual. Thus, a low value of D means a low level of IOp. Conversely, a higher value of D means a high level of IOp. Higher than average predicted outcomes, based on favorable circumstances, will lead to a higher D-index, as will lower than average predicted outcomes due to unfavorable circumstances.

Bottom Half Mobility (Asher et al. 2023)

The primary outcome of interest in Asher et al. (2023) is a novel measure of intergenerational education mobility that circumvents specific issues that arise in the estimation of intergenerational mobility in data-constrained developing country settings.

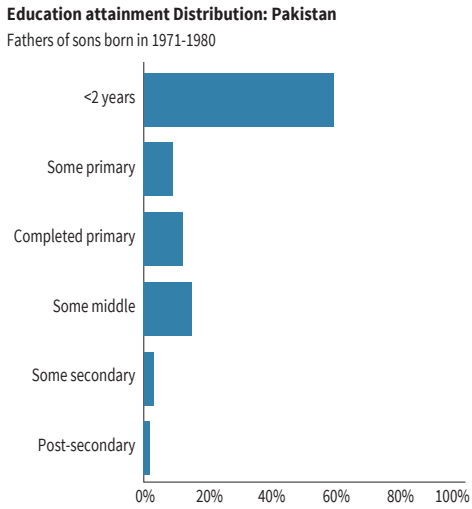
In South Asian countries, data on income are limited and unreliable. While researchers have used education attainment as a proxy measure for income to calculate intergenerational mobility in developing countries (Solon 1999; Guell et al. 2013; Wantchekon and Stanig 2015; Card et al. 2022; Derenoncourt 2019; Alesina et al. 2021), this approach also poses a problem in the South Asian context for the following reason.

Consider individuals born in the 1971–1980 birth cohort in Pakistan, 59 percent of fathers are in the lowest years of education category. As a result, it is impossible to identify a father at the 25th percentile of the education attainment distribution and estimate the average education attainment of their children. The education attainment distribution is similarly coarse for other South Asian countries.

Asher, Novosad and Rafkin (2023) developed an estimate of intergenerational education mobility that overcomes the issue posed by coarseness of the education distribution. This measure—the

bottom-half mobility measure—uses a partial identification approach to provide precise bounds on the average education attainment rank of an individual conditional on their parental education attainment rank.

Figure A3.1: Education attainment of fathers of sons born in 1971-1980 (Pakistan); Asher et al. (2023)



Calculating bottom-half mobility requires matched parent-child education attainment across birth cohorts. In the first step, raw education attainment variables capturing years of schooling are transformed into weighted education ranks within birth-cohort and gender groups. At the second stage, a transition matrix is created to illustrate the education attainment distribution of children born to parents in each education category. The shares in each cell of a transition matrix provide the weights for calculation of average education attainment ranks of children born to parents in each education attainment category. At the final stage, bounds are calculated on the average education attainment of children born to the group of parents within the bottom half of the educated distribution even if the bottom half is not directly observed in the data due to coarseness. The bounds are calculated using a simple principle of monotonicity wherein the average education attainment rank of children born to parents in any education attainment bin is either higher or equal to the average education rank of children of parents in the next education attainment category.

To construct this measure, a harmonized education attainment variable across all surveys was constructed with the following categories: (i) less than two years of schooling; (ii) some primary education; (iii) completed primary education; (iv) completed middle school; (v) completed high school; and (vi) post-high school. For individuals who were still attending an educational institution at the time of the survey, it is assumed that they would complete the level of education they were pursuing. Since education attainment of parents is not directly recorded across most surveys, parent-child education attainment is matched using household rosters. To account for co-residence bias emerging from this process, the analysis limits the sample to individuals who are old enough to have completed high school education yet are young enough to remain in co-residence with parents. These age intervals were identified using the underlying distribution of education attainment and co-residence share across countries. The age intervals vary by gender since women tend to leave home earlier than men primarily for marriage in the South Asian context.

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