SOUTH ASIA ECONOMIC FOCUS

SPRING 2022

Reshaping Norms: A New Way Forward

WORLD BANK GROUP

1818 H Street NW, Washington, DC 20433

Telephone: 202-473-1000; Internet: www.worldbank.org

1 2 3 4 25 24 23 22

ISBN (electronic): 978-1-4648-1857-8

DOI: 10.1596/978-1-4648-1857-8

Cover design: Gabriel Lora

Acknowledgements

This report is a joint product of the Office of the Chief Economist for the South Asia Region (SARCE) and the Macroeconomics, Trade and Investment (MTI) Global Practice. Its preparation was led by Valerie Mercer-Blackman and Zoe Leiyu Xie (both Senior Economists). Maurizio Bussolo (Lead Economist) was responsible for Chapter 3. The report was prepared under the oversight of Hans Timmer (Chief Economist, South Asia Region), in close collaboration with Hoon Sahib Soh, Shabih Ali Mohib (both Practice Managers, MTI) and Zoubida Kherous Allaoua (South Asia Regional Director, Equitable Growth Finance and Institutions).

The core team for Chapter 1 consisted of Zoe Leiyu Xie, Sebastian Franco Bedoya (Research Analyst), and Xiao'ou Zhu (Consultant). Miguel Eduardo Otero Nule (former Consultant) contributed to the early stage of the chapter. Jiemin Ren (Consultant) contributed Box 1.3 and the contents of Section 1.4. Franz Ulrich Ruch (Economist, Prospects Group) contributed analysis used in Sections 1.2 and 1.5. Holti Banka (Financial Sector Specialist, Finance, Competitiveness and Innovation Global Practice) contributed Box 1.4. The core team for Chapter 2 consisted of Valerie Mercer-Blackman, Lazar Milivojevic (Consultant Economist), Victor Mylonas (Consultant, Fiscal Policy and Sustainable Growth), and Yi (Claire) Li (Consultant). Lazar Milivojevic contributed Box 2.1. Margaret Triyana (Economist) contributed Box 2.2 and inputs to the Chapter. Alexander Haider (Research Analyst, Global Macro and Debt) contributed to the macroeconomic modelling for Chapter 2. The team of Chapter 3 was led by Maurizio Bussolo, together with S Anukriti (Research Economist, Development Research Group) and Ana Maria Munoz Boudet (Senior Social Scientist, Poverty and Equity Global Practice) and included: Jessy Amarachi Ezebuihe (Consultant), Tasmia Rahman (Economist, Poverty and Equity Global Practice), Nele Warrinnier (Consultant Economist), and Anaise Marie Williams (Consultant). The Chapter 3 box was contributed by Andreas Eberhard and Veronica Michel Gutierrez (both from the Jobs Group). Dr. Stavros Poupakis (Lecturer, University College London Institute for Global Health) also shared inputs for Chapter 3.

Colleagues from MTI's Macro-Fiscal team provided key inputs for the country analysis used in Chapters 1 and 2, including Tobias Akhtar Haque (Afghanistan); Melanie Simone Trost (Bhutan); Bernard Haven and Nazmus Sadat Khan (Bangladesh); Richard Walker and Ruijie Chen (Maldives); Alice Joan Brooks and Nayan Krishna Joshi (Nepal); Rangeet Ghosh, Kanika Bhatnagar, and Rishabh Choudhary (India); Derek Hung Chiat Chen and Zehra Aslam (Pakistan); Kishan Abeygunawardana (Sri Lanka).

Chapter 1 benefitted from inputs and comments provided by Miquel Dijkman, Tatsiana Kliatskova, Namoos Zaheer, Venkat Bhargav Sreedhara, Tushar Arora (all Finance, Competitiveness and Innovation), and Nandini Krishnan (Senior Economist, Poverty and Equity). Chapter 2 benefitted from inputs provided by Andrew Burns (Lead Economist, Global Macro and Debt), Laura Liliana Moreno Herrera (Data Scientist, Poverty and Equity), and Michael Norton (Consultant Economist). Both chapters also benefitted from comments provided by Robert Beyer, Emilia Skrok, Florian Blum, Aroub Farooq, Rafay Khan, and Gonzalo J. Varela (all MTI, Macro-Fiscal).

Helpful comments and suggestions on Chapter 3 were provided by Wei Winnie Wang (Senior Transport Specialist, Transport Global Practice), the Bangladesh Bhutan Gender Platform team, the South Asia regional gender team including Isis Gaddis, Anne Kuriakose, Sarah Haddock, and Maria Beatriz Orlando, and the India Macro-Fiscal team comprising Kanika Bhatnagar, Rangeet Ghosh, Mohini Gupta, Emilia Skrok, and Hoon Sahib Soh.

Rana Al-Gazzaz (Consultant) facilitated various aspects of the report's preparation, production, and dissemination. Alejandro Espinosa at Sonideas was responsible for the layout, typesetting, and an accompanying video. Gabriel Lora and Carlos Reyes designed the graphics and layout. William Shaw provided excellent economic editing. Barbara Yuill copyedited the chapters. Elena Karaban (Manager, South Asia Region External Affairs), Diana Ya-Wai Chung (Senior External Affairs Officer), Trishna Thapa (External Affairs Officer), and Adnan Javaid Siddiqi (Consultant) coordinated the dissemination. Neelam Chowdhry and Ahmad Khalid Afridi provided valuable administrative support.

South Asia as used in this report includes Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. The cutoff date for this report was April 4, 2022.

South Asia Chief Economist Office
Macroeconomics, Trade, and Investment Global Practice

Contents

CHAPTER III

Boxes

Figures

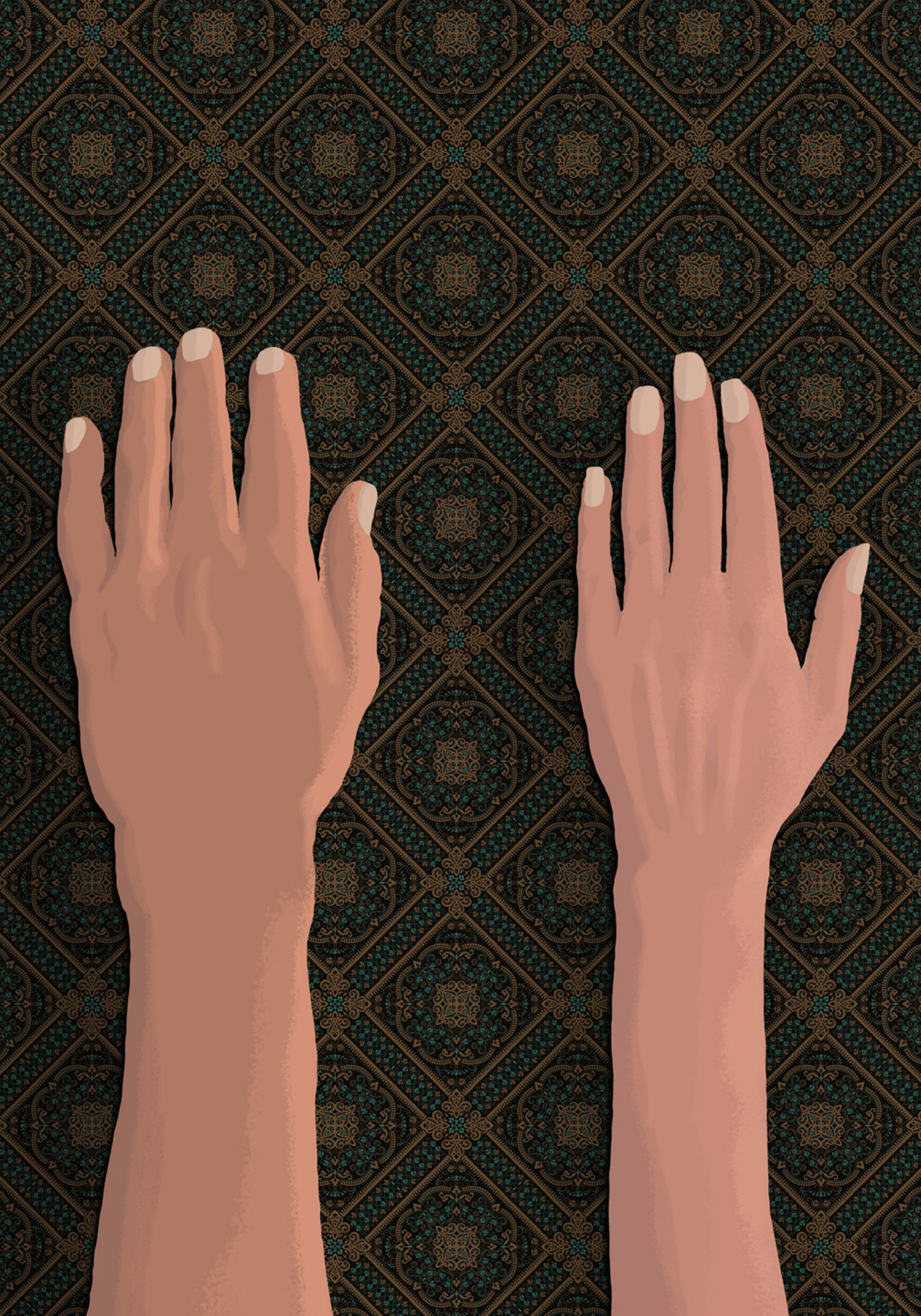
Tables

Abbreviations

Abbreviation	Name
3mma	3-Month Moving Average
ADB	Asian Development Bank
AE	Advanced Economy
AFG	Afghanistan
ASPIRE	Atlas of Social Protection Indicators of Resilience and Equity
BAU	Business-as-Usual (Simulation Scenario)
BGD	Bangladesh
BIS	Bank for International Settlements
BRAC	Bangladesh Rural Advancement Committee
BTN	Bhutan
CAGR	Compound annual growth rates
CAMS	Copernicus Atmospheric Monitoring Service
CARE	Cooperative for Assistance and Relief Everywhere
CBAM	Carbon Border Adjustment Mechanism
CBDC	Central Bank Digital Currency
CCDR	Country Climate and Development Reports (World Bank)
CEIC	Computer and Enterprise Investigations Conference Global Database
CO2	Carbon Dioxide (Emissions)
COVID-19	Coronavirus (SARS-CoV2)
CPAT	Carbon Pricing Assessment Tool
CPI	Consumer Price Index
DFI	Development Financial Institution
DHS	Demographic and Health Survey
EAP	East Asia and the Pacific
EBA	European Banking Authority
ECA	Europe and Central Asia
EIA	US Energy Information Administration
EMBI	Emerging Market Bond Index
EMDE	Emerging Market and Developing Economy
EU	European Union
FDI	Foreign Direct Investment
FLFP	Female Labor Force Participation
FPI	Foreign Portfolio Investors
FTSE	Financial Times Stock Exchange

FY	Fiscal Year
GBD	Global Burden of Disease (Database)
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GDP p.c.	Gross Domestic Product Per Capita
GHG	Greenhouse Gas (Emissions)
GTAP	Global Trade Analysis Project
HIES	Household Integrated Economic Survey (Pakistan)
HIES	Household Income and Expenditure Survey (Bangladesh)
HIES	Household Income and Expenditure Survey (Sri Lanka)
ICT	Information and Communications Technology
IEA	International Energy Agency
IHME	Institute for Health Metrics and Evaluation
IIASA	International Institute for Applied Systems Analysis
ILO	International Labour Organization
IMF	International Monetary Fund
IND	India
INR	Indian Rupee
IPV	Intimate Partner Violence
JEEViKA	Bihar Rural Livelihoods Project
JOIN	Global Jobs Indicators Database
LAC	Latin America and the Caribbean
LASSO	Least Absolute Shrinkage and Selection Operator
LFP	Labor Force Participation
LKA	Sri Lanka
LOG	Logarithm
LPG	Liquefied Petroleum Gas
LSS	Living Standards Survey (Nepal)
MDV	Maldives
MENA	Middle East and North Africa
MFB	Microfinance banks
MFMod	Macroeconomic-Fiscal Model (World Bank)
MGNREGA	The Mahatma Gandhi National Rural Employment Guarantee Act 2005
MPO	Macro Poverty Outlook
MSME	Micro, Small, and Medium Enterprise
NA	North America
NBFI	Non-Bank Financial Institution
NDC	Nationally Determined Contribution
NPA	Non-Performing Asset
NPL	Nepal

NPL	Non-Performing Loan
NSA	Not Seasonally Adjusted
NSS	National Sample Survey (India)
OECD	Organization for Economic Co-operation and Development
PAK	Pakistan
PKR	Pakistan Rupee
PLI	Production Linked Incentive
PMI	Purchasing Managers' Index
PPI	Producer Price Inflation
RHS	Right-hand side
S&P	Standard & Poor
SA	South Asia
SAR	South Asia Region
SHG	Self-Help Groups
SME	Small and Medium-sized Enterprise
SOE	State Owned Enterprise
SSA	Sub-Saharan Africa
TFR	Total Fertility Rate
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
US	United States
USD	United States Dollar
USDA	United States Department of Agriculture
VAR	Vector Autoregression (Model)
WDI	World Development Indicators
WEO	World Economic Outlook (IMF)
WHO	World Health Organization
WPI	Wholesale Price Index
WRI	World Resources Institute
WRS	World Road Statistics
WVS	World Values Survey



Executive Summary

The uneven recovery from the pandemic has left countries in South Asia with multiple policy challenges, which are exacerbated by the impact of the war in Ukraine. While several countries are navigating rising inflation and growing difficulties to finance fiscal deficits and trade deficits, the region must also chart a new way forward to address rising inequality, unleash new growth potential, and accommodate an energy transition. To reshape their economies, the region cannot avoid redesigning tax systems, increasing competition, and challenging vested interests and existing gender norms. This issue of the *South Asia Economic Focus* describes recent economic developments, analyzes the economic impact on South Asia of the war in Ukraine, presents growth forecasts, provides risk scenarios, and concludes that reshaping economies goes hand in hand with reshaping norms.

Chapter 1. Stronger headwinds during recovery

Although the region's economy is growing again, the recoveries have been uneven across sectors, countries, and groups of people. While production and exports of digital services have risen, other sectors like construction, transportation, and tourism have not fully recovered in most countries. While some countries experience a solid rebound in GDP growth, Afghanistan faces a humanitarian crisis, Pakistan a political crisis, and Sri Lanka a balance-of-payments crisis. While high-skilled workers retained jobs during the pandemic, or found new opportunities, only some unskilled migrant workers have returned to jobs in the cities. Moreover, men have been able to find new job opportunities more quickly than women.

South Asian economies are emerging from the deep COVID-19 recession, burdened by high inflation, rising current account deficits, and deteriorated fiscal balances, which are exacerbated by the impact of war in Ukraine. Even as the impact of the pandemic on growth is subsiding, partly because of increases in vaccination rates, the economic scars left behind after two years of the pandemic are deep. Inflation and deficits in trade balances reflect supply bottlenecks, pent-up demand, and rising commodity prices in international markets. Support measures and reduced revenues have deteriorated fiscal balances. All these problems have become more pressing because of the immediate impact of the war in Ukraine, which has pushed up prices of oil and other commodities in international markets.

Financial sectors in South Asia, already in relatively weakened positions before COVID-19, were effectively supported during the pandemic, but are facing renewed challenges. In 2019, non-performing loan (NPL) ratios for most countries in the region were higher than the average of emerging markets and developing economies and above the 5-percent warning threshold for banking sector systemic stress. At the start of the COVID-19 pandemic, countries introduced lending support measures, including regulatory forbearance, which were extended during subsequent COVID waves. Loan restructuring with public guarantees alleviated banks' burden to cover potential loan losses and gave banks incentives to provide much-needed liquidity to firms. As a result of these support measures, reported NPL ratios declined during COVID and private sector credit growth was sustained, reaching even 30 and 20 percent growth in Nepal and Pakistan, respectively. However, such fast growth could lead to deterioration of bank asset quality if lender screening is not adequate and, as most moratorium programs have ended, a resurgence in defaults remains possible.

Carefully designed monetary and fiscal policies are needed to weather the new external shocks on top of the legacies of the pandemic. There is limited scope for broad fiscal stimulus as fiscal space is limited and, equally important, the major shocks to South Asian economies have been negative supply shocks. As supply is curtailed, broad-based demand stimulus will merely lead to increased inflation. Consequently, it would be better to turn the focus to the quality of government spending. For example, targeted income support for vulnerable households that are struggling with higher food and energy costs is more efficient than price subsidies. There is scope for higher nominal interest rates set by central banks, as higher inflation has reduced real interest rates and financial conditions in international markets are tightening.

Chapter 2. Charting the course to a new normal

The forecast in this report for South Asia's GDP growth in calendar year 2022 is 6.6 percent, a full 1 percentage point lower than the World Bank forecast published in January of this year. This downgrade is the net effect of the negative impact of the war in Ukraine and some positive surprises, especially the stronger than anticipated performance of the services sectors. Higher import prices will exert further pressure on the current account balances in the region in 2022. This report estimates that the war could reduce income growth in South Asia this year by 2.2 percentage points, 1.3 percentage point because of slower GDP growth and 0.9 percentage point because of terms-of-trade losses due mostly to higher fuel import prices. Most affected are likely Sri Lanka, which is already struggling to pay the import bills, and Maldives, whose oil imports as a percent of GDP are the largest of all South Asian economies and 20 percent of tourists in Maldives were

coming from Russia and Ukraine. Energy subsidies as a percent of GDP are the highest in Pakistan, which means that the price increase in international markets potentially poses a tough fiscal challenge. Higher food prices complicate humanitarian aid to Afghanistan. Bangladesh would be affected by a potential indirect effect of slowing import demand in Europe.

In several countries uncertainty has steeply risen and further increases in commodity prices, additional supply disruptions, and tighter financial conditions remain threats for the whole region. The balance-of-payments crisis, leading to widespread shortages, makes any forecast for Sri Lanka highly uncertain. The halting of data collection in Afghanistan precludes the possibility of a forecast. Three risk simulations for the region are presented in this report: (i) a 24 percent further increase in oil prices in 2022-2024; (ii) additional supply disruptions in global value chains because of lockdowns in Chinese cities or shortages of essential metals like palladium; and (iii) more aggressive than anticipated tightening of monetary policy in advanced economies (AEs). The higher oil price would have more permanent effects, reducing GDP growth by 1.2 percent from baseline. Supply chains would have a large impact in 2022 of 1.5 percent but would be short-lived. The simulation exercise also shows that it would be preferable if strong monetary tightening could be avoided in response to AEs sudden tightening to prevent negative impacts on the health of the financial sectors and the competitiveness of firms in international markets. Even if inflation is slightly higher than baseline, this is preferable assuming inflation expectations are well-anchored.

High and volatile oil prices have exposed South Asia's vulnerabilities and have underscored the need to become less dependent on fossil-fuel imports. The dependence on fossil fuels causes, apart from economic problems, also environmental damages, which in turn have a negative impact on the economy. Air pollution is one of the key negative side-effects of the burning of fossil fuels in South Asia. And the burning of fossil fuels obviously also contributes to climate change. The report analyzes the impact of a greening of the tax system, which internalizes the negative externalities in energy prices, and provides an illustrative example of the impact of phasing in a carbon tax. The main objective is to trigger an energy transition towards cleaner and more renewable forms of energy. Such greening of taxation can provide much needed fiscal space in South Asia. This is particularly important given the region's high informality that constraints revenue mobilization from standard tax instruments. The additional fiscal space will still require careful balancing of spending tradeoffs, but opportunities are abundant. The additional revenues can be used for further development of social safety nets, for infrastructure needed to support future growth, and for measures that help adapt to climate change.

Chapter 3. Reshaping social norms about gender: A new way forward

South Asia lags other regions, apart from Middle East and North Africa, in gender outcomes and in attitudes towards gender equality. Female labor force participation in many countries of the region is among the lowest in the world, and other related forms of gender inequality (freedom of movement, social interactions, asset ownership, and parents' offspring preference) compare unfavorably to other countries at the same level of development. At the same time, South Asian gender attitudes tend to be more conservative than those in other regions and have become more so over time. Judging by responses to questions on gender attitudes from the World Values Survey, the share of individuals with traditional views in most countries has declined over the past few decades and is now under 50 percent. In the South Asian countries surveyed, however, most individuals still hold these traditional views and these majorities have increased. Women and the more educated tend to hold more progressive views than men and the less educated, respectively.

Social norms are even more traditional than people's individual attitudes. Social norms reflect individuals' expectations of what they think their reference group believes is acceptable or appropriate. New data used for this report measures for the first time both norms and attitudes. It finds that South Asian social expectations of gender roles tend to be more conservative than individuals' personal beliefs. Women expect their neighbors to be considerably more conservative than men do.

Social norms and personal beliefs are important determinants of gender outcomes, such as female labor force participation, even after controlling for the level of economic development. There is a significant, negative correlation between the level of conservative gender attitudes and women's labor force participation, likely reflecting bidirectional influences. Both social norms and personal beliefs are significantly related to cross-country differences in gender outcomes. Further, social norms are more important than personal beliefs in explaining differences in gender inequality that remain after the influence of economic development is accounted for.

Traditional social norms about gender tend to persist, despite their negative impact on women's opportunities, the welfare of children, and overall economic growth. Many norms are sustained despite their origins in long ago economic relationships and concerns that have become irrelevant with income growth and technological progress. The persistence of regressive gender norms may reflect their codification in law, pressures to conform, and the importance of family and communities in rural societies. Those practices include patrilocality (wives moving to husbands' families) and patrilineality (sons' rights to inherit). Regressive gender norms are also perpetuated because they support existing power relationships between men and women, such as control over assets and resources or decision-making

power within the household. Crises often result in changes in norms and can either exacerbate regressive norms or instill more progressive ones.

Successful interventions need to tackle all barriers to women's participation, including norms that are biased against women. Investments in electrification and transportation can help overcome norms-related barriers to economic opportunities for women. Transfers, subsidies, and access to financial instruments can help families that wish to support their daughters. Legal changes have been successful in some instances in challenging norms. Amendments to the Hindu Succession Act, for example, granted daughters the same right as sons to ancestral property inheritance. But such interventions by themselves are not sufficient to achieve gender equality. Programs that focus on equipping women with skills, assets, and education to improve their ability to work can face difficulties if there are no alternatives to substitute for women's household responsibilities (daycare, for example) or if men use violence to prevent a threat to their authority. Correcting misperceptions of societal attitudes, where individuals may believe that their reference group is more conservative than it is in reality, can increase the effectiveness of interventions. Influencing the beliefs of women's families about the benefits of accessing opportunities, either through the provision of information or involving them with women in income-generating projects, can help overcome barriers.

CHAPTER 1

Stronger Headwinds during Recovery

Introduction

South Asian countries are emerging from the shadows of the COVID-19 pandemic, burdened by high inflation, deteriorated fiscal balances, and rising current account deficits. Recoveries have been uneven across sectors, countries, and groups of people. At the same time, the economies face existing and built-up challenges. Externally, global commodity prices are at historical highs, most recently driven by the ongoing war in Ukraine, while supply constraints linger and threaten to limit economic activities. Internally, COVID-era lending support measures prevented further deterioration in asset quality, but as countries withdraw these measures, vulnerabilities in the financial sector, especially among small businesses and in the non-bank and micro-finance sectors, may come to light. Financial sanctions and trade embargoes on Russia could exacerbate these challenges. Facing these headwinds, carefully designed monetary and fiscal policy supports are needed to weather external shocks and sustain recovery.

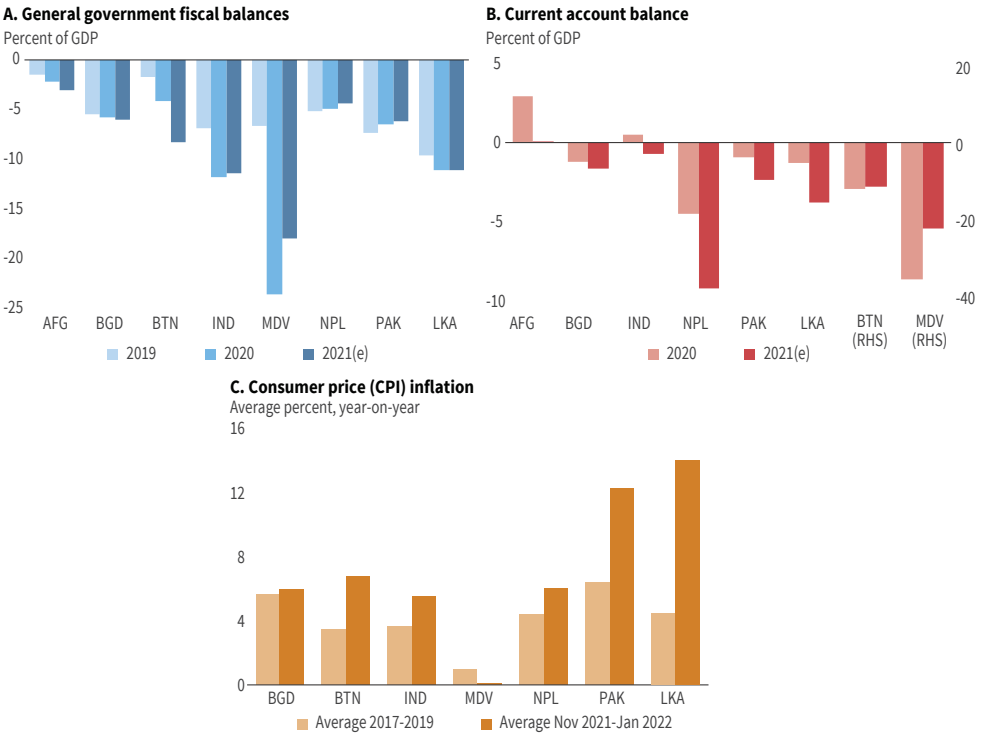
The chapter is divided as follows. Section 1.1 discusses the current recovery in South Asia from the COVID-19 crisis and the immediate impact from the war in Ukraine. Section 1.2 looks at the potential impacts of rising commodity prices on the region's domestic inflation. Section 1.3 considers the current supply-side constraints. Section 1.4 discusses the financial sector vulnerabilities and potential risks as forbearance measures are withdrawn. Section 1.5 characterizes the current fiscal and monetary policies and the challenges faced by the governments and monetary authorities in the region.

1.1 An uneven recovery characterized by challenges

South Asian countries are emerging from the shadows of COVID-19. The economic impacts from the most recent COVID-19 Omicron wave were relatively small (Box 1.1) and the populations in most of the countries are well-vaccinated. But the pandemic has left many countries

with rising fiscal deficits, and although countries including India and Maldives have seen their overall fiscal deficit decline in 2021 compared to 2020, deficits are still larger than pre-pandemic levels. High import prices and demand during the recovery have led to deteriorating current account balances in some, while supply constraints and rising commodity prices since the second half of 2021 have added to inflationary pressures (Figure 1.1).

Figure 1.1. Pandemic left countries with high inflation, rising fiscal deficits, and deteriorating current accounts

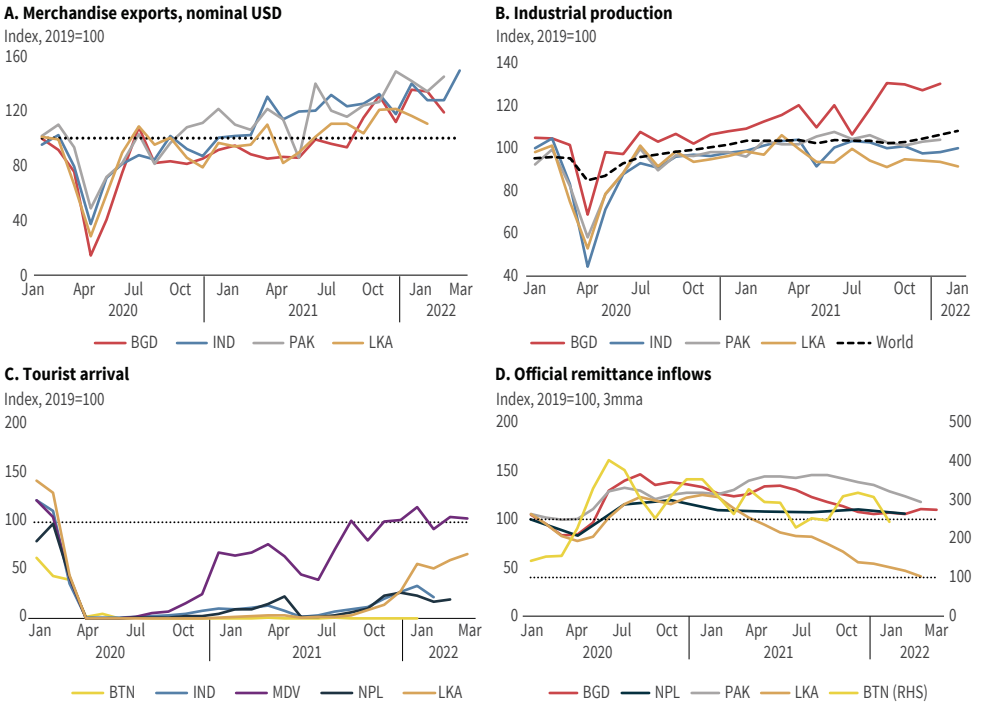


Source: Haver Analytics, World Bank Macro Poverty Outlook.
Note: (e)=estimate. Data presented in calendar year.

The economic recovery continues to be highly uneven across countries and sectors (Figure 1.2). Major exporters in the region continue to see export values well above pre-pandemic levels, in part due to rising commodity prices and domestic inflation (Box 1.2). Industrial production in Bangladesh and Pakistan is above pre-pandemic levels and has increased by more than the world average, while in Sri Lanka the level has remained below the pre-pandemic level since the Delta wave last year. Tourist arrivals have continued to recover in Maldives. Despite impacts from the Omicron wave, tourist arrivals in the first two months of 2022 were close to 50 percent above the same months in 2021. Sri Lanka's tourism had a promising start

of the year, with visitor arrivals in the first two months of 2022 reaching 90 percent of total arrivals in 2021. Tourism in India, Nepal, and Bhutan has yet to recover. Official remittance inflows have declined from their peaks during 2020 and early 2021. But for most countries, the inflows are still above pre-pandemic levels. The exception is Sri Lanka, where broadly fixed exchange rates up to early March created parallel foreign exchange markets with more favorable rates and deterred remittance inflows through official channels.

Figure 1.2. Economic recovery continues to be uneven across sectors and countries

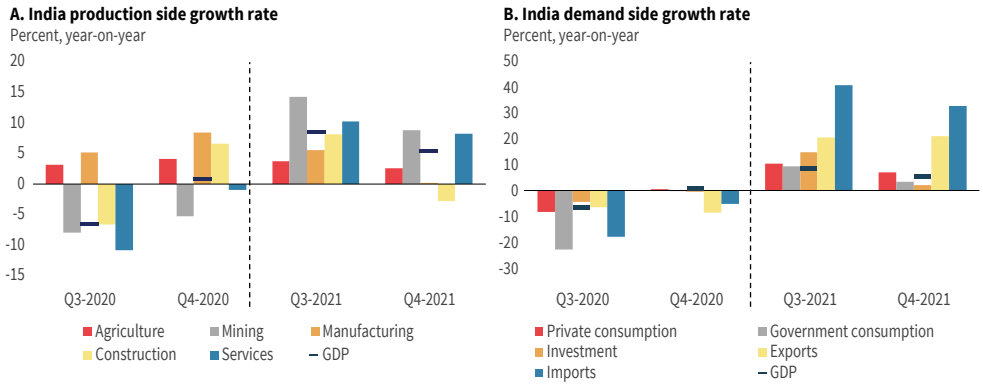


Source: CEIC, CPB Netherlands Bureau for Economic Policy Analysis, Haver Analytics, Nepal Rastra Bank, and Royal Monetary Authority of Bhutan.
Note: Merchandise exports are nominal in USD, then indexed to the average 2019 value. Official workers' remittances are quarterly data for Nepal, placed on the first month of each quarter; smoothed (3-month moving average) monthly data for the other countries.

Recovery is also uneven across sectors in India. On the supply side (Figure 1.3.A), the mining sector benefited from rising global commodity prices and expanded in both Q3 and Q4 of 2021 (FY2021/22 Q2 and Q3). Manufacturing expanded in Q3, riding on increasing external demand but remained static in Q4 as the Omicron wave impacted global demand and rising input costs reduced margins. Services expanded in both quarters but remain below the pre-pandemic level. On the demand side (Figure 1.3.B), growth in private consumption was supported by a release of pent-up demand during the Delta wave, while investment was

crowded-in by increased government capital spending. Imports and exports remained the fastest growing sectors in both Q3 and Q4, with higher growth in imports than in exports, contributing to current account deficits.

Figure 1.3. Uneven sectoral recovery in India

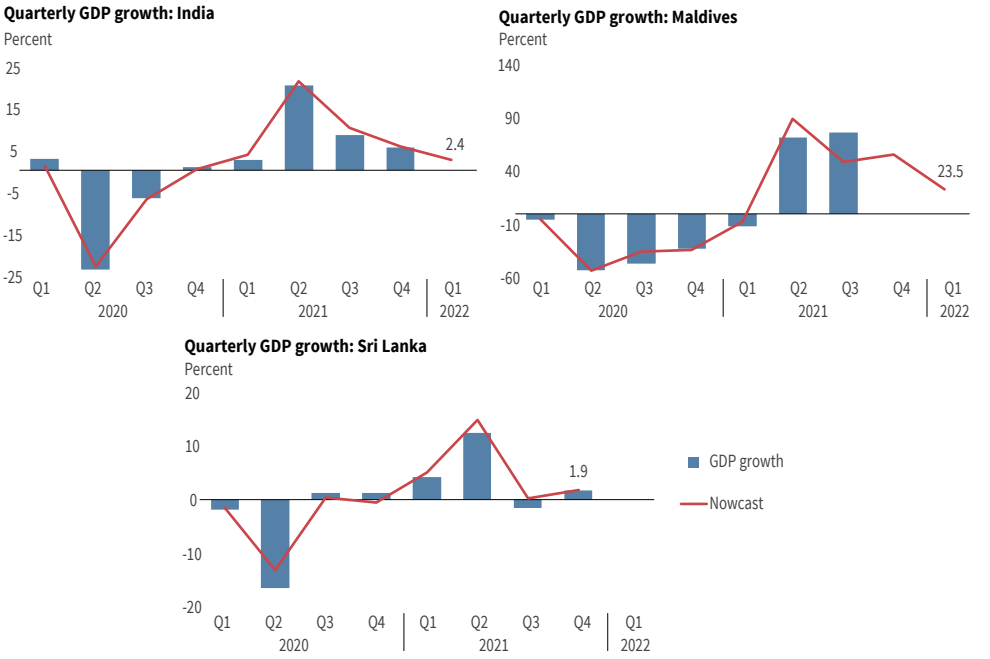


Source: Haver Analytics.

Nowcast of GDP growth in recent quarters shows uneven recovery across countries. The nowcast is based on different high-frequency activity indicators, and a LASSO statistical model is used to select the most relevant economic activity indicators for each country, following World Bank (2020). Using the data available up to this point, the nowcast shows continued strong growth in Maldives (Figure 1.4) for 2021Q4 and 2022Q1, supported by a robust recovery in tourism. It also suggests a relative slowdown of growth in India in 2022Q1 compared to previous quarters, as the low base effects of 2020 wear off. Despite a gradual recovery in tourism, Sri Lanka is facing multiple headwinds to growth, including an ongoing balance of payments crisis and persistently high inflation. Accordingly, the nowcast also finds low growth rates for 2021Q4.

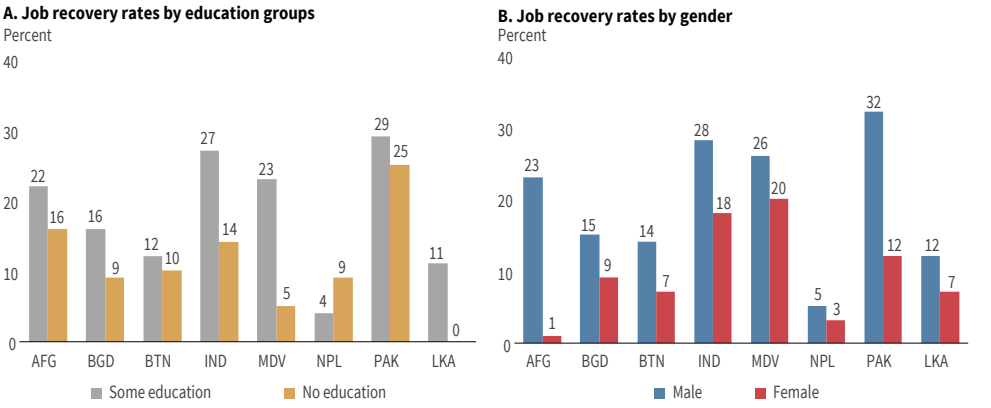
The recovery has been uneven across individuals, exacerbating pre-existing inequalities. While individual-level surveys that cover the latter part of the pandemic are not yet available, the SAR COVID-19 Phone Monitoring Survey paints a picture of a highly unequal recovery during late 2020-early 2021 (Figure 1.5). Across most South Asian countries, job recovery rates were higher among workers with some education than those with no education. In all South Asian countries, the recovery rates were higher among male than female workers who lost their pre-COVID jobs. In Afghanistan, India, and Pakistan, the gender gap in job recovery rates is more than 10 percentage points, indicating that women lag significantly in labor market recovery. These patterns can further worsen inequalities in the region, especially since female labor force participation rates in South Asia were among the lowest before the pandemic (Chapter 3).

Figure 1.4. GDP nowcast shows uneven economic recoveries across countries



Sources: CEIC, Mercer-Blackman et al. (2021).
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.

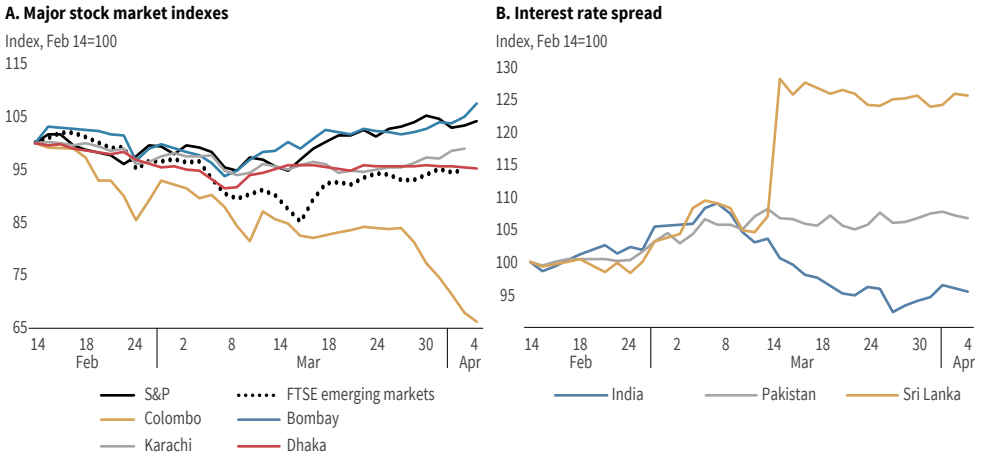
Figure 1.5. Economic recovery has been uneven across education and gender



Source: SAR COVID-19 Phone Monitoring Survey.
Note: The sample includes individuals who lost their job between March 2020 and the time of the survey. An individual is counted in the job recovery rate if they subsequently found a job during the survey period. Survey time: August-November 2020 for Afghanistan; Bangladesh and Nepal; September-October 2020 for Bhutan; September-December 2020 for Sri Lanka; September 2020-February 2021 for Maldives; December 2020-March 2021 for Pakistan; October 2020-April 2021 for India.

Against this backdrop, the war in Ukraine had immediate impacts on the region's financial markets (Figure 1.6). Equity markets in India, Pakistan, Bangladesh, and Sri Lanka fell sharply following the February 24 invasion of Ukraine. While most of the initial losses have been recovered, all equity indexes except for India's are still below their pre-war levels. Interest rate spread for the region's long-term government bonds increased initially following the invasion. As the US Treasury yields rose following policy tightening by the United States, the spread has either come down (India) or the increase has been contained (Pakistan). In Sri Lanka, a 100-basis point policy rate hike in early March substantially raised the interest rate spread, although the spread has stayed roughly the same since then.

Figure 1.6. Most of the immediate effects from the war in Ukraine are short-lived



Source: Haver Analytics.
Note: Daily data as of April 4, 2022. B. Interest rate spread is the spread between 10-year government bond yield and 10-year US Treasury yield. US 10-Year Treasury Note Yield at Constant Maturity is used to compute spread. For South Asian countries, the 10-year government bond yield published by Refinitiv is used.

The war has pushed global commodity prices to historical levels. Energy prices have been rising since mid-2021, driven by recovering global demand and supply issues. Following the invasion of Ukraine, price rises for energy and other commodities accelerated.[1] Although most prices have eased from their peaks, many remain much higher than pre-war levels. As of early April, the global price of wheat stood at 20 percent above the level just one week before the war; the price of Brent crude oil rose 15 percent, and the price of coal increased by 30 percent (Haver Analytics). Although South Asian countries have few direct trade linkages with Russia and Ukraine, most are net energy importers, importing close to 100 percent of domestic consumption of petrol, diesel, and liquefied petroleum gas (LPG) and large shares

1 Russia is a major exporter of coal, wheat, and crude oil. Ukraine exports 40 percent of total global exports of seed oil, and 7 percent of global wheat (Section 2.1).

Box 1.1. COVID-19 vaccination and economic activity in South Asia

While the health benefits of COVID vaccines in reducing deaths have been well documented (Dagan et al. 2021; Polack et al. 2020; Voysey et al. 2021), vaccination can also help reduce the economic impacts. With higher vaccination rates, governments can afford to move away from wide-spread mobility restrictions and people may also feel safer moving around during a COVID wave. The most recent Omicron wave had relatively small impacts on most South Asian countries, partly because the populations of more than half of the countries had been well vaccinated.

Using high-frequency Google mobility data, we can look at the relationship between COVID surges and economic activity. Google mobility data has been established as a good proxy for economic activity (Fernández-Villaverde and Jones 2020; Sampi and Jooste 2020). The indexes are constructed to show changes in the level of activities relative to the same type of movements in a country during January-February 2020. For example, a number 10 means the activity level is 10 percent above baseline. We use the retail and workplace activity indexes to capture the levels of economic-related activities. We use the data from early 2021, when vaccination started in the region, to February 2022. To smooth out day-to-day variations within a week, the daily data on mobility, new COVID cases per million population, and vaccination rates are averaged to a weekly frequency.

An analysis shows that COVID surges are associated with lower economic activities in South Asia, but less so when vaccination rates are higher. A simple correlation exercise shows that economic activity, as proxied by mobility at both retail and workplace locations, is strongly negatively correlated with new COVID cases. In addition, in places where the vaccination rates are above 50 percent, the correlation is much weaker compared to where vaccination rates are below 50 percent (Figure 1.7).

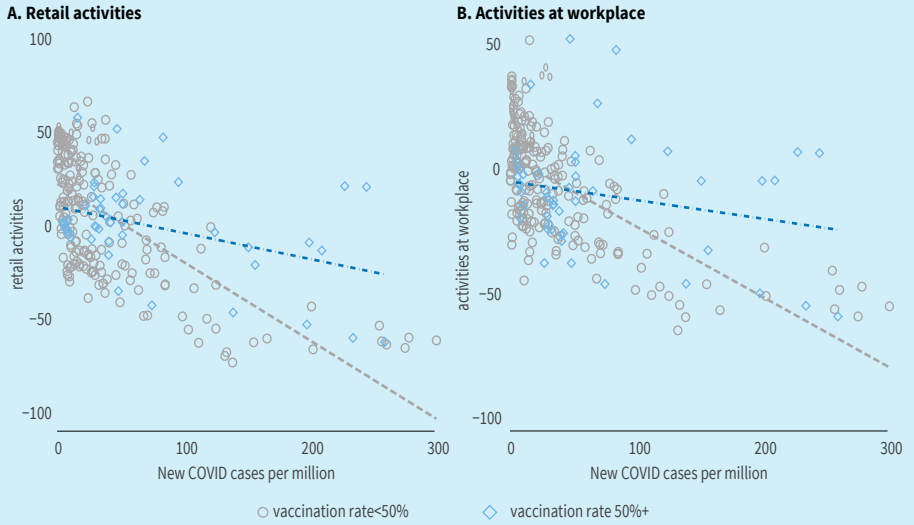
Results from fixed-effects regressions support this pattern. To control for other factors that may also affect economic activity, the following equation is estimated using country (ϵ_i) and time (δ_t) fixed effects:

$$\textit{Mobility index}_{it} = \beta * \textit{lagged new COVID cases}_{it} + \epsilon_i + \delta_t + e_{it} \qquad (1)$$

where *t* indexes time and *i* indexes country. The time fixed effects control for trends common across countries, such as COVID-19 surges that hit the region around the same time. The country fixed effects control for time-invariant across-country

differences such as institution, structure of the economy, and age distribution among the population. The analysis is performed for different ranges of vaccination rates. For robustness, alternative choices of ranges and lags for new COVID cases are used and yield similar results.

Figure 1.7. COVID surges dampen economic activities in South Asia, but less so with higher vaccination rates



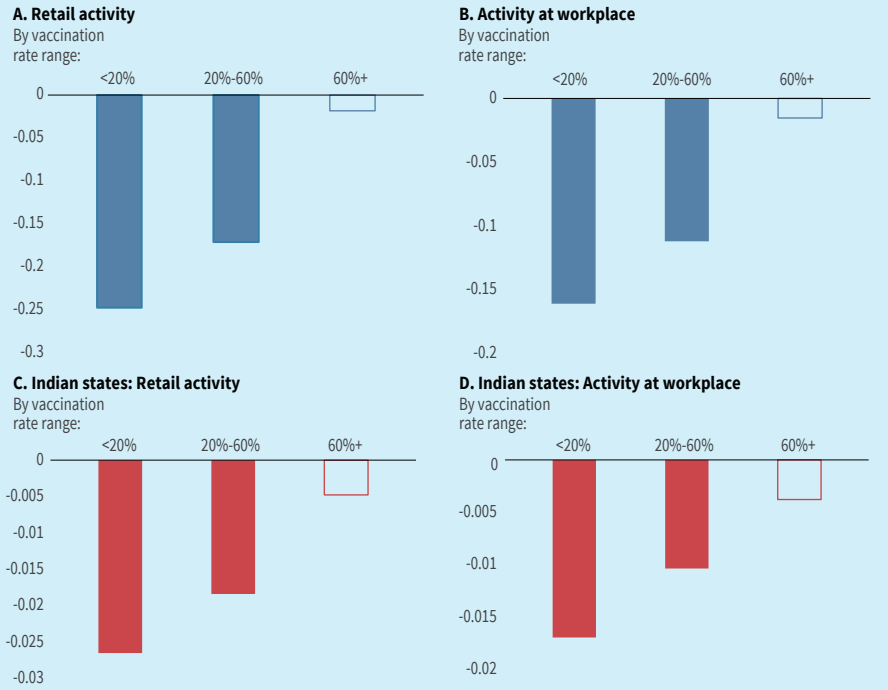
Source: Google mobility report, Our World in Data (database).
Note: Dashed lines are linear fit for each subgroup by vaccination rates.

The regression results summarized in Figure 1.8.A-B suggest that new COVID cases are indeed negatively correlated with economic activities, controlling for country characteristics and trends common across countries. This is especially so when and where vaccination rates are low. For example, at vaccination rates below 20 percent, one additional new COVID case per million population is associated with a 0.25-percent reduction in retail activity and a 0.16-percent drop in activity at workplaces, relative to the country baseline. As vaccination rates go up, the correlation effect is weaker, both in scale and significance. The same pattern holds if we instead consider vaccination rates at different lags.

Regressions using state-level data from India also show that the correlation between COVID surges and economic activity goes down when states have higher vaccination rates. Using data on economic activities (Google mobility indexes), new COVID cases,

and vaccination rates for 33 states in India, we ran regression (1). As shown in Figure 1.8.C-D, and similar to the cross-country evidence, as vaccination rates go up, the correlation between new COVID cases per million population and economic activity indicators go down.

Figure 1.8. Regressions show smaller impact of COVID on economic activities when vaccination rates are high



Source: Google mobility report, Our World in Data (database), CEIC, and staff calculations.
Note: Figure shows the results from fixed-effects panel regressions of new COVID cases per million population on weekly Google mobility index, for different vaccination rate ranges, controlling for country (or Indian state) and time fixed effects, on a sample of six South Asian countries (Panels A and B) and 33 India states (Panels C and D). Solid blocks indicate that the coefficient is significant at 1 percent level.

While the results here cannot establish a causal relationship between vaccination and the economic impacts of COVID-19 (such as Deb, Furceri, Jimenez, et al. 2021; Hansen and Mano 2021), they show a clear correlation. The findings here are also not without caveats. First, behavior toward COVID has shifted during the more recent COVID waves. Governments adopted targeted lockdowns with smaller economic impacts; better relief measures were in place to help individuals and businesses in need; and the private sector also learned to adapt to lockdown measures without completely

stopping economic activities. These changes coincided with higher vaccination rates and could have contributed to the smaller economic impacts from COVID-19, although higher vaccination rates may have opened the door to the changes in behavior. Second, not all countries followed the same approach to COVID. Even though a majority of Bhutan's population has received booster shots, the country followed a strict zero-COVID policy with stringent mobility restrictions during the Omicron wave to avoid exhausting medical resources.

of coal consumption. Additionally, Bangladesh and Sri Lanka also import large shares of the wheat they consume.[2] The rapidly increasing energy and agricultural prices can contribute to inflationary and external sector pressures, which can lead to a slowing of the recovery momentum for the rest of 2022 (Chapter 2).

The region faces headwinds from pre-existing supply constraints and financial sector vulnerabilities. COVID waves disrupted supply chains, and the lingering disruptions constrain countries' ability to increase capacity and contribute to cost-push inflation. Deterioration in asset quality previously masked by COVID-era lending support measures including loan forbearance can resurface as these measures are phased out. Pre-existing vulnerabilities among micro, small, and medium enterprises (MSMEs) and in the non-bank/microfinance sectors can worsen after supports are phased out. The ongoing war further adds to supply constraints and financial sector uncertainties, as trade embargoes and financial sanctions on Russia reverberate through the global goods and financial markets.

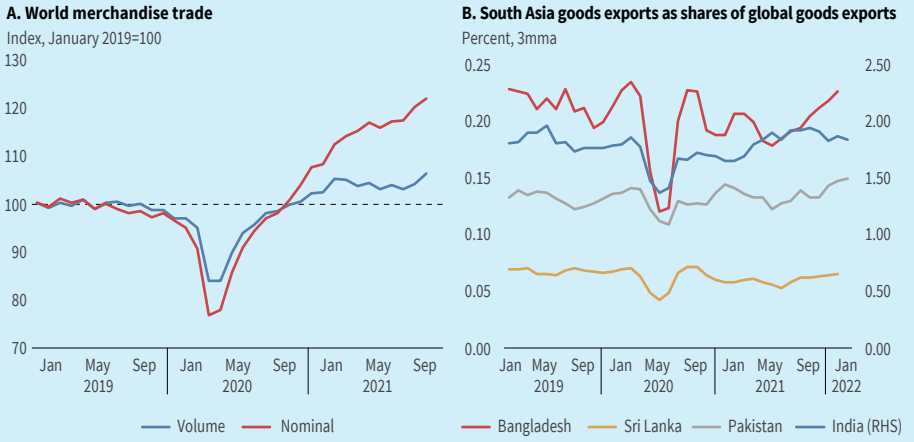
In the following sections we analyze the impact of each of these challenges and policy responses.

2 Bangladesh imports over 80 percent of the wheat it consumes. Although Pakistan is not a large wheat importer, about 40 percent of its wheat imports come from Russia in recent years.

Box 1.2. Where do South Asia's exports stand in 2022?

Exports are important drivers of South Asia's economic growth. While many South Asian countries saw rapid recovery in goods exports after the initial negative COVID shocks (Figure 1.2.A), countries' experiences differed, depending on their economic structure, COVID and economic policies, and the external market condition. This box takes a close look at the region's exports recovery and where it stands against the backdrop of the war in Ukraine.

Figure 1.9. Global and South Asian goods trade



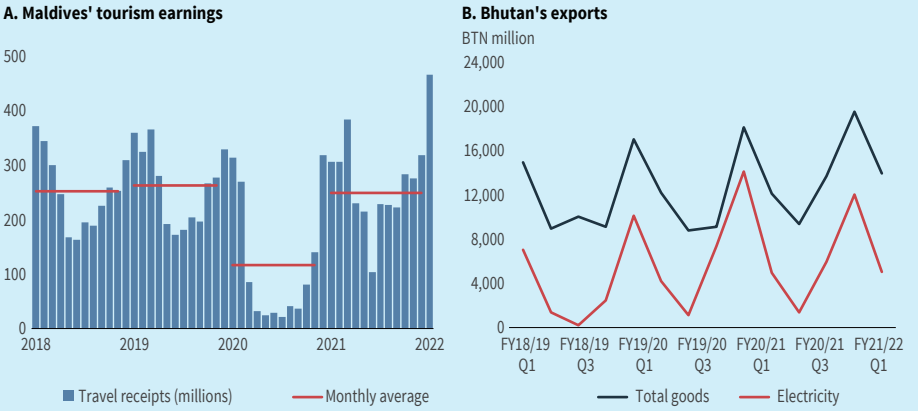
Source: A. CPB World Trade Monitor. B. Haver Analytics.

Bangladesh experienced the largest contraction in exports in the region in 2020, but exports have rebounded with the reinstatement of canceled orders of ready-made garments and an overall strong exports performance. With garments exports accounting for more than 80 percent of exports, Bangladesh suffered a severe contraction when major export destinations canceled or delayed their orders in April-May 2020, and exports fell up to 71 percent of the 2019 level in the same months. Growth in the industry in 2021 increased as quickly as it had contracted. By the end of the year, Bangladesh received most of the cancelled orders. Other commodities, like leather and leather goods, fish, shrimp, and prawns, also experienced a strong exports performance in the second half of 2021. The country's goods exports closed 2021 at 33 percent above the pre-pandemic level.

Goods exports in Bhutan have been resilient to the COVID shock thanks to the steady flow of hydropower exports to India. Bhutan's hydro exports had a

strong performance in 2020 (Figure 1.10.B), thanks to the coming onstream of the Mangdechhu hydro plant, which raised hydropower generation capacity. This compensated for the contraction of non-hydro exports in April-June 2020. The available data until the end of 2021 shows total goods exports well above the pre-pandemic level. Preliminary data suggests that electricity exports, which constituted almost 50 percent of total goods exports in fiscal year 2020/21, fell 11 percent in 2021 due to hydropower maintenance.

Figure 1.10. Exports in Maldives and Bhutan



Source: Maldives Monetary Authority, Royal Monetary Authority of Bhutan.

India experienced a broad-based exports growth in 2021, and despite some weakening in momentum, exports in 2022 stand 31 percent above the 2019 level. India's merchandise exports in March 2022 increased by 14.5 percent year-over-year to almost $40 billion. Total merchandise exports for the fiscal year ending March 2022 stand at $414.5 billion, surpassing the government's target of $400 billion. Engineering goods, chemicals, petroleum products, pharmaceuticals, cotton yarn/fabrics, and rice were the best-performing goods categories, but the strong exports performance was broad-based. Goods exports started 2022 with a slight decline but still at 31 percent above January 2019. The 2022-23 budget envisages that exports will continue to be the growth engine and the government plans to promote electronic manufacturing and increase India's global value chain participation through the Production Linked Incentive (PLI) scheme.

Thanks to successful vaccination campaigns, Maldives saw a robust recovery in the tourism sector despite repeated COVID waves. The tourism sector is key for the

country's economy, representing around 85 percent of total exports. Although tourist arrivals were catching up to pre-pandemic levels in the second half of 2021, they were still 22 percent below 2019 levels at year-end. By contrast, tourism receipts had almost reached pre-pandemic levels (Figure 1.10.A), as tourists booked longer stays during the pandemic (Li and Mercer-Blackman 2022). Tourists from the two countries together accounted for almost 20 percent of total tourist arrivals in Maldives in 2021. Already, visitor arrivals from the two countries dropped in March, with arrivals from Ukraine falling immediately after the invasion, and arrivals from Russia down after March 8, when Russia's Aeroflot suspended international flights. However, due to rising numbers from traditional (UK) and new (Saudi Arabia) markets, total tourist arrivals in March were close to the level in February.

Pakistan experienced the mildest exports contraction in the region in 2020, and the recovery led by the textile sector was also the most rapid. Pakistani goods exports fell 54 percent year-over-year in April 2020 at the height of the pandemic. Since late 2020, the textile sector, which makes up more than 60 percent of total goods exports, has led the recovery. Pakistan loosened COVID restrictions earlier than other Asian countries. This helped Pakistan divert orders from competitors and keep goods exports 40 percent above January 2019 levels. Knitwear, cotton fabrics, and bed-wear are some of the commodity groups enjoying export subsidies, in addition to a sharp reduction in import tariffs on intermediates for the textile sector, and a favorable exchange rate in the past years. The government is also providing subsidies and incentives to other sectors to diversify exports and reduce the dependence on textiles. Additional policies were put in place to incentivize industries to open to new markets, especially in areas such as pharmaceuticals, engineering products, and chemicals. Going forward, the country faces the challenges of diversifying exports and boosting its low exports-to-GDP ratio (currently around 10 percent), for example, through a tariff rationalization to encourage manufacturers to export and compete in global markets.

Similar to Bangladesh, Sri Lanka also suffered large decline in exports in 2020, but goods exports are back to the pre-pandemic level now, driven by rising prices and currency depreciation. Goods exports in Sri Lanka grew by 20 percent y-o-y in December 2021 to stand at 11 percent above the pre-pandemic level, boosted by a strong performance in industrial products, textiles and garments, agricultural products, and minerals. Textiles, garments, and tea comprise most of Sri Lanka's total exports, with textiles and garments making up 42 percent and tea accounting for 11 percent. The depreciation of the country's currency could help make its exports cheaper and boost exports demand. But the depreciation and a lack of foreign

currency threaten to delay the import of raw materials required for export production. The war in Ukraine can also reduce its tea exports, as Russia is the second largest buyer of Ceylon Tea.

While countries' goods exports have increased above the pre-pandemic level in recent months (Figure 1.2.A)**, exports as a share of global exports have stayed around pre-pandemic levels.** As global commodity prices rise in 2021, goods exports have been fueled by rising prices. As a result, the rise in global merchandise exports value has far surpassed the rise in exports volume (Figure 1.9.A). By the end of 2021, the nominal global goods exports reached 20 percent above its level in January 2019, while the volume is only 5 percent above the pre-pandemic level. The same is true for South Asian countries as a whole. In the absence of reliable high-frequency trade volume data for most countries, we normalize countries' goods exports using the global level. Figure 1.9.B shows that the normalized goods exports have stagnated in recent months, with the shares out of global goods exports hovering around their pre-pandemic levels. This suggests that the recent stellar performance in goods exports is mostly driven by rising prices worldwide, and much needs to be done to secure the region's growth in exports volume, especially facing external headwinds including the war.

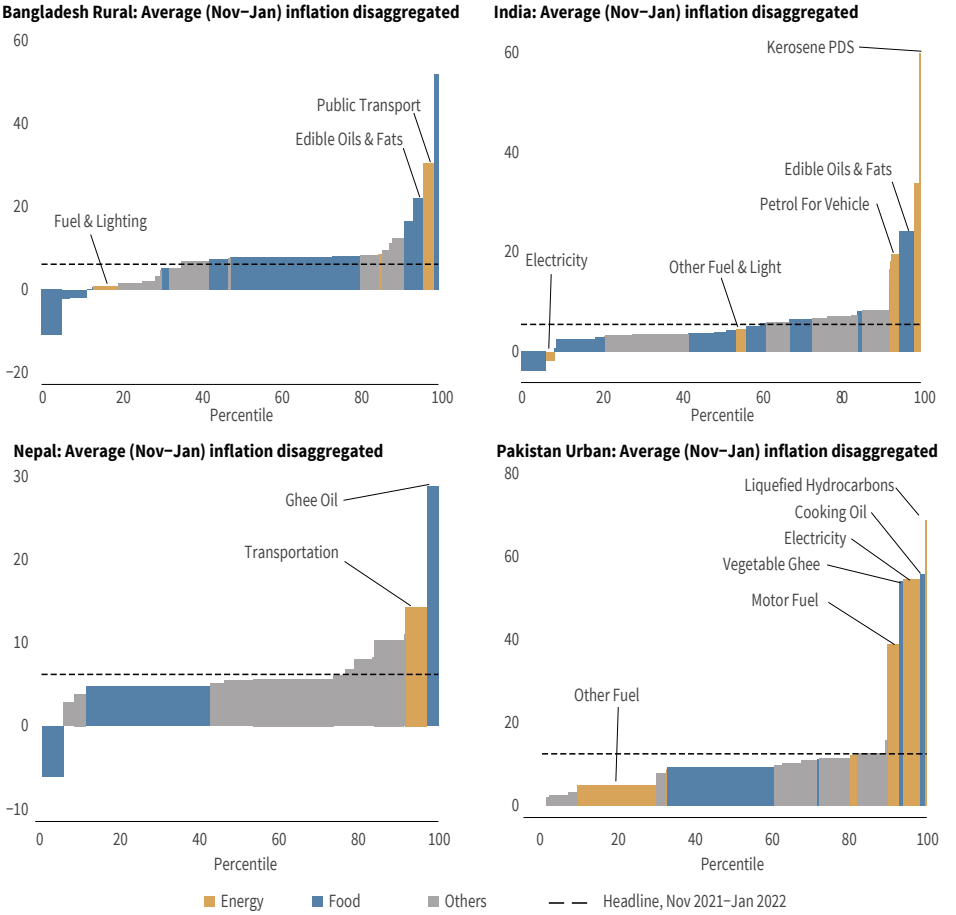
1.2 Rising global commodity prices pushing up inflation

Even before the war, domestic prices of food and energy-related items increased rapidly. Driven by rising global energy prices since the second half of 2021, inflation rates in most energy-related goods (for example, fuel for utilities, transport) are much higher than the headline inflation in Bangladesh, India, Nepal, and Pakistan for the months from November 2021 to January 2022 (Figure 1.11). Base effect contributes in part to the higher energy inflation, as energy prices were relatively low around the same time a year ago due to the COVID shock. But even the two-year compound annual growth rates (CAGRs) in energy prices are at double digits. Food prices have remained elevated. In particular, the prices of edible oils have been rising sharply. In Bangladesh, India, Nepal, and Pakistan, inflation in edible oils reached over 20 percent in late 2021.[3] Although targeted policy interventions in Bangladesh and India have helped reduce edible oil inflation a bit in recent months (Section 1.5), it remains in the double digits. Even in Maldives, where headline inflation has been below 1 percent since

3 To capture inflation in edible oils, the CPI category "edible oils & fats" is used for Bangladesh, India and Maldives; categories "mustard oil," "cooking oil," and "vegetable ghee" are used for Pakistan; and category "ghee & oil" is used for Nepal, which includes ghee, mustard oil, soybean oil, and sunflower oil.

mid-2021, inflation in edible oils reached 10 percent in January 2022, compared to 2.9 percent a year ago. The high inflation is driven by a combination of rising prices of edible oil imports, rising demand, and in some countries pre-existing import duties that discourage domestic refinery (Jadhav 2022).

Figure 1.11. Consumer inflation in energy-related items and edible oil high even before the war



Source: Haver Analytics, Bangladesh Bureau of Statistics, and staff calculations.
Note: Energy categories include energy utilities used in household and energy used in transportation. Food items include food and non-alcoholic beverages.

The war in Ukraine has raised commodity prices even higher, further contributing to inflationary pressures on energy and food. Both Russia and Ukraine are agricultural exporters, and Russia is also among the top exporters of energy (see Figure 2.5). Embargoes on Russian exports and the ongoing war in Ukraine have already led prices of wheat, oil, and coal to

historical levels. The inflation in edible oils was already high before the war. As Ukraine is a major exporter of sunflower oil, India's average retail price of sunflower oil increased by 12 percent in the first three weeks after the war started (Aggarwal 2022). Prices of other cereals and edible oils also rose as they are considered substitutes: compared to the beginning of the year, global prices of rice rose 10 percent in the first week of the war,[4] and India's average retail price of palm oil rose 14 percent in the first three weeks (Aggarwal 2022). The increase in energy and food prices will hit the poor households hardest, exacerbating already rising inequalities.

Countries in the region have ways to cushion the impact of higher commodity prices. India has so far been able to purchase Ural oil at a discount from Russia (Dempsey and Cornish 2022), and Pakistan announced that it will continue importing wheat and natural gas from Russia (Agency 2022; Parkin and Bokhari 2022). These arrangements may help reduce the impact of soaring global prices on domestic inflation. Bhutan imports fixed quantities of LPG from India at subsidized prices (Table 1.1), which can help soften the blow of higher energy prices. Wheat is also not a major food staple for South Asian households, which means the impact of rising wheat prices on domestic food prices is likely limited. Higher wheat prices can also be an opportunity for wheat exporting countries in the region. India signed new wheat forward contracts after the war started and is set to export 7 million tons of wheat this year (Bhardwaj 2022).

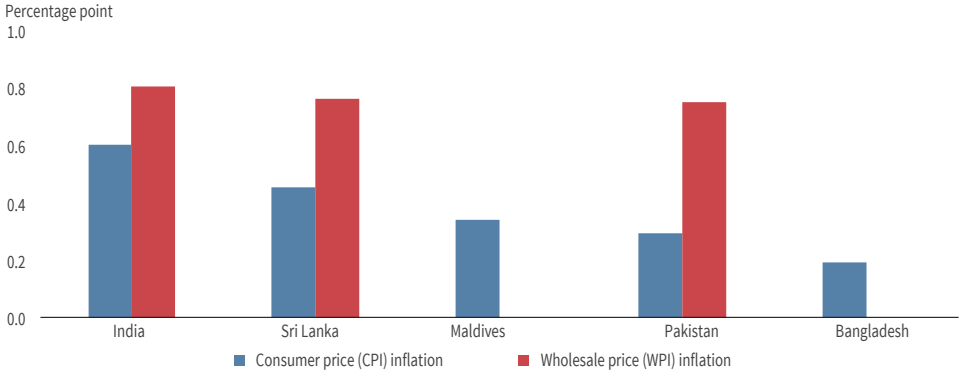
The overall impacts of higher commodity prices on domestic prices are uncertain and depend on pass-throughs to the local economy. In March, which is the first whole month since the war started, inflation in Pakistan continues previous trends, with elevated inflation in edible oils and fuel-related categories, while inflation in wheat is subdued at 5 percent. The other countries in the region have not reported March inflation by the publication date of this report. The impacts can also be delayed as countries can rely on national reserves and existing forward contracts before paying higher prices in the global markets. The likely effects will largely depend on the degree of global price pass-through. This is especially the case for energy, which is used widely in all sectors of the economy, from power generation to industrial production and residential usage. Higher energy prices also raise fertilizer prices, worsening food inflation.

Pass-throughs of global oil prices are weak for consumers and stronger for producers. Vector autoregression (VAR) analysis, using data going back to 2000, shows that in response to a 10-percent increase in global oil prices, consumer price (CPI) inflation increases by 0.3-0.6

4 Data from Trading Economics. Accessed April 4, 2022.

percentage point in Pakistan, Sri Lanka, and India (Figure 1.12).[5] Bangladesh has the weakest pass-through to consumer prices. The price pass-through to producers is much stronger, with an increase of 0.75-0.8 percentage point in the wholesale prices (WPI) in the three countries. To better understand these results, we next look at the historical correlation of global oil prices with major goods categories for consumers and producers.

Figure 1.12. Pass-through of a 10 percent increase in global oil prices to consumer and wholesale prices



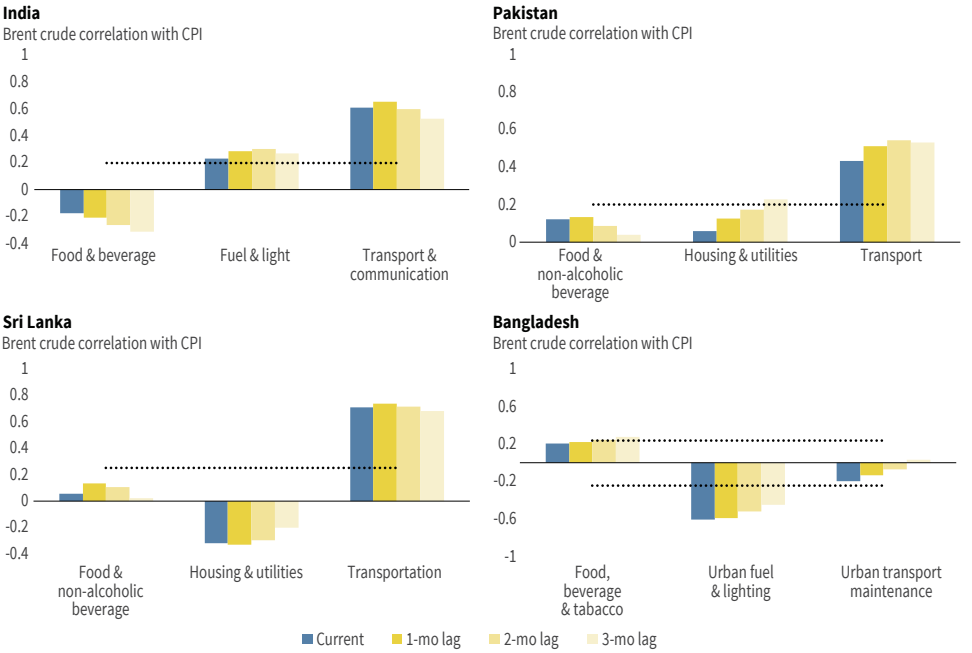
Source: Haver Analytics, staff calculations using the model in Ruch and Taskin (2022) adapted to South Asia.
Note: Results come from a structural Bayesian vector autoregression model with stochastic volatility. The model includes four lags on data from 2000Q1 to 2021Q4, or where available. The model includes real GDP, the respective inflation measure, the real exchange rate, policy interest rates, and oil prices (average of Brent, West Texas Intermediate, and Dubai Fateh). In the India model, oil is endogenous, and numbers shown are from the impulse response function. For the other countries, the numbers are VAR coefficients on the exogenous global oil price variable.

On the consumer side, the pass-throughs of global oil prices are weak for most major categories, except for transportation (Figure 1.13). In India, Pakistan, Sri Lanka, and Bangladesh, the prices of food and fuel for utilities correlate only weakly with global oil prices. Many factors contribute to this weak correlation, including subsidies or price caps on domestic fuel prices, as we discuss below. The correlations with transportation are much stronger in most countries. In India, for example, transportation prices, and in particular the prices of petrol and diesel for vehicles, correlate strongly with global oil prices. By contrast, the correlation of oil prices with transportation is much weaker in Bangladesh, because the country uses natural gas and not gasoline or diesel as the main fuel for transportation (Ullah 2012).

On the producer side, the pass-throughs of global oil prices are strong for many categories (Figure 1.14). In India, Pakistan, and Sri Lanka, the prices of crude petroleum and petroleum products are highly correlated with global oil prices. In Pakistan, the prices of raw agricultural

5 Reserve Bank of India found in 2019 that for every 10 US-dollar/barrel increase in crude oil prices, India's headline inflation increases by 0.4 percentage point.

Figure 1.13. Weak pass-throughs of global oil prices to most consumer goods

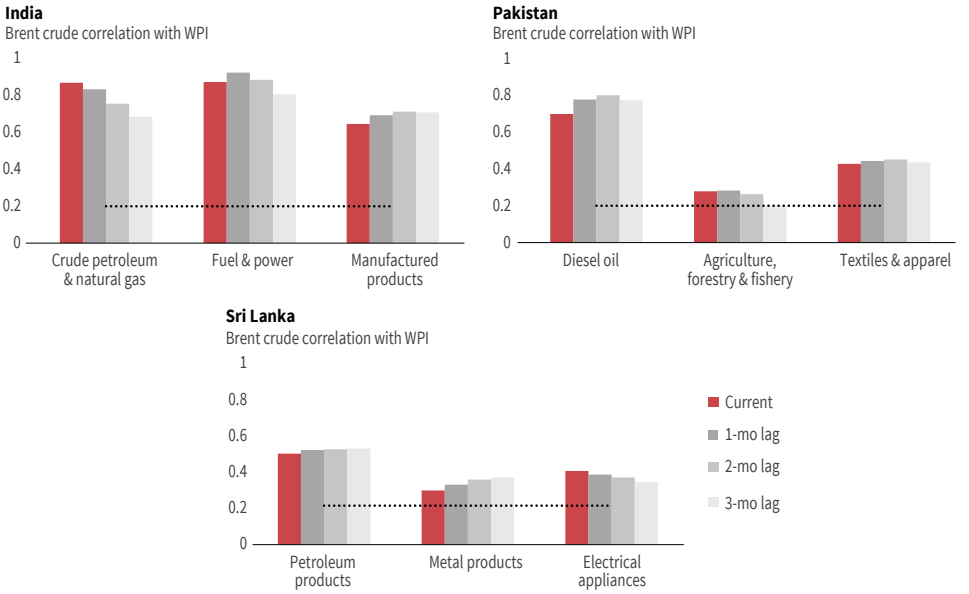


Source: Haver Analytics, Bangladesh Bureau of Statistics, and staff calculations.
Note: The dotted line marks the significance level, given the sample size. Sample periods are: 2012-Feb 2020 for India, Pakistan, and Bangladesh national-level; Aug 2014-Feb 2020 for Bangladesh urban sample; 2015-Feb 2020 for Sri Lanka. "Urban transport maintenance" for Bangladesh includes petrol, natural gas, and diesel used for cars and regular car servicing.

products such as edible oils, grains, and animal-based products are also positively correlated with oil prices, suggesting pass-throughs of oil prices through the prices of fertilizers and feed. The pass-throughs to manufactured products such as textiles and apparels, metal products and electrical appliances are also strong, reflecting pass-throughs of higher operating (energy use) and transportation costs along the production chain.

Government subsidies on fuel-related goods dampen the pass-through of global oil prices. Many South Asian countries have subsidies on fuel, electricity, and public transport (Table 1.1). These subsidies take many forms, from proportional subsidies on retail prices, to regulated price caps to subsidized import energy prices. In most cases, the subsidies are adjusted on a discretionary basis, and often driven by public pressures to lower consumer prices. Subsidies as a share of GDP had been falling in South Asia before the pandemic, and subdued oil prices in 2020 and early 2021 also alleviated political pressures on governments. But the recent surges in energy prices reversed that trend. India cut fuel taxes in late 2021 to cushion the effects of rising global prices. Pakistan announced fuel and electricity price relief in February 2022. While these measures can help reduce fluctuations in domestic prices, they

Figure 1.14. Strong pass-throughs of global oil prices to wholesale prices



Source: Haver Analytics, staff calculations.
Note: Wholesale price index (WPI) is used. The dotted line marks the significance level given the sample size. Sample periods are: 2012-Feb 2020 for India, Pakistan, and Sri Lanka. "Other transportable goods" for Pakistan include petrol, diesel, and other petroleum products.

also constitute a direct burden or hidden liability on the government's budget, which could increase fiscal vulnerabilities going forward. Price subsidies also tend to be larger on the consumer side than on the producer side. For example, in 2019, India spent US$11.43 billion on explicit petroleum subsidies for consumers, and none on producers (International Monetary Fund energy subsidy database). That helps explain the larger pass-through of global oil prices to producers than to consumers.

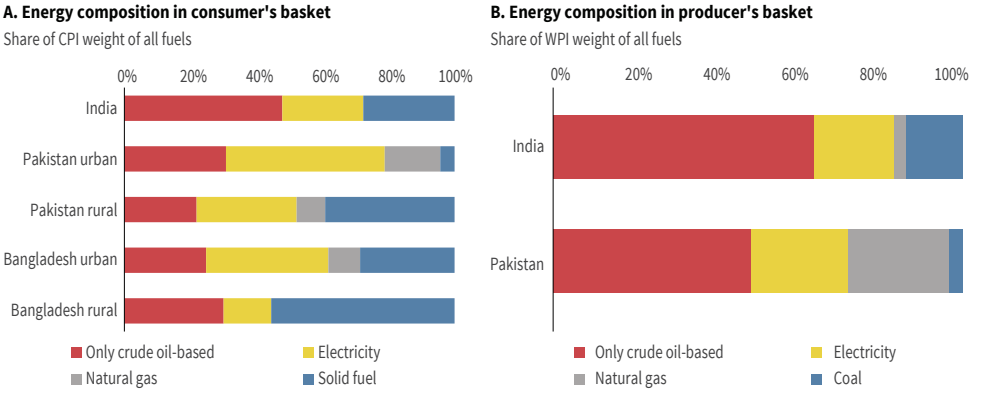
Market forces can also lower the pass-through effect to consumer prices. Producers may be unable to pass higher input costs to consumers (Jongwanich et al. 2016). Alternative sources of energy also matter. In India, crude oil-based sources (LPG, kerosene, diesel, petrol) take up less than half of energy usage in the consumer's basket, whereas on the producer side, the proportion is close to two-thirds (Figure 1.15). In Pakistan, between 20-30 percent of consumer's energy usage consists of crude oil-based sources, compared to close to half of the producers' usage. In Bangladesh, only 25-30 percent of energy used by consumers comes from crude oil, and the majority of the rest is natural gas. In Bhutan and Nepal, hydropower provides a natural hedge against increases in crude oil-based energy prices, while biofuels, such as fuel wood and waste, provide over 70 percent of Nepal's energy supply (International Energy Agency).

Table 1.1. Fuel subsidies in South Asian countries

	Subsidy on fuels	Subsidies on:	
		Electricity	Public transport
Bangladesh	Domestic fuel prices fixed and subsidized, adjusted on discretionary basis	Subsidized through SOE	Regulated price
Bhutan	Fixed quantity of LPG imported at subsidized prices from India, consumer prices for LPG regulated	Subsidized through SOE	Subsidized through SOE
India	LPG, kerosene subsidized; petrol and diesel duties adjusted on discretionary basis	Subsidized through SOE	
Maldives	Diesel subsidy to electricity providers through SOEs	Subsidized	
Nepal	Consumer prices regulated, and for some (such as LPG), adjusted on discretionary basis	Subsidized for certain segments by usage	
Pakistan	Imported gas subsidized; fuel levies adjusted mostly on discretionary basis (an additional subsidy may apply depending on the price differential in producer and consumer prices, net of taxes/levies)	Subsidized	Regulated price caps
Sri Lanka	Diesel, petrol, kerosene, LPG subsidized; prices set on discretionary basis since Nov 2019	Subsidized through SOE	Bus fare regulated; rail fare highly subsidized

Source: Viswanathan et al. (2021) and World Bank country economists.

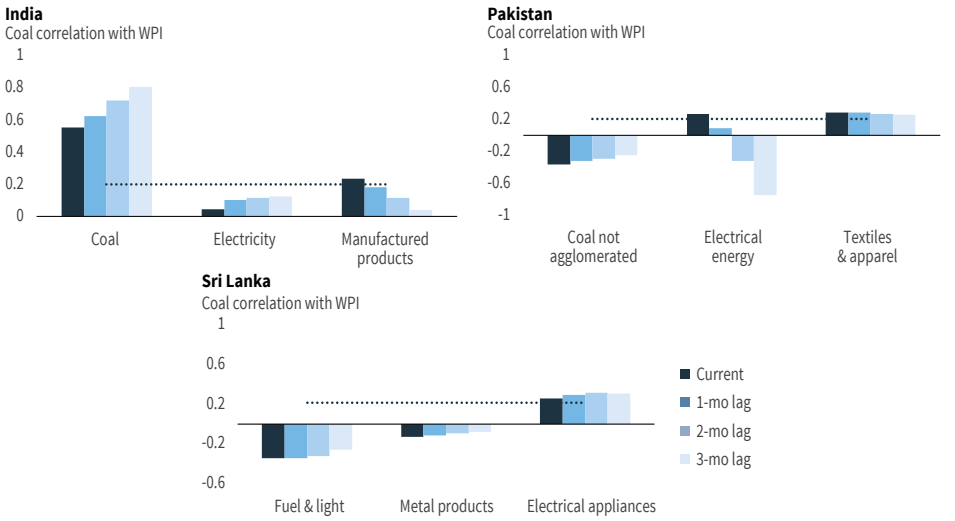
Figure 1.15. Consumers use relatively smaller shares of crude oil-based energy sources



Source: Haver Analytics, Bangladesh Bureau of Statistics, and staff calculations.
Note: Numbers computed based on CPI and WPI index weight shares. "Only crude oil-based" includes LPG, kerosene, diesel, petroleum, motor oil, and fuel. Natural gas includes liquefied hydrocarbons where available. Solid fuel includes coal, firewood, candle, and matches where available.

The pass-through of coal prices to domestic inflation tends to be weaker than with oil prices (Figure 1.16)**.** Coal is also by far the most subsidized energy in South Asia (Figure 2.12), which dampens the pass-through to domestic coal prices. Unlike petroleum, diesel, and other crude oil-based energy, coal is widely used in power generation, and so the pass-throughs to other sectors of the economy are weak. Electricity is often subject to price controls in South Asia, for example in Bangladesh and Sri Lanka, thus reducing the pass-through one channel of price pass-through. The share of import in energy consumption also matters. Over 2011-2019, India imported over 95 percent of its consumption of oil, compared to just 25 percent for coal (US Energy Information Administration). A smaller share of import for consumption means that domestic prices are less exposed to fluctuations in global prices, thus reducing the extent of the price pass-through.

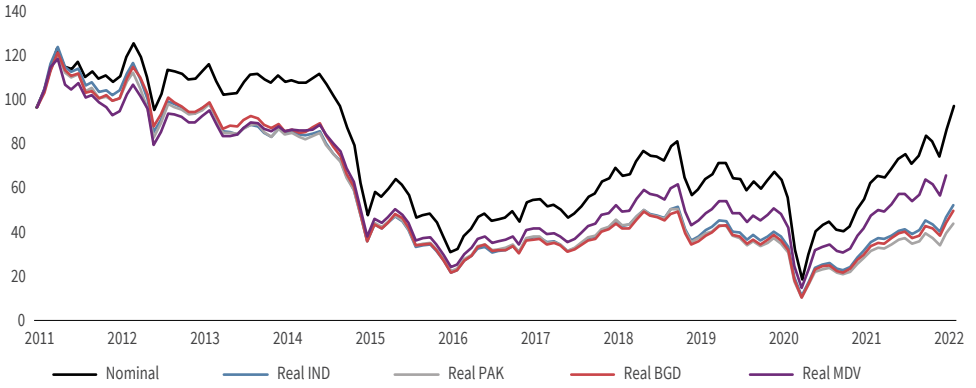
Figure 1.16. Weaker pass-throughs of coal prices to wholesale prices



Source: Haver Analytics, staff calculations.
Note: WPI is used. The dotted line marks the significance level given the sample size. Sample periods are: 2012-Feb 2020 for India, Pakistan, and Sri Lanka. "Other transportable goods" for Pakistan include petrol, diesel, and other petroleum products.

Despite rising energy prices, inflation-adjusted real oil prices have not yet reached the historical high (Figure 1.17). Over the long-run, improvement in mining techniques tends to lower oil prices, but the need to mine deeper tends to increase prices. With a broader shift to renewable and alternative energy sources, real oil prices could also decline in the long run. That is why, even with the recent surge in commodity prices, real prices of oil are still below recent historical levels. If non-renewable prices remain high for a long period of time and governments resist the temptation to subsidize fuels, the current surge may accelerate the shift toward alternative energy (Chapter 2).

Figure 1.17. Real oil prices not yet reached historical high



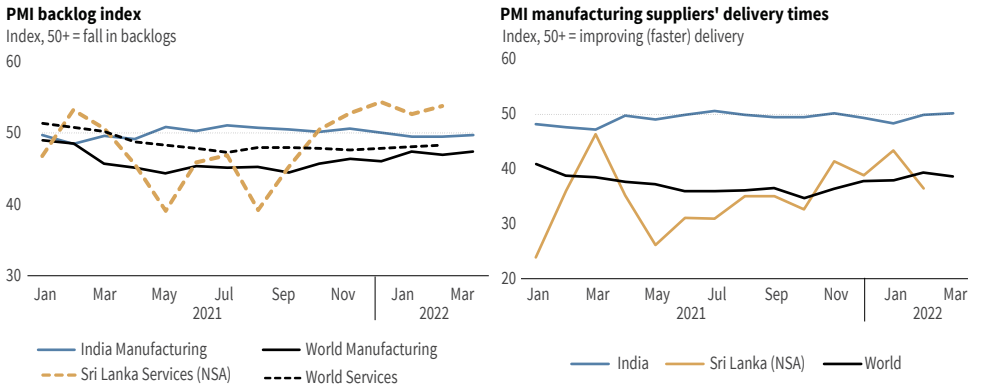
Source: Haver Analytics, CEIC, and staff calculations.
Note: Brent crude oil prices are deflated using indexed CPI levels. The base period for CPI index is January 2011 for all countries.

1.3 Continued supply-side constraints

In addition to rising energy prices, producers also face lingering supply chain disruptions. Globally, demand for computer chips increased during the COVID-19 pandemic, and demand for durable goods rose during the recovery. As production and transportation capacities could not expand quickly enough, and lockdowns further limited capacities, the increased demands led to supply bottlenecks. The Baltic Dry Index, which measures the cost of shipping raw materials worldwide, peaked in September 2021. More recently, COVID-related lockdowns in East Asia and the war in Ukraine further added to supply chain disruptions. Accordingly, the global Purchasing Managers' Index (PMI) shows a continued rise in backlogs in both manufacturing and services and worsening delays in suppliers' delivery times, month-over-month (Figure 1.18).

South Asian countries are also experiencing lingering supply constraints. In India, both backlogs and delivery times in the manufacturing sector have barely improved month to month since April 2021. In Sri Lanka, backlogs in the services sector eased starting in October 2021, as restrictions during COVID-19's Delta wave were relaxed. Delivery time in the manufacturing sector continues to lengthen in Sri Lanka, reportedly due to delays in receiving imports (Central Bank of Sri Lanka 2022a; 2022b). However, the rate of increase has been slowing down since mid-2021, signaling gradually improving supply bottlenecks in manufacturing. Data on the number of vessel arrivals show that maritime traffic at the port of Colombo has not recovered to pre-pandemic levels, which are consistent with the reported delays in imports, as the balance of payments crisis has led to import restrictions and reduced the availability of foreign currency for import payments. The war in Ukraine and rising energy prices will likely increase transportation time and costs, further adding to backlogs and delivery time (Chapter 2).

Figure 1.18. Lingering supply constraints

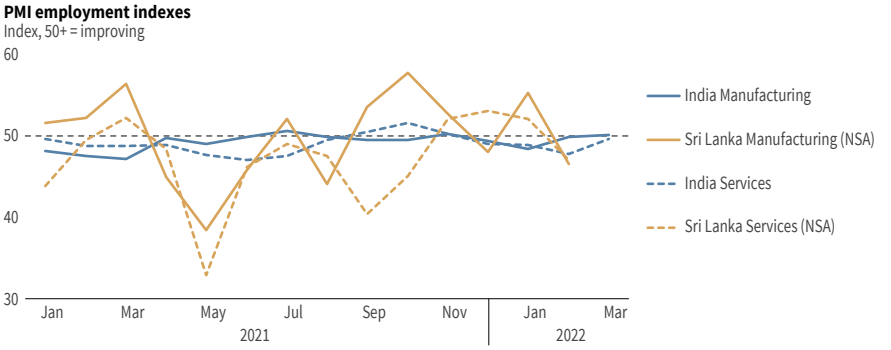


Source: Haver Analytics.
Note: PMI indexes for India and the world come from IHS Markit and are seasonally adjusted. Indexes for Sri Lanka are reported by the Central Bank of Sri Lanka and are not seasonally adjusted. PMI backlog subindex is inverted by subtracting data from 100, so a number above 50 indicates falling backlogs compared to previous month.

Recovery in employment continues to be slow (Figure 1.19)**.** PMI employment indexes for India show that employment in both manufacturing and services contracted month to month between December 2021 and February 2022, with a marginal expansion in manufacturing employment in March 2022. In Sri Lanka, services employment improved month-over-month between November 2021 and January 2022, while manufacturing employment has improved since October with a break in December. But more recently in February, employment in both sectors contracted. The overall lackluster performance in employment is still very much driven by a slow recovery in labor demand. In India, the manufacturing sector has been affected by sluggish domestic demand for goods, the global Omicron wave, and higher input costs, which have squeezed the price margins of the manufacturers. Sri Lanka's recent setback in employment reflected a broader slowdown of economic recovery in the country. At the same time, labor squeezes in certain sectors limit production. In Sri Lanka, employment in the textile and garment sector has declined since September, as the sector experiences difficulty in hiring and employers in the sector report constrained production levels due to labor shortages (Central Bank of Sri Lanka 2021a; 2022a).

With supply constraints and rising commodity prices, input cost inflation remains elevated. WPI inflation, which covers primary articles, manufactured products and fuel and power, has been elevated since early 2021 in India and Pakistan (Figure 1.20). Part of the higher inflation reflects base effects of relatively low input costs in 2021, as the two-year CAGR of WPI remains much lower. The WPI inflation has also been higher than CPI inflation for these countries since January 2021. The gap between the two may capture a difference in the index composition. While CPI includes services items such as health care and education, WPI includes primary goods such as crude petroleum and manufactured products such as

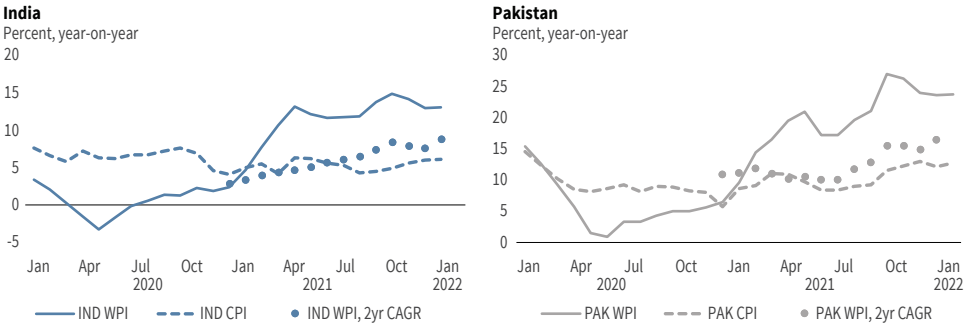
Figure 1.19. Slow recovery in employment



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

chemicals and mineral oils, which are not purchased directly by consumers. But even looking at items that are in both indexes, the WPI inflation is also higher than the CPI inflation. For India in February 2022, for example, the WPI inflation for electricity stood at 15 percent, compared to CPI inflation for electricity at -1.5 percent, which likely reflects heavier subsidies on the consumer side (Section 1.2). In addition, relatively muted pass-throughs of input prices to consumer prices can also contribute to the gap, but recovery in consumer demand can reduce this effect going forward.

Figure 1.20. Wholesale price inflation remains elevated and higher than consumer price inflation

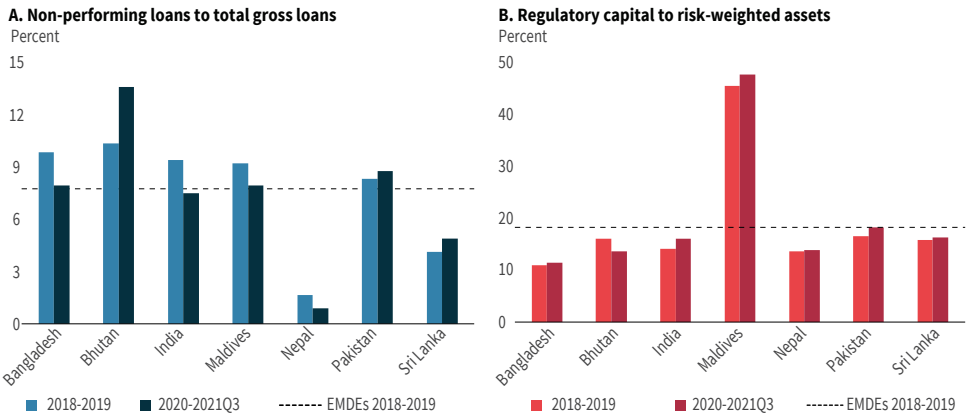


Source: CEIC.

1.4 Financial sector vulnerabilities

Financial sectors in South Asia were in relatively weakened positions even before COVID-19 (Figure 1.21)**.** Non-performing loan (NPL) ratios for most countries were higher than the average of emerging markets and developing economies (EMDEs). Banks' capital adequacy ratios in all except Maldives were below the average level of EMDEs. India faced stress in the non-bank financial institutions (NBFI) sector and among public sector banks, stemming from the Twin Balance Sheet Problem of 2016-17[6] and the default by two large NBFIs in 2018, which exacerbated liquidity issues and stress in the sector. But the country was on the path toward improvement between 2018 and 2020, and NPL ratios also came down.

Figure 1.21. Non-performing loan ratios were high and bank capital levels were low pre-COVID, but reported asset quality did not deteriorate in most countries during COVID



Source: Haver Analytics, central bank websites, Global Financial Development Database, and staff calculations.

At the onset of the COVID-19 pandemic, countries introduced lending support measures, including regulatory forbearance, which were extended during subsequent COVID waves. Many of these policies focused on supporting borrowers, including loan repayment moratoriums, NPL moratoriums (or relaxation of NPL treatment), loan restructurings and rescheduling, and interest caps or waivers (Table 1.2). These lending support measures, together with government credit guarantee and capital injection programs, provided breathing space to distressed borrowers and helped preserve the functioning of the financial sector. Moratorium

6 India's Twin Balance Sheet Problem was characterized by over-leveraged companies and bad loan-burdened public sector banks. During the boom of the mid-2000s, public sector banks fueled lending growth, while companies saw robust growth fueled by easy credit. But as credit conditions turned and economic growth slowed down, corporates were left with high levels of debt, and state-run banks accumulated large amounts of NPLs on their balance sheets (*The Economist* 2017).

policies helped reduce payment defaults, which would have hit banks' capital and worsened their lending capability. Loan restructuring with public guarantees alleviated banks' burden to cover potential loan losses and gave banks incentives to provide much-needed liquidity to firms during the pandemic.

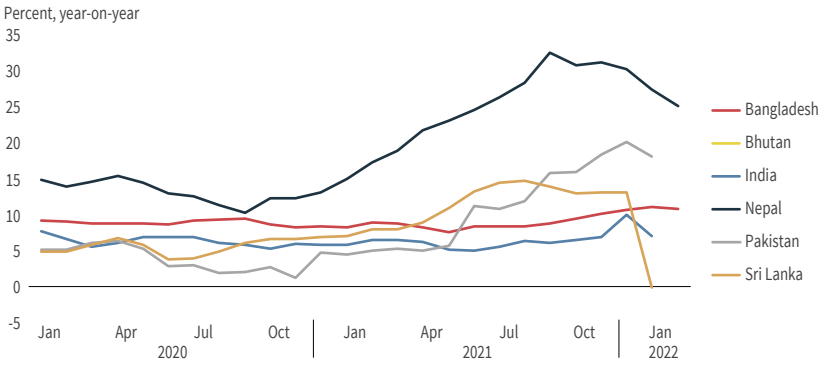
Table 1.2. Lending support measures in SAR during the COVID-19 pandemic

	Loan repayment moratorium	NPL moratorium or relaxation of NPL treatment	Encourage restructuring (e.g., with public guarantee)	Interest cap or waiver
Bangladesh	✓	✓	✓	✓
Bhutan	✓			✓
India	✓	✓	✓	✓
Maldives	✓			
Nepal	✓		✓	✓
Pakistan	✓	✓	✓	
Sri Lanka	✓	✓	✓	✓

Source: COVID-19 Finance Sector Related Policy Responses Database, country central banks, and World Bank financial sector economists.
Note: NPL moratorium and relaxation of NPL treatment allow banks to delay or pause recognition of NPL. In India, NPL moratorium meant no loans were classified as NPLs between March 2020 and March 2021. Relaxations of NPL rules were implemented in Bangladesh, Pakistan, and Sri Lanka. In Bangladesh, borrowers were not considered in default if they paid 15 percent (instead of the previous 25 percent) of the total instalment of loans payable in 2021. Pakistan increased the number of days past due, after which loan is considered as non-performing. Sri Lanka withdrew the requirement to classify all credit facilities extended to a borrower as non-performing when the aggregate amount of all outstanding NPLs granted to such borrower exceeded 30 percent of total credit facilities.

The policy measures prevented further deterioration in NPL ratios, and private sector credit growth has been sustained. As a result of the support measures, reported NPL ratios declined during COVID in Bangladesh, India, Maldives, and Nepal (Figure 1.21.A). With low interest rates and functioning financial sectors, credit to the private sector sustained healthy growth (Figure 1.22). In Bangladesh and India, private sector credit growth has been subdued at an annual rate of 5-10 percent. In Nepal and Pakistan, private sector credit growth has picked up since early 2021 and has reached the 30 and 20 percent range, respectively, although growth is from a relatively low base in both countries. Fast credit growth signals ample demand for credit in the private sector and attests to the lending capability of the financial sector. But the fast growth of credit could also lead to rapid deterioration of bank asset quality if lender screening is not adequate. In Pakistan, banks have focused on lending to the most creditworthy borrowers, with almost 70 percent of the loan book pivoted towards the corporate segment, but microfinance banks (MFBs) that lend to individuals and MSMEs have seen declines in asset quality (Box 1.3).

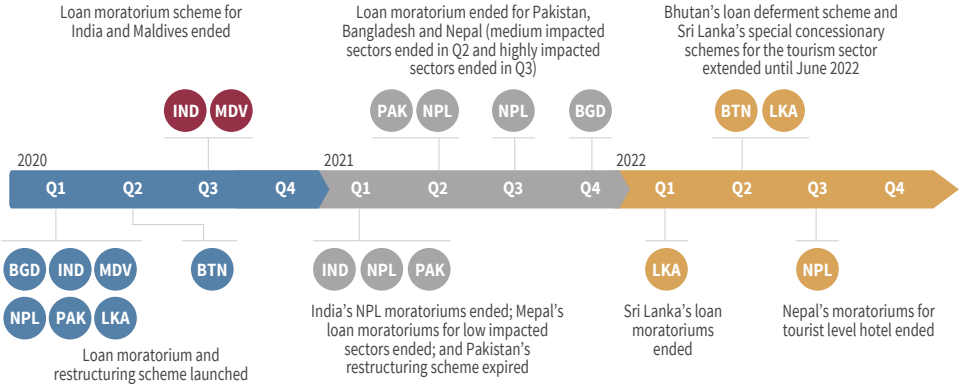
Figure 1.22. Private sector credit has sustained growth



Source: CEIC, Royal Monetary Authority of Bhutan.

As lending support measures are phased out in most countries, the financial sector faces renewed challenges. As of the end of 2021, most South Asian countries have ended their moratorium programs, except for Bhutan, Sri Lanka, and special programs for the tourism sector in Nepal (Figure 1.23, see more details in the appendix). Some worry that the moratorium and restructuring programs have delayed recognition of NPLs as banks stopped classifying delinquent loans that are under deferment, restructuring or rescheduling, as "non-performing" (Fitch Ratings 2022; IMF 2022). The programs may have also created a lack of transparency about the health of bank balance sheets (World Bank 2022), especially if there lacks strong regulatory frameworks and bank supervision. In the event of a surge in defaults of existing loans, banks will need to replenish capital to ensure that they have enough for a full recognition of credit losses, which can be a drag on capital resources. The impact can be especially severe for banks with low profitability and thin capital buffers and in countries or sectors with slower economic recovery. Box 1.3 looks at what happens after the support measures are phased out.

Figure 1.23. Timeline of the phaseout of lending support measures in South Asia



Source: Country official documents.

Box 1.3. Financial markets post-lending support measures

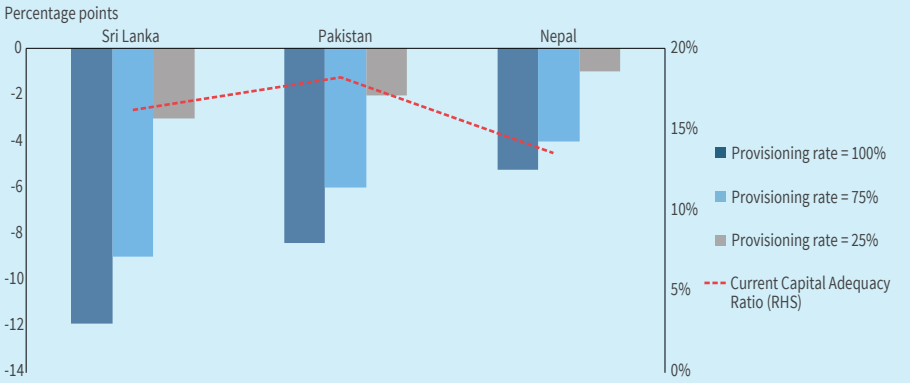
Lending support measures were widely used in South Asian countries during the pandemic. It is said that these programs mask the true extent of deterioration in asset quality during COVID. Loans that took advantage of moratorium or restructuring policies amounted to 5 to 10 percent of total gross credit or loans in Nepal[7] (as of 2021Q3) and Pakistan (as of 2021Q1). In India, loans that took advantage of loan moratoriums accounted for more than 40 percent of total loans, with an additional 1 to 2 percent under restructuring as of mid-2021. In Sri Lanka, around 25 percent of loans were under moratorium in the first half of 2020, which subsequently fell to below 10 percent in 2021Q3 (Central Bank of Sri Lanka). An additional 6 to 7 percent of loans went under restructuring in Sri Lanka as of 2021Q3. Given the large size of these programs, their phaseout can lead to deterioration in the overall asset quality. While the full extent of the impact will take time to materialize, this box assesses the likely scenarios and discusses early signs when lending supports were withdrawn in some countries.

The phaseout of moratoriums and other relief measures can drive defaults higher on existing loans. NPL ratios can shoot up as previously unclassified loans are reclassified as NPLs and some loans under repayment moratoriums and restructuring become non-payment. As a result, banks will be required to increase loan-loss provisioning to absorb the losses on the delinquent loans. The capital impact from the phaseout will vary across countries, larger in countries with larger shares of loans under moratorium. It will also depend on the provisioning ratio, which is the percentage of funds that banks set aside for loan losses. In the worst scenarios, where 100 percent of the loans on moratoriums are classified as NPLs and the required provisioning rate is 100 percent, the capital adequacy ratio could drop by 5 to 12 percentage points in Nepal, Pakistan, and Sri Lanka (Figure 1.24). These drops would represent sizable impacts on the countries' capital adequacy ratio. In Sri Lanka, for example, where the current capital adequacy ratio stands at 16.2 percent, a 11.9-percentage point drop would reduce it to 4.3 percent. Because of a higher initial capital adequacy ratio and relatively low capital impact, Pakistan would have the highest capital adequacy ratio after the impact. In India, where blanket loan moratoriums ended in August 2020, stress tests by the Reserve Bank of India suggest an impact of

7 Total outstanding credit, which is computed as the sum of all sectors' outstanding credit of banks and financial institutions, is used to calculate the share in Nepal.

1.7 to 3.5 percent on the system-level capital adequacy ratio from deteriorations in asset quality, depending on the severity of the stress (Reserve Bank of India 2021).

Figure 1.24. Simple stress analysis: capital impact of moratorium phaseout



Source: Haver Analytics, Nepal Rastra Bank (2021), Fitch Ratings (2022), State Bank of Pakistan website "COVID-19: Loan Extension and Restructuring Package," and staff calculations.
Note: Sri Lanka: By end of 2021Q3 loans under moratorium were 10 percent of gross loans which was 10.3 million Sri Lankan rupees. Pakistan: Data is as of 2021Q1. Nepal: Loan amount on moratorium is as of August 2021, and regulatory capital and risk-weighted assets are as of mid-Oct 2021. For this exercise, it is assumed that 100 percent of the loans on moratoriums at the time the data are taken are subsequently classified as NPLs, which is the worst case scenario.

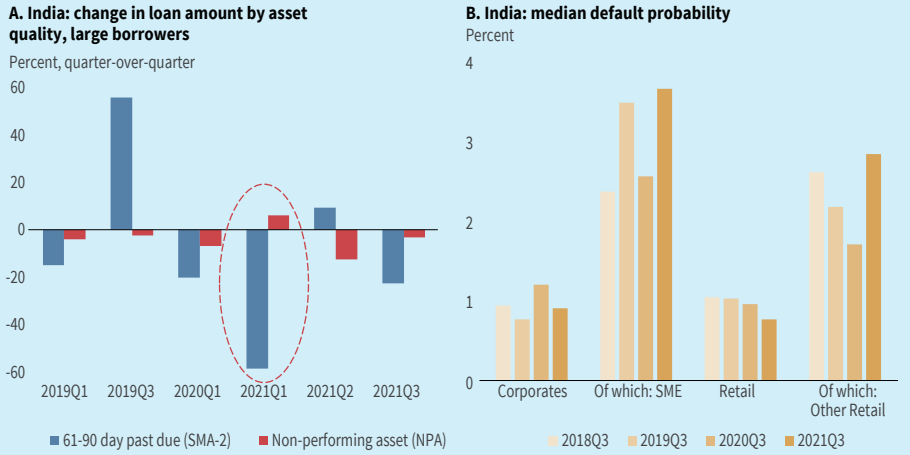
$$capital\ impact = \frac{Total\ Regulatory\ Capital - Increase\ in\ NPLs * Provisioning\ rate\ for\ new\ NPLs}{Risk - weighted\ Assets - Increase\ in\ NPLs * Provisioning\ rate\ for\ new\ NPLs} - \frac{Total\ Regulatory\ Capital}{Risk - weighted\ Assets}$$

In India, the NPL moratorium, which was in effect between March 2020 and end-March 2021, applied to all loans in the financial system. Under the program, no loans were classified as NPL. As the program expired in the first quarter of 2021, the non-performing assets (NPAs) for large borrowers registered a positive change (6 percent) from the previous quarter, while NPA growth was always negative in all other quarters since 2019 (Figure 1.25.A).[8] In the same quarter, loans 61-90 days past due (SMA-2) dropped by over 50 percent. This pattern suggests that delinquent loans that previously had been classified as SMA-2 despite being 90+ days delinquent were reclassified as NPA after the NPL moratorium expired. At the same time, while fresh delinquencies declined for large borrowers, performance among SMEs and retail borrowers has deteriorated. According to recent data from the European Banking Authority (EBA), the median default rate for retail obligors increased to 3.54 percent in 2021Q1 from 0.82 percent in 2019Q1. The median probabilities of default for the credit portfolio of

8 NPA ratio fell in 2021Q1 despite rising NPA amount, because of an even larger increase in gross loan amount.

SMEs and other retail borrowers are also much higher in 2021Q3 compared to 2020Q3, suggesting a rising default probability in these sectors (Figure 1.25.B).

Figure 1.25. Immediate impacts on India's NPLs and defaults from program phaseout

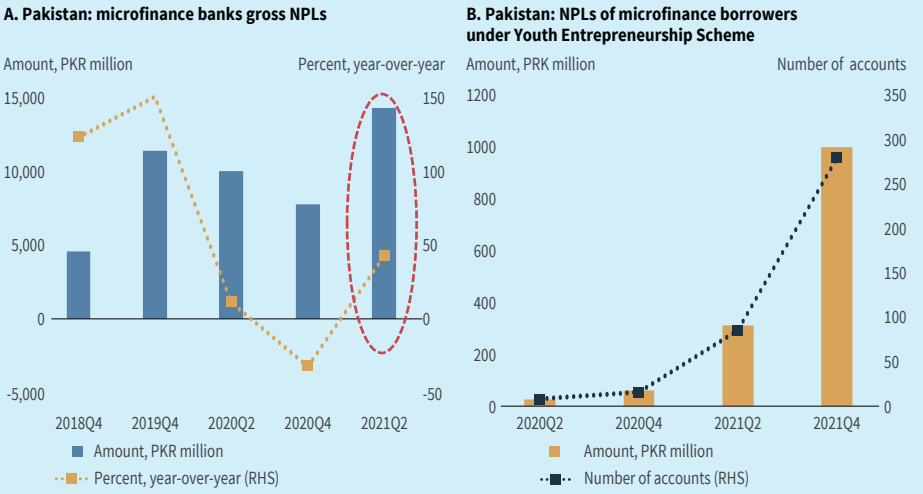


Source: Reserve Bank of India (2019; 2020; 2021), European Banking Authority risk dashboard.
Note: A. SMA-2: loans past due 61-90 days. NPA: non-performing assets. B. "Other retail" excludes: (1) retail exposure secured on real estate and (2) qualifying revolving retail exposure.

In Pakistan, microfinance borrowers represented approximately 94 percent of the approved applications for the loan deferral and restructuring programs. Close to 50 percent of the net-loan portfolio of microfinance banks (MFBs) in the country participated in the programs. It is thus not surprising that gross NPLs of MFBs rose sharply by 4.3 billion rupee or 42.7 percent year-over-year in 2021Q2 when loan moratoriums expired (Figure 1.26.A). This surge was partly driven by non-repayment of borrowers who took advantage of loan deferment or restructuring facilities a year earlier. Data on the Youth Entrepreneurship Scheme,[9] which accounts for 23 percent of total loan disbursements by the microfinance sector, shows a sharp increase in both NPL amount and the number of NPL accounts since 2021Q2 (Figure 1.26.B), consistent with the deterioration in asset quality post-support measures. But given the relatively small size of the microfinance sector in Pakistan, which takes up just 3.6 percent of total loans as of 2021Q4, any stress is likely going to be localized.

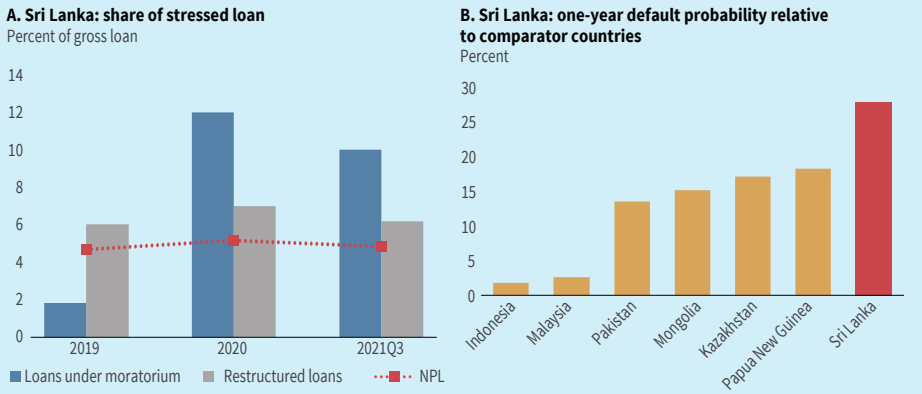
9 Prime Minister's Kamyab Jawan Youth Entrepreneurship Scheme was launched by the Government of Pakistan in July 2019 (initially called "SME Lending Program" and renamed in July 2020). It aims to provide lending support to self-employed enterprises and individuals.

Figure 1.26. Immediate impacts on Pakistan's NPLs and defaults from program phaseout



Source: A. State Bank of Pakistan (2021). B. State Bank of Pakistan Quarterly Data of PM's Kamyab Jawan - Youth Entrepreneurship Scheme.
Note: The data is for Tier-I, which limits loans to 0.1-1 million PKR.

Figure 1.27. Possible immediate impacts on Sri Lanka's NPLs and defaults from program phaseout



Source: Fitch Ratings (2022), CEIC, and Bloomberg.
Note: A. Sample includes all Fitch rated banks. B. According to Bloomberg's model, 1-year default probability above 1.5 percent signifies high risk of failure to pay (Ondaatjie and Karunungan 2021).

In Sri Lanka, since most moratoriums just expired at end-March 2022, and the tourism-related moratorium will continue to end-June 2022, it will take some time for any deterioration of asset quality to materialize. As of September 2021, about 10 percent

of gross loans were still under moratorium and 6 percent under restructuring (Figure 1.27.A), which are sizable numbers compared to the country's NPL ratio, which hovers around 4 to 5.5 percent since the pandemic. If all remaining loans in the program become delinquent, they could contribute significantly to declines in loan quality. Banks' holdings of government securities also expose the financial sector to sovereign risks. According to Bloomberg, Sri Lanka's one-year default probability reached 27.9 percent as of July 2021, the highest in Asia, up from around 13 percent in January 2021 (Figure 1.27.B).

Because of delayed recognition of NPLs and ongoing support measures in some countries, the full impact of the pandemic on asset quality is yet to be fully recognized. The impact will also depend on countries' economic and global financial conditions going forward. As an increasing number of advanced economies raise monetary policy rates, global financial conditions have tightened. The war in Ukraine further increased volatility in global financial markets. As relief measures expire and easy-liquidity conditions disappear, countries' financial sectors could see higher impaired loans and credit costs, especially in countries that experienced larger macroeconomic impacts during the pandemic and whose banks have relatively low capital buffers. Policymakers will need to re-orient policy to strengthen the resilience of banking systems.

In Sri Lanka, difficulties in the macroeconomy and especially in the external sector have spillover effects to the financial sector. The country is facing high inflation, reaching 17.5 percent in February 2022, and a dire lack of foreign currency reserve. With a lack of investor confidence in the broader economy, the Colombo stock market has been in free fall since early 2022. A 100-basis point policy rate hike in March and a more recent 700-basis point rate hike on April 8 to curb inflation raised interest rates and borrowing costs. The country's banks hold a sizeable portion of dollar-denominated government debt. With a sharp depreciation of the Sri Lanka rupee (Section 1.5) in early March, the cost of debt servicing increased drastically, and threatens to hurt banks' balance sheets in case of non-payment.

The war in Ukraine has sent most stock indexes in the region lower and raised borrowing costs. The stock markets fell sharply on the day of the invasion. Although most of the losses were recovered over the following days, investor confidence quickly evaporated as the war dragged beyond the first week. Most major indexes in the region trended lower, in line with indexes in other developing countries (Figure 1.6). In response to heightened volatilities globally, foreign investors are exiting emerging markets, which also contributed to the collapse in indexes. But in India, the exit has been partly met by domestic investment in capital market,

which prevented further declines in asset prices. Long-term borrowing costs for South Asian countries also increased following the invasion, as for most EMDEs. In Pakistan, for example, the spread on the 10-year bond vis-à-vis the policy rate has been going up. The collapse in stock indexes can hurt consumer confidence in the short term and generate a chain reaction throughout the financial market.

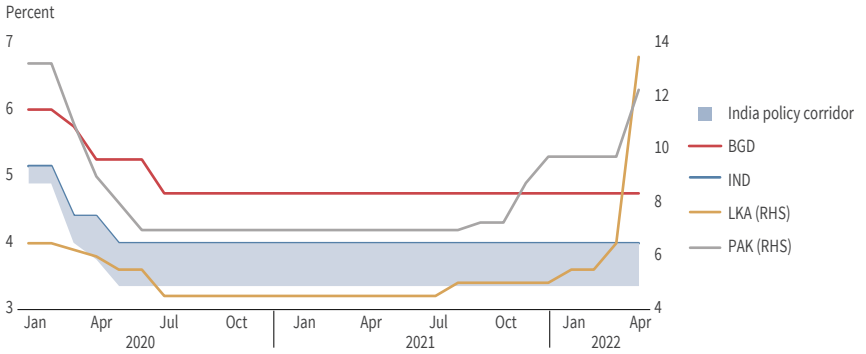
Financial sanctions on Russia could affect the financial sector in South Asia despite little direct exposure to Russia. Following the initial sanctions, central banks in the region (such as the Reserve Bank of India) started gathering information on the full exposure of the financial sector. Unlike many European banks, most banks in South Asia have small exposures to Russia and Ukraine. Although no Indian banks have subsidiaries in Russia, the country's largest bank, State Bank of India, reported exposure of less than $10 million through a joint venture in Russia. The Reserve Bank of India is also exploring alternative payment systems with Russia (Srivastava and Beniwal 2022). Banks that support domestic importers and exporters with links to Russia may stop providing trade credits, thus impacting specific domestic companies involved in the trading. Over time, more of the financial sectors can be impacted through creditor-debtor relations in the global financial system (Chapter 2).

1.5 Policy support

Given the uncertainties, coordinated monetary and fiscal policies are much needed. At this juncture, inflation is mostly driven by cost-push factors, while recoveries in private consumption and investment are still fragile and can be deterred by uncertainties related to the war in Ukraine. International capital markets are in flux both because of the war and the anticipated monetary tightening by advanced economies. Monetary policy needs to contain inflation without derailing nascent economic recovery. Fiscal policy needs to provide support to fragile sectors without over-stimulating demand or jeopardizing fiscal sustainability.

Across South Asian countries, monetary authorities have taken very different approaches. At one end, Sri Lanka and Pakistan raised rates to curb inflation (Figure 1.28). Pakistan has raised its policy target rate by a cumulative 525 basis points since August 2021, with the latest hike of 250 basis points on April 7. Sri Lanka hiked policy rate by 100 basis points in early March and another 700 basis points on April 8. At the other end, India and Bangladesh have kept key policy rates unchanged. At the start of the pandemic, the Reserve Bank of India widened the policy corridor between the two key policy rates (the repo and reverse repo rates) to increase liquidity in the banking system. By keeping both policy rates unchanged so far, the central bank also keeps the policy corridor unchanged and maintains an accommodative stance. At the same time, the Reserve Bank of India has also taken steps to remove excess liquidity in the market.

Figure 1.28. Sri Lanka and Pakistan raised rates aggressively, while India and Bangladesh stayed accommodative

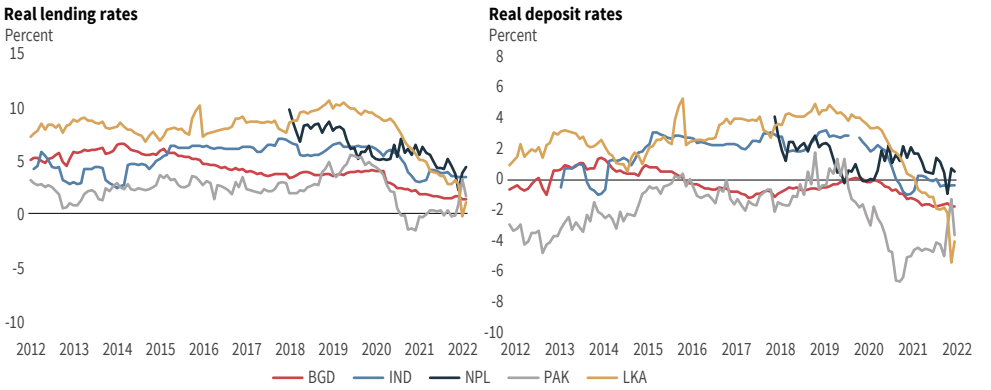


Source: CEIC.
Note: Data shown are standing deposit facility rate (repo rate) for Sri Lanka, policy target rate for Pakistan, one to three day repo rate for Bangladesh, repo and reverse repo rates for India.

In addition to blanket rate changes, countries have also used market policies to curb inflation in certain sectors. Faced with inflation in edible oils over 20 percent, India in February cut the import tax on crude palm oil to encourage domestic edible oil refineries. Bangladesh recently reduced the value-added import tax for edible oil and removed the value-added production tax. With fuel and electricity price inflation over 50 percent year over year, Pakistan announced a price cap on fuel in February and promised no further increases in fuel prices until June 2022. The price cuts have lowered inflation in electricity to below 5 percent in March. In Bangladesh, fuel and electricity prices are fixed, and the supplies are operated by state-owned enterprises and subsidized through the fiscal budget. The rising global energy prices since late 2021 have put a dent in the fiscal budget and drove Bangladesh to raise fuel and transport prices in November. But even with the price hikes, consumer prices are still relatively low at the cost of a fiscal burden for the government.

Despite diverging monetary policy directions, current monetary policies are accommodative in the region. Because of high inflation and low policy rates, countries' real rates have reached historical lows since 2014 (Figure 1.29). In Pakistan, high inflation has pushed the real lending rate briefly into negative territory in 2021. But a series of monetary tightening measures lowered inflation expectations, and the real lending rate has been positive since the end of 2021. In India, Bangladesh, and Sri Lanka, the real deposit rates are negative, while the real lending rates remain positive. Low or even negative real lending rates indicate low real cost of borrowing and suggest a highly accommodative monetary environment. But negative deposit rates reflect that returns on deposit savings in banks are not catching up with inflation.

Figure 1.29. Real lending rates at historically low levels, while real deposit rates in negative territory



Source: Haver Analytics, country monetary authorities.
Note: Real rates are calculated using the contemporaneous headline inflation, or the one-year-ahead inflation expectations where available. Inflation expectations are constructed using inflation forecasts from consensus economics transformed into fixed horizon.

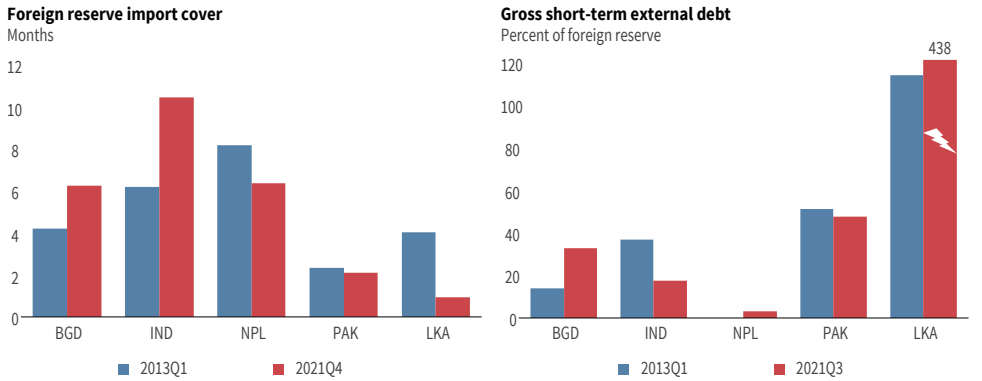
Monetary authorities are also confronted with heightened volatilities in the international capital markets. The anticipation of rate hikes in advanced economies had already created outflows of capital from the region. In response to the Russian invasion, capital flight to safety accelerated. For example, selloffs by foreign portfolio investors have led to a total withdrawal of $15 billion from India's stock market in the first three months of the year (Verma 2022), which represents roughly 0.5 percent of the country's total market size. The capital outflow puts countries' foreign exchange reserves to the test, especially for countries that are actively managing their exchange rates using foreign exchanges. Rising energy prices can also raise import bills and erode countries' foreign reserve buffers (Section 2.2), creating further pressure to raise rates.

Most countries have ample foreign reserve buffers compared to the pre-taper tantrum period.[10] Compared to 2013Q1, India and Bangladesh have boosted import cover (Figure 1.30). India's gross short-term external debt as a percent of foreign reserves is also lower now compared to the pre-taper tantrum period. The most worrying is Sri Lanka, where foreign reserves were enough to cover only 1.4 months of imports. The country's short-term external debt stands at over four times its foreign reserves. Shortage of foreign currency reserves has limited and delayed imports of inputs for production (Section 1.3) and has led to widespread shortages of essential items, including medication and milk powder, as well as 10-hour power outages. Government policies to boost official remittances have not been

10 In May 2013, the U.S. Federal Reserve announced tapering of asset purchases put in place following the Great Financial Crisis. This rollback led to a panic pull out of funds from emerging markets including South Asia.

successful, as parallel markets offer more favorable exchange rates (Section 1.1). To shore up more foreign reserves, the Central Bank of Sri Lanka floated its currency on March 7, leading to a sharp currency depreciation of approximately 31 percent by March 15. Although drastic, it may not be enough as the parallel market rates can adjust accordingly, and at the same time, it will add to imported inflationary pressures. Given the unsustainable debt, mounting balance of payments, and inflationary pressures, the country has announced its intention to seek help from the International Monetary Fund (IMF) to stabilize the economy. But a challenging political situation amid the most recent public protests across the country could make the future even more uncertain.

Figure 1.30. India is in better external position and Sri Lanka in worse position compared to pre-taper tantrum



Source: CEIC.

On the fiscal side, accumulated government debt during COVID may lead to fiscal consolidation measures, which can face political resistance. General government debt has reached over 70 percent of GDP in Pakistan, over 80 percent in India, and over 100 percent of GDP in Sri Lanka and Maldives (World Bank Macro Poverty Outlook). In Bhutan, general government debt was already over 100 percent of GDP in FY2018/19, and it has increased to an estimated 135 percent of GDP for FY2020/21, reflecting higher gross financing needs from the hydropower projects during the pandemic. To reduce the debt burden, India has followed revenue-led consolidation, relying on growth in goods and services tax and fuel-based tax revenues, while trying to rein in current spending in FY2021/22. Pakistan had earlier followed its agreement with the IMF to remove tax exemptions and increase the tax on fuels. But rising energy prices domestically and challenges from political opposition have forced the government to offer electricity and fuel price relief. The financing of the price cuts or subsidies can create an additional burden on the fiscal budget, threaten the ongoing program with the IMF, and limit the use of the fiscal budget on other, more productive projects.

The need for fiscal consolidation notwithstanding, fiscal policy is being reoriented to build capacity. Given the supply constraints that limit production and contribute to inflation, public investment in infrastructure can expand capacity and reduce supply constraints in the medium to long term. Bhutan is focusing on hydropower and other construction projects and the development of industrial parks to attract investment. India's proposed budget for the upcoming fiscal year focuses on capital spending to reduce supply constraints and crowd in private investment. Capital expenditure is budgeted to rise by 24.5 percent in FY2022/23, with an over 50 percent increase in spending on the transport sector compared to the previous year. The budget also emphasizes enhancing the infrastructure for digital payments, and as part of that effort, the Finance Ministry announced the launch of a Central Bank Digital Currency (Box 1.4).

Policies that support lower-income workers and vulnerable sectors are expanded to provide income support. The pandemic has increased inequality and left small and medium enterprises in dire conditions. While some segments of the economies have stepped out of the shadow of the pandemic, many are left behind and require support from the government for income and livelihood. The central government of India is providing additional funding in late 2021 to the rural work guarantee program (MGNREGA) to accommodate increased demand for participation, although the allocated funds in the union budget have been reduced for the new fiscal year that starts in April 2022. In Sri Lanka and Nepal, while loan forbearance measures are being phased out for most sectors, they have been kept in place for the tourism sector (Box 1.3), as sporadic mobility restrictions stunt tourism recovery.

Box 1.4. Central bank digital currency[11]

Over the last few years, the issuance of central bank digital currency (CBDC) has become a highly relevant financial-sector topic worldwide. The rapidly evolving payments technology and its application to finance—in particular, the issuance of value in digital forms—are making it possible for central banks to issue their nation's fiat currency in a digital format. Now that South Asian countries are considering issuing their own CBDC, it is worth reviewing its main aspects to clear any confusion and shed light on its potential risks.

What is CBDC? To understand the role of CBDC in modern payment systems, it is important to understand first the different forms of money that coexist in modern economies.

- Central bank, or public money, consists of reserves and settlement accounts held at the central bank by the institutions participating in the payment systems, and banknotes in circulation.

- Commercial bank money, a type of private money (used by end users in the form of checks, credit transfers, direct debits, debit cards, and credit cards) is a claim against the issuing commercial banks, rather than legal tender.

- Electronic monies (e-money), also a type of private money (used by end users in the form of mobile money, online money, and prepaid cards), are typically issued by non-banks and are claims on commercial bank deposits.

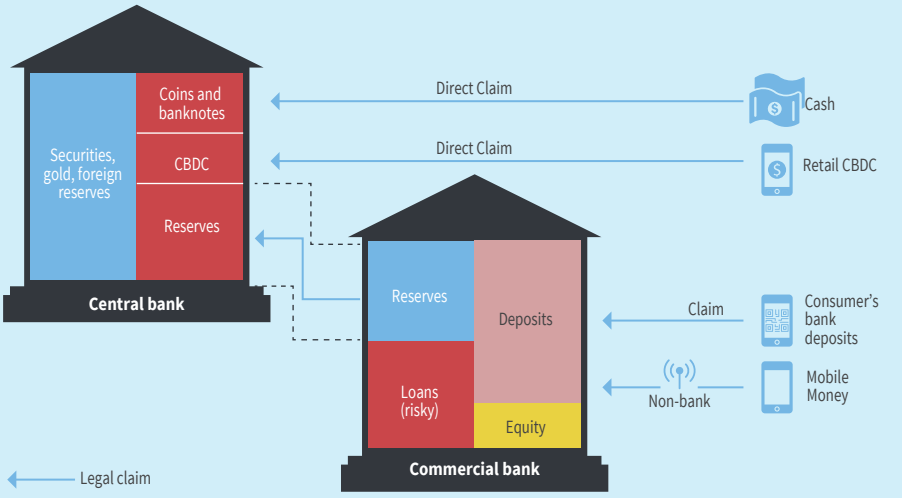
CBDC is a new form of central bank money and thus shares many commonalities with traditional central bank money. It is a central bank liability, denominated in the existing fiat currency, and, in principle, convertible into physical cash and private money on demand by the holder with authorized entities. CBDC differs from traditional central bank money in that it can be digitally created and recorded on centralized or decentralized ledgers. There are two main types of CBDC: (1) wholesale CBDC, for which access and circulation are restricted to predefined classes of agents (typically banks and other select financial institutions) under specific regulatory and policy requirements, as is the case today with central bank reserves; and (2) retail or general-purpose CBDC, for which access and circulation are open to a wider class of agents, including individuals. Countries of varied economic profiles, population sizes, and geographic

11 For more information on CBDC, please refer to World Bank (2021a).

locations are exploring the issuance of retail CBDC. For instance, the Bahamas and Nigeria have already launched CBDC, while others are in the piloting phase, including Jamaica, Eastern Caribbean, China, Ghana, South Korea, South Africa, Uruguay, and Saudi Arabia. Many more are in the research phase, including India, which has announced that it would launch its CBDC during the 2022-2023 fiscal year.

How could retail CBDC be distributed? Retail CBDC could be arranged in one or two tiers, although the countries that have launched and piloted so far have opted for the two-tier model. In a one-tier retail CBDC, the central bank would operate the CBDC infrastructure, distribute CBDC directly to the public, and manage the accounts of all users (individuals and enterprises), keeping records of all balances and updating them with every transaction. In this type of model, the central bank could outsource some operations, such as the user interface, call center, and the handling of user complaints. In a two-tier model, the central bank would distribute CBDC to the public via intermediaries (that is, payment service providers), which could be commercial banks or non-bank entities and would be licensed and overseen by the central bank. The two-tier design tries to balance the credibility of direct claims on the central bank (the equivalent of cash) with the benefits of using payment intermediaries. At the same time, monetary policy effectiveness and financial stability considerations are important for central banks when designing the distribution of CBDCs.

Figure 1.31. What is CBDC? An illustration



Source: Auer and Böhme (2020).

How is CBDC different from existing digital payment methods? First, central bank money is considered safer than commercial bank money (bank deposits). CBDC could allow the general public access to the same level of safety but in digital form, similar to bank deposits. Second, unlike other digital payment instruments, CBDC could be designed to have similar anonymity as cash, although so far, no jurisdiction that has fully implemented or is piloting CBDC has chosen to do so. Third, CBDC could be issued as a digital token, and any transfer between users would be like handing over cash, hence avoiding the need for account holding.

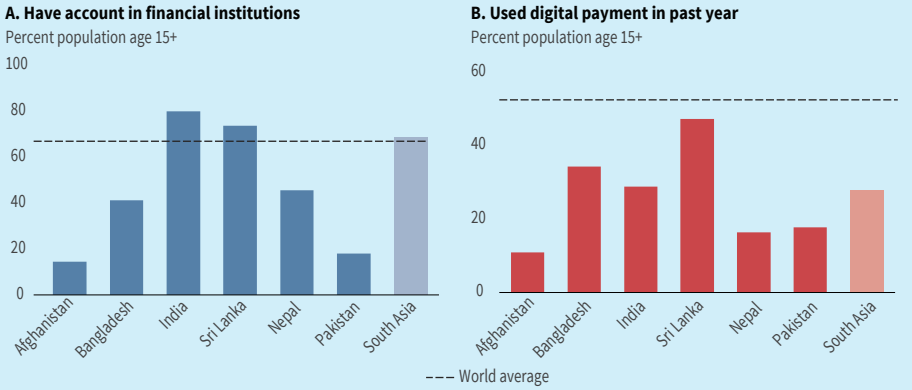
How are cryptocurrencies different from CBDC? Technically, cryptocurrencies do not fit the public or private money definitions. Cryptocurrencies such as Bitcoin and Ether are digital representations of value and are not issued by a central bank, deposit-taking institution, or e-money institution. Instead, they rely on algorithms, decentralized systems, and cryptography for issuance and security of transactions. Because they depend on algorithms and decentralized systems with no central decision making, cryptocurrency values tend to exhibit huge fluctuations. Stablecoins, which are a subset of cryptocurrencies, are marketed as a less volatile alternative to other cryptocurrencies. They could be pegged to and/or backed by specific assets such as a fiat currency, commodities, or they could be controlled by employing an algorithm to adjust supply to match demand. Examples of stablecoins include Tether and USD Coin.

What are potential motivations for introducing CBDC? The relative weight and importance of CBDC depend on specific country contexts and the design features. On one end of the spectrum, countries may wish to preserve the role of public money and safeguard financial stability and monetary sovereignty. On the other end of the spectrum, some countries may wish to use CBDC to supplement traditional digital payments and to promote financial inclusion, government payment disbursements and collections, cross-border payments, competition, and interoperability.

What are potential risks/challenges associated with introducing CBDC? The introduction of CBDC could disrupt the existing financial-intermediation structure. In addition, depending on design and country context, CBDC could pose risks to financial stability, financial integrity, data protection and privacy, and cyber resilience. Further, it can have implications for the legal and regulatory framework, increased responsibilities of the central bank, and could also lead potentially to currency substitution, especially in the context of cross-border CBDC.

CBDC in the context of financial inclusion: For many developing countries, including some South Asian countries, low access to transaction accounts and low usage of digital payments (Figure 1.32) have been seen as a motivator to introduce CBDC. Although not a panacea, CBDC could potentially help fill the gap in traditional payment systems and promote financial inclusion. To meet the financial inclusion challenge, however, CBDC would have to be designed with that objective in mind. CBDC design aspects that encourage financial inclusion include the affordable cost of onboarding and transaction, off-line capabilities, privacy, and remuneration. A CBDC system needs to be easy to access through a simple user-enrollment process, convenient to use through a large network of agents and service providers, and acceptable for daily-life use cases at merchants, billers, and by the government, on a continuous basis. However, even though CBDC can facilitate financial inclusion, it is not a necessary condition, as other existing payment systems and arrangements, such as well functioning and comprehensive fast payment systems, have also been successfully utilized for the same objective (For example, Brazil).

Figure 1.32. Access to transaction accounts and usage of digital payments are low in many South Asian countries



Source: World Bank Global Findex database 2017.
Note: Usage of digital payment refers to "made or received digital payments in the past year."

Overall, given that CBDC is still in its nascent stages, even in countries where it has been fully introduced, it remains to be seen to what extent CBDC can promote financial inclusion, as well as other intended objectives, and the level of risk it would introduce in practice.

Box 1.5. Voices from South Asia

As in the last six editions of this report, we conduct an opinion survey among experts and researchers working in academia, policymaking, and consultancies in South Asia. This year, the survey aims to gain insights into the outlook of economic growth in South Asian countries, especially on the macroeconomic conditions and outlooks and gender norms in the region. We received 54 responses from six countries: 31 percent are from India, and around 20 percent each from Bangladesh, Nepal, and Pakistan; 84 percent are men and 16 percent are women; and 84 percent identify as academics, 80 percent as macroeconomists, 57 percent as policy advisors, and 20 percent as policymakers.

Experts' views suggest continuing recovery in the region, but views on the future have become less optimistic (Figure 1.33)**.** Forty-four percent of the respondents believe the level of economic activity is above 85 percent of the pre-pandemic level, a moderate increase from 36 percent in the fall of 2021 (World Bank 2021b). On tourism, 39 percent believe it is already coming back to pre-pandemic levels, compared to the 5 percent in fall 2021 who believed tourism would recover "very soon." At the same time, experts are less optimistic about the future than they were last fall: 51 percent believe GDP growth will increase in the next six months, a drop from 56 percent last fall. This is consistent with the downgrade of growth in the most recent regional forecast compared to January this year and to last fall (Chapter 2).

Experts perceive inflation as the biggest short-term risk to economic recovery and see a relatively small risk from further COVID-19 waves (Figure 1.34). Thirty-eight percent of respondents cite high inflation as the biggest risk to economic recovery within the next six months, compared to only 4 percent in fall 2021. Only 11 percent of respondents see COVID-19 waves as the biggest risk, compared to over 50 percent in the Fall 2021 survey. This is consistent with our findings of a decoupling between COVID waves and the economy (Box 1.1). A widening current account deficit is also perceived to be an increasing risk (13 percent of respondents compared to 4 percent last fall), especially in Nepal and Sri Lanka; current account deficits in the region are rising with the surge in commodity prices. Accordingly, an overwhelming majority of respondents consider supply disruptions and rising commodity prices to be the main drivers of inflation over the past three months, consistent with the discussion in this chapter.

Figure 1.33. Experts' views suggest continuing recovery in the region but views on the future are less optimistic now

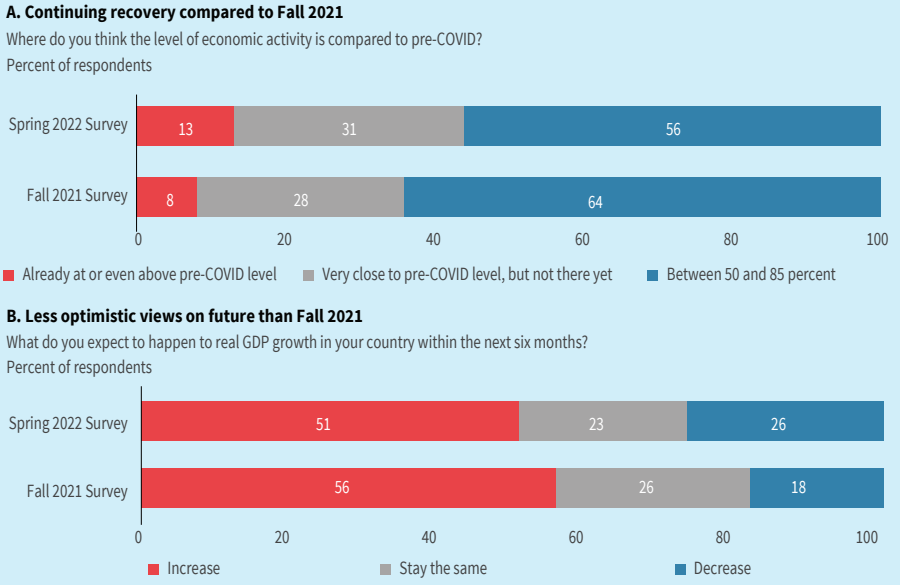
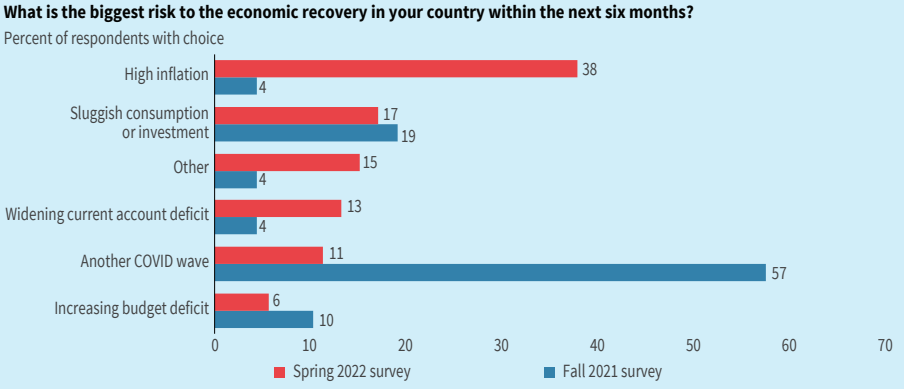


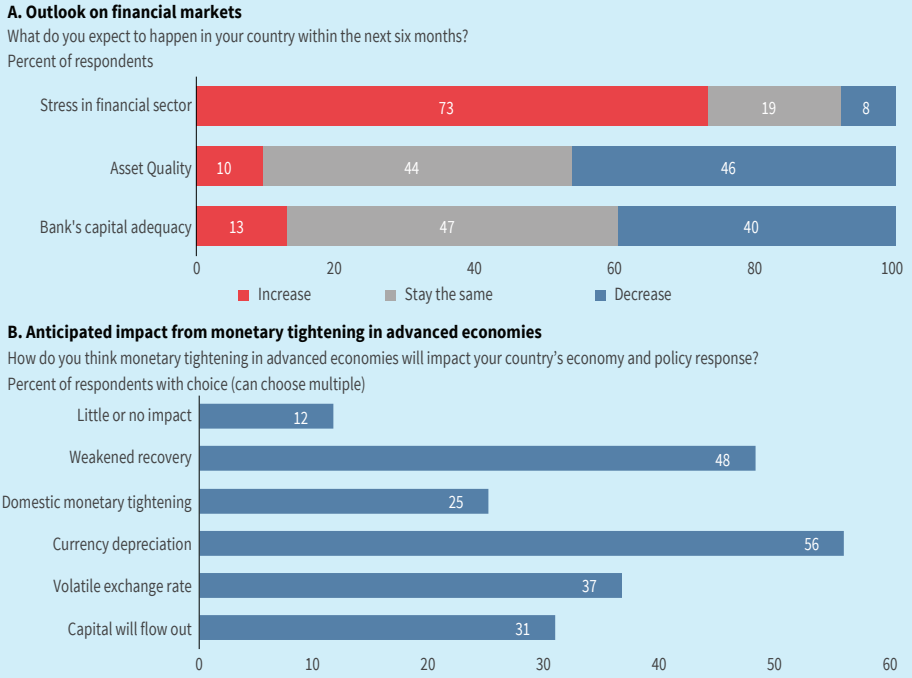
Figure 1.34. Experts perceive inflation as the biggest short-term risk and see a small risk from further COVID waves



Experts express concern about stress in the financial sector and spillovers from rate hikes in advanced economies. Over 70 percent of respondents expect stress in the financial sector to increase over the next six months, compared to 60 percent in the Fall 2021 survey. Relatedly, 46 percent believe that asset quality will deteriorate,

and only 10 percent think it will improve over the next six months (Figure 1.35.A). As Section 1.4 discusses, as COVID-era support measures are phased out, pre-existing vulnerabilities and deterioration in asset quality may resurface; uncertainties due to the war in Ukraine could further add to financial sector volatility. Monetary tightening by advanced economies can also be a source of uncertainty. Fifty-six percent of the respondents believe that rate hikes in advanced economies will lead to currency depreciation in their country, while half of the respondents think they will weaken economic recovery (Figure 1.35.B). Other concerns over rate hikes include capital outflows and volatile exchange rates. Section 2.2 analyzes the potential impacts of monetary policy tightening in advanced economies.

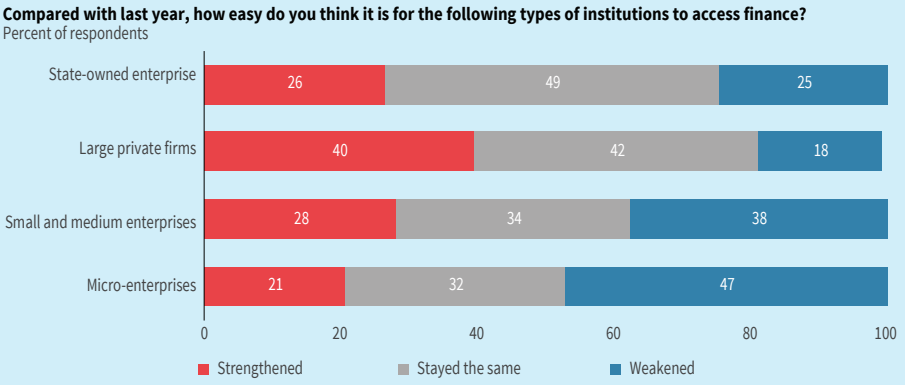
Figure 1.35. Experts express concern about stress in financial sectors and rate hikes in advanced economies



Survey results reveal unequal access to finance, and experts call for continued government support for businesses. Unprecedented support measures for businesses were implemented over the past two years, including subsidies, low-interest loans, and moratoriums. However, financial support might not have been allocated in a way that is consistent with a level playing field for firms. Around 40 percent of respondents

believe large private firms have better access to finance now compared to a year ago, while 47 percent believe that financing conditions have worsened for micro-enterprises over the past year (Figure 1.36), which is consistent with our discussion in Section 1.4. Given the hardships faced by micro-enterprises and heightened uncertainty due to the war in Ukraine, almost half of the respondents call for more support measures for businesses.

Figure 1.36. Experts believe small firms have faced worsening access to finance



Respondents also support measures to strengthen climate change mitigation and women's empowerment. One-quarter of respondents believe a carbon tax should have been implemented a long time ago, while 37 percent are in favor of a gradual phase-in now (Figure 1.37). Section 2.3 illustrates the benefits of implementing a carbon tax in the region. On women's empowerment, 63 percent of female respondents and 50 percent of male respondents strongly agree that reducing gender inequalities will lead to additional economic growth. On average, female respondents rate 10/10 for the statement "men and women should have equal opportunities (for example, in education, jobs, household decision-making)," compared to an average rating of 8/10 among male respondents. By contrast, on average respondents believe that only seven out of ten of their peers would support gender equality, suggesting that there is room for improvement in the perception of gender norms in the society (Chapter 3). Around 60 percent of respondents attribute the region's low female labor force participation to a lack of good job opportunities. The most effective policies for reducing gender inequality are seen as boosting female education (38 percent of respondents) and improving security for women (around one-third). Twenty-six percent of male respondents and 43 percent of females rank the latter as the top policy. A majority of

respondents believe market-intervention policies, such as affirmative action and subsidies for hiring women, would be the *least* effective policies (Figure 1.38).

Figure 1.37. Majority of experts support carbon tax

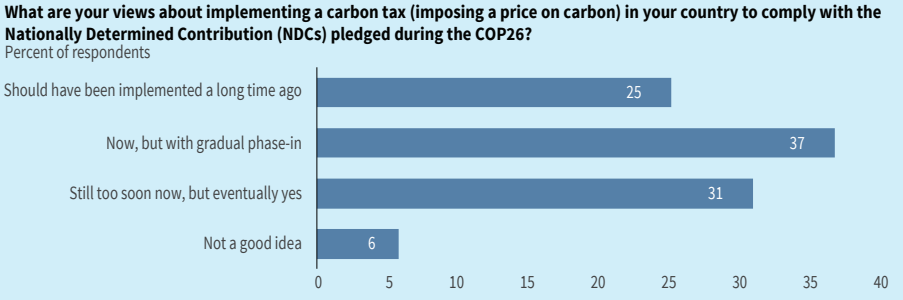
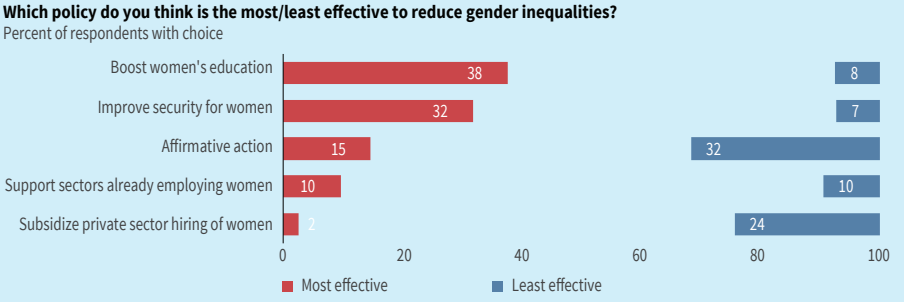


Figure 1.38. Experts support boosting education and improving security for women as effective policies to reduce gender inequalities



Appendix

Appendix A.1. Loan moratorium policies in select South Asian countries during the COVID-19 pandemic

	Bhutan	India	Nepal	Pakistan	Sri Lanka
Applicable moratoria regimes (announcement date)	4/11/2020 (first moratorium); 6/26/2020 (second moratorium); 6/30/2021 (third moratorium)	3/27/2020 (first moratorium); 5/22/2020 (second moratorium)	3/29/2020 (first moratorium); 4/24/2020 (second moratorium); 7/17/2020 (third moratorium)	3/26/2020 (first moratorium and restructuring); 7/7/2020 (availability of deferment of principal amount of loans facility extended until Sep 2020)	3/24/2020 (first moratorium); 7/16/2020 (second moratorium in respect of capital outstanding of leasing facilities granted to tourism related vehicles); 8/26/2020 (third moratorium to tourist industry); 11/9/2020 (fourth moratorium); 3/19/2021 (fifth moratorium for leasing facilities obtained by engaged in passenger transportation); 9/8/2021 (sixth moratorium)
Coverage	Apr-Jun 2020 (first moratorium, including full interest payment waiver for all loans); Jul 2020-Jun 2021 (second moratorium, including full interest waiver up to Sep 2020, followed by partial interest for all loans Oct 2020-Mar 2021); Jul 2021-Jun 2022 (third moratorium, including partial interest waiver for all loans)	Mar-May 2020 (first moratorium); Jun-Aug 2020 (second moratorium)	Mid-Apr to mid-Jul 2020 (first moratorium); mid-Jul 2020 to mid-Jan 2021 (second moratorium); mid-Jan to mid-Apr 2021 (third moratorium for medium impacted sectors); mid-Jan to mid-Jul 2021 (third moratorium for highly impacted sectors); mid-Jan to mid-Jul 2022 (third moratorium for tourism level hotel)	Mar 2020-Mar 2021 (restructuring); Mar 2020 - Jun 2021 (moratorium); Mar-Sep 2020 (deadline to apply for deferral of principal payments of loans for housing, SME, consumer, agriculture & MF was extended to 9/30/2020 from 6/30/2020).	Apr-Sep 2020 (first moratorium); Oct 2020 - Mar 2021 (2nd, 3rd, and 4th moratorium); Apr-Sep 2021 (fifth moratorium); Apr-Dec 2021 by banks and Apr 2021 - Mar 2022 by NBFIs; Apr 2021 - Jun 2022 for tourism sector by banks and Apr 2021 - Mar 2022 for tourism sector by NBFIs; Sep - Dec 2021 for lease facilities by banks and Sep 2021 - Mar 2022 by NBFIs (sixth moratorium)

	Bhutan	India	Nepal	Pakistan	Sri Lanka
Eligibility criteria of loans	All loans	All term loans	COVID-19 affected borrowers	Borrower makes a written request before expiry date of scheme. Loan is performing as of 12/31/2019.	COVID-19 affected borrowers, prioritizing the micro, small and medium enterprises, the tourism sector, and lease facilities in the passenger transportation sector
Amount of loans benefit from moratorium	As of Sep 2021, 140,000 loan account holders benefited from the (partial) interest waiver and loan deferment	41,996 Bil. Rs as of 8/31/2020, through banks and financial institutions (37.91 percent of total outstanding credit for scheduled commercial banks and 44.94 percent for non-bank financial companies)	Extension of grace period of loans: 52 Bil. Rs; extension of loan repayment time: 93.63 Bil. Rs; loan restructuring and rescheduling: 129.21 Bil. Rs, through banks and financial institutions as of 8/13/2021	910.78 Bil. Rs as of 4/16/2021 through banks, development financial institutions (DFIs), and microfinance banks (MFBs)	As of 8/11/2021, a total of 4,679 Bil. Rs: 3,560 Bil. Rs given to COVID-19 affected borrowers through banks; 523.8 Bil. Rs given to COVID-19 affected borrowers through NBFIs; 548 Bil. Rs given to the tourism sector through banks; 11 Bil. Rs given to the tourism sector through NBFIs; 3.2 Bil. Rs given to the passenger transportation sector through banks; 33.4 Bil. Rs given to the passenger transportation sector through NBFIs.

Source: Haver Analytics, Bhutan: Royal Government of Bhutan (2020) and Bhutan Foundation (2021), India: Shrestha (2020) and Reserve Bank of India (2020b; 2020c), Pakistan: State Bank of Pakistan website "COVID-19: Loan Extension and Restructuring Package," Sri Lanka: Central Bank of Sri Lanka (2021b), Nepal: Nepal Rastra Bank (2021).

References

Agency, Anadolu. 2022. "Pakistan to Import Wheat, Natural Gas from Russia." *Pakistan Today*, March 2, 2022. https://www.pakistantoday.com.pk/2022/03/02/pakistan-to-import-wheat-natural-gas-from-russia/.

Aggarwal, Mayank. 2022. "Ukraine-Russia War Jolts India's Import-Dependent Edible Oil Market." *AlJazeera*, March 15, 2022. https://www.aljazeera.com/economy/2022/3/15/ukraine-russia-war-jolts-indias-import-dependent-edible-oil-mkt.

Auer, Raphael, and Rainer Böhme. 2020. "The Technology of Retail Central Bank Digital Currency." *BIS Quarterly Review* March: 85–100.

Bhardwaj, Mayank. 2022. "India Set to Export Record 7 Million Tonnes Wheat This Year." *Reuters*, March 6, 2022. https://www.reuters.com/world/india/india-set-export-record-7-mln-tonnes-wheat-this-year-2022-03-05/.

Bhutan Foundation. 2021. "Loan Deferment Extended by One More Year." July 1, 2021. https://www.bhutanfound.org/loan-deferment-extended-by-one-more-year/.

Central Bank of Sri Lanka. 2021a. "Sri Lanka Purchasing Managers' Index - October 2021." Statistics Department Central Bank of Sri Lanka.

Central Bank of Sri Lanka. 2021b. "Moratoria to COVID-19 Affected Businesses and Individuals Has Exceeded Rs. 4,000 Billion: Saubagya Loans Amount to over Rs. 179 Billion." Press Release, Central Bank of Sri Lanka, November 8, 2021.

Central Bank of Sri Lanka. 2022a. "Sri Lanka Purchasing Managers' Index - January 2022." Statistics Department Central Bank of Sri Lanka.

Central Bank of Sri Lanka. 2022b. "Sri Lanka Purchasing Managers' Index - February 2022." Statistics Department Central Bank of Sri Lanka.

Dagan, Noa, Noam Barda, Eldad Kepten, Oren Miron, Shay Perchik, Mark A. Katz, Miguel A. Hernán, Marc Lipsitch, Ben Reis, and Ran D. Balicer. 2021. "BNT162b2 MRNA Covid-19 Vaccine in a Nationwide Mass Vaccination Setting." *New England Journal of Medicine* 384 (15): 1412–23.

Deb, Pragyan, Davide Furceri, Daniel Jimenez, Siddharth Kothari, Jonathan D. Ostry, and Nour Tawk. 2021. "The Effects of COVID-19 Vaccines on Economic Activity." IMF Working Paper 21/248, International Monetary Fund, Washington, DC.

Dempsey, Harry, and Chloe Cornish. 2022. "Russian Oil Exports to India Surge as Europe Shuns Cargoes." *Financial Times*, March 18, 2022. https://www.ft.com/content/5efc6338-3f01-4015-aedf-53a4a1944ca8.

Fernández-Villaverde, Jesús, and Charles I. Jones. 2020. "Macroeconomic Outcomes and COVID-19: A Progress Report." *Brookings Papers on Economic Activity* 2020 (3): 111–66.

Fitch Ratings. 2022. "Sri Lankan Banks Dashboard: February 2022." Fitch Ratings.

Hansen, Niels-Jakob H., and Rui C. Mano. 2021. "COVID-19 Vaccines: A Shot in Arm for the Economy." IMF Working Paper 21/281, International Monetary Fund, Washington, DC.

IMF (International Monetary Fund). 2022. "Nepal: Request for an Arrangement Under the Extended Credit Facility -Press Release; Staff Report; Debt Sustainability Analysis; Staff Supplement; Statement by the Executive Director for Nepal (2022)." IMF Staff Country Reports, International Monetary Fund, Washington, DC.

Jadhav, Rajendra. 2022. "India Cuts Tax on Crude Palm Oil Imports to Help Consumers, Refiners." *Reuters*, February 14, 2022. https://www.reuters.com/world/india/india-cuts-tax-crude-palm-oil-imports-help-consumers-refiners-2022-02-13/.

Jongwanich, Juthathip, Petchtharin Wongcharoen, and Donghyun Park. 2016. "Determinants of Consumer Price Inflation versus Producer Price Inflation in Asia." ADB Economic Working Paper Series No. 491, Asian Development Bank, Manila, Philippines.

Li, Yi, and Valerie Mercer-Blackman. 2022. "The Changing Face of Tourism and Work: How Maldives Is Successfully Adapting to the Pandemic." *World Bank* (blog). January 26, 2022. https://blogs.worldbank.org/endpovertyinsouthasia/changing-face-tourism-and-work-how-maldives-successfully-adapting-pandemic.

Mercer-Blackman, Valerie, Sebastian Franco Bedoya, Robert C. M. Beyer, and Yi Li. 2021. "What Do High-Frequency Indicators Tell Us about Economic Activity in South Asia?" *World Bank* (blog). April 29, 2021. https://blogs.worldbank.org/developmenttalk/what-do-high-frequency-indicators-tell-us-about-economic-activity-south-asia.

Nepal Rastra Bank. 2021. "Monetary Policy for 2021/22." Nepal Rastra Bank Central Office.

Ondaatjie, Anusha, and Lilian Karunungan. 2021. "Asia's Highest Default Risk Spotlights Sri Lanka Debt Worry." *Bloomberg*, July 5, 2021. https://www.bloomberg.com/news/articles/2021-07-05/asia-s-highest-default-risk-spotlights-sri-lanka-debt-concerns.

Our World in Data (database). "Coronavirus Pandemic (COVID-10)." Accessed March 21, 2022. https:// ourworldindata.org/coronavirus.

Parkin, Benjamin, and Farhan Bokhari. 2022. "Pakistan Presses Ahead with Russian-Built Gas Pipeline." *Financial Times*, March 16, 2022. https://www.ft.com/content/9294890a-593c-442b-bc53-13099d14d36f.

Polack, Fernando P., Stephen J. Thomas, Nicholas Kitchin, Judith Absalon, Alejandra Gurtman, Stephen Lockhart, John L. Perez, et al. 2020. "Safety and Efficacy of the BNT162b2 MRNA Covid-19 Vaccine." *New England Journal of Medicine* 383 (27): 2603–15.

Reserve Bank of India. 2019. "Financial Stability Report, December 2019." Reserve Bank of India.

Reserve Bank of India. 2020a. "Financial Stability Report, July 2020." Reserve Bank of India.

Reserve Bank of India. 2020b. "Statement on Development and Regulatory Policies, March 27." Reserve Bank of India.

Reserve Bank of India. 2020c. "Statement on Development and Regulatory Policies, May 22." Reserve Bank of India.

Reserve Bank of India. 2021. "Financial Stability Report, December 2021." Reserve Bank of India.

Royal Government of Bhutan. 2020. "Comprehensive National Response to the Challenges of the COVID-19 Pandemic Phase II." Press Release, Royal Government of Bhutan, July 26, 2020.

Ruch, Franz Ulrich, and Temel Taskin. 2022. "Demand and Supply Shocks: Evidence From Corporate Earning Calls." Policy Research Working Paper 9922, World Bank, Washington, DC.

Sampi, James, and Charl Jooste. 2020. "Nowcasting Economic Activity in Times of COVID-19: An Approximation from the Google Community Mobility Report." Policy Research Working Paper 9247, World Bank, Washington, DC.

Shrestha, Prithvi Man. 2020. "Central Bank Announces Relief Measures for Businesses Affected by Covid-19." *The Kathmandu Post*, March 29, 2020. https://kathmandupost.com/money/2020/03/29/central-bank-announces-relief-measures-for-businesses-affected-by-covid-19.

Srivastava, Shruti, and Vrishti Beniwal. 2022. "Russia Offers SWIFT Alternative to India for Ruble Payments." *Bloomberg*, March 30, 2022. https://www.bloomberg.com/news/articles/2022-03-30/russia-proposes-swift-alternative-to-india-for-ruble-payments.

State Bank of Pakistan. 2021. "Mid-Year Performance Review of the Banking Sector (January-June 2021)." Financial Stability Department State Bank of Pakistan.

State Bank of Pakistan. "COVID-19: Loan Extension and Restructuring Package." Accessed March 23, 2022. https://www.sbp.org.pk/COVID2/Loans.html.

The Economist. 2017. "India's Twin Balance-Sheet Problem," March 2, 2017. https://www.economist.com/finance-and-economics/2017/03/02/indias-twin-balance-sheet-problem.

Ullah, Zachary. 2012. "Natural Gas in Bangladesh and the U.S." University of Texas, Austin.

Verma, Pallavi Arun. 2022. "FPI Outflow Shoots Past Rs 1 Lakh Crore Mark in 2022." *The Economic Times*, March 27, 2022. https://economictimes.indiatimes.com/markets/stocks/news/fpi-outflow-shoots-past-rs-1-lakh-crore-mark-in-2022/articleshow/90470833.cms.

Viswanathan, Balasubramanian, Anjali Viswamohanan, Prateek Aggarwal, Danwant Narayanaswamy, Anna Geddes, Theresia Betty Sumarno, Max Schmidt, et al. 2021. "Mapping India's Energy Subsidies 2021." The International Institute for Sustainable Development and the Council on Energy, Environment and Water, New Delhi, India.

Voysey, Merryn, Sue Ann Costa Clemens, Shabir A. Madhi, Lily Y. Weckx, Pedro M. Folegatti, Parvinder K. Aley, Brian Angus, et al. 2021. "Safety and Efficacy of the ChAdOx1 NCoV-19 Vaccine (AZD1222) Against SARS-CoV-2: An Interim Analysis of Four Randomised Controlled Trials in Brazil, South Africa, and the UK." *The Lancet* 397 (10269): 99–111.

World Bank. 2020. *South Asia Economic Focus: Beaten or Broken? Informality and COVID-19*. Fall. Washington, DC: World Bank.

World Bank. 2021a. "Central Bank Digital Currency: A Payments Perspective." World Bank, Washington, DC.

World Bank. 2021b. *South Asia Economic Focus: Shifting Gears: Digitization and Services-Led Development*. Washington, DC: World Bank.

World Bank. 2022. *World Development Report 2022: Finance for an Equitable Recovery.* Washington, DC: World Bank.

World Bank (database). n.d. "COVID-19 Finance Sector Related Policy Responses." Accessed March 23, 2022. https://datacatalog.worldbank.org/search/dataset/0037999.

CHAPTER II

Charting the Course to A New Normal

Introduction

Though GDP growth has mostly decoupled from the COVID pandemic, as discussed in Chapter 1, the crisis itself has left multiple economic scars, from remaining supply disruptions and inflationary pressures to large fiscal deficits and financing gaps on the balance of payments. The headwinds from the war in Ukraine and a precarious environment for investors amid global uncertainty have deepened these scars. Under these circumstances, the challenges ahead are extraordinarily complicated for South Asian policymakers. Though South Asia has limited trade and financial links with Russia and Ukraine, higher commodity prices in global markets are expected to drag down this year's GDP growth. The high oil prices and uncertainty in international oil markets are an incentive to accelerate the transition to a low-carbon development path. Such a path will boost energy security and make development more sustainable. The chapter illustrates this by simulating the region-wide macroeconomic impacts of carbon pricing.

The chapter is organized as follows. Section 2.1 discusses the outlook for the region's growth, including forecasts on external balances and poverty. Section 2.2 considers some scenarios to illustrate the risks to the forecasts from higher prices and potential monetary policy responses and discusses the fiscal and financial vulnerabilities from external shocks as the financial sectors return to a post-COVID new normal. Section 2.3 illustrates why putting green taxes at the center of the region's development strategy is highly consistent with inclusive and sustainable growth.

2.1 Recovery continues despite headwinds from Europe

Growth going forward will resume roughly to pre-COVID levels. South Asia's GDP is projected to grow by 6.6 percent in 2022 and 6.3 percent in 2023 (Table 2.1), not as high as the 7.7 percent growth rate in 2021 which represented the strong bounce-back from COVID.

Offsetting the continued recovery from the health crisis is the impact of the war in Ukraine, which has clouded the outlook for global economic recovery. High commodity prices will weigh on import demand, while lower growth abroad will lead to softening demand for South Asian exports, especially from Europe (see below). The war and consequent sanctions are expected to subtract about 1.3 percentage points of GDP growth in 2022 and 0.6 percentage points in 2023, largely through indirect trade channels, though a better-than-expected recovery of services exports will offset this by about 0.3 percentage points. As a result, the 2022 growth forecast for the region has been revised down by 1.0 percentage point compared to January 2022. The forecasts assume that there will not be any new COVID waves affecting the region.

Table 2.1. The recovery in South Asia downgraded but remains strong

	Country fiscal year	Real GDP growth at constant market prices (percent)				Revision to forecast from January 2022 (percentage point)	
Calendar year basis		2020	2021(e)	2022(f)	2023(f)	2022(f)	2023(f)
South Asia region (excluding Afghanistan)		-4.5	7.7	6.6	6.3*	-1.0	0.2*
South Asia region (excluding Afghanistan and Sri Lanka)		-4.6	7.8	6.7	6.3	-1.1	0.2
Afghanistan	January to December	-1.9	--	--	--	--	--
Maldives	January to December	-33.5	31.0	7.6	10.2	-3.4	-1.8
Sri Lanka	January to December	-3.6	3.5	2.4	--	0.3	--
Fiscal year basis		**FY20/21**	**FY21/22(e)**	**FY22/23(f)**	**FY23/24(f)**	**FY21/22(f)**	**FY22/23(f)**
India	April to March	-6.6	8.3	8.0	7.1	0.0	-0.7
		FY19/20	**FY20/21(e)**	**FY21/22(f)**	**FY22/23(f)**	**FY21/22(f)**	**FY22/23(f)**
Bangladesh	July to June	3.4	6.9	6.4	6.7	0.0	-0.2
Bhutan	July to June	-2.4	-3.7	4.4	4.7	-0.7	-0.1
Nepal	mid-July to mid-July	-2.1	1.8	3.7	4.1	-0.2	-0.6
Pakistan	July to June	-1.0	5.6	4.3	4.0	0.9	0.0

Source: World Bank Macro Poverty Outlook, staff calculations.
Note: (e)=estimate, (f)=forecast. * = excludes Sri Lanka, which has no forecast for 2023. GDP measured in 2015 prices and market exchange rates. 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$, for which quarterly GDP data are not available. Pakistan is reported at factor cost. Afghanistan is not included in the regional aggregates as Afghanistan is not producing statistics so there are no estimates or forecasts beyond 2020.

Only two countries in the region are currently reporting GDP figures on a calendar year basis: Maldives and Sri Lanka.

- The halting of data collection in **Afghanistan** precludes the possibility of a forecast. Nonetheless, the cutoff of grants and the absence of a working payments system are hampering economic activity and adding to the humanitarian crisis. The country is in survival mode and food insecurity is very high, with no clear end in sight.
- In **Maldives**, real GDP is projected to stay strong as the remarkable recovery in 2021 extends into 2022. Real GDP will grow by 8.5 percent in 2022 and 9.1 percent in 2023. Prospects were for even higher growth in 2022, but the abrupt decline of visitor arrivals from Russia and Ukraine will dampen the momentum. The expected resumption of tourism from India as flights resume will partially help fill the void left by the decline in Russian and Ukrainian tourists in February 2022. By 2023 tourism from China may also resume to pre-COVID levels.
- In **Sri Lanka,** a series of shocks amid high debt will continue to hamper growth prospects, as import restrictions have stepped up to a new level. The immediate outlook is highly uncertain given the unsustainable fiscal and external financing positions of the country. Assuming the economy can muddle through long enough to close the financing gap, growth for 2022 would be on the order of 2.4 percent, though this could quickly change as the effects of power cuts, fuel scarcity, and widespread shortages of inputs weigh in. The forecast implies no per capita growth over a 4-year period ending in 2022.

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 much more certainty about the forecast for the fiscal year ending in mid-2022.

- In **Bangladesh**, GDP is expected to increase by 6.4 percent in FY2021/22 and 6.7 percent in FY2022/23. While economic disruptions related to the COVID-19 pandemic are waning, garment exports are expected to remain strong if Bangladesh is able to maintain its market share in Europe and the United States. However, a slowdown in growth in major export markets, particularly the European Union, could, in turn, hamper export growth. GDP growth is expected to remain resilient in FY2022/23, supported by strong domestic demand.
- In **Bhutan**, growth in FY2021/22 is projected to be 4.4 percent, rising to 4.7 percent in FY2022/23. The expected easing of strict internal mobility restrictions in the second quarter of 2022 on the back of a highly successful COVID vaccination campaign should enable the authorities to finally allow the return of international tourists and migrant workers from India (easing some of the labor shortages in construction and other ser-vices during the pandemic). In the medium term, growth will be driven by the new hydro plants coming on stream.

- In **Nepal**, GDP is projected to grow by 3.7 percent in the current fiscal year and by 4.1 percent by FY22/2023, led by the recovery of the services sector (amid now-high COVID vaccination rates), including digital services. The outlook for remittances is also very strong. Industry sector growth is projected to be supported by increased production of hydropower including from the recently completed Upper Tamakoshi plant.
- In **Pakistan**, GDP growth is expected to slow to 4.3 percent in FY2021/22 (ending June 2022) and to 4.0 percent in FY2022/23. This comes amid monetary tightening measures that began in September 2021, high base effects from the previous year, and continued high inflation eroding real private consumption growth. Beyond that, the expectation is for growth to gradually recover as structural reforms to support macroeconomic stability, increase domestic revenue collections, improve the financial viability of the energy sector, and enhance export competitiveness begin to pay off.

Finally, India's current (FY2022/23) fiscal year runs from April 1, 2022, to March 31, 2023. That means that most of the recovery from the major COVID waves is already reflected in the last fiscal year growth numbers.

- **India** is expected to grow by 8 percent, slightly below its 2021 rate as some of the investment programs spill over into the 2022/23 fiscal year. The recovery in private consumption will be constrained by the incomplete recovery in the labor market, and inflationary pressures weighing on households' purchasing power. The negative impact of the war in Ukraine on FY2022/23 growth is expected to be moderate, so growth will begin to taper off in the second half of 2022.[1] Credit offtake in the infrastructure sector is expected to continue growing in 2022 (power and roads). Business expectations and investment, which had improved, might sour amid elevated input prices and a faster-than-anticipated increase in borrowing costs. The travel services balance may improve as India allows international flights to resume, while exports of computer and professional services are expected to remain strong.

Consumption will again make the largest contribution to domestic demand in 2022 and 2023. As Figure 2.1 shows, the contribution of various sources of demand to growth in 2023 will begin to take on a more "normal," pre-COVID pattern as rebuilding begins.[2] Private consumption growth in 2022 will be about the same as during the pre-pandemic period at 6.5 percent. Continued pent-up demand following the Omicron wave in the early months will be offset by lower purchasing power due to rising prices, as the war in Ukraine will reduce the supply of food and fuel and lead to other supply bottlenecks. Government consumption is forecast

1 Growth in the April-June period will be double-digit, due to the base effects from the same period in 2021, during which the COVID Delta variant impacted India considerably.

2 The forecast for 2023 excludes Sri Lanka. In 2021, Sri Lanka's share of South Asia's GDP was 2.5 percent.

to grow 10 percent, reflecting continued momentum in India, Pakistan and Bangladesh. Investment growth will still be higher than the 2010-2019 average in large part due to the base effects of the recovery. Indeed, public investment will help drive the recovery in the latter half of 2022 amid weakened consumption growth due to inflation, higher fuel prices and much higher import costs. Net exports will be a drag on growth as imports grow faster than exports.

Table 2.2. All demand components are projected to continue rising, with price effects pushing up imports

	South Asia real GDP and demand components growth (percent)			Revision to forecast from January 2022 (percentage point)	
Calendar year basis	2021(e)	2022(f)	2023(f) 1/	2022(f)	2023(f) 1/
GDP	7.7	6.6	6.3	-1.0	0.2
(GDP excluding Sri Lanka) 1/	7.8	6.7	6.3	-1.1	0.2
Private consumption	8.3	6.5	6.1	-1.0	0.5
Government consumption	7.9	9.6	4.5	0.1	-0.7
Investment	15.4	7.2	7.3	-2.8	0.2
Exports	18.9	7.4	9.0	-0.2	0.4
Imports	28.9	10.1	8.7	1.7	-0.5
Net exports	-64.5	-16.9	-7.7	-6.1	3.3

Source: World Bank Macro Poverty Outlook, staff calculations.
Note: (e)=estimate, (f)=forecast. 1/ No 2023 forecasts have been produced for Sri Lanka, so 2023 growth numbers exclude Sri Lanka. South Asia GDP and its components are calculated using country-level fiscal year numbers converted to calendar year. Afghanistan is not included in the calculations.

Figure 2.1. The composition of broad demand categories has normalized

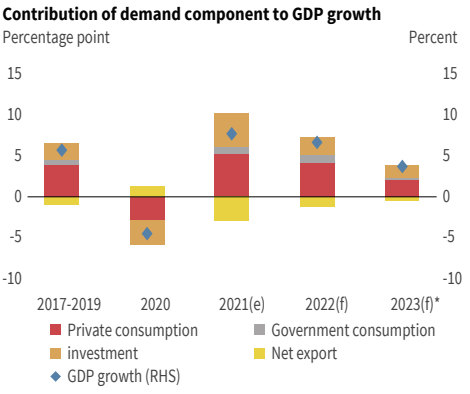
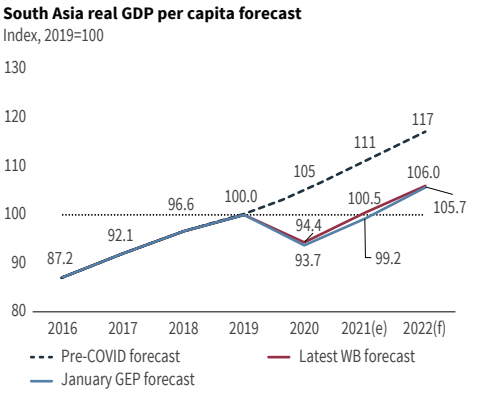


Figure 2.2. South Asia's per capita income in 2022 will be 6 percent higher than pre-pandemic levels

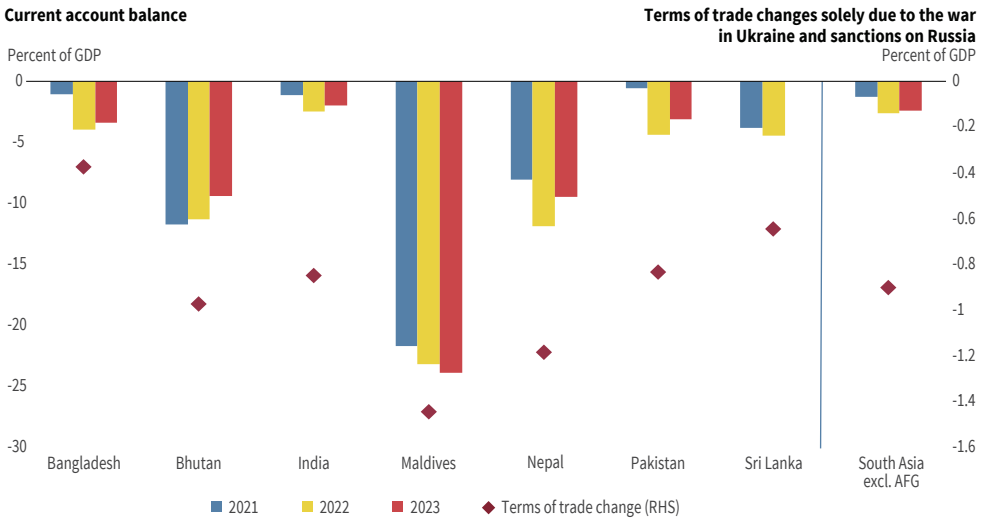


Source: World Bank Macro Poverty Outlook (MPO), staff calculations.
Note: (e)=estimate, (f)=forecast. South Asia aggregates shown are in the calendar year. Afghanistan is not included in the calculations. The value of stacked bars in Figure 2.1 does not exactly sum to GDP growth due to inventory changes and statistical discrepancies. No 2023 forecasts have been produced for Sri Lanka, so (the contribution of demand components to) 2023 GDP growth excludes Sri Lanka.

Inflation is expected to rise in 2022. These projections assume normal monetary policy response, but other options will be discussed below. Inflation is expected to rise in all countries in 2022 and reach double digits in Pakistan and Sri Lanka before subsiding in 2023. For the region as a whole, headline inflation is expected to be 7.0 percent in 2022 and 5.8 percent in 2023 (up from 6.7 percent in 2021).

The upheaval in commodity prices will have an immediate and direct impact on current account balances in 2022. Demand for imports will return, but the commodity price surge will play a dominant role in the higher import bill expected through most of 2022, leading to widening deficits for the region in 2022 and a small improvement in 2023 (Figure 2.3). Even before the war in Ukraine, most countries were already expected to see their current account balances deteriorate in 2022 amid higher import prices and pent-up demand for imports carrying over from 2021 (exports of goods had recovered strongly in 2021, see Box 1.2). The terms-of-trade impact solely due to expected oil price increases triggered by the war and related sanctions is expected to have an immediate impact of 0.9 percent for the region. But it ranges between 0.38 and 1.4 percent of GDP, as global oil prices will likely remain high in 2022 and into 2023. The war could reduce income growth in South Asia this year by 2.2 percentage points: 1.3 percentage points because of slower GDP growth and 0.9 percentage points because of terms-or-trade losses. By end-2022, real export and import growth are expected to slow, as demand at home and abroad softens due to higher prices.

Figure 2.3. Current account balances will worsen in 2022 amid terms of trade losses



Source: World Bank MPOs, staff calculations.
Note: Terms of trade changes capture changes solely due to the effects of the war in Ukraine on fuel prices, comparing 2022 forecasts with and without the war. The current account balance for the region is converted to the calendar year. Afghanistan is excluded from the calculations. 2023 current account balance excludes Sri Lanka.

Current account deficits will move differently across countries (Figure 2.3). The war in Ukraine will impact demand for exports; South Asia exports about 25 percent of its products (including textiles and garments) to Europe, where demand growth is expected to slow, though there could be some trade diversion towards East Asia. Exports of services are expected to recover in most countries, including the recovery in tourism which will be crucial for Maldives, in particular. There are some differences across countries: in India and Pakistan, macroeconomic adjustment measures and the weaker currency in tandem with high commodity prices are expected to help tame imports in the second half of 2022 amid very fast transmission of elevated input prices to domestic consumer prices. There is much uncertainty about the outlook for Sri Lanka, as even the tourism outlook has deteriorated. If the country can muddle through by 2022 and assuming the external financing gap will be closed, the current account balance deficit in 2022 is expected to increase compared to 2021: the abrupt switch to a floating exchange rate regime in March could help increase competitiveness. Bangladesh should continue to see buoyant growth of garment exports by 2023. Moreover, higher remittances will offset higher import bills in Bangladesh and Nepal as higher oil prices underpin demand for migrant workers in Gulf Cooperation Council (GCC) countries.

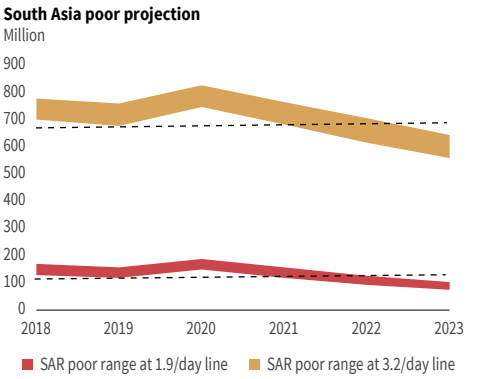
Fiscal policy will switch towards public investment and away from current spending over the forecast period. As relief efforts are unwinding, governments turn their focus to long-term growth bottlenecks. Alleviation of these bottlenecks requires investments in infrastructure and capacity expansions in the health and education sectors. This shift toward public investment is most prominent in India's recent budget, coupled with emphasis on gradual fiscal consolidation. While some cash transfers set up during the pandemic can wind down, these programs leave behind a positive legacy of a broader and more efficient social safety net that can be used when needed. Apart from specific support measures, there is no scope for broad-based fiscal stimulus. Several countries, especially Sri Lanka and Afghanistan, have no borrowing capacity, while others, for example Maldives and Pakistan, need to carefully watch their fiscal balance amid rising external debt vulnerabilities and domestic debt vulnerabilities for the case of Pakistan. But even countries with available fiscal space should be careful with using such space. Supply disruptions caused by the pandemic and high energy prices have pushed prices up. General demand stimulus would only increase prices further.

Poverty rates for the region are expected to recover in line with growth recovery and a resumption of contact-intensive services. Using the poverty line measure of $3.20 a day, the number of poor is forecast to range somewhere between 615 million and 704 million in 2022[3], which means there will be fewer poor compared to before the pandemic

3 The latest official data for estimating poverty in India date to 2011/12, so the range represents upper and lower bounds. Afghanistan is not included in the measure; thus, the number of poor is adjusted with the rest of the region's poverty rate and Afghanistan's population projection.

(Figure 2.4). Poverty in the region will continue to decline in 2023. The decline in poverty is also evident if measured using the $1.90 a day international poverty line for low-income countries. The most drastic exception is Afghanistan: though recent indicators of monetary poverty are not available, a recent survey in Kabul showed that 70 percent of households report insufficient incomes to meet basic food and nonfood needs, compared to about 35 percent reported in May 2021. Extreme poverty has led to the widespread adoption of coping mechanisms such as reducing food consumption, borrowing at high interest rates and the sale or consumption of assets which could perpetuate poverty cycles in the long term (World Bank Group 2022). The poverty rate in Sri Lanka will increase: using the $3.20 international poverty line metric, poverty in Sri Lanka will rise to 11 percent in 2022 compared to 10 percent in 2019 amid import compression and investor uncertainty due to high debt levels.

Figure 2.4. South Asia's projected poverty level in 2022 falls below the 2019 level

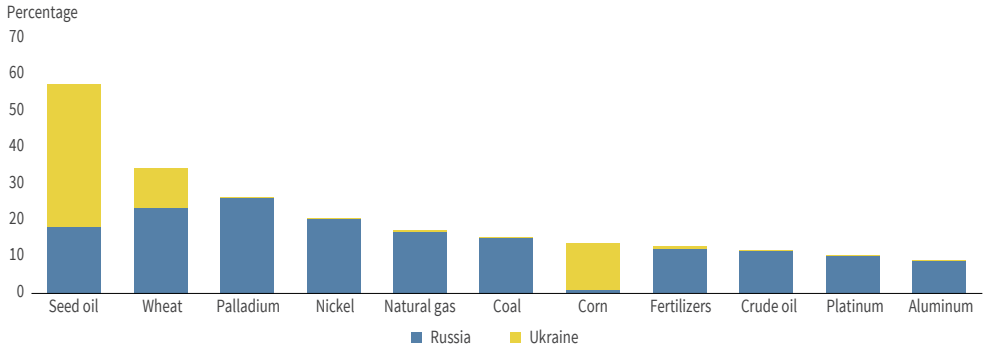


Source: World Bank MPO, Poverty Global Practice.
Note: Dotted line refers to lower bound of number of poor in 2019.

There is also a risk that poverty rates will not recover due to food insecurity if agricultural production yields are hampered by global fertilized prices. Russia and Ukraine are major producers and exporters of wheat and meslin (24 percent and 10 percent of globally traded amounts respectively, see Figure 2.5). Together, they export over 57 percent of seed oil. Wheat is not a major staple in South Asia (though it is increasingly so in some higher-income urban areas), but the substitution effect could exert further upward pressure on other staple grains such as rice.[4] The greatest concern over the forecast period, not just for South Asia but globally, will be the impact on the price of fertilizer (since Russia accounts for a sixth of global fertilizer exports). In response to high prices, farmers may choose to save on fertilizer inputs, which could affect the yield of all crops in the next planting season, further increasing food insecurity. This could be further exacerbated by the higher probability of weather-related crop damage due to climate change. Therefore, food inflation could stay high well into 2023, raising urban poverty. If governments react by restricting food exports as they did in 2008 and the early months of the pandemic, such hoarding will raise international prices further (Mitchell et al. 2022).

4 Ukrainian planting for the autumn harvest is reported to have been disrupted and its government has forbidden many food exports (including wheat). India may benefit in 2022 from higher prices for its wheat exports.

Figure 2.5. Russia and Ukraine's commodity exports in percent of global exports



Source: Comtrade, BACI.

2.2 Risks to the forecast center around price impacts

Risks to the forecast are considerable, as high commodity prices could persist. The war in Ukraine and related sanctions on Russia will continue to shake commodity prices and global financial markets for most of 2022. The baseline assumption is that Brent crude oil prices will average $95.10/bl in 2022 (compared to $70.44 in 2021), and then revert to $85/bl in 2023 and $80/bl in 2024. Agricultural commodity prices will rise by 11 percent but revert close to 2021 levels in 2023; and metals & minerals prices will rise by 17 percent and revert only slightly thereafter. But the outcome and effects of the war are extremely uncertain, so that commodity prices could be significantly higher. The forecast does not account for the impact of increased financial market volatility, which could further impinge on investment behavior, as will be discussed in Section 2.2.3.

Moreover, a sudden and large tightening of advanced economy monetary policy could complicate the task of South Asia policymakers to gradually unwind accommodative monetary policy implemented during COVID. Inflationary pressures in Advanced Economies (AE) could get out of control amid pent-up demand for services, cost-push inflation due to supply-chain bottlenecks, and higher fuel prices. With the US labor market close to full employment and still very low interest rates, the US itself may soon be struggling to quell unanchored inflationary expectations at home. The job of central banks in emerging markets becomes more complicated because inflationary pressures are coming from so many directions. Though real interest rates are at historically low levels--so there is scope for raising nominal interest rates--tightening prematurely could stifle the post-COVID recovery. Emerging markets, including those in South Asia, may be forced to quickly react to AE tightening.

An exercise of three illustrative scenarios is performed using the World Bank's Macro-Fiscal Model (MFMod). Table 2.3 describes the scenarios, interpreted as deviations from the baseline

Table 2.3. Assumptions of risk and alternative scenarios

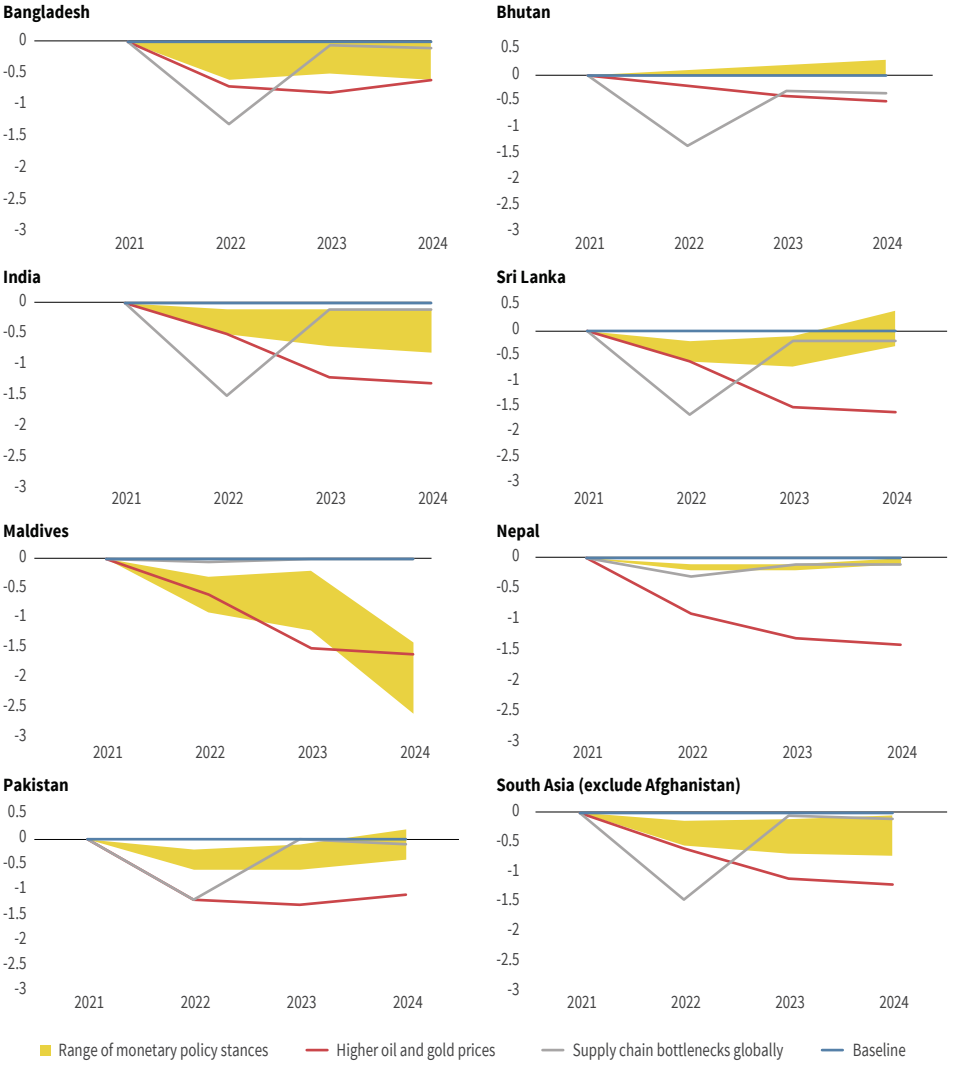
	Scenario	Description	Assumption behind scenario relative to baseline forecasts
1	Prolonged energy crisis: supply shock	Tensions between Russia and Ukraine and the ensuing sanctions raise oil and natural gas prices further, and--through substitution--coal and metals prices. South Asia mostly affected through higher import prices and fuel inflation.	Oil prices remain at $120/barrel through end-2022 and remain 24 percent above baseline through 2024. Natural gas increases by the same percent, and coal by 60% of that (due to substitution effects). Gold prices also rise in line with oil. Authorities raise policy rates further in response to fuel inflation dampening public and private investment.
2	Supply-chain disruptions continue into 2022	Uneven COVID recovery rates around the globe and uncertainty about markets keep semiconductor and chip production limited through 2022, while geopolitical tensions further delay global shipping. South Asia manufacturing imports and exports suffer as a result.	Trade in intermediate and final goods, and investment in manufacturing sector 20 percent lower than baseline in 2022 and 4 percent lower compared to baseline in 2023. Supply chain bottlenecks lead to goods' export and import shortages (volumes down by 16 percent) and prices up by 4 percent.
3a	The dilemma of premature monetary policy tightening: advanced economy (AE) inflation continues to rise leading to sharper than expected AE monetary policy tightening. In response, US and UK real interest rates rise by 1 percent, EMU and Japan real rates rise by 0.5 percent in 2022 and 2023.	To reduce the inflation pass-through coming from imports, all South Asian countries tighten policy rates, so real interest rate spread differential between domestic and external rate rises by 200 basis points.	The cost of capital rises and credit tightens. Ensuing currency appreciation against the US dollar reduces debt servicing costs for dollar-denominated external debt and reduces export competitiveness.
3b		Monetary authorities in the region choose not to tighten more than at baseline to fend off possible short-term capital inflows. Inflation rises above baseline.	Higher import prices raise inflation 2-3 percentage points above baseline and thus dampened credit and consumption in 2023.

forecast summarized in Table 2.1. The results discuss the impact on the region, though the magnitude and direction of the impact depend on each country's openness and exchange rate regime, among other things.

2.2.1 Higher oil prices

Oil price spikes could be much higher than envisioned in the baseline. A first scenario assumes that oil prices are 24 percent higher than baseline, at $120/barrel in 2022—a 70 percent increase over 2021—and the level remains above the baseline until 2024. This will impact South Asia's growth through the export demand channels and lower import demand in response to higher commodity prices. Inflationary effects via price

Figure 2.6. External developments could slow growth and reduce output compared with the baseline (percent change in GDP vs. baseline)



Source: Authors' calculations based on MFMod simulation output.

pass-through also affect consumption through an additional erosion of the purchasing power of consumers. The red line in Figure 2.6 shows the percent change in GDP compared to the baseline, which reflects the direct, first-round impact of the shock on growth and the second-round impact coming from the lower growth of trading partners due to the 24-percent oil price increase. Countries with a high fuel import share of GDP such as Maldives, Nepal and Sri Lanka will see a large first-order impact even assuming no effect

on trading partner growth.[5] For the region, GDP would be 1.1 percent lower than baseline by 2023.

2.2.2 Additional supply-chain bottlenecks

A second scenario assumes that supply chains will continue to suffer heavy disruptions through 2022, abetted by the war in Ukraine, raising cost-push inflation in the last six months of 2022. The outlook for global trade and value chains was already clouded, due to the start-stop impact of successive COVID waves in different parts of the world, such as a late Omicron surge in major Chinese cities and Hong Kong early in 2022 (Section 1.3). This could worsen for various reasons. First, Russia is a large exporter of industrial metals like palladium, used in automobile production, and nickel, used in the steel sector. Sanctions will further interrupt global value chains in manufacturing, even though South Asia imports most machines and electronics from East Asia and the Middle East. Second, the rerouting of global shipping amid trade diversion and closures of the Black Sea ports adds to logistical challenges and could lead to higher global shipping costs.

The impact on GDP is large for most countries but short-lived. Growth would be lower, mainly through the investment channel. Most countries are not large importers of intermediate products, as the manufacturing sector in the region is less than 15 percent of GDP, so the effect through imports would be small and reflected in lower imports of intermediate goods and durable goods in 2022. Export growth would be affected the most, especially in Sri Lanka, Pakistan, India, and Bangladesh, which have the largest share of exports of manufacturing goods. Almost 60 percent of the region's export value in 2020 in those countries comprised manufacturing goods. Services exporters such as Maldives, and to a lesser extent Nepal and Bhutan, would see a very small impact on growth. For the region, real GDP would be 1.4 percent lower than baseline in 2022 but will mostly recover in 2023 as global supply bottlenecks fade (Ha et al. 2022).

2.2.3 Response to tighter monetary policy in advanced economies

If advanced economies' (AE) inflation continues to rise, leading to sharper than expected AE monetary policy tightening, central banks in South Asia will have two choices: either follow suit to stem inflationary pressure from import prices, or maintain the same, more gradual stance as in the baseline. For example, the Reserve Bank of India so far has undertaken steps toward gradual policy normalization by pausing the government securities acquisition

5 Bhutan receives fuel under a fixed contract price with India so growth would only be affected by the indirect effect through trading partner-growth.

program. A sudden and unexpected increase in policy rates in AE could create the dilemma of whether more tightening is prudent to avoid unhinging inflationary expectations.[6]

- **If the monetary authorities in all the countries chose to tighten further in response to AEs, the region's GDP would be 0.5 percent lower than baseline in 2022 and 0.7 percent lower than baseline in 2023.** Figure 2.6 shows the yellow range of GDP difference relative to baseline, where the lower part of the range assumes the region increases interest rates 200 basis points above AE real interest rates (Table 2.3 scenario 3a). In this scenario, tighter credit amid higher borrowing costs would lead to lower consumption compared to the baseline (by about 0.3 percent). Investment would also fall, partly because of the higher cost of funds (by about 0.5 percent). The biggest negative effect compared to baseline would be on exports, and this would persist until 2024. The appreciation of the real exchange rate that ensues from tightening would make South Asia exports less competitive.
- **To preserve the growth momentum, the alternative for South Asia as a region would be to not react to AE tightening (Table 2.3, scenario 3b).** This will lead to higher inflation compared to scenario 3a. Even then, there would be a small negative effect on growth relative to the baseline in 2022, mainly through the pass-through of higher import prices reducing the purchasing power of domestic demand. But assuming import prices raise inflation enough to cause a real depreciation of the currency relative to baseline, more competitive exports offset some of the growth declines that may come from higher import prices.[7] The risk of central banks following such a strategy is that inflationary expectations could get out of hand amid imported inflation, though that depends on individual circumstances. However, since about half of South Asia's consumer basket is comprised of food and fuel, commodity prices have a bigger, more long-lasting effect on the purchasing power than the pass-through from non-fuel imports.

There are important differences in the size of the impact across countries. The effect on Bhutan and Nepal would be small because their currency is pegged to the Indian rupee, much of their trade is with India, and because of low levels of financial intermediation. They cannot effectively use domestic monetary policy, given their exchange rate anchor, so the monetary policy stance should be the same as India's. At the other end of the spectrum, Maldives' currency is pegged to the US dollar and is an open economy, so tightening would

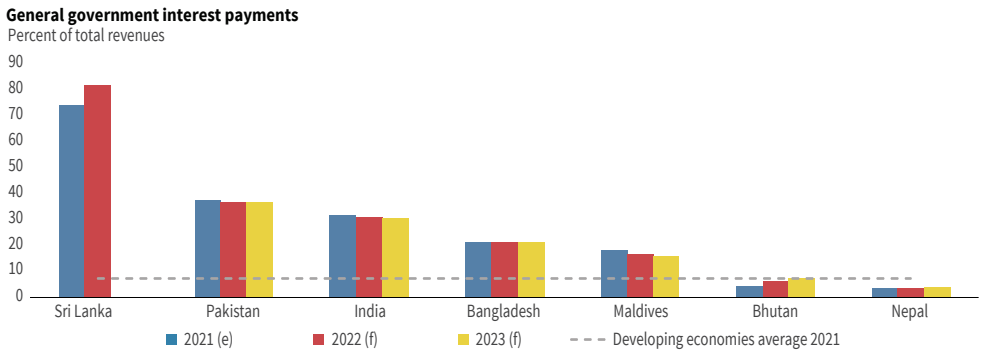
6 Tightening in the MFMod is modeled as an increase in the real interest rate. The baseline already assumes normal tightening, in other words, a policy stance consistent with baseline inflation. The assumption is also that AE's sudden tightening has a delayed effect on inflation of between 1-2 years.
7 If inflation increases while the currency depreciates, how the real effective exchange rate moves will ultimately depend on which of the two effects dominates. In this simulation, it is assumed that the pass-through from import prices to consumer price inflation is weak (as shown in Figure 1.13 for Brent crude imports), leading to a real depreciation.

require it to adjust by reducing demand, which would lower GDP by over 2 percent relative to baseline in 2024. Such a policy would thus not be warranted. Bangladesh, India, Sri Lanka,[8] and Pakistan's GDP in scenario 3b would be around 0.5 percent higher if they choose not to tighten (scenario 3b), as compared to tightening (3b), in large part because the real depreciation would improve their export competitiveness. These decisions would be made in conjunction with the normal policy response to domestic inflationary pressures. The risk is that scenario 3a could lead to inflation staying above targets for a long time. Therefore, the decision will also be affected by the external environment and the fiscal situation.

2.2.4 Tighter external financing conditions

Given the war in Ukraine, the region is now more vulnerable to risks from the volatile external environment. If, as in scenario 3a in Table 2.3 (above), central banks in the region tighten monetary policy in response to monetary tightening in AEs, this could also threaten the solvency of firms, financial institutions, and governments in economies that have benefited from short-term financing at low interest rates globally (World Bank 2022b). This will lead to higher refinancing costs in the future, with significant fiscal implications. Interest payments already account for more than one-quarter of government revenues in India, more than one-third in Pakistan, and almost three-quarters in Sri Lanka (Figure 2.7).

Figure 2.7. Interest payments comprise more than one-quarter of government revenues on average



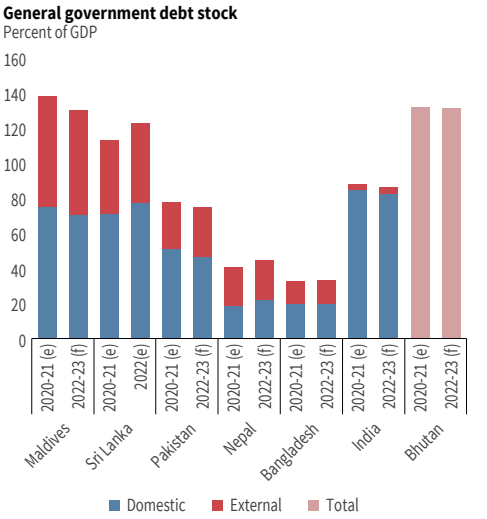
Source: World Bank Macro Poverty Outlook, staff calculations.
Note: (e)=estimate, (f)=forecast. No 2023 forecasts have been produced for Sri Lanka. Values for India are in the respective fiscal years.

Rising interest rates in advanced economies could lead to capital outflows, putting pressure on the currencies in countries grappling with high external indebtedness. This is of

8 The simulation does not consider the uncertainty surrounding the Sri Lankan economy at the time of writing.

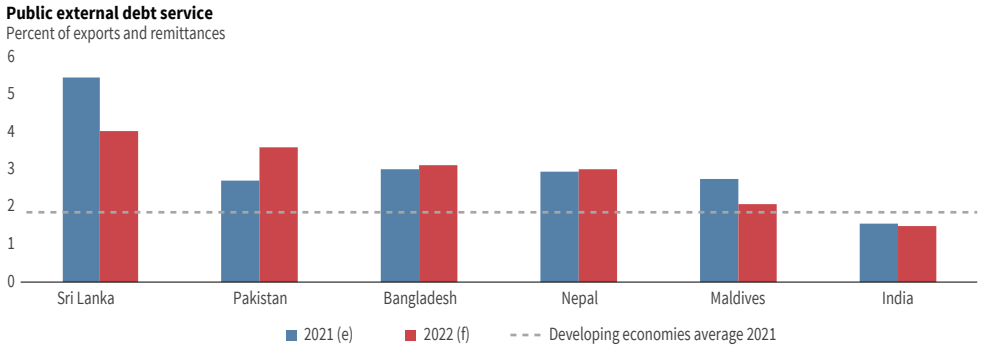
particular concern in countries with high levels of foreign currency-denominated debt, such as Sri Lanka, Pakistan, and Maldives. They are thus more exposed to swings in the risk appetite of foreign investors amid higher geopolitical uncertainty (World Bank 2022a). Public external debt as a share of GDP is particularly high in Maldives and Sri Lanka (Figure 2.8). Downside risks to tourism revenue related to the Russia-Ukraine war and new waves of COVID-19, as well as further increases in global energy prices, could exacerbate external vulnerabilities in Maldives. Indicators of ability to pay, such as the ratio of public external debt service to exports and remittances, is highest in Pakistan and Sri Lanka (Figure 2.9).[9] The situation is especially worrisome in Sri Lanka, where heightened fiscal and external risks led to a series of sovereign credit rating downgrades, preventing market-based refinancing.

Figure 2.8. External debts in the region are particularly high in Maldives and Sri Lanka...



Source: Macro Poverty Outlook.
Note: (e)=estimate, (f)=forecast. Bhutan's external debt is with India, which by contract is covered by revenues from hydropower exports to India, thus offsetting the financing needs and almost eliminating exchange rate risk and government indebtedness risks. Values are averages over calendar years, except for India where they are in the respective fiscal years.

Figure 2.9. ...with indicators of ability to pay deteriorating in Pakistan and unsustainable in Sri Lanka

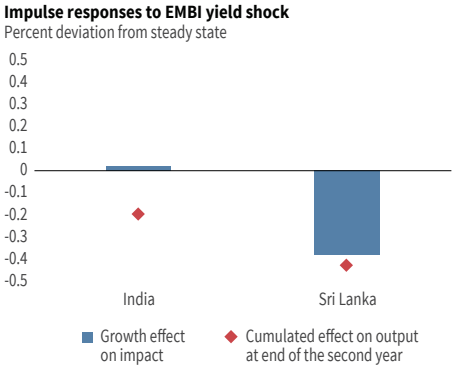


Source: World Bank Macro Poverty Outlook, staff calculations.
Note: (e)=estimate, (f)=forecast. Values for India are in the respective fiscal years.

9 The indicator is expressed as a share of exports, making it more robust in the presence of real exchange rate fluctuations (IMF 2000). Given the importance remittances have in regional balances of payments, their net inflows are added to the exports of goods and services.

For countries in the region with more exposure to global capital markets, tighter external financing conditions are likely to impinge on economic growth. The importance of the effects is larger for economies that are more exposed to capital flow volatility or those that have narrower policy space as proxied by current account balances and public debt levels. For example, using a sample of 18 emerging market economies (including India), Almansour et al. (2015) shows that a 100-basis point increase in the composite Emerging Market Bond Index (EMBI) yield (a risk premium shock) reduces average growth by a quarter percentage point on impact. Applying the same methodology to recent data from Sri Lanka shows that a risk premium shock of 100 basis points reduces Sri Lanka's growth by 0.38 percent within the same quarter, and the spillover remains negative and accumulates to more than 0.4 percent growth reduction at the end of the second year (Figure 2.10). This is larger than the average effect obtained in the original study. Current circumstances in Sri Lanka are dire, however. The country is facing a balance-of-payments crisis and any increase in debt service would have stronger implications. The government has begun talks with the IMF on a possible loan program. The results for India, on the other hand, suggest a negligible response within the same quarter and a negative one-fifth percentage point cumulatively.

Figure 2.10. A risk premium shock reduces growth in Sri Lanka, with effects remaining negative even after two years



Source: Staff calculations based on Almansour et al. (2015).
Note: The shock represents a 100-basis point increase in a composite of emerging market global sovereign yields (J.P. Morgan Emerging Markets Bond Index), independent of growth developments in advanced economies or China. The model is estimated for the period 2011Q1-2019Q4 and is limited to India and Sri Lanka, due to data availability (Appendix A.2.1).

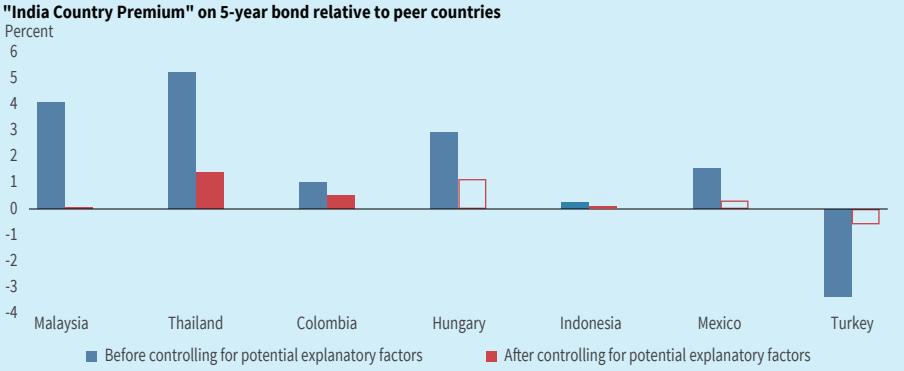
The spillover risks are palpable across the region. Further escalation of the war in Ukraine could scare investors in emerging market securities and debt instruments and lead to capital flight from emerging markets and developing economies (EMDEs), including South Asia, to "safe havens" in the West. Foreign investors have already been exiting India's financial market since October 2021, due to the impending monetary tightening by the US Federal Reserve. Recent developments in Eastern Europe have intensified the capital outflow, weakening the Indian rupee (INR). Maintaining macroeconomic stability through prudent and transparent policies will be important also if the Indian government turns to domestic borrowing. Box 2.1 explains why sound macroeconomic fundamentals and a liquid foreign currency market backed up by ample foreign reserves, are key ingredients in reducing sovereign bond yields, which are slightly higher in India relative to peer emerging markets.

Box 2.1. What determines domestic market yields?

Local currency borrowing provides a stable source of financing for emerging market sovereigns. A better understanding of sovereign bond yields' determinants can help lower the cost of borrowing. This is particularly important in light of a potential tightening in global liquidity conditions and capital outflows from EMDEs. Macroeconomic fundamentals and external conditions are important factors determining the relative borrowing cost across countries. More particularly, the expected monetary policy path, credit risk, inflation risk, exchange rate risk, as well as market structure factors, are possible drivers of a country's local currency sovereign yields.

To provide further insights and compare India's sovereign yields with the set of peer countries, this box relies on the analytical framework developed by Buzas et al. (2021). The applied methodology estimates panel regressions of a dependent variable (local-currency yield of five-year sovereign bonds) on explanatory variables with country- and time-fixed effects and clustered robust standard errors. Explanatory variables include macro-financial factors (monetary policy rate, real GDP growth rate, inflation expectations, fiscal balance, and current account balance), variables related to the liquidity and stability of the foreign exchange market (currency bid-ask spread and foreign reserve adequacy), and perceptions of political stability (the World Bank's score of political stability). The sample comprises seven EMDE countries between 2009Q1 and 2019Q2.

Figure 2.11. After controlling for macro-financial and foreign-currency market variables, the "India premium" narrows significantly



Source: Bloomberg, CEIC, World Bank FinStats, WDI, and staff calculations based on Buzas et al. (2021).
Note: Filled bars refer to values significant at the 10 percent level.

The results suggest that India has paid higher average yields on its local-currency sovereign bonds relative to most peers (Figure 2.11). The unconditional "India premium," that is, the excess yield on India's sovereign bonds without controlling for any explanatory variables, has been higher relative to peer emerging markets. After controlling for explanatory variables, however, the premium narrows and remains statistically significant in only two cases.

The findings provide suggestive empirical evidence of the importance of stable macroeconomic policies on local currency sovereign bond yields. Holding other things constant, a lower policy rate and an improvement in current account balances may help reduce the cost of sovereign borrowing. Similarly, an improvement in currency market liquidity and an increase in foreign reserve adequacy give the same outcome. Finally, a perception of higher political stability is also associated with lower yields. Higher political stability and a sustainable current account balance may indicate favorable debt service capacity, lowering risk perceptions of a country's foreign borrowing and the bond yield it pays. In this sample, real GDP growth, one-year-ahead inflation forecasts, and the fiscal balance are not found to be important determinants of sovereign borrowing yields. However, the explanatory variables considered in this exercise do not account for the entire "India premium," which remains significant in two cases, indicating that other factors may also play an important role in this regard. Policy reforms aimed at improving local-currency government bond market functioning could improve the efficiency of local-currency sovereign yields.

Elevated financial risks in one sector can spill over and destabilize the economy as a whole (World Bank 2022b). Financial sector balance sheets in South Asian economies featured significant risks even before COVID-19 outbreaks (Figure 1.21). Such balance sheet problems within state banks and corporates in India, for example, could worsen if the economy slows down, although profitability indicators have improved post-pandemic. The deepening foreign exchange crisis in Sri Lanka is putting a severe strain on its banking sector. In addition, low interest rates and supportive credit and fiscal measures have led to the rapid growth of private sector credit in the region (Figure 1.22). However, they could also lead to rapid deterioration of bank asset quality if lender screening is not adequate, adding to the financial sector risks. In some cases, like in Pakistan, the main banking sector predominantly lends to credit-worthy large conglomerates, but the balance sheets of microfinance banks could be more problematic (Section 1.3).

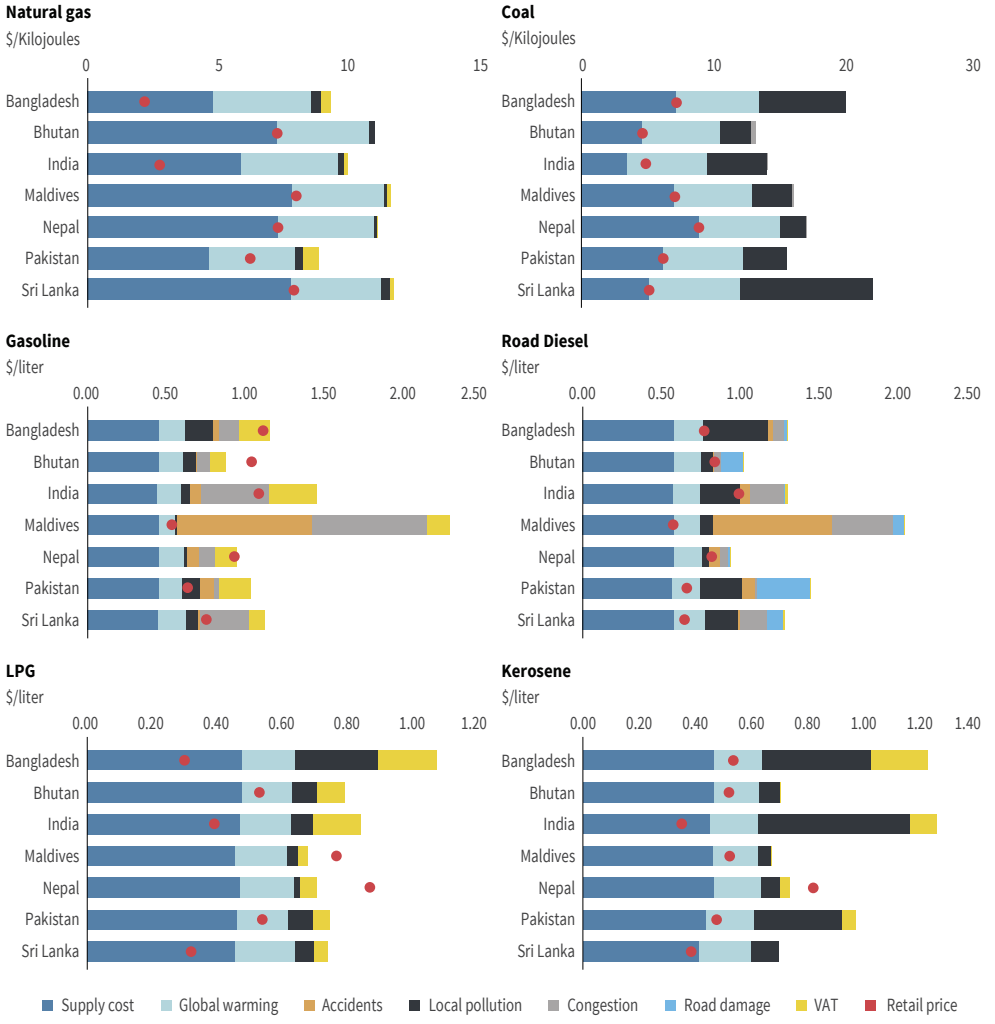
Financial institutions are likely to come under significant stress as debt moratoria and other support policies for borrowers are scaled back from levels during the pandemic. Eased lending conditions in the past two years have helped avoid a wave of loan defaults. But they have also masked the true extent of nonperforming loans and credit risks that could materialize once debt moratoria are lifted (Melecky 2021). Most programs in India have already ended without a rise in NPLs, although localized stress could emerge. In Bangladesh and Sri Lanka, where such programs are stillongoing. The impact from the phase-out of the asset quality regulations will vary across countries: it will be larger in those with larger shares of loans under moratorium. The withdrawal of supportive policies, there-fore, should be gradual, given that governments are often the lender of last resort and private sector debts can quickly become public debt if financial and economic stability is threatened.

2.3 Greening of taxation can reduce current problems and alleviate future bottlenecks

High and volatile oil prices have exposed South Asia's balance-of-payment vulnerabilities and fiscal challenges. Rising oil prices, further pushed up by the war in Ukraine, sharply increased the import bill for most countries in South Asia, which is posing new challenges to financing current account deficits. And as many governments in South Asia use subsidies to keep consumer energy prices low, rising oil prices in international markets impose further strain on fiscal balances. Moreover, volatility in international energy markets creates major uncertainties for policymakers, investors, and households. From a socioeconomic perspective, it is key to become less dependent on fossil fuels. This can be done by taxing, rather than subsidizing, carbon-intensive fossil fuels. Such taxation would provide incentives for higher energy efficiency and encourage the transition toward renewable energy. South Asia is a net energy importer but has considerable renewable energy potential, particularly India (IEA 2021, Box 2.2). Therefore, in addition to improving energy security, taxes on carbon-intensive fossil fuels could also support improvements in current account balances.

There is a strong case for including the negative externalities associated with the use of fossil fuels in retail energy prices. Reliance on carbon-intensive fossil fuels is also associated with environmental damages, which can have a negative impact on the economy. Local air pollution is one of the key negative side effects of fossil fuel combustion in South Asia. Additionally, the burning of fossil fuels contributes to climate change. Moreover, subsidized road fuels can worsen congestion, road damage, and accidents, due to higher driving rates. From an economic point of view, it would be optimal to internalize these negative external-ities in the user prices of fossil fuels. Following Parry, Black, and Vernon (2021), Figure 2.12 below

Figure 2.12. In most cases, 2020 fossil fuel retail prices in the region are below their "optimal" externality-inclusive levels



Source: Authors' estimates based on data and methods in Parry, Black, and Vernon (2021).

shows what the socially optimal (or "efficient") price of different fossil fuels would be in the countries of South Asia. The optimal price of each fuel per unit of consumption is composed of: (i) supply costs,[10] (ii) global climate and local (outdoor) air pollution damages, and (iii) a

10 For non-tradeable fossil fuels (e.g., electricity), these consist of total production costs. For tradeable fossil fuels, these equal the opportunity cost of home consumption (as opposed to sale abroad) which is quantified via the import-export parity price (based on whether a country is a net importer or exporter of the fuel) and adjusted for home margins.

standard value-added/general consumption tax.[11] Currently, user prices in most South Asia countries are far below these optimal prices, in many cases not even covering supply costs because of direct subsidies. Especially in India, Bangladesh, and Sri Lanka, retail prices (for example, for natural gas and coal) are considerably below their optimal levels, while Nepal's prices (mainly LPG and kerosene) are generally closer to these levels.

Greening of taxation can provide much-needed fiscal space in South Asia. Taxation of negative environmental consequences, or in other words, the greening of taxation, can help raise significant government revenues and is an integral part of other green fiscal instruments such as green public infrastructure. This is particularly important given the region's high informality, which constraints revenue mobilization from standard tax instruments. The additional fiscal space will still require careful balancing of spending tradeoffs, but opportunities to use the additional revenues are abundant. Any additional revenues can be used for further development of social safety nets, infrastructure needed to support future growth, abatement measures to reduce air pollution, investments that make cities more livable, and measures that help adapt to climate change. All require substantial resources, especially the latter. According to the Global Climate Risk Index, which measures the extent to which countries have been affected by impacts of weather-related loss events (storms, floods, heat waves, etc.), 800 million people in South Asia live in climate hotspots, and most countries are ranked as the most vulnerable globally (Germanwatch 2021). Many places could suffer from melting glaciers (Nepal, Bhutan) or rising sea levels (Maldives, Sri Lanka, Bangladesh). Large segments of the population that are dependent on the agricultural sector will need to adapt and move more often, due to the changes brought on by climate change.

Despite their positive impacts, the implementation of green taxes can be challenging. First, if not properly structured, higher energy prices could erode the incomes of vulnerable households and, thus, popular support for green taxes. Moreover, the distributional impact of green taxes has to be carefully monitored and compensation measures should be put in place. Well-designed programs of targeted support to vulnerable households can be much more cost-effective than blunt energy subsidies, which tend to benefit richer households in absolute terms (Abdallah et al. 2015 and Coady et al. 2015). Second, less reliance on cheaper, more carbon-intensive inputs might give rise to (international) competitiveness concerns in the short run. However, in the longer run, when other countries impose carbon taxes on their imports, South Asia will benefit from having developed a comparative advantage in greener production. This could be enhanced through other instruments to encourage energy efficiency. Third, the energy transition toward renewables will lead to stranded assets in the fossil-fuel industry and a shift in job opportunities, both in terms of location and required skills. Nevertheless, in the long run, the renewable energy sector will lead to better jobs because it

11 See Parry, Black and Vernon (2021) for detailed definitions/explanations of these components.

tends to be more innovative (Box 2.2). There are few examples of green taxes in South Asia, but appetite for these types of taxes seems to be increasing.[12] An opinion survey of experts in the region showed that the overwhelming majority believe the implementation of a carbon tax would be a good idea (Figure 1.37). This might be because the pandemic brought home the realization that tail-end risks and large global shocks will happen more frequently and, hence, business-as-usual (BAU) activity is no longer warranted.

An analysis of a stylized carbon tax impacts could illustrate the advantages of green taxes. The forthcoming *World Bank-IMF Climate Policy Assessment Tool (CPAT)*[13] is used to simulate the impacts of a comprehensive carbon tax that from 2023 onward gradually increases to real 2021 $25 per ton of CO_2 equivalent in 2030 against a BAU scenario, assuming no new miti-gation policies.[14] This exercise is illustrative of the impact of a green tax, but both the size and the specific nature of the tax should not be considered policy recommendations.[15] Actually, a carbon tax might not be the first green tax that the region wants to consider and carbon taxes are more efficient if they are part of a global taxation of carbon. A few emerging markets (Argentina, Colombia, Chile, Mexico, and South Africa) have experimented with limited carbon taxes (less than $10 per ton of CO_2 as of 2019). Still, the simulation provides insights into how a region-wide change in taxes can trigger the required transition to renewable energies. The simulation also illustrates the positive side effects that might occur.

The positive impacts of reduced environmental externalities may outweigh the reduction the reductions in efficiency caused by the carbon tax (Figure 2.13). Net benefits are calculated as the difference between gross benefits and efficiency costs.[16] Gross benefits consist of the following: (i) global climate (the equivalent to "global warming" in Figure

12 For example, the "GST Compensation Cess" (formerly the "Clean Energy Cess"/ "Clean Environment Cess") in India imposes a modest tax on raw coal of roughly $3-4 per ton of CO_2 equivalent (see further discussion in Parry, Mylonas and Vernon, 2019).

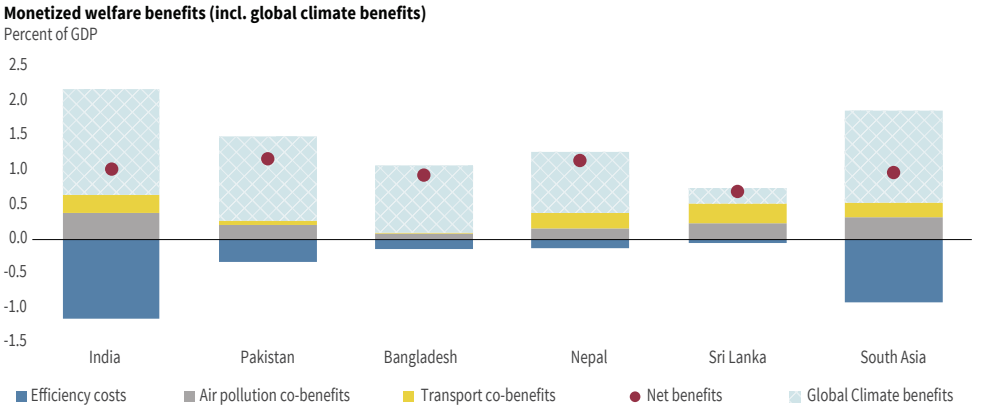
13 This excel-based tool, which allows simulations to be conducted on climate change policies for 150 countries under user-specified scenarios, will be publicly available at https://www.worldbank.org/en/programs/the-global-tax-program/knowledge-center. Previous iterations of the tool have been used, for example, here: https://www.financeministersforclimate.org/sites/cape/files/inline-files/IMF-WB%20Coalition%20Note%20-%20Implications%20of%20the%20Global%20Economic%20Crisis%20for%20Carbon%20Pricing.pdf

14 The carbon tax is assumed to: (i) apply to upstream fossil fuel suppliers; (ii) be levied on the carbon content of fossil fuels; and (iii) be imposed in addition to any pre-existing taxes on fossil fuels. Similar exercises have been carried out in the past for large emitters in IMF (2019b) and Parry, Mylonas and Vernon (2021), as well as across 135 economies in IMF (2019a) using a simplified version of a model predating CPAT.

15 The stylized scenario choice of a carbon tax amounting to $25 per ton of CO_2 equivalent in 2030 is based on the proposed minimum carbon price for developing economies in Parry, Black and Roaf (2021). See Appendix A.2.2 for an overview of the model.

16 In theoretical terms, these efficiency costs represent the deadweight losses/Harberger's triangles from the imposition of the carbon tax, plus the rectangles representing the loss in consumer surplus from higher fuel prices. There is no loss in terms of producer surplus, due to assumed horizontal (i.e., perfectly elastic) supply curves. See Parry et al. (2014).

Figure 2.13. Net quantifiable benefits from phasing in a $25/ton of CO_2 carbon tax by 2030 are positive



Source: Authors' estimates using CPAT, based on the data and methods in Parry et al. (2014) and Parry and Small (2005).
Note: Economic costs are deadweight and consumer surplus losses from the carbon tax. Global climate (or "global warming") benefits are social benefits from emissions reductions following imposition of the carbon tax (valued at a social cost of carbon of real 2021 $47 per ton of CO_2 equivalent in 2019, rising at approximately a 4 percent annual rate to reach real 2021 $72 per ton CO_2 equivalent in 2030). The global tax benefits will, thus, accrue to countries outside the region.

2.12 above) benefits;[17] (ii) air pollution co-benefits (averted local air pollution mortality and morbidity due to lower $PM_{2.5}$ exposure); as well as (iii) transport co-benefits (averted road accidents, reduced road damage and reduced congestion as fewer passenger vehicles are on the road).[18] Specifically, India and Sri Lanka see important net benefits from less congestion and averting road accidents. In most cases, net benefits remain positive regardless of whether (global) climate benefits—which by definition also accrue to countries outside the region—are considered. The magnitude of global climate benefits provides evidence of the need for (and large payoffs from) global coordination when it comes to carbon taxes. In other words, the case for a carbon tax becomes stronger the more countries participate.

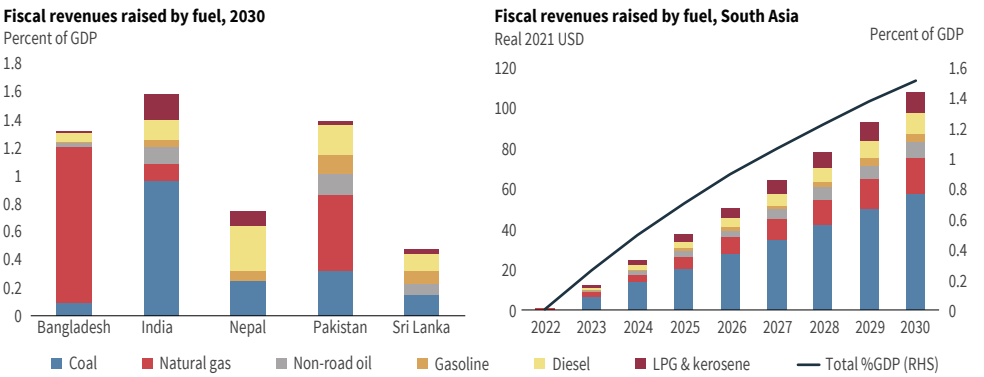
A carbon tax might cause far-reaching structural changes. In the process of pricing fossil fuels, households will have an incentive to move toward cleaner sources of fuel to save money, use public transportation that relies on less carbon-intensive fuels, and walk or use rickshaws on the margin. There will be greater incentives to build more pedestrian walkways and provide flexible work arrangements for those who can work from home, especially women. There may also be a greater demand for walkable green spaces in urban areas, and

17 These consist of the monetized social benefits from CO_2 emissions reductions under the simulated carbon tax, at a social cost of carbon of approximately real 2021 $47 per ton CO_2 equivalent in 2019, growing at approximately an annual rate of 4 percent to reach approximately real 2021 $72 per ton of CO_2 equivalent in 2030.
18 See Parry, Black and Vernon (2021), Parry, Mylonas and Vernon (2021), Parry et al. (2014) as well as Parry and Small (2005) for further information on the underlying definitions and calculations of the components shown in Figure 2.13.

lower traffic will reduce time spent commuting.[19] As a result, ambient pollution will decline, reducing average sick days for workers and increasing life expectancy and the ability of the average South Asian to contribute their full human capital to the economy.

The simulated carbon tax raises average fiscal revenues for the region by approximately 1.5 percent of GDP in 2030 (Figure 2.14), providing funds for compensating those affected or for easing the green transition. These revenues are independent of the monetized benefits shown in Figure 2.13. The (fuel) source of these revenues is strongly correlated with the main source and carbon intensity of fossil fuel consumption: for example, coal in India and natural gas in Bangladesh and Pakistan (see also Table A.2.1 in Appendix A.2.4). These revenues can be used in different ways, but a potential allocation would be to provide funds or services to vulnerable households, compensating them for higher energy costs and reducing inequality. This will likely be a key component of every compensation strategy because it can significantly increase buy-in from the population for the energy transition. The use (that is, the recycling) of resources from the carbon tax could vary. For example, resources could be used to strengthen social safety net systems that were scaled up during COVID, or for adaptation such as better insurance against weather-related disasters in rural areas, or for enabling greater/more efficient production of renewable energy.

Figure 2.14. Annual revenue gains from the $25/ton CO_2 carbon tax are substantial

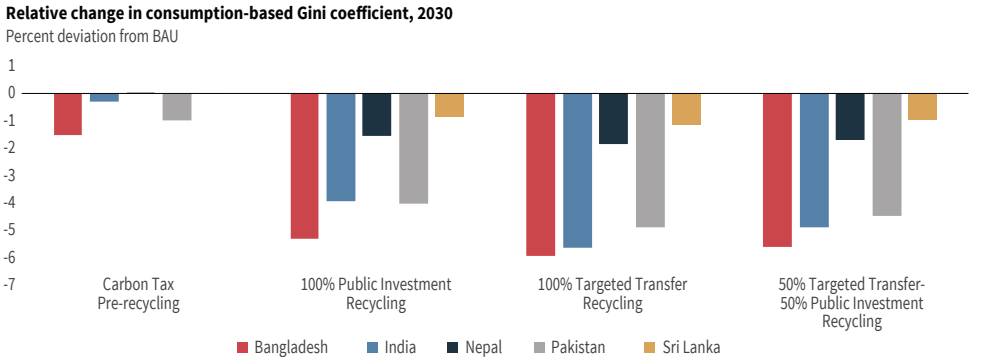


Source: Authors' estimates using CPAT.
Note: Shows total additional (above BAU) fiscal revenues from the policy net of renewable energy subsidies by source of fuel. See Appendix A.2.2 for assumptions.

19 Traffic congestion in Dhaka and Karachi resulting from bustling economic activity has depleted human capital through time lost in traffic for workers and absences due to airborne illnesses of urban and factory workers (Ali et al. 2014, ADB 2015). Though there are positive examples: plans to create urban green and walkable spaces such as Karachi's center town will help (Gopihan and Malkawi 2021).

Effectively recycling revenues from green taxation could help enhance equity and foster political acceptability of higher fossil fuel prices. Figure 2.15 shows the results from estimating the distributional impact of the simulated carbon tax, coupled with two basic (but different) revenue-recycling policies in 2030: (a) public investment in the form of infrastructure access provision, based on household access to the following infrastructure types: electricity, water, sanitation, Information and Communications Technology (ICT), and public transport; and (b) a targeted cash transfer to households in the bottom 70 percent of the consumption distribution.[20]

Figure 2.15. Inequality falls following recycling of the $25/ton CO2 carbon tax revenues



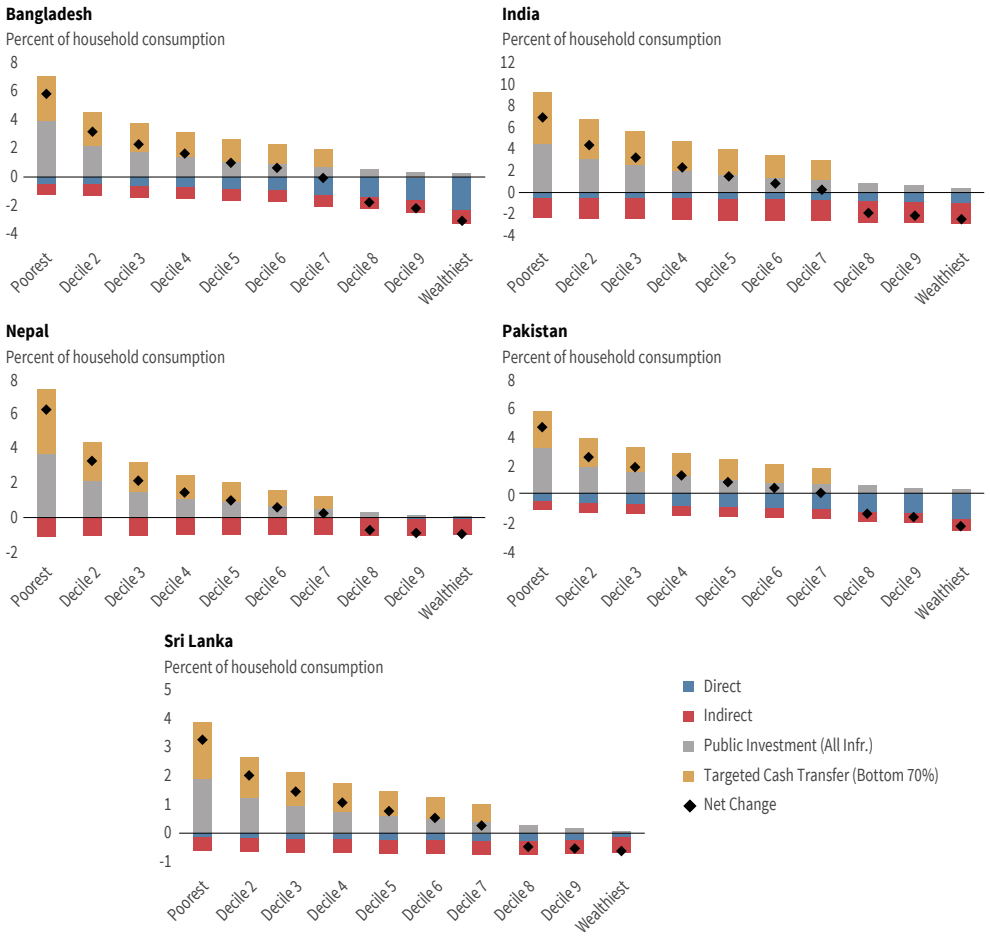
Source: Authors' estimates using CPAT.

Even without taking into account revenue recycling, income equality improves a small amount in some countries relative to BAU.[21] Figure 2.15 shows the percent change in the consumption-based Gini coefficient under four cases: (i) pre-recycling; (ii) assuming that all carbon tax revenues are allocated to infrastructure access provision (a); (iii) assuming that all carbon tax revenues are allocated to compensating the bottom 70 percent (b); and (iv) assuming that half the revenues are allocated to policy (a) and the other half to policy (b). India, Bangladesh, and Pakistan would see an important improvement in equality from such policies (almost 4-5 percent decline in the Gini).

20 Household-level information on access to the infrastructure types mentioned above is obtained directly from household budget surveys (see Appendix A.2.3 for data sources). The associated revenue-recycling policy is set up as follows: if, for example, the average infrastructure access rate of the poorest (e.g., bottom 10 percent) individuals is equal to 30 percent, carbon tax revenues are allocated to the remaining 70 percent of these individuals and so on for subsequent segments of the population.

21 This is the case not least because poorer households in the region are largely not connected to the electricity grid and consume biomass, which is not taxed under the simulated carbon tax. However, this effect could attenuate as incomes grow and poorer households become relatively more fossil-fuel-intense in their consumption (see further discussion in Parry, Mylonas and Vernon (2019)).

Figure 2.16. In 2030, the direct vs. indirect consumer surplus losses in each country represent a small portion of total household consumption and are mildly progressive



Source: Authors' estimates using CPAT.
Note: Individual country charts present the incidence effects of a $25/ton CO_2 carbon tax in 2030 by (population-weighted) per-capita household consumption decile. Positive (negative) values represent gains (losses) in percent of total household consumption. The "direct" effect is the loss in consumer surplus from price increases of fossil fuels (for example, electricity, gasoline/diesel, natural gas) following the introduction of a carbon tax. The "indirect" effect is the loss in consumer surplus from price increases of non-fossil fuel products (such as food, clothing, housing) following the introduction of a carbon tax. These charts also assume that all revenues raised from carbon taxation are equally split between public investment in infrastructure access and targeted cash transfers to households. All reported values represent population-weighted averages and are adjusted for behavioral responses. See Appendix A.2.3 for further information on data and methods.

The distributional impacts of carbon taxation (and any revenue recycling) depend on household spending patterns. The individual country charts in Figure 2.16 assume that 50 percent of the revenues raised are spent on infrastructure access and 50 percent are rebated to the bottom 70 percent of households via a targeted transfer (half of policy (a) and half of

policy (b) above).[22] Absent revenue recycling, consumer surplus losses from the introduction of the carbon tax are (mildly) progressively distributed across consumption deciles, mirroring the findings observed in terms of the Gini coefficient above.[23] On average, approximately 30-40 percent of the incidence is due to increases in the direct cost of energy for households (that is, the "direct" effect), while the rest is due to an increase in the prices of non-fuel goods and services that use (the now costlier) fossil fuels as an input into their production process (the "indirect" effect). Once revenue recycling is considered, the bottom seven consumption deciles receive gains ranging, on average, between approximately 1 (Sri Lanka) and 3 (India) percent of total household consumption.[24]

The greening of taxation requires careful planning and implementation. To reap the potential benefits from carbon taxation, broad consensus and integration into budget planning are required because new taxes must remain in place and not change following every political cycle. Moreover, accompanying measures are needed to smooth the transition process, as mentioned above. Additionally, although revenue mobilization capacity across the region is low, energy taxes should be generally easier to collect than many other taxes, since produc-ers and distributors of energy are mostly large, formal, and sometimes state-owned compa-nies. The phasing in of green taxes would ideally occur when global oil prices are falling, not rising.

Broad consensus on green policy can only be achieved with a gradual approach and thorough public debate. Even if there is disagreement about the optimal (or first-best) tax system, there might be agreement about the initial steps toward such a tax system. These steps could be in the form of the elimination (or at least reduction) of inefficient fuel subsidies, which still average 0.8 percent of GDP in South Asia but vary widely (from insignificant amounts in Bhutan and Nepal to 2.5 percent of GDP in Pakistan, see Appendix A.2.2). This also ensures that electricity companies are no longer loss-making and contingent liabilities are no longer being built up. Public debate about compensation measures and long-term objectives is also a key element of broad consensus that ensures that policies survive political cycles. For example, India's 2022-2023 budget, presented in early February, incorporated for the first time such a long-term strategy. Climate action was framed as one of the pillars of the budget, including plans for low-carbon and climate-resilient development (Jha 2021).

How quickly and easily green taxes can achieve the desired impact of encouraging a low-carbon development path depends on how the transition is managed with

22 See Figure Note and Appendix A.2.3 for further details.

23 Mean incidence effects across all consumption deciles range between roughly 0.5 (Sri Lanka) and 2.5 (India) percent of total household consumption.

24 This is mainly by design, given that the targeted cash transfer was assumed to apply only to the bottom 70 percent of the consumption distribution.

accompanying measures. The transition includes a shift in the structure and location of jobs and productive assets from "brown" to "green" firms. Box 2.2 analyzes the current job structure to understand how prepared South Asia is for a green transition in the energy sector. It finds that areas with more renewable potential are already using more renewable energy, and firms engaged in renewable energy are more likely to be in such areas. For workers in the energy sector, those in "green" jobs are more educated and earn more, suggesting that poor, lower-educated workers are likely to be adversely affected by the transition.

The transition should also deal with stranded assets. For example, it may become unprofitable to mine coal, affecting the livelihoods of people and communities in mining regions. As the cost of producing renewable energy continues to drop, the assets of fossil-fuel companies will become obsolete much faster. This risk of stranded assets also extends to financial institutions that are involved in financing highly carbon-intensive industries.

Energy transition is easier when there is coordination across borders. Such coordination can prevent sudden changes in comparative advantage and provide, through trade, quicker access to renewable energy like hydropower. Coordination can take the form of imposing the same taxes on imports as on domestic production. One example is the EU's adoption of mitigation policies that will impact trade, though the immediate effect on South Asia is still very small. The Carbon Border Adjustment Mechanism (CBAM) adopted by the EU is a tax on the carbon content of imports and is scheduled to take effect in January 2023. Currently, the list of goods subject to this special fee is limited, and only about 8.8 percent of the region's exports of goods will be subject to CBAM (Table 2.4). The number is negligible for Bhutan, Pakistan, and Sri Lanka. Maldives and Bangladesh do not export any goods to the EU that would be subject to CBAM. However, the EU is likely to widen the list of goods subject to CBAM, so the region should be prepared to compete by offering increasingly greener exports. South Asia itself could impose similar import tariffs.

Table 2.4. Few exports to the EU from the region will be subject to CBAM

CBAM sector		Sub-sector	South Asia share of exports to the EU in percent 1/				
			India	Nepal	Pakistan	Sri Lanka	South Asia
Aluminium	76	Aluminium and articles thereof	1.05	0.01	0.04	0.05	0.87
Cement	25	Salt, sulphur, earths, stone	0.25	0.00	0.47	0.07	0.27
Fertilisers	28	Inorganic chemicals	0.36	---	0.01	0.00	0.30
	31	Fertilisers	0.01	---	---	---	0.01
Iron and Steel	72	Iron and steel	5.60	---	0.01	0.00	4.64
	73	Iron or steel articles	3.22	0.01	0.08	0.08	2.68
Grand total			10.49	0.02	0.61	0.21	8.78

Source: Authors' estimates based on WITS data.
Note: 1/SAR' exports of each product as a total share of exports to the EU.

Box 2.2. How prepared are South Asia's energy firms and workers for the green transition?

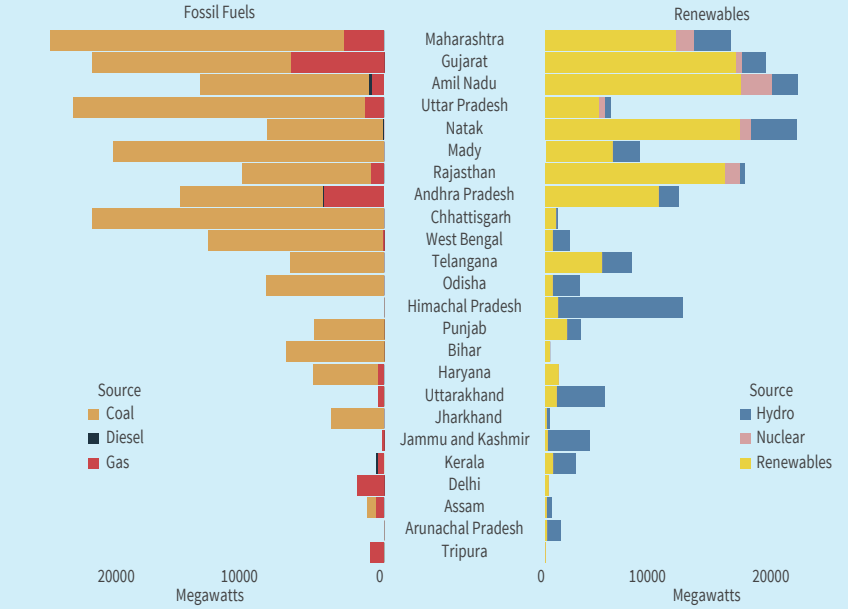
Leading South Asia's energy sector toward less carbon dependence presents challenges and opportunities, so it is important to assess the region's preparedness for this transition. One of the challenges in decarbonizing the energy sector is the labor market. Firms may diversify or new firms in renewable energy may enter the market. Current workers need to be retrained for new positions and future workers would need appropriate training to meet future labor demand. Additionally, there can be geographic differences between where current and future jobs are, which may push workers to migrate, even internally within a country. The effects of the green transition could go beyond energy production, but the labor market in energy production provides an illustration of this phenomenon.

Energy production remains reliant on fossil fuels in the region, and there is considerable geographical variation in terms of diversification into renewable energy use. The main coal-producing region in South Asia is in central India, including the states of West Bengal, Jharkhand, and Chhattisgarh. Renewable energy potential is also regional, with wind and solar potential highest along the coast in western India, and hydropower potential highest in the Himalayas. Rooftop solar, the most labor-intensive form of renewable energy, is concentrated in urban areas. In addition, offshore wind has tremendous potential that has not yet been fully exploited. Some of this geographic discrepancy is evident in power generation statistics from India, as illustrated in Figure 2.17. States within the coal-producing region are still dependent almost entirely on coal for power, while other states have diversified their power generation into the renewable sector. The location of firm headquarters is consistent with the geographical distribution of the region's renewable energy potential (Figure 2.18). Similarly, workers in coal mining are in coal-producing states, while other workers in the energy sector are more dispersed geographically.

Workers in the energy sector who have "green" jobs tend to be more well-educated, which is good news for the energy transition, though lower educated, low-wage workers are less likely to have a "green" job. Using a task similarity indicator, which provides a probabilistic measure of the "greenness" of an occupation,[25] the labor force

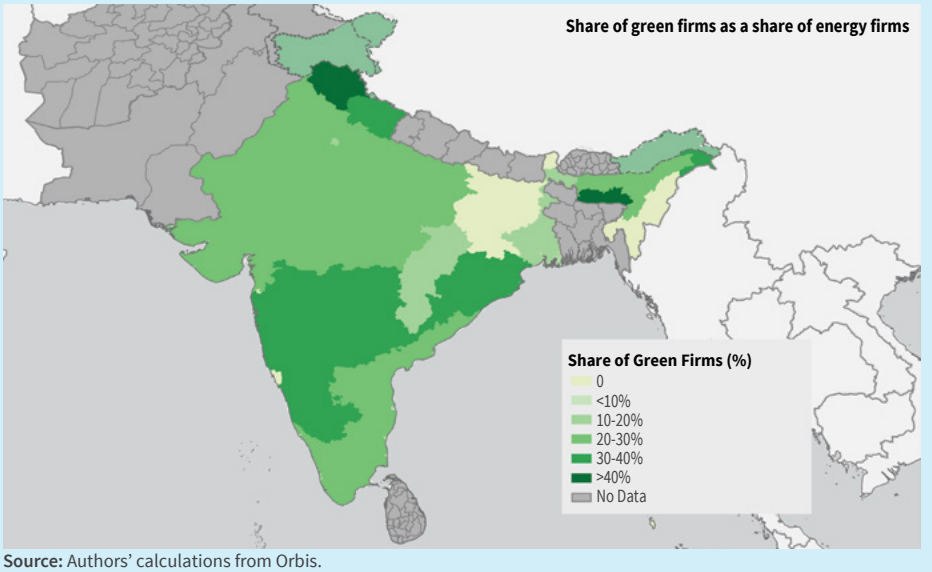
25 To assess the labor market's preparedness for the green transition, the tasks associated with occupations in the energy sector are compared to the tasks of occupations that have been classified as "green" in the ONet Resource Center. Further details are available in a forthcoming working paper (Li and Triyana 2022).

Figure 2.17. Power generation by type and state in India, December 2021



Source: National Power Portal, India.
Note: For states with at least 100MW in power generation.

Figure 2.18. Location of energy firms in India

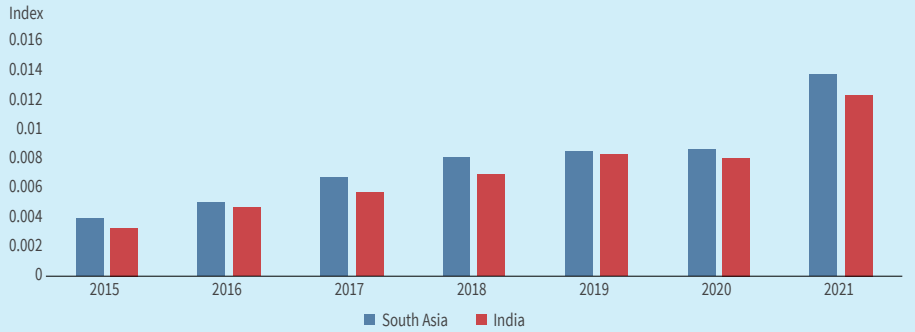


Source: Authors' calculations from Orbis.
Note: Sample restricted to firms in coal mining, coal mining support, energy generation, and transmission. The green firm indicator takes the value one if the energy firm's textual description includes terms like "solar," "wind," and "renewable."

survey from India and Pakistan shows that workers with "green" jobs in the energy sector are more educated, earn more, and engage in higher-skilled occupations. As the green transition progresses, less educated, low-wage workers, such as those in coal mining are more likely to face challenges. As with any transition, special compensation and training schemes could be considered for those who lose.

Demand for green skills in the energy sector has grown. To further examine skill demand in the energy sector, more granular data on job characteristics from LinkedIn are used. The skill penetration index, which measures the time trend of skills within an industry, shows that the region's energy and mining sector has incorporated more green skills, and a similar trend is observed individually for India (Figure 2.19). Similarly, the hiring of workers with green skills has grown since 2015. The pandemic may have accelerated the growth of demand for green skills in the energy sector, providing an opportunity for the green transition.

Figure 2.19. Green skill penetration in the energy and mining sector



Source: LinkedIn skill penetration index.
Note: The index measures the time trend of a skill across all occupations within an industry, based on the methodology developed by Zhu et al. (2018).

In conclusion, mainstreaming climate change into macro-financial policies that foster sustainable growth will require more attention to structural changes and distributional issues. The traditional macroeconomic objectives of price stability, robust external and fiscal balances, and a sustainable economic growth plan are still equally important, but their design should reinforce the path towards a greener development model. The findings from this exercise reinforce the notion that pricing carbon is good for the region's development even if South Asia is not a major global greenhouse gas emitter in per-capita terms.[26] Adaptation

26 Though, as a region, it accounts for 7.8 percent of total global greenhouse gas (GHG) emissions.

will be necessary for the region, but mitigation can catalyze successful green development. Although many developing countries were reluctant to unilaterally commit to mitigation targets because the perception was that this would stifle their development, the effects of climate change and innovation in green technology stand to alter this trade-off. South Asia does not have to reduce energy consumption—which is required for economic development—but can reduce the carbon content of that energy consumption as it transitions to renewables. The policy discussion should shift to how (as opposed to *whether*) to facilitate the transition to a green economy while minimizing associated short-term costs.[27]

27 A more thorough analysis of each of the available tools for countries in the region to mitigate climate change and adapt to its effects will be the subject of the forthcoming CCDRs, designed specifically "to tackle disconnects between climate and development policies, identify the highest-impact actions to reduce GHG emissions and build resilience" (World Bank Group 2021).

Appendixes

Appendix A.2.1 Methodology for estimating external spillovers in India and Sri Lanka

A model proposed by Almansour et al. (2015) is used to estimate the effects of a risk premium shock in India and Sri Lanka. The analysis relies on a Bayesian vector autoregression model with financial and real variables to quantify the impact of external shocks on growth in emerging markets. The model features an external and internal block and assumes that global economic conditions are exogenous to shocks to an emerging market contemporaneously. Within the external block, structural shocks are further identified using a recursive (Cholesky) scheme. Each economy's baseline model consists of the variables ordered as follows: US real GDP growth, Eurozone real GDP growth, China real GDP growth, Brent international oil prices, US inflation rate, US 10-year Treasury bond rate, the EMBI yield, the economy-specific terms-of-trade growth, domestic real GDP growth, domestic inflation rate, the rate of appreciation of the economy's real exchange rate vis-à-vis the US dollar, and the domestic monetary policy rate. The first eight variables constitute the external or foreign block, and the remaining variables make up the internal or domestic block. All variables enter the model with four lags. The model is estimated using the data from 2011Q1 to 2019Q4.

Appendix A.2.2 Overview of the Climate Policy Assessment Tool (CPAT)

The model provides country-specific projections of fossil fuel CO2 emissions and assessments of the emissions, fiscal, economic, public health/other externalities and distributional impacts of carbon pricing and other mitigation policies for 150 countries. It decomposes fossil/other fuel use into the power, industrial, transport, and residential sectors, projecting it forward via: (i) GDP forecasts; (ii) assumptions about the income and own-price elasticity of demand for fuels; (iii) assumptions about the rate of technological change affecting energy efficiency; and iv) changes in international energy prices, with pre-existing fuel taxes/levies being held constant in real terms. The impacts of mitigation policies on fuel use and emissions depend on: (i) their effect on future energy prices; (ii) fuel switching within the power generation sector; and (iii) price elasticities of electricity/other fuel demand across sectors.

The tool is parameterized using 2019 fuel use and emissions factors by country/sector from the International Energy Agency (IEA). Data on energy taxes/subsidies and prices by product and country is obtained from the IMF.[28] Prices are projected forward using this data in tandem with an average of IEA, US Energy Information Administration (EIA), IMF World Economic Outlook (WEO), and World Bank[29] forecasts of international energy prices. Fuel price responsiveness is broadly consistent with empirical/energy model results. See Appendix III in IMF (2019a) for an analytical exposition of the model and its parameters.[30]

The analysis within CPAT is subject to some limitations and caveats.

First, the model does not explicitly incorporate gradual turnover of energy capital. This assumption limits the short-term responsiveness of fuel use to carbon pricing but is reasonable, given the focus on longer-term scenario simulations (for example, in 2030), which are assumed to be gradually introduced.

Second, CPAT abstracts from the possibility of additional mitigation actions (beyond those implicit in current country-level price data) in the business-as-usual (BAU) scenario. Specifically, the BAU scenario is used as a "benchmark" against which the performance of any modeled mitigation instruments is measured (a standard approach in the literature). On this note, capturing the full set of intricacies and tailored approaches of domestic mitigation policies is challenging and may require further modeling than what is currently available in CPAT.

Third, the fuel price response parameters in the model are plausible for small, incremental price changes. In other words, model elasticities may not apply under drastic price hikes that could cause major technological developments or non-linear adoption of technologies.

28 See, for example: https://www.imf.org/en/Topics/climate-change/energy-subsidies

29 The analysis presented in Section 2.3 does not incorporate the preliminary World Bank commodity price forecasts following the war in Ukraine, as these would be inconsistent with the price forecasts obtained from the other sources listed above. If said preliminary forecast were to be considered, 2030 CO_2 emissions under the $25 carbon tax would fall by 10.4 percent (as opposed to 11.7 percent) relative to BAU.

30 CPAT also uses multiple other data sources including: the Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE), Climate Watch, Copernicus Atmospheric Monitoring Service (CAMS), Enerdata, Global Burden of Disease (GBD 2019), Global Trade Analysis Project (GTAP), Institute for Health Metrics and Evaluation (IHME), International Institute for Applied Systems Analysis (IIASA's) GAINS model, International Labour Organization (ILO), Organisation for Economic Co-operation and Development (OECD), United Nations Framework Convention on Climate Change (UNFCCC), United States Department of Agriculture (USDA), World Bank Group Carbon Pricing Dashboard, World Health Organization (WHO), World Bank Development Indicators (WDI), World Road Statistics (WRS), World Resources Institute (WRI) CAIT.

Fourth, the model assumes flat (perfectly elastic) supply curves, an absence of general equilibrium effects, and no changes in international fuel prices that might result from multiple countries introducing mitigation policies at the same time. See also further discussion of these issues in IMF (2019b) and Parry, Mylonas, and Vernon (2021).

Appendix A.2.3 Data sources and methodology used to analyze the distributional consequences of carbon taxation in South Asia[31]

The burden on household consumption deciles d = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10} from higher end-user prices following the introduction of the $25 per ton CO_2 equivalent carbon tax is calculated as:

$$\text{(A)} \qquad \sum_g \pi_t^{dg} \cdot \rho_t^{dg}$$

where g stands for the main categories of goods/services consumed by households, π_t^{dg} is the share of decile d's total consumption spent on good/service g at time t, and ρ_t^{dg} is the relative price increase for good/service g caused by the carbon tax. For example, for a good with a budget share of 2 percent of total household consumption, expression (A) implies that a 5 percent increase in said good's price will reduce decile d's consumption by 0.1 percentage points.

Data on household budget shares is obtained from: (i) the 2016-2017 Household Income and Expenditure Survey (HIES) for Bangladesh;[32] (ii) the 68th Round of the National Sample Survey (NSS) for India;[33] (iii) the 2010-2011 Living Standards Survey (LSS) for Nepal;[34] (iv) the 2018-2019 Household Integrated Economic Survey (HIES) for Pakistan;[35] and (v) the 2016 Household Income and Expenditure Survey (HIES) for Sri Lanka.[36] After the data is aggregated into CPAT-compatible good/service categories,[37] households are grouped into

31 The methodology described here is primarily based on Coady and Newhouse (2006) and applied within several other studies (e.g., Parry, Mylonas and Vernon (2019) and IMF (2019b)).

32 See: http://data.bbs.gov.bd/index.php/catalog/182

33 See: http://microdata.gov.in/nada43/index.php/catalog/126

34 See: https://microdata.worldbank.org/index.php/catalog/1000

35 See: https://www.pbs.gov.pk/content/household-integrated-economic-survey-hies-2018-19

36 See: http://www.statistics.gov.lk/IncomeAndExpenditure/StaticalInformation

37 To facilitate relative cross-country comparability of results, CPAT uses a standardized classification of goods and services across all countries, distinguishing among 8 fuel (coal, electricity, natural gas, oil, gasoline, diesel, kerosene, LPG) and 14 non-fuel (appliances, chemicals, clothing, communications, education, food, health services, housing, other, paper, pharmaceuticals, recreation and tourism, transportation equipment, public transportation) good/service categories. This classification is, in part, informed by the implicit carbon intensity of non-fuel goods/services (i.e., goods/services with similar carbon intensities are classified under the same category).

population-weighted, per-capita consumption deciles, and budget shares are computed by dividing total consumption expenditure on each CPAT good/service category by each household's total consumption expenditure across all goods/services.

Sector-specific percent price increases from the simulated carbon tax are obtained directly from CPAT for each fossil fuel. Calculating (A) above in terms of the fossil fuel-specific price changes and budget shares yields an estimate of the loss in consumer surplus from price increases of fossil fuels (for example, electricity, gasoline/diesel, natural gas, etc.) following the introduction of a carbon tax (that is, the "direct" incidence effect).

Price increases for other consumer goods (due to higher energy/fossil fuel input prices) are calculated, assuming full pass-through of producer fossil fuel/energy cost increases onto consumer prices domestically (that is, flat/perfectly elastic supply curves). In particular, non-fuel sector price increases are obtained as the sum-product of: (i) each sector's input intensity in each fossil fuel; and (ii) the price increase of each fossil fuel induced by the carbon tax. Sectoral fossil fuel intensities are generally obtained from input-output/direct requirements matrices.

For the five South Asian countries analyzed in Section 2.3, these matrices are sourced from the GTAP-10 database,[38] which includes 2014 data for 65 sectors[39] that are, in turn, mapped to the CPAT non-fuel consumption good/service categories mentioned above to re-estimate equation (A). Summing the estimates across all non-fuel goods/services yields a measure of the loss in consumer surplus from price increases of non-fossil fuel products (for example, food, clothing, housing, etc.) following the introduction of a carbon tax (that is, the "indirect" incidence effect).

Adding up the direct and indirect effects yields an estimate of the total incidence effect. All incidence effects are scaled by the ratio of total CPAT carbon tax revenues in the year of the distributional effects analysis (that is, 2030) to "implied" carbon tax revenues from the distributional analysis (that is, the total incidence effect multiplied by projected/national accounts-adjusted total household consumption from the household budget survey). This scaling implicitly adjusts the estimated incidence effects for behavioral responses (as well as any structural changes in the economy as these are captured, for instance, via fuel switching in the power generation sector).

38 See: https://www.gtap.agecon.purdue.edu/databases/v10/index.aspx

39 These cover the following five fossil fuels: coal ("coa"), electricity ("ely"), oil ("oil"), natural gas ("gas", "gdt") and petroleum products ("p_c").

The analysis described above is subject to several shortcomings. First, in projecting the distributional analysis forward to 2030, the fossil fuel intensities (as given by the input-output matrices) and decile-specific household budget shares are assumed to remain constant. This means that the use of input-output matrices likely overstates consumer price changes for non-fuel goods/services, since the fossil fuel intensity of production would likely decrease due to higher energy prices. Second, some of the incidence of carbon taxation could be passed backward into lower producer prices, assuming upward-sloping supply curves in the medium-to-long run. If this results in lower capital returns, some of the incidence could be borne by capital owners or even workers (for example, in the form of lower wages). See also additional commentary in Parry, Mylonas, and Vernon (2019).

Appendix A.2.4. Primary energy use by type of fuel

The most important fuels in terms of economy-wide energy demand are coal in India and natural gas in Bangladesh and Pakistan. Nepal and Sri Lanka rely relatively more on biomass, which includes firewood (Table A.2.1).

Table A.2.1. Selected South Asian Countries: Total Primary Energy Use, 2019

(In percent of Total Primary Energy Use)						
Energy Source | Country	Bangladesh	India	Nepal	Pakistan	Sri Lanka	Total
Coal	9.5	47.3	6.6	12.1	13.0	41.3
Natural gas	55.8	3.1	0.0	24.0	0.0	7.2
Non-road oil	4.5	6.8	-0.3	8.1	9.9	6.8
Gasoline	1.5	4.0	2.9	7.7	12.9	4.3
Diesel	9.1	8.9	9.9	7.5	14.9	8.9
LPG	0.1	3.3	3.6	0.9	5.9	3.0
Kerosene	0.3	0.8	0.3	0.2	0.1	0.7
Nuclear	0.0	1.4	0.0	2.4	0.0	1.4
Non-biomass renewables	0.2	3.2	6.0	2.5	3.8	3.0
Biomass	19.0	21.3	71.0	34.5	39.6	23.4
Total	100	100	100	100	100	100

Source: IEA.
Note: "Biomass" includes firewood.

References

Abdallah, C., M. D. Coady, M. S. Gupta, and E. Hanedar. 2015. "The Quest for the Holy Grail: Efficient and Equitable Fiscal Consolidation in India." IMF Working Paper, International Monetary Fund, Washington, DC.

ADB (Asian Development Bank). 2015*. Bangladesh Country Diagnostic Study.* Manila, Philippines: Asian Development Bank.

Ali, Mir Shabbar, Muhammad Adnan Syed, Muhammad Noman, and Syed Fazal Abbas Baqueri. 2014. "Estimation of Traffic Congestion Cost-A Case Study of a Major Arterial in Karachi." *ScienceDirect* 77: 37-44.

Almansour, Aseel, Aqib Aslam, John Bluedorn, and Rupa Duttagupta. 2015. "How Vulnerable Are Emerging Markets to External Shocks?" *Journal of Policy Modeling* 37 (3): 460–483.

Buzas, Laszlo, Erik Feyen, Owen Nie, Cindy Paladines, and Igor Zuccardi. 2021. "*Analyzing the Determinants of EMDE Local-Currency Sovereign Yields: A Simple Comparative Approach."* Washington, DC.: World Bank.

Coady, David and David Newhouse. 2006. "Ghana: Evaluating the Fiscal and Social Costs of Increase in Domestic Fuel Prices." In *Poverty and Social Impact Analysis of Reform*, edited by A. Coudouel, A. Dani, and S. Paternostro. Poverty and World Bank: Washington, DC.

Coady, David, Valentina Flamini, and Louis Sears. 2015. "The Unequal Benefits of Fuel Subsidies Revisited: Evidence for Developing Countries." IMF Working Paper 15/250. International Monetary Fund, Washington, DC.

Germanwatch. 2021. "Global Climate Risk Index." Briefing Paper January 25 2021, Germanwatch, Bonn, Germany.

Jha, Abhas. 2021. "COP26: Four Big Takeaways for South Asia." *End Poverty in South Asia* (blog), World Bank. November 23, 2021. https://blogs.worldbank.org/endpovertyinsouthasia/cop26-four-big-takeaways-south-asia .

Gopihan, Annie and Fuad Malkawi. 2021. "Transforming Karachi Into a Livable City Begins with Public Spaces." *Sustainable Cities* (blog), World Bank. December 9, 2021 https://blogs.worldbank.org/sustainablecities/transforming-karachi-more-livable-city-begins-public-spaces.

Ha, Jongrim, M. Ayhan Kose, and Franziska Ohnsorge. eds. 2019. *Inflation in Emerging and Developing Economies: Evolution, Drivers, and Policies*. Washington, DC: World Bank.

IMF (International Monetary Fund). 2000. "Debt-and Reserve-Related Indicators of External Vulnerability." Washington, DC: International Monetary Fund. https://www.imf.org/external/np/pdr/debtres/

IMF (International Monetary Fund). 2008. *Fuel and Food Price Subsidies: Issues and Reform Options.* September. Washington, DC: International Monetary Fund.

IMF (International Monetary Fund). 2019a. *Fiscal Policies for Paris Climate Strategies—From Principle to Practice*. Washington, DC: International Monetary Fund.

IMF (International Monetary Fund). 2019b. *Fiscal Monitor: How to Mitigate Climate Change*. Washington, DC: International Monetary Fund.

IEA (International Energy Agency). 2021. *India Energy Outlook 2021. World Energy Outlook Special Report*. Paris: International Energy Agency.

Li, Yi, and Margaret Triyana. Forthcoming. 2022. "Green Jobs and the Energy Transition in South Asia." Mimeograph. World Bank, Washington, DC.

Melecky, Martin. 2021. *Hidden Debt: Solutions to Avert the Next Financial Crisis in South Asia*. Washington, DC: World Bank.

Mitchell, Ian, Sam Hughes, and Samuel Huckstep. 2022. "Price Spike Caused by Ukraine War Will Push Over 40 Million into Poverty: How Should We Respond?" *Center for Global Development* (blog), March 18. https://www.cgdev.org/blog/price-spike-caused-ukraine-war-will-push-over-40-million-poverty-how-should-we-respond?utm_source=220322&utm_medium=cgd_email&utm_campaign=cgd_weekly.

Parry, Ian, and Kenneth Small. 2005. "Does Britain or the United States Have the Right Gasoline Tax?" *American Economic Review* 95 (4): 1276-1289.

Parry, Ian, Dirk Heine, Eliza Lis, and Shanjun Li. 2014. *Getting Energy Prices Right: From Principle to Practice.* Washington, DC: International Monetary Fund.

Parry, Ian, Victor Mylonas, and Nate Vernon. 2019. "Reforming Energy Policy in India: Assessing the Options." In *Handbook on Green Growth*, edited by Roger Fouquet, 361-403. Cheltenham, UK: Edward Elgan Publishing.

Parry, Ian, Simon Black, and James Roaf. 2021. "Proposal for an International Carbon Price Floor Among Large Emitters." IMF Staff Climate Note 2021/001. International Monetary Fund, Washington, DC.

Parry, Ian, Simon Black, and Nate Vernon. 2021. "Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies." IMF Working Paper 21/236, International Monetary Fund, Washington, DC.

Parry, Ian, Victor Mylonas, and Nate Vernon. 2021. "Mitigation Policies for the Paris Agreement: An Assessment for G20 Countries." *Journal of the Association of Environmental and Resource Economists* 8 (4): 797-823.

World Bank. 2022a. *Global Economic Prospects*. January. Washington, DC: World Bank.

World Bank. 2022b. *World Development Report: Finance for an Equitable Recovery*. Washington, DC: World Bank.

World Bank and IMF (International Monetary Fund). Forthcoming. 2022. *The Carbon Pricing Assessment Tool*, Washington, DC: World Bank.

World Bank Group. 2021. "CPO26 Climate Brief Country Climate and Development Reports (CCDRs)." Brief presented at the 26th U.N. Climate Change Conference of the Parties, Glasgow, Scotland, November 12, 2021. https://thedocs.worldbank.org/en/doc/c8781cc9ab9e9286930475da27f0903a-0020012021/original/COP26-Climate-Briefs-CCDRs-Final-2610.pdf

World Bank Group. 2022. "Afghanistan Private Sector Rapid Survey, A Snapshot of the Business Environment—Round 1." World Bank, Washington, DC. https://thedocs.worldbank.org/en/doc/ced9ff1a094dd92886271f532f3c9754-0310062022/original/AFG-Private-Sector-Rapid-Survey-Report-Apr-2022-Final.pdf.

Zhu, Tingting Juni, Alan Fritzler, and Jan Orlowski. 2018. "World Bank Group–LinkedIn Data Insights: Jobs, Skills and Migration Trends Methodology & Validation Results."

CHAPTER III

Reshaping Social Norms about Gender: A New Way Forward

Introduction

Despite decades of rapid economic growth, rising education, and declining fertility, women in South Asia continue to face greater disadvantages in accessing economic opportunities than in most of the developing world. Some progress has been made but improvements are slow and increasing income levels do not seem sufficient to reduce stubbornly high gender gaps across multiple dimensions in the region. Social norms about gender can be a key obstacle towards gender equality and these norms are particularly biased against women in South Asia. Many jobs and occupations are considered "men's jobs," and few women cross over (World Bank 2022). This concentration of employment in a few (mainly service) sectors exposes women to large employment losses when a crisis hits these sectors. Mobility restrictions further limit women's ability to work outside the home. Social norms hinder women's access to land, financial capital, and other assets. They also limit households' investment in women's human capital, reducing access to higher education, and constrain women's influence over decision making, inside and outside the home.

The COVID-19 crisis has exacerbated existing gender disparities. Available data indicate that men have suffered from higher COVID-19 mortality rates, but women are more heavily affected by the economic consequences of the pandemic. Women's employment was disproportionately reduced because the service sector where many women work was most affected by the lockdowns and voluntary restrictions during the pandemic (ILO 2021). Closures of female-run businesses during COVID have been more frequent than those of male-run businesses. Women's lesser access to credit also makes it harder for them to bounce back and rebuild their small businesses. Social norms result in women undertaking about three times as much unpaid care and domestic work as men (OECD 2019). Thus, women had to adjust to and accommodate the closure of daycare facilities and schools during the pandemic. Often women found themselves stretched between increased unpaid care work and reduced income. Moreover, mobility restrictions during the pandemic, coupled with high levels of acceptance of intimate partner violence (IPV) in the region, resulted in increased violence against women.

The pandemic has thus increased the importance of understanding the role of social norms in limiting women's access to opportunities in South Asia. Addressing the core obstacles to achieving gender equality and effectively protecting women in difficult times are critical to preventing setbacks from settling in, to support the economic recovery, but also, in the long term, to boost inclusive growth. Better allocation of talent has a very large growth benefit. Hsieh et al. (2019) estimate that the reduced sectoral segregation against women and African Americans' employment during the last 50 years explains between 20 to 40 percent of economic growth in the US during the same period. For South Asia, Cuberes and Teignier (2016) estimated an income loss due to gender gaps of 25 percent, with almost 40 percent of it being due to occupational gaps between men and women.

A key objective of this chapter is to focus the attention of research and policymaking on social norms, not to claim that social norms are the only, or the most important factor hindering the path towards gender equality in South Asia. More work is needed, especially on better measurement of the complex construct of social norms. This chapter, by adopting a clear definition of social norms and by providing some initial empirical quantification of their links with gender outcomes, is a first step. The next section, Section 3.1, sets the stage and compares female labor force participation rates and related forms of gender inequality in South Asia with trends in other developing regions. Section 3.2 describes in detail what social norms are, distinguishing them from personal beliefs or attitudes. It presents new evidence on the link between social norms and gender outcomes: countries with more restrictive gender norms tend to have worse gender outcomes, such as lower female labor force participation. Section 3.3 examines the potential for changing norms, and the implications for the design of policies to support women.

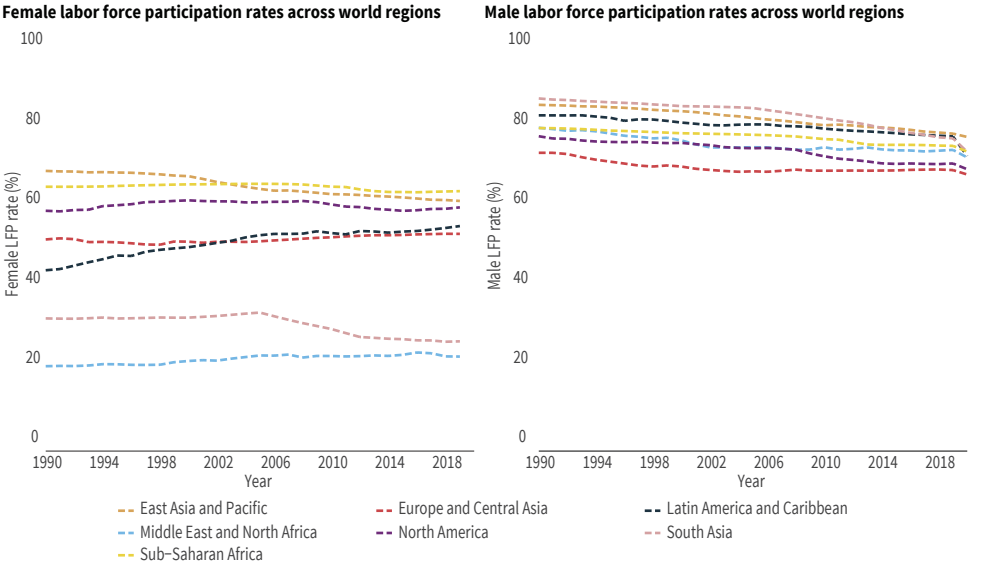
3.1 Female labor force participation and gender inequalities in South Asia

Female labor force participation (FLFP) rates in South Asia are well below the levels in all other world regions, apart from the Middle East and North Africa (MENA) (Figure 3.1, left panel).[1] In 2019, only 23.6 percent of women in South Asia were in the labor force, compared with around 50-60 percent in other regions (excluding MENA). Gender gaps in labor force participation are also greater in South Asia, given that the labor force participation of men in South Asia is not so different from the rates in other world regions (Figure 3.1, right panel).

1 This comprises women who are either currently employed or are currently unemployed but actively seeking employment. Note that the labor force participation estimates presented in this chapter are modeled ILO estimates. The ILO modelled estimates series provides a complete set of internationally comparable labor statistics, including both nationally reported observations and imputed data for countries with missing data. The employment definition following 19th ICLS is not yet implemented in the ILO modelled estimates for countries in which it would generate a methodological break, as there are not enough data points based on the new standard to produce reliable global and regional estimates.

The gender gap in engagement with the labor market is both a driver and a consequence of multiple disparities that affect women in South Asia. Parental discrimination against girls in human capital investments and women marrying at young ages reduce women's labor market engagement, while the ability to work can generate multiple benefits. Working women, when compared with women who do not work, report higher levels of agency, which, together with more resources, is associated with improvements in nutrition, health care utilization, productivity, and overall well-being for both women and their children (Donald et al. 2020; Chang et al. 2020; Bussolo et al. 2021). In addition to being a pathway to achieve gender equality in other domains (Jayachandran 2021), enabling women to pursue their comparative advantages by participating in the labor market can improve aggregate economic performance (Hsieh et al. 2019).

Figure 3.1. South Asia lags behind other world regions, apart from the Middle East and North Africa, in female labor force participation



Source: World Bank calculations based on World Development Indicators (WDI) (modeled ILO estimate for female LFP rate).
Note: The vertical axes measure the female and male labor force participation (LFP) rate, and the horizontal axes show the year of the data. LFP rate is the proportion of the population age 15 and older that is economically active: all people who supply labor (including unemployed and looking for work) for the production of goods and services during a specified period. Female(male) LFP is calculated as the percentage of females(males) ages 15+ actively in the labor market out of the total female(male) population ages 15+.

This section highlights two points. Firstly, economic drivers, such as economic growth, rising education, and declining fertility, cannot adequately explain the levels and trends of FLFP in the region. Secondly, a host of other forms of gender gaps related to economic participation—freedom of movement, social interactions, asset ownership, and parents' offspring preference—also show stagnant trends in South Asia. Thus, the large literature on the economic

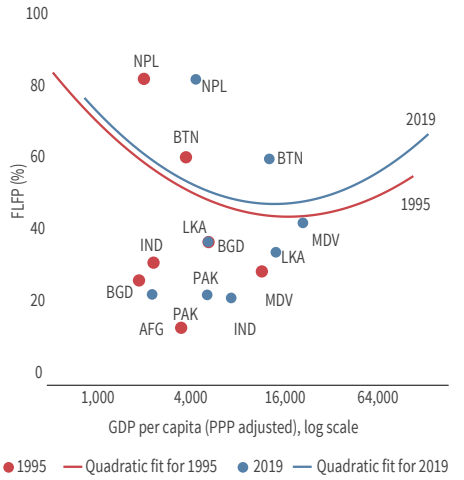
determinants of FLFP in developing countries[2] needs to be complemented by a better understanding of other barriers to women's engagement and success in labor markets.

3.1.1 Economic growth, rising female education, and declining fertility do not adequately explain female labor force participation trends in South Asia

A well-known view of the evolution of FLFP maintains that it follows a U-shaped path over the course of economic development (Boserup 1970; Durand 1975; Goldin 1995). At low levels of economic development, women participate extensively in the labor force, performing work on family farms and in family businesses. As incomes grow and countries industrialize, women's participation is reduced as the returns to income from a second earner in the family go down, demand for women's labor in agriculture declines, and women may be barred from manufacturing jobs due to social customs. Yet, as incomes continue to grow and the tertiary sector expands along with a rise in female education and a decline in fertility levels, women move back into the labor force performing service sector jobs where they may have a comparative advantage and face fewer restrictions.

The relatively low levels of FLFP in South Asia, however, are not due to South Asian countries being at a different point on the U-shaped curve relative to more developed countries. Global data indeed show that a U-shaped (quadratic) curve is the best fit for the cross-country relationship between GDP per capita and the FLFP rate in both 1995

Figure 3.2. There is a U-shaped relationship between female labor force participation and development



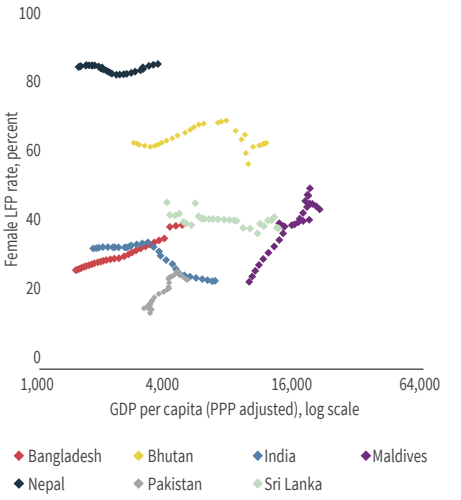
Source: World Development Indicators (modeled ILO estimate for FLFP rate).
Note: The vertical axis measures the FLFP rate, and the horizontal axis measures the logarithm of GDP per capita. The graph plots the quadratic fit of FLFP rate and GDP per capita for 210 countries (1995) and 221 countries (2019). The graph compares a) FLFP rate for 1995 on the vertical axis and GDP per capita for 1995 on the horizontal axis and, b) FLFP rate for 2019 on the vertical axis and GDP per capita for 2019 on the horizontal axis. GDP per capita is PPP adjusted at constant 2017 international USD. Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people (including the unemployed looking for work) who supply labor for the production of goods and services during a specified period. FLFP is measured as the percentage of females in the labor market out of all females aged 15+. GDP per capita 1995 data are not available for Afghanistan.

2 For reviews on this literature see Elson (1999); Heath and Jayachandran (2018); Klasen (2019).

and 2019 (Figure 3.2).[3] However, in 1995, South Asian countries other than Nepal and Bhutan displayed much lower FLFP rates for their level of development. Over time, the U-shaped curve for all countries has moved up, reflecting an increase in FLFP for the same level of development. In South Asia, however, while per capita GDP increased in all countries, FLFP barely changed in Nepal; increased in Bangladesh, Pakistan, and Maldives; and declined a lot in India.

The relationship between economic development and FLFP over 1991-2019 differed across South Asian countries, and for some, differed across time (Figure 3.3. shows the correlation of FLFP rate with per capita GDP for South Asian countries). FLFP in Nepal and Sri Lanka has barely changed despite economic development, whereas it has significantly increased in Bangladesh, Bhutan, Pakistan, and Maldives (although the relationship recently turned negative for Pakistan and Maldives). India saw a weak but positive relationship between FLFP and GDP per capita growth at levels of development roughly below US$3,500 per capita and declines beyond this point.

Figure 3.3. The correlation between female labor force participation and per capita GDP varies across countries in South Asia

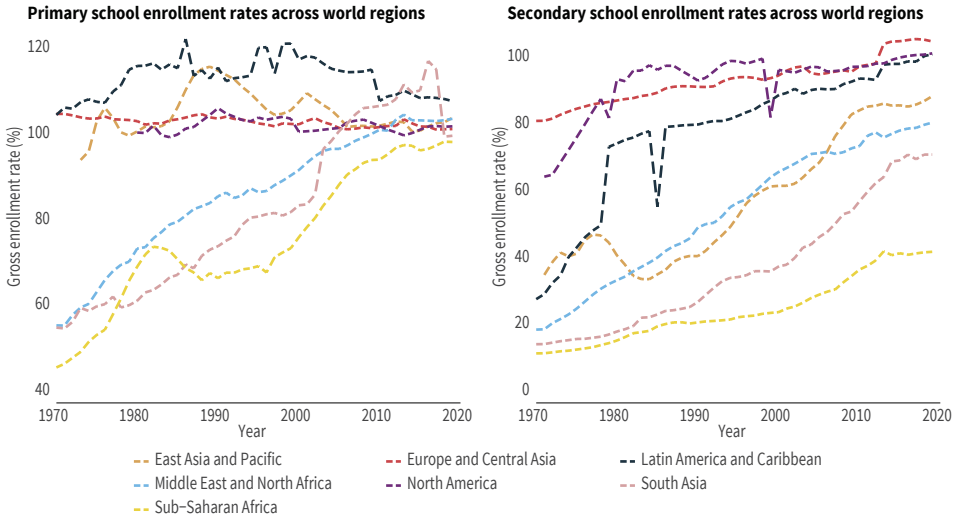


Source: World Bank calculations based on World Development Indicators and Penn World Tables Version 10.0
Note: The vertical axis measures the FLFP rate, and the horizontal axis measures the logarithm of GDP per capita. GDP per capita is PPP adjusted at constant 2017 international USD. FLFP is measured as the percentage of females in the labor market out of all females aged 15+.

Education, another key determinant of FLFP, also does not explain changes in FLFP in South Asia. In almost all developing countries, a positive correlation is observed between female education and FLFP (Psacharopoulos and Tzannatos 1989); research suggests that this relationship is also causal (see examples of experimental evidence cited in Heath and Jayachandran 2016). In South Asia, however, primary and secondary school enrollment rates (Figure 3.4) have improved dramatically over time and have either converged or gotten very close to the levels in more developed regions, without commensurate improvements in FLFP.

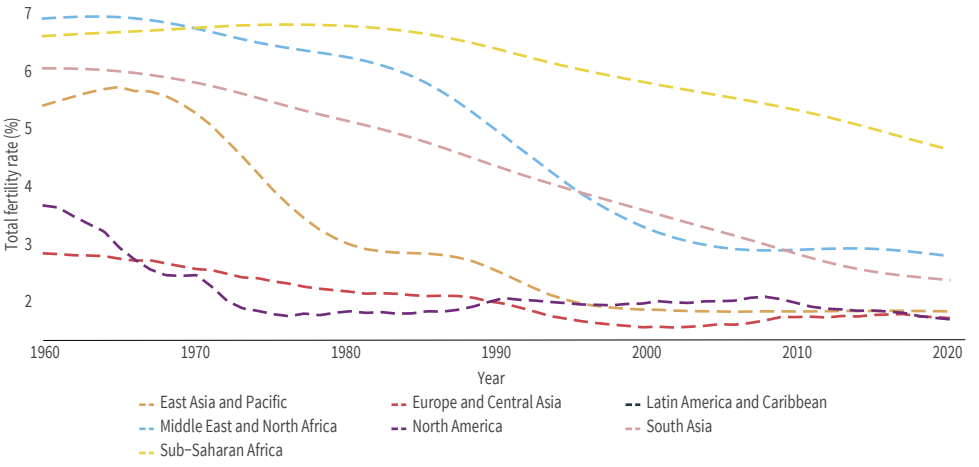
3 The empirical literature is divided as some studies (Goldin 1995) find that cross-country data support the U-shape hypothesis while others (Klasen 2019) cast doubts on its validity.

Figure 3.4. Female enrollment rates in South Asia have dramatically improved over time



Source: World Development Indicators (retrieved from UNESCO Institute for Statistics).
Note: The vertical axes measure the gross enrollment rate for primary and secondary school and the horizontal axes show the year of the data. Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.

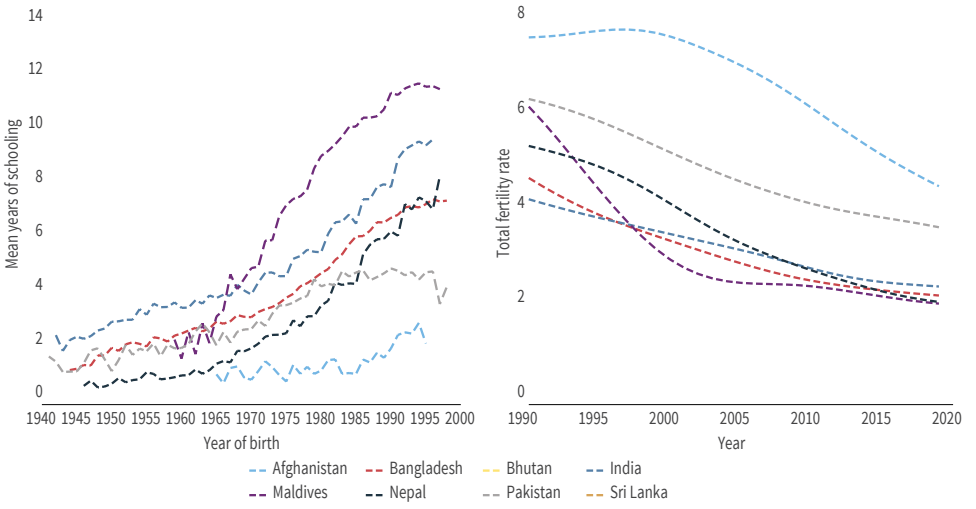
Figure 3.5. Fertility rates have declined globally, including in South Asia



Source: World Development Indicators gathered from (1) United Nations Population Division, World Population Prospects: 2019 Revision, (2) Census reports and other statistical publications from national statistical offices, (3) Eurostat: Demographic Statistics, (4) United Nations Statistical Division, Population and Vital Statistics Report (various years), (5) U.S. Census Bureau: International Database, and (6) Secretariat of the Pacific Community: Statistics and Demography Programme).
Note: The vertical axis measures the total fertility rates and the horizontal axis plots years. Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.

A similar picture emerges if we examine the long-term evolution of the gap in completed years of schooling (rather than just enrollment) of adult men and women for generations born since the 1940s in South Asia. Women are catching up with men in the number of years they spend in school, except in Afghanistan. The decline in education inequality in the region has been most remarkable for Bangladesh, followed by India and Nepal. The closing of the gender gap in educational attainment is driven by significant increases in female education (Figure 3.6, left panel). Women born before 1965 achieved fewer than 4 years of schooling, on average, in all countries. After 1965, however, educational attainment rose due to greater access and investment in education in the region (and across the world, see Barro and Lee 2013). Women born after 1990 achieved more than twice the years of education that women born before 1965 in all countries. The highest gains in access to education in the region are found in Maldives, India, Bangladesh, and Nepal, where women born after 1990 attain around four additional years of education compared to those born in 1965. In Afghanistan, gains have been lower as women born after 1990 attain fewer than two additional years of education compared to the cohorts born before 1965. Although an upward trend is evident in all countries, the average years of education of women born after the 1980s has stagnated in Pakistan.

Figure 3.6. Women's years of schooling have increased and total fertility rates have declined in most South Asian countries



Source: The figure in left panel is based on data from repeated cross-sections from the Demographic and Health Surveys (DHS) that have been combined to create pseudo panels, where individuals from specific birth cohorts are followed as they age. The figure in the right panel is based on data from the World Bank World Development Indicators.
Note: The vertical axes measure the mean years of schooling and total fertility rate for the left and right graphs. The horizontal axes plot the year of birth and the year of data for the left and right graphs. Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.

Box 3.1. Female labor force participation rates may be affected by a country's economic structure and by the prevalence of norms over women's employment in specific sectors[1]

Employment by sector differs for men and women. And some sectoral composition of employment demand is associated with a higher probability of women's overall employment than others. This can be related to the emergence or expansion of sectors that substitute home production, some of which may also create jobs for women (Dinkelman and Ngai 2022), as well as non-neutral technical change that favors female labor (Autor et al. 2003; Bhalotra and Fernández 2021).

Cross-country differences in female labor participation rates may be related to, or perhaps even driven by, differences in the sectoral shares of employment. To analyze this, we first create four groups of developing countries according to their level of GDP per capita, then divide each group into countries where the FLFP rate is higher than the median rate and those where it is lower than the median, and finally calculate the sectoral shares of total (male and female) employment (Figure 3.7). For each of the four development level categories, the sectoral composition of employment identified for the group of countries with high FLFP rates provides a benchmark against which we can compare South Asian countries. For these countries, the share of female employment is lower than that found in the corresponding sectors of the benchmarks (Figure 3.8).

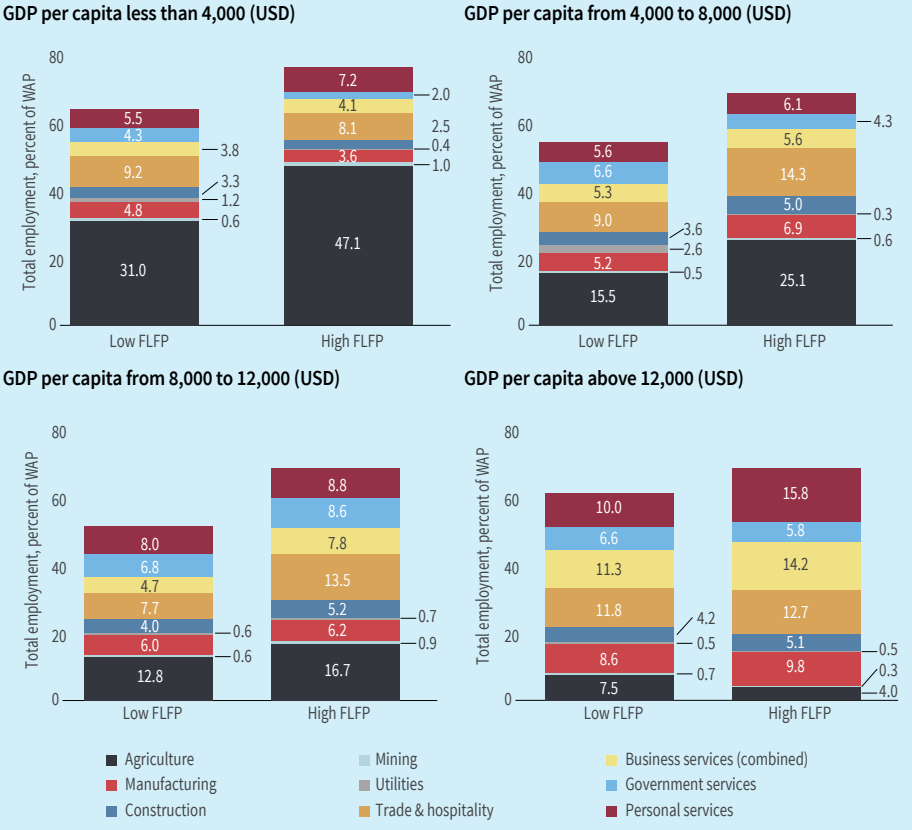
Among countries with per capita GDP between 4,000 and 8,000 US dollars[4], higher FLFP is associated with more female employment in trade and hospitality services. By contrast, the shares of working women in these sectors in the South Asian countries at this level of income (Bangladesh, Bhutan, India, and Pakistan) are relatively low.

Among countries with per capita GDP between 8,000 and 12,000 US dollars, higher FLFP also is associated with more female employment in trade and hospitality services. In Bhutan, female employment in trade and hospitality services is quite low. [5]

4 All per capita GDP measures are expressed in 2017 international US dollars.

5 In Bhutan's Labor Force Survey raw dataset, a very small number of respondents (across women and men) reported to work in personal services or in government services; this is surprising and might suggest data quality issues.

Figure 3.7. Female employment varies with countries' economic structure both between and within levels of economic development



Source: World Bank Jobs Indicator Database (JOIN).

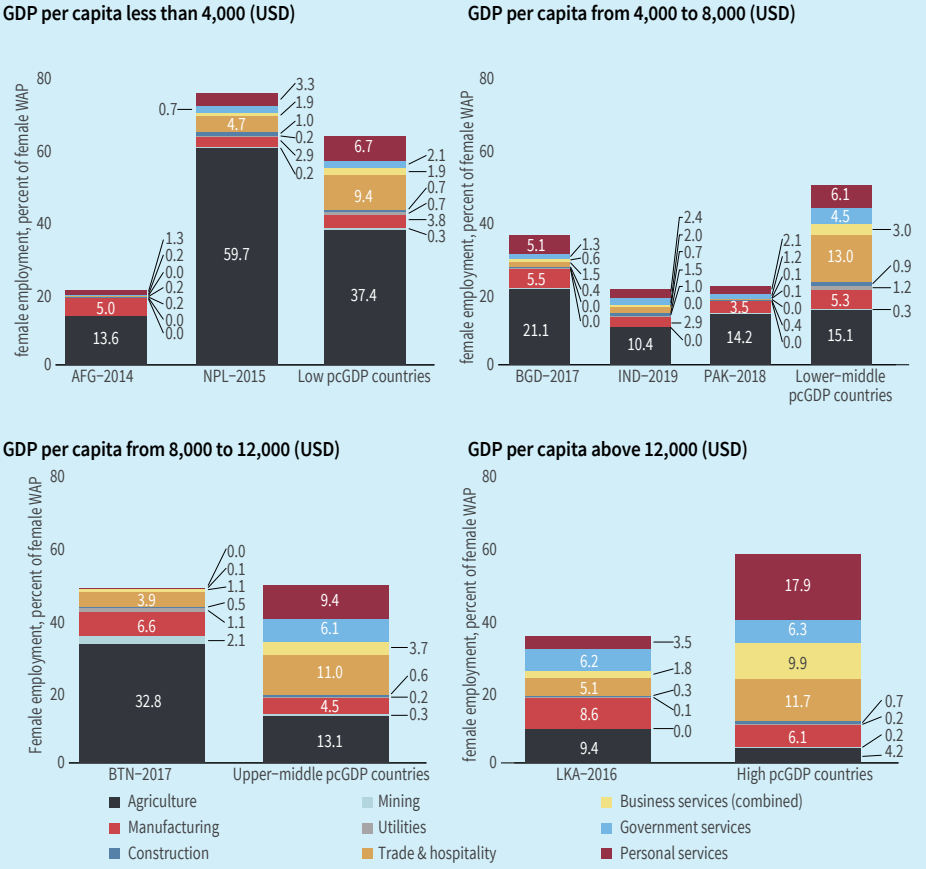
Among countries with per capita GDP above 12,000 US dollars, higher FLFP is associated with more female employment in personal services and business services, while in Sri Lanka, the share of female employment in personal services is low (one in ten in Sri Lanka compared to one in five in developing countries at this income level).

South Asian countries with GDP per capita below 4,000 US dollars (Afghanistan and Nepal) are an exception, as the share of females working in agriculture are high, while the higher than median FLFP countries at this income level also have high shares of employment in agriculture.

These results indicate that gender-specific barriers interact with a country's availability of jobs for women in certain sectors. Low female labor force participation is not

only the result of supply-side factors, such as social norms that encourage marrying at a young age and having children early, but also the result of below average expansion of sectors that create jobs that absorb women. Moreover, in some countries, barriers to female labor force participation are sector-specific because social norms operate from the demand side. Firms prefer to employ men and segregate women out of certain occupations/sectors.

Figure 3.8. Compared to countries at similar level of income, South Asian countries display lower female employment in sectors that are associated with higher FLFP



Source: Country statistics based on respective national Labor Force Surveys. Survey years differ by country: Afghanistan 2013-14, Bangladesh 2016-17, Bhutan 2017, India 2018-19, Sri Lanka 2016, Maldives 2016, Nepal 2014-15, Pakistan 2017-18. Cross-country aggregates based on data from World Bank Jobs Indicator Database (JOIN).
Note: Maldives is not included because its Labor Force Survey does not include a standard industry classification. All GDP values are calculated in 2017 US international dollars.

[1] Veronica Michel-Gutierrez and Andreas Eberhard-Ruiz from the Jobs Group contributed to this box.

The evolution of fertility rates, a third important determinant of FLFP, also cannot explain FLFP trends in South Asia. In general, a decline in fertility tends to raise FLFP, as the opportunity cost of women's time falls. However, most countries in South Asia have experienced a significant reduction in the number of children that an average woman has in her lifetime, with fertility rates now around the replacement level (Figure 3.5 and right panel in Figure 3.6). The exceptions are Afghanistan and Pakistan, where fertility rates are still above replacement level, though also declining rapidly (from, respectively, 7 and 5 children born per women in 2000 to around 4 in 2018). These declines in fertility rates are in turn driven by improvements in female education, increases in age at marriage, and declines in child mortality rates that have occurred in all countries.[6] In addition to these supply-side drivers, demand may matter as well for FLFP as discussed in the Box 3.1. below.

3.1.2 Other (norms-sensitive) gender inequalities also show stagnant progress in South Asia

South Asia exhibits gender gaps in several other dimensions that are also closely related to women's labor market participation. Like FLFP, these other forms of gender gaps also show stagnant trends and remain unaffected by decades of sustained economic growth, improvements in female education, and fertility decline.

A particularly worrying aspect of gender inequality in South Asia is the selective abortion of girls. Improvements in medical technology during the last few decades have made it possible for parents to find out if they are pregnant with a boy or a girl through cheap and reliable ultrasound scans, and then have low-cost and low-risk sex-selective abortions. This has led to a substantial gender imbalance in the newborn population in India, Pakistan, Nepal, Maldives, and Afghanistan, where many more boys than girls are born each year, over and above what would be expected naturally (Figure 3.9). In the absence of any interference by parents, typically 105 boys are born per 100 girls. However, in 2019, the male to female ratio at birth was as high as 110 boys per 100 girls in India and 109 boys per 100 girls in Pakistan. Bhalotra and Cochrane (2010) estimate that 480,000 girls were aborted per year in India alone from 1995–2005.

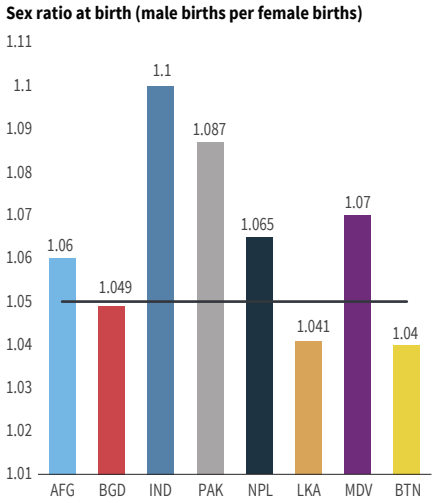
Like the trends in FLFP, disparities in the sex ratio at birth have worsened despite economic development, rising female education, and declining fertility. There is a weak relationship between the level of economic development and sex ratio imbalances (Figure 3.10), but in comparison to other countries with the same level of per capita GDP, countries like

6 Lower fertility has also contributed to higher life expectancy for women in South Asia, which has increased by an average of six years over the last 20 years. This is partly driven by improvements in reproductive health of women across all countries in the region as women in recent cohorts are less likely to die during childbirth due to lower fertility, improvements in health infrastructure, and higher rates of institutional delivery.

India and Pakistan have a higher imbalance in male to female births. In fact, the use of prenatal sex-selection has rapidly increased with the persistent decline in fertility that has taken place almost universally (see Figure 3.11 for India).

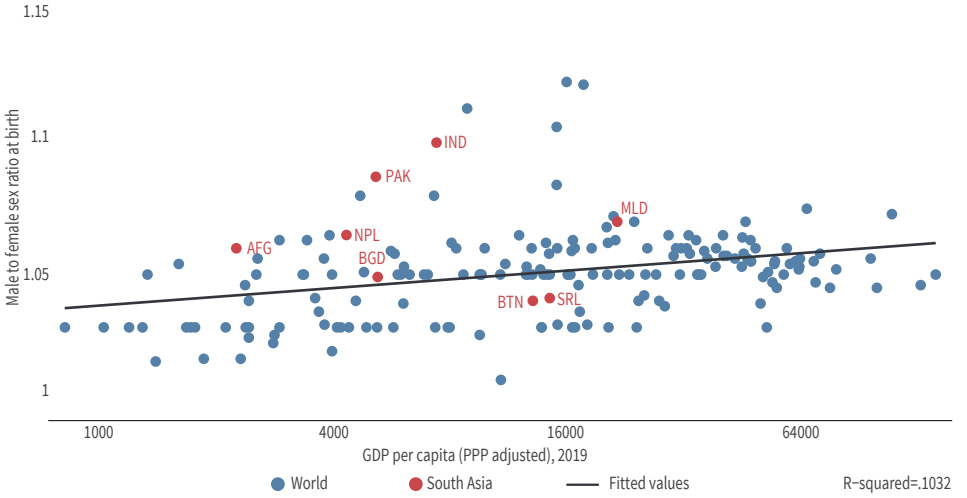
These demographic trends are closely linked with FLFP and the economic value of women relative to men in society. For instance, sex-selective abortions could be driven by parents valuing sons more than daughters due to their dependence on sons for old-age support in patrilocal societies where daughters move away from their natal families upon marriage. Improvements in women's earning potential and bargaining power relative to men have been shown to decrease sex-selective abortions of female fetuses and neglect and infanticide of girls (Brule et al. 2020; Qian 2008).

Figure 3.9. Several countries in South Asia have male-biased sex ratios at birth



Source: 2019 World Development Indicators, based on United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects: 2019 Revision.
Note: Interpolated using data for 2017 and 2022. Sex ratio at birth refers to male births per female births. The red line denotes the normal sex ratio at birth. The blue bars are based on five-year averages.

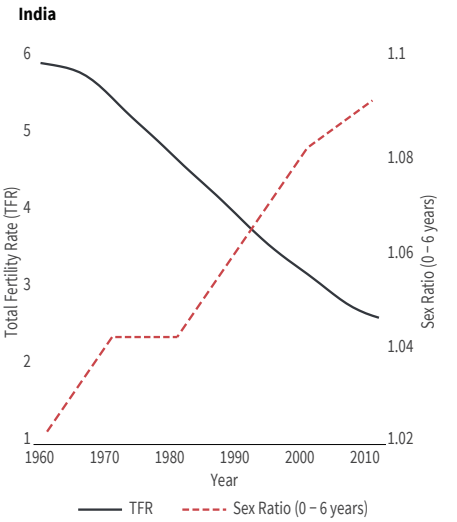
Figure 3.10. The relationship between sex ratios at birth and economic development is weak.



Source: World Development Indicators gathered from United Nations Population Division, World Population Prospects: 2019 Revision.
Note: The vertical axis measures sex ratio at birth and the horizontal axis measures the logarithm of GDP per capita for 2019. The sex ratio at birth refers to male births per female births and is measured as a five-year average. GDP per capita is PPP adjusted at constant 2017 international USD.

Women in South Asia continue to face significant constraints as they enter the marriage and childbearing stages of their lives. Despite increases in the minimum age at marriage, early marriage remains more common in South Asia relative to rest of the world. Similarly, age at first birth remains low, as women often face pressure to give birth soon after marriage to prove their "value" (Scott et al. 2021). Early marriage and childbearing in turn prevent effective human capital accumulation (Field and Ambrus 2008; Scott et al. 2021) as well as labor market attachment for young married women. The negative influence of childbearing on labor market outcomes is compounded by the unavailability of paid maternity leave of at least 14 weeks for mothers in Afghanistan, Bhutan, Sri Lanka, and Maldives and the prevalence of informal employment. This creates a conflict between LFP and childbearing for women. In fact, the dismissal of workers because they are pregnant in Afghanistan, Bangladesh, Nepal, and Pakistan is not even prohibited by law (World Bank 2020).

Figure 3.11. There is a strong inverse relationship between male-biased sex ratios at birth and fertility in India



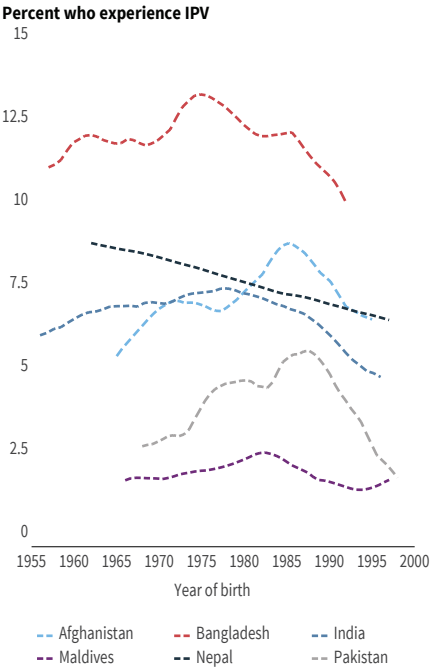
Source: The annual TFR data is from the World Bank's World Development Indicators database for 1960-2012. The child sex ratio data are from the decennial Census of India (1961-2011).
Note: The left vertical axis measures the total fertility rate, and the right vertical axis measures the sex ratio (0-6 years). The horizontal axis shows the year of the data.

Married women also face significant levels of IPV in all countries. The trend in IPV prevalence has remained stagnant in South Asia (Figure 3.12), despite legal provisions in all countries, except Afghanistan, that address domestic violence. Women's economic empowerment can result in IPV against them by their husbands, as violence is often used as an instrument of financial and psychological control by male partners to extract their wives' income (Vyas and Watts 2009) The social and legal environment often makes it difficult for victims of IPV to leave their abusive partners. For example, women do not have the same rights to divorce and remarry as men in Afghanistan, Bangladesh, Pakistan, and Maldives.

Women in South Asia, unlike men, also face significant mobility constraints and are not permitted to access places outside the home alone due to concerns about safety and the "purity" of women. A significant fraction of South Asian women practice *purdah* or *ghunghat* (wearing a head or face covering), and their social interactions are often controlled by family members, such as husbands and mothers-in-law. These restrictions lower women's ability to work outside the home and prevent them from forming social connections with

non-relatives, especially men, restricting their lives to the domestic sphere (Cheema et al. 2019). Recent literature from India (see, for example, Andrew et al. 2020; Anukriti et al. 2020; Anukriti et al. 2022; Kandpal and Baylis 2019) shows that rural married women interact with few individuals other than their household members on a regular basis, limiting access to the numerous benefits social networks provide to their members, including information about jobs (Beaman and Magruder 2012), support for entrepreneurship (Field et al. 2016), and migration opportunities (Munshi 2020). This relegation of women to the domestic sphere goes hand-in-hand with the gendered division of household labor and implies that women's contributions to the household and their provision of unpaid care work are economically undervalued. In none of the South Asian countries does the law provide for the valuation of non-monetary contributions made by a spouse in case of marital dissolution, which primarily undervalues the unpaid household care work performed by women.

Figure 3.12. The trend in IPV prevalence has remained stagnant in South Asia



Source: Based on data from repeated cross-sections from the Demographic and Health Surveys (DHS).
Note: The vertical axis measures the share of women by birth year who experience intimate partner violence (IPV). The IPV included are physical and sexual violence. The horizontal axis shows the year of births. The graph plots a local polynomial smooth of the IPV variable on year of birth

The gender gap in asset ownership also constrains women's economic participation, which, in turn, drives gender gaps in entrepreneurship and business ownership. In many developing country contexts, including in South Asia, asset ownership, especially land ownership, is primarily determined by inheritance. Although inheritance rights over parental and spousal property have been equalized between men and women in Bhutan, India, Sri Lanka, and Nepal, unequal inheritance rights are still prevalent in Afghanistan, Bangladesh, Maldives, and Pakistan.[7] Even in countries that have equalized inheritance rights, the implementation of these laws in practice is far from equal (see, for example, Deininger et al. 2013 for the case of India). Gaddis et al. (2021) shows that the gender gaps in property ownership in South Asia are quite large by global standards.

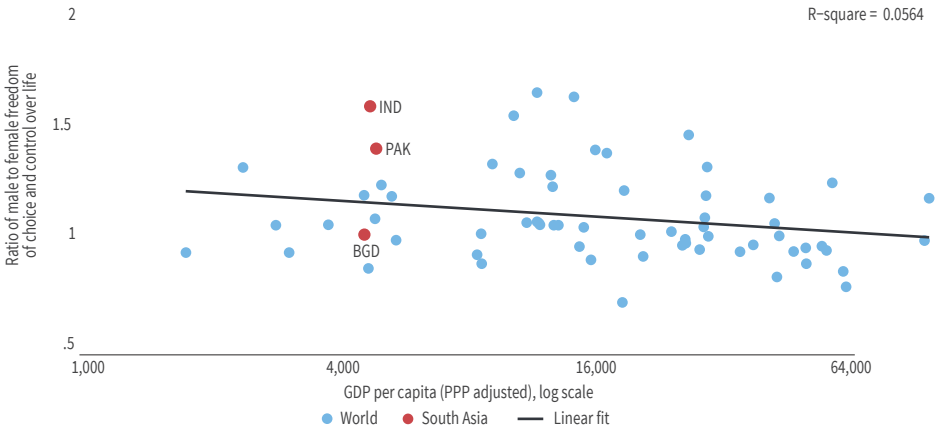
7 The World Bank's Women, Business and the Law Data (https://wbl.worldbank.org/en/wbl-data) indicates that Sri Lanka has had equal rights since 1971, while the India Hindu Succession Act was adopted in 1996, and Nepal only implemented legal changes in 2019.

Apart from financial assets, the proportion of women aged 15-49 who do not own any property (land or house), either alone or jointly, remains extremely high (WB Gender Statistics and Global Findex Database[8]).

Even when women do participate in the labor market, they face significant barriers. Apart from Bhutan and Nepal, no country in the region has a law that mandates equal remuneration for work of equal value. Legal barriers to female employment remain commonplace in much of the region through restrictions on the timing of working hours or the type of industry that women can work in (Najeeb et al. 2020).

It is therefore not surprising that women in some South Asian countries report a lack of freedom of choice and control over their lives relative to men in these countries. Figure 3.13 shows that in India and Pakistan men have more freedom of choice and control over their lives than women. Moreover, the gender gaps in India and Pakistan are greater than in countries with similar levels of per capita GDP.

Figure 3.13. In India and Pakistan, men have more freedom of choice and control over their lives than women



Source: World Value Survey (WVS), 2010-2014, 2017-2020 for freedom of choice and control over one's life and World Development Indicators, 2010-2014, 2017-2020, for GDP per capita.
Note: The vertical axis measures the outcome—ratio of male to female ratio in the share of respondents who answered 9 or 10 on a scale of 1–10, where a higher number indicates more freedom. Includes 66 countries. Waves 6 and 7 of the WVS are used, however, only the latest data is used for each country, that is, even if data for a country is available in waves 6 and 7, only data from wave 7 is included. Data for wave 6 was collected from 2010 to 2014 and data for wave 7 was collected from 2017 to 2020. The horizontal axis measures the logarithm of GDP per capita. The GDP per capita is PPP adjusted at constant 2017 international USD. The GDP per capita years corresponds to the individual years of each country's WVS survey.

8 See Demirguc-Kunt et al. (2020)

The analysis presented in this section implies that to fully understand the reasons behind low FLFP in South Asia, one needs to look beyond just the standard economic determinants of women's labor market engagement. The next section delves deeper into this argument, starting with a description of social norms; how they are measured; whether social norms in South Asia, especially those pertaining to FLFP, differ from those prevalent elsewhere, both in terms of their current levels and evolution over time with economic development; and how they influence gender outcomes.

3.2 Social Norms

Social norms biased against women have a strong correlation with gender inequality. This section starts with a discussion of what a social norm is. It highlights the important distinction between personal beliefs, or attitudes, which may have (some) influence on behavior, versus social expectations that exert (stronger) pressure through the social context in which individuals live, work, and socialize. The next subsection describes the standing of South Asian countries in the global context in terms of gender attitudes. The following subsection discusses in more detail the evolution of some of these attitudes and their correlation with gender outcomes for specific countries in the South Asia region. The last subsections show that normative social expectations, more strongly than personal beliefs, exert an influence on gender inequality. That influence is comparable to the level of development (proxied by GDP per capita) and provides strong descriptive evidence that regressive social norms in South Asia are holding back gender equality well beyond what would be expected, given the region's level of development.

3.2.1 Definition of social norms

Social norms are informal rules of behavior that dictate what is acceptable or appropriate to do in a given situation within a given social context (Cislaghi and Heise 2019; Bicchieri 2006). They influence behavior through unwritten rules of social conduct. Individuals tend to conform to a norm—that is, act a certain way—if they believe that most individuals within the group they consider their reference network, both conform to the norm and believe that everyone should conform to the norm (Bicchieri 2017).

Social norms are different than personal attitudes. Social norms rely on individual perceptions of others. In this way, they are distinct from personal attitudes, morals, and beliefs if these are unrelated to perceptions of others (Cislaghi and Heise 2018; Mackie et al. 2015). The motivating factor with attitudes and beliefs is *internal*, compared with the *external* influence of others with social norms. Unlike attitudes, social norms comprise two primary components—perceptions about how frequent or typical a behavior is within a particular reference

group (i.e., a "descriptive norm" or "social empirical expectation"), and perceptions about how a member of the group ought to behave (i.e., an "injunctive norm" or "social normative expectation") (Bicchieri 2006, 2012; Cialdini et al. 1991). Table 3.1. provides a useful example of how a social norm about early marriage can be identified. An early marriage social norm will exist in a specific society, or group within that society, if a large percentage of people share the same social belief about (a) what others do, and (b) what others think one should do. Unfortunately, most of the empirical work relies on elements of the first column of Table 3.1. namely, on non-social beliefs. The assessment of how important the role of social norms is in explaining gender inequality is thus still quite imprecise (with few exceptions such as Gauri et al. 2019).

Table 3.1. Normative and social components of beliefs

	Non-social beliefs	Social beliefs/expectations
Non-normative beliefs	Factual beliefs	Empirical expectations
Definition	*Beliefs about reality (excluding beliefs about people's behavior and thought)*	*Beliefs about what people (in a reference group) do*
Example	An older girl will not find a good husband.	All my neighbors marry off their daughters as soon as they reach puberty
Normative beliefs	Personal normative beliefs	Normative expectations
Definition	*Beliefs about what one should do*	*Beliefs about what other people (in a reference group) think one should do*
Example	I should marry off my daughter as soon as she reaches puberty.	My neighbors think that one should marry off one's daughter as soon as she reaches puberty.

Source: Bicchieri (2012). "Social Norms, Social Change." Lecture at the University of Pennsylvania-UNICEF Summer Program on Advances in Social Norms and Social Change. July. https://agora.unicef.org/course/info.php?id=2351

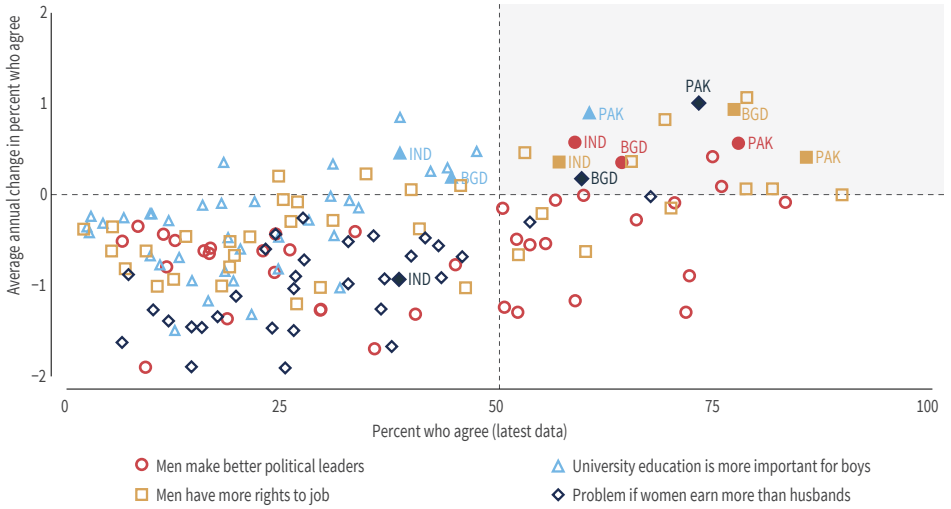
3.2.2 Attitudes toward gender

South Asian attitudes toward gender tend to be more conservative than in other regions and have become more conservative over time. We constructed an (almost) balanced panel of 39 countries for four key questions on gender attitudes from successive waves of the World Values Survey (WVS, see Annex): (a) men make better political leaders, (b) university education is more important for boys than for girls, (c) when jobs are scarce men have more right to a job than women, and (d) it is a problem if women have more income than their husbands.[9] Figure 3.14 plots the annual change of the share of people with conservative views toward gender against the same share observed in the most recent wave. For most observations,

9 The qualifier "almost'" for the balanced panel is added because, unfortunately, the same questions are not repeated for all waves of the WVS. In particular, the question "if a woman earns more money than her husband, it's almost certain to cause problems" was not included in wave 4 for the Middle East and North African countries.

the share of people with conservative views is less than 50 percent in the most recent year and has declined over the past couple of decades (bottom left quadrant). By contrast, for the three countries of South Asia surveyed in the WVS (Bangladesh, India and Pakistan), almost without exception the majority of individuals hold conservative views and these majorities have increased over time (top right quadrant). For example, 57 percent of respondents in India, 77 percent in Bangladesh, and 85 percent in Pakistan favor preferential access to jobs for men, which is linked to low female labor force participation (Kenny and Patel 2017; Fortin 2005; Seguino 2007; Giavazzi et al. 2013; Alesina and Giuliano 2014; and see Section 3.2.3), and these percentages have increased.[10] Similar levels and worsening trends are shown for the other three attitudes, with the exception of India for the view of women earning more than their husbands, which is in the bottom left quadrant.

Figure 3.14. Attitudes toward gender, low progress, or deterioration for South Asian countries

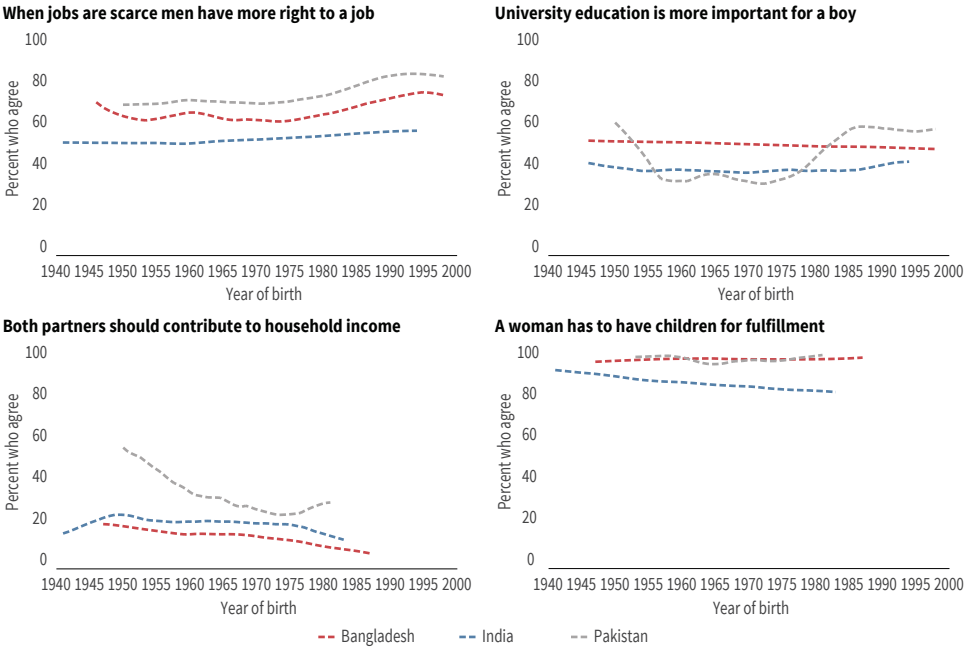


Source: World Value Survey (Waves 3, 4, 6 and 7)
Note: The vertical axis measures the annual change, in percentage points, of the share of respondents who agree that men make better political leaders, university education is more important for boys than for girls, men have more right to a job than women when jobs are scarce, or whether it is a problem if women have more income than their husbands. This annual change is calculated by subtracting the share for each variable in waves 3 or 4 from the share in waves 6 or 7 and dividing by the difference between the survey years for each country. The horizontal axis measures the most recent share of respondents who agree to the attitudes (wave 6 or 7). Wave 3 was collected from 1995-1998, wave 4 from 1999-2004, wave 6 from 2010-2014, and wave 7 from 2017-2020. Includes 39 countries: Algeria, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Brazil, Chile, China, Colombia, Egypt, Estonia, Georgia, Germany, India, Iran, Iraq, Japan, Jordan, Mexico, New Zealand, Nigeria, Pakistan, Peru, Philippines, Poland, Puerto Rica, Romania, Russia, Serbia, South Korea, Spain, Sweden, Turkey, Ukraine, United States, Uruguay, and Venezuela.

10 In the cases of Pakistan and India, the increase has been about 0.4 percentage points per year, calculated, for India, as (57-51)/17 [(wave 3 share-wave 6 share)/number years between the two waves], and (85-77)/21 for Pakistan. Bangladesh had an increase of 0.9 percentage points, calculated as (77-56)/22.

Conservative attitudes toward gender also appear to be stable, if not increasing, across generations. Bussolo et al. (2022) use repeated cross sections of the WVS to construct a pseudo panel and assess the attitudes of different cohorts, starting from those born in 1940s. In Bangladesh, India, and Pakistan, the shares of people agreeing with conservative attitudes have remained remarkably high across cohorts or even increased in younger cohorts; people born in 1940 had similar attitudes to those born 60 years later (Figure 3.15). Attitudes toward the sharing of household financial responsibility between spouses seem to have become even more conservative across generations. The most progressive position is that toward education, where the population is divided about 50-50 between agreeing and disagreeing that university education is more important for boys than girls. These stagnant, or somewhat deteriorating, trends in gender attitudes closely resemble the trends observed for gender outcomes discussed in section 3.1 (see figures 3.2 and 3.3, for example), suggesting a link between attitudes and gender outcomes. This point is discussed in more detail below in subsection 3.2.3.

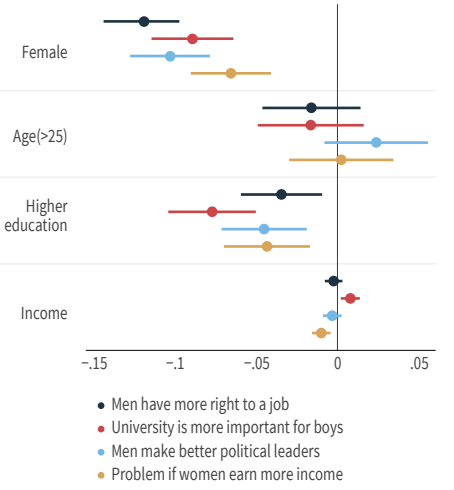
Figure 3.15. Even in the long run, attitudes toward gender in South Asia are remarkably stable



Source: Based on repeated cross section of the World Value Survey.
Note: The vertical axes show the share of women who agree with the four attitude statements. The response options for the first three statements were "agree strongly", "agree," "disagree," and "strongly disagree," and include "neither agree nor disagree". For the last statement, the possible responses were simply "necessary" or "not necessary". The share of agreeing women is thus calculated by summing all those who either "agree" or "strongly agree," or say "necessary," and dividing these sums for the sum of all possible responses. The horizontal axes show the year of birth. The graphs plot a local polynomial smooth of the attitude variable on year of birth.

Despite large and growing majorities holding conservative attitudes toward gender, and little difference in attitudes across age cohorts, there are some significant differences in attitudes between men and women and by education and income.[11] Women are 12 percentage points less likely than men to believe that men have more right to a job when jobs are scarce—and more educated women are 3 percentage points less likely than those with less education to hold that belief (Figure 3.16). Similarly, women are 9 percentage points less likely than men, and the more educated are 8 percentage points less likely, to believe that university education is more important for boys than girls; women are 10 percentage points less likely than men and the more educated are 5 percentage points less likely to believe that men make better political leaders than women; and women are 7 percentage points less likely and the more educated are 4 percentage points less likely to believe that it is a problem when women earn more than husbands. The results are less uniform for self-reported household income scale. The beliefs that men have more right to a job and men make better political leaders are not significantly different across income groups. However, respondents who reported higher incomes are 1 percentage point more likely to believe that university education is more important for boys, but they are 1 percentage point less likely to believe it's a problem if women earn more than husbands.

Figure 3.16. Higher educated people and women tend to have less restrictive attitudes toward gender



Source: Authors' calculations using data from the World Value Survey (wave 6 and 7)
Note: This figure shows the coefficients from the regression of the attitude variables on gender, age, education, and income. Age is a dummy variable indicating that the respondent is older than 25 years. Higher education is a dummy variable indicating that the respondent attained higher secondary education or tertiary education. The income variable is a self-reported scale ranging from 1 to 10, where 1 indicates the lowest income group and 10 is the highest group in one's country. Countries included are Bangladesh (2018), India (2012), and Pakistan (2018). The regression includes country fixed effects.

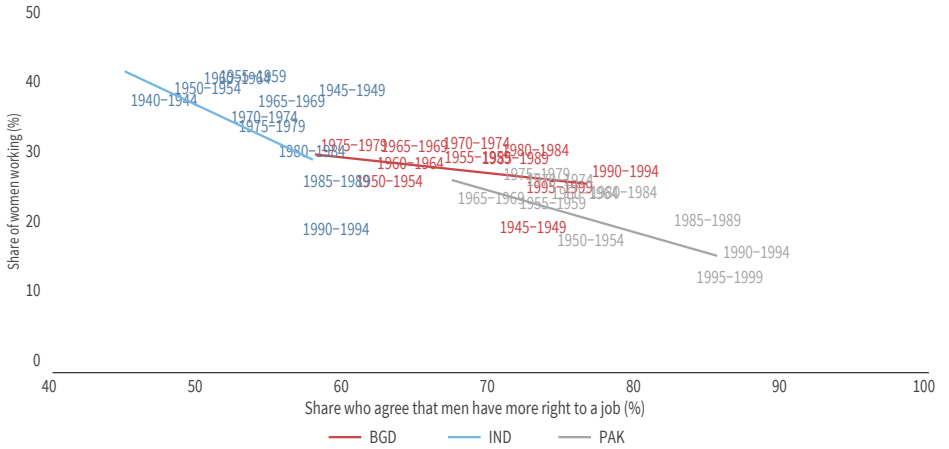
3.2.3 Attitudes and gender outcomes

The attitudes toward gender discussed above are strongly connected to women's participation in economic activities. A bidirectional influence is likely, whereby gender outcomes are supported by more progressive gender views, and these views are becoming more open as gender gaps are closing. Fortin (2005) uses data from three rounds of the

11 Notice that the regressions include country fixed effects, which implies that we estimate within-country differences.

World Values Survey (1990, 1995, and 1999) across 25 OECD countries and finds that anti-egalitarian views have a strong negative association with FLFP rates and are associated with higher gender pay gaps. Similarly, perceptions around women's roles as homemakers also showed a negative relationship with FLFP, suggesting that traditional gender roles within the household also play a role (Giavazzi et al. 2013; Alesina and Giuliano 2014). This relationship also appears to hold across South Asian countries. Bussolo et al. (2022)'s analysis of WVS data from Bangladesh, India, and Pakistan across multiple time periods and cohorts indicates a clear negative association between women's employment rate and the gender attitude about men having a greater right to jobs when they are scarce (Figure 3.17).

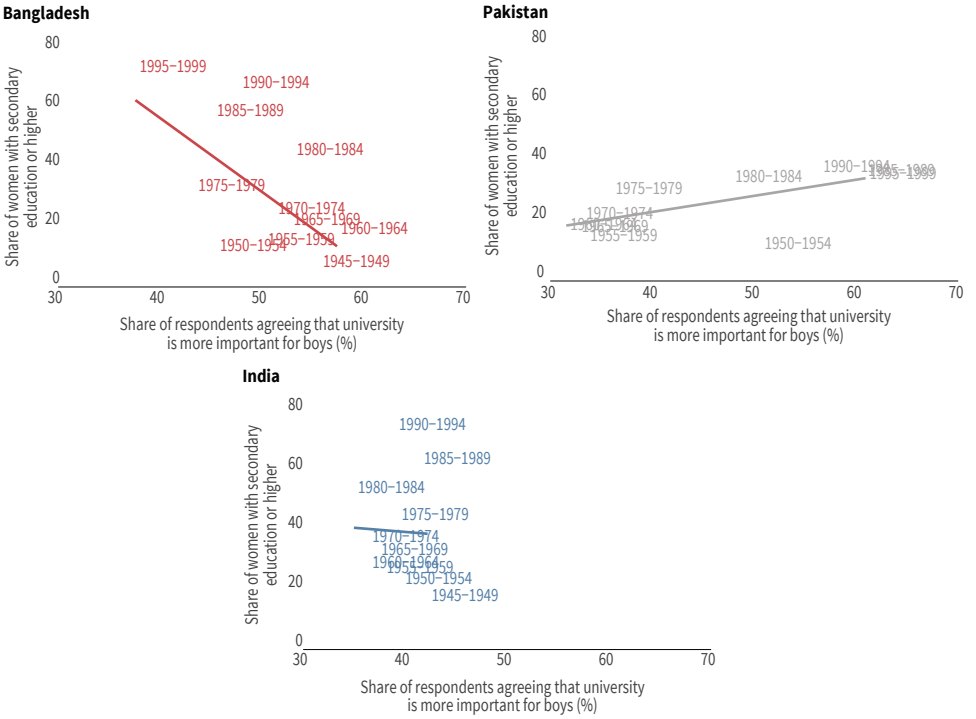
Figure 3.17. Attitudes biased against women's right to jobs are negatively correlated with female employment



Source: World Value Survey and Demographic and Health Survey.
Note: The correlation coefficient (with observations grouped in five birth years) of being employed and agreeing that when jobs are scarce, men have more right to a job than women is -0.36 for Bangladesh, with a 95 percent confidence of -0.787 to 0.311; -0.57 for India with a 95 percent confidence interval of -0.872 to 0.045; -0.76 for Pakistan with a 95 percent confidence interval -0.941 to -0.255.

Other attitudes related to women's employment are also observed as conservatives. As discussed above, data from the last available wave of the World Values Survey in South Asia show that there is still strong agreement with views such as *"Men make better executives than women do"* (over 70 percent of agreement across Pakistan, Bangladesh, and India). With regard to whether working women can build relationships with their children as good as those of stay-at-home mothers, less than 23 percent of women and 13 percent of men in Pakistan in 2001 agreed, while agreement reached 50 percent in Bangladesh and India. Overall, there seems to be a link between these prevalent conservative views around women's role in the labor force and the low economic participation of women in the region.

Figure 3.18. Correlations between female participation in higher education and attitudes toward women's education vary across countries



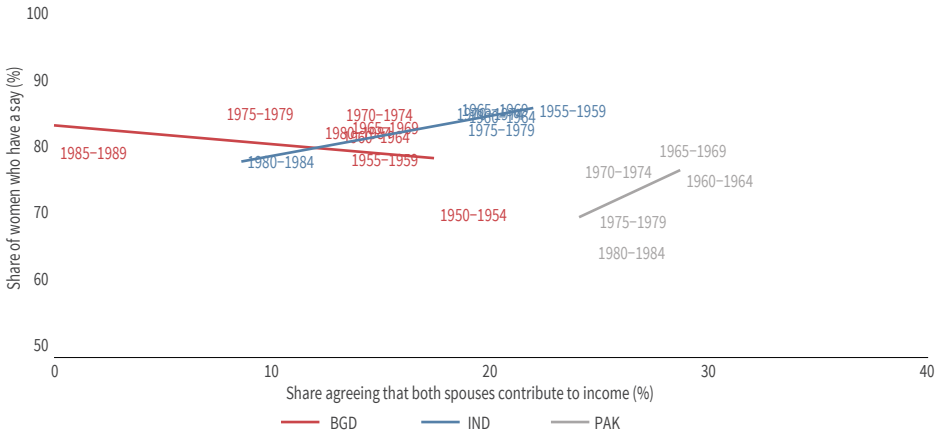
Source: World Value Survey and Demographic and Health Surveys.
Note: The vertical axes measure the share of women with secondary education and higher. The horizontal axes measure the share of repsondents agreeing that education is more important for boys than girls. The correlation coefficient (with observations grouped in five years birth cohorts) of the level of education and agreement that university education is more important for boys is -0.63 for Bangladesh, with a 95 percent confidence interval of -0.892 to -0.044; -0.03 for India with a 95 percent confidence interval of -0.650 to 0.608; and 0.67 for Pakistan with a 95 percent confidence interval of 0.066 to 0.913

Studies of the relationship between attitudes toward gender and outcomes in terms of education and agency, which are also linked to labor force participation (see Section 3.1), show mixed results (Kenny and Patel 2017). The relationship between attitudes and educational attainment, areas in which South Asia has made significant strides, is not straightforward. A cohort analysis across multiple time periods shows a strong negative association between the share of women with a secondary or higher education and the share of respondents who agree that "*University is more important for boys than girls,*" but only in the case of Bangladesh (Figure 3.18). In this country, more recent cohorts appear to hold more progressive views and higher levels of education. The correlation, however, is not present or is in the opposite direction for India and Pakistan. In India, recent cohorts have higher levels of education, despite attitudes staying mostly unchanged. And in Pakistan, even when attitudes become less progressive, the share of women receiving higher education increases. The persistence of regressive gender attitudes has, seemingly, not been a binding constraint for women's educational

outcomes. This may be due to the role of extensive policy action, such the Punjab Education Sector Reform Program in Pakistan. The program, which included a cash transfer for girls that was conditional on in a government girl's school and on maintaining a minimum attendance level of 80 percent, had a significant impact on the number of years of education for girls who received transfers (Chaudhury and Parajuli 2006; Bussolo et al. 2022).

The relationship between attitudes and outcomes around women's agency and motherhood is similarly less predictable across countries. In theory, financial empowerment can increase the agency of women in the household, so that women who contribute financially to household income are more likely to participate in household decision making. The share of respondents who agree that both spouses should contribute to household income is generally low in all three countries—less than 40 percent—with the share decreasing with younger cohorts. The correlation between the attitude toward shared economic responsibilities and agency is positive in the cases of India and Pakistan, while no significant association is found for Bangladesh (see Figure 3.19).

Figure 3.19. Women agency and spousal co-responsibility in income generation



Source: World Value Survey and Demographic and Health Surveys.
Note: The vertical axes measure the share of women who have a say in at least one of three household decision. The horizontal axes measure the share of repsondents agreeing that both spouses should contribute to household income. The correlation coefficient (with observations grouped in five years birth cohorts) of having a say in at least one household decision and agreeing that both spouses should contribute to household income is -0.3 for Bangladesh with a 95 percent confidence interval of -0.830 to 0.511; 0.92 for India with 95 percent confidence interval of 0.429 to 0.991; and 0.50 for Pakistan with 95 percent confidence interval of -0.681 to 0.960.

Similarly, the relationship between attitudes toward the importance of motherhood and the average age when women first have a child differs across countries. The onset of motherhood has been strongly linked to the withdrawal of women from the labor force and their selection into casual work or more flexible jobs that allow time for childcare. Deep-seated beliefs about women as mothers are evident in Figure 3.15, where, across countries and cohorts and over time, more than 80 percent of respondents agree that women need to have

children to be fulfilled. Correspondingly, the average age of women at their first birth has remained mostly stable at around 17 to 18 years old in Bangladesh and above 20 years of age in Pakistan. In India, the slight increase in age at first birth is mirrored by a corresponding decline in the share of respondents who agree that women need to have children to be fulfilled; India is thus the only country with a statistically significant negative correlation between age at first birth and the attitude toward motherhood.

3.2.4 From Attitudes to Social Norms

A recent survey with data on social norms provides further insight into the relationship between norms and gender outcomes. The empirical analysis so far has focused on personal beliefs, or attitudes, one of the pieces that make a social norm, largely because these attitudes are what has been collected to date in existing surveys. While personal attitudes can be useful proxies for social norms, the social elements of norms (what I think others believe in, and what I see others do, see table 3.1) have been less explored. A recent global survey,[12] which measures both *personal* beliefs, or attitudes, and the *social* expectations toward gender equality, provides some information on the relationship between the two. The distinction between personal attitudes and social expectations is important because assuming that the former is a close substitute for the latter may potentially lead to an underestimation of the strength of social norms and their link with gender inequality.[13]

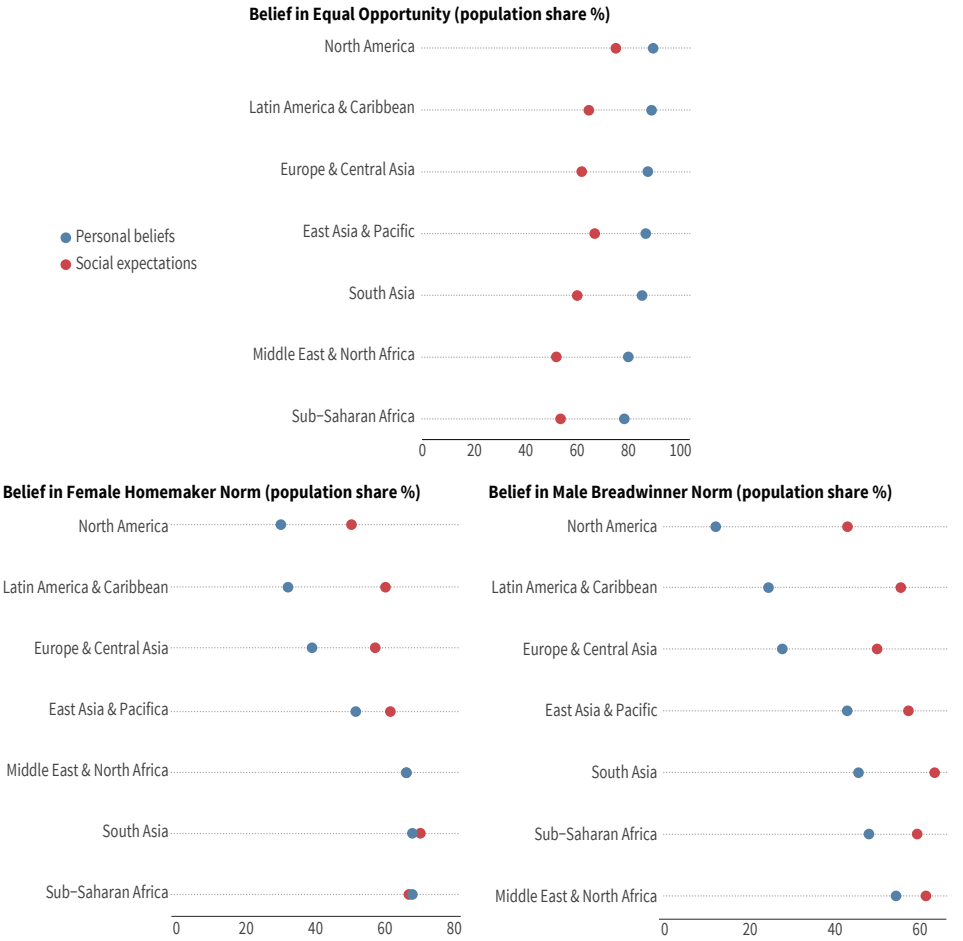
The survey shows that social expectations of gender roles tend to be more conservative than individuals' personal beliefs. Respondents were asked about their own agreement with various statements concerning the role of women in the household (personal beliefs) and how many, out of 10 neighbors (taken as a reference group), would agree with the same statements (social normative expectations). Specifically, respondents were asked to report how strongly they agree or disagree with the following statements (a) Equal Opportunity: *"Men and women should have equal opportunities (e.g. in education, jobs, household decision-making),"* (b) Female Homemaker norm: *"Woman's most important role is to take care of her home and children,"* and (c) Male Breadwinner norm: *"Household expenses are the responsibility of the man, even if his wife can help him."* Social expectations of the reference group are more conservative across all three statements compared to people's own personal

12 The Facebook (2020) Survey on Gender Equality at Home, is conducted in partnership with, CARE, Ladysmith, the World Bank, and UNICEF. See appendix for further details.

13 The gap between personal belief and social expectations is commonly referred to as *pluralistic ignorance*. Individuals privately hold an opinion but incorrectly believe that most other people do not share that opinion and, almost universally, believe that beliefs held in their social surroundings are more conservative than they are themselves. In societies that experience pluralistic ignorance, there is a problem of coordination, and people often end up acting against their own beliefs in order to conform to misperceived social norms (Katz et al. 1931; Bicchieri 2012, 2016; Bursztyn et al. 2020; Duque 2022).

beliefs (Figure 3.20). As discussed in Section 3.2.1, if the "external" pressure from the reference group matters for individuals' behavior, then gender outcomes may be more strongly correlated with social expectations of the reference group than with people's own personal beliefs. This gap between social expectations and personal beliefs is not only true for South Asia but also across all other regions in the world. Note also that, for one statement, "*A woman's most important role is to take care of her home and children*," there is a convergence for South Asia about what people believe and what they assume others' beliefs are, at least when regional aggregates are considered, as in Figure 3.20.

Figure 3.20. The gap between (more liberal) personal beliefs and (more restrictive) social expectations varies across world



Source: Survey on Gender Equality at Home.
Note: Share of population who hold personal beliefs about the above normative statements are calculated as the regional averages that "agree" or "strongly agree" with the respective statements. Social expectations are calculated as the share of the reference group believed to agree with the above normative statements on average for each region.

Compared to other regions, South Asian countries also appear to have the most conservative normative expectations around women's and men's roles within the household (as indicated by expected agreement with the statements "*A woman's most important role is to take care of her home and children,*" and "*Household expenses are the responsibility of the man, even if his wife can help him.*") These overwhelmingly conservative expectations about what other people in one's immediate social network consider to be appropriate roles for men and women—for a woman to focus on her family and for a man to be the provider—can exert pressure on both men and women, but especially women, to not deviate from the norm. In Afghanistan, Bangladesh, and Pakistan, personal beliefs are even more conservative than social expectations when it comes to the role of women as mothers and homemakers. This suggests that a woman's decision to stay home instead of going to work may not only respond to what she (and her family) think is the correct behavior, but also what they think society expects it to be a correct behavior, and in the behavior of other women around them; and understood as a social and individual internalized preference.

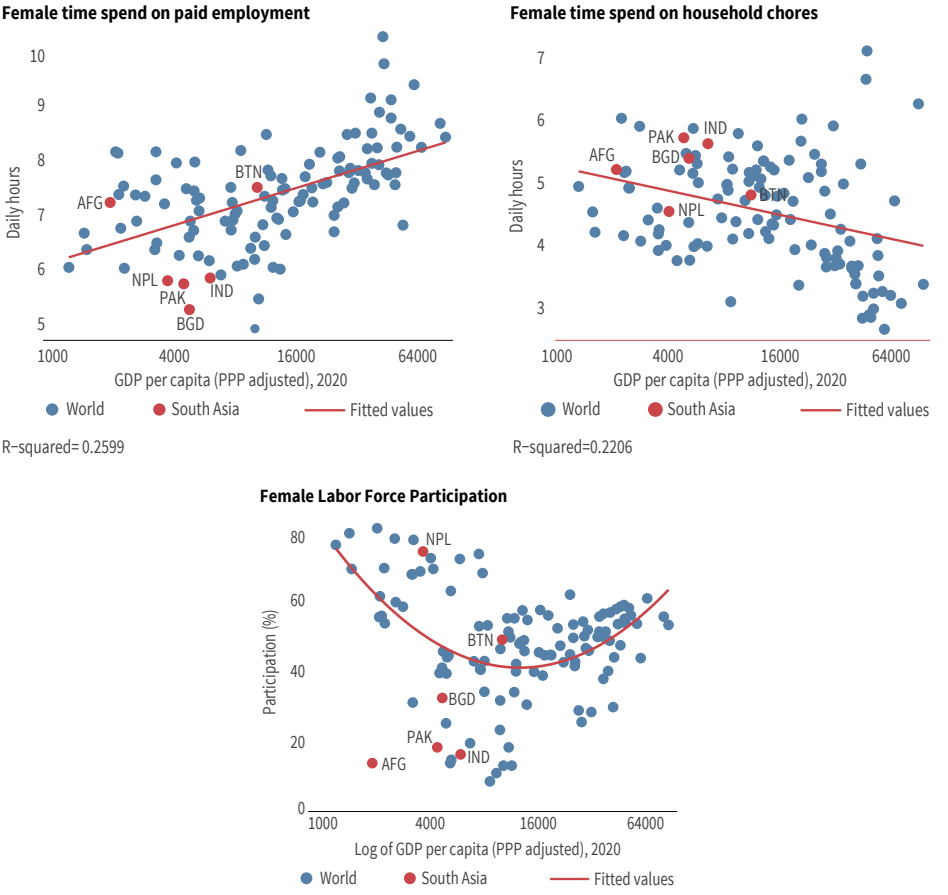
As in the case of the personal attitudes from the WVS, there is heterogeneity across socioeconomic groups within South Asian countries concerning social expectations of appropriate gender roles. Identifying which groups have more conservative views and which have less can be important when designing policies. The first clear, and most remarkable, difference is between men and women. As shown in appendix Table 3.2., men are less likely to support equal opportunity and more likely to believe in the traditional gender roles. Men in South Asia are 10 percentage points more likely to believe that women's place is in the household and 20 percentage points more likely to believe that men should financially provide for the household. Women have more progressive beliefs overall but expect their neighbors to be considerably more conservative (compared to men's social expectations) when it comes to equal opportunity and the role of women as mothers and homemakers.

3.2.5 Social Norms and Gender Outcomes

This section uses regression analysis to explore the relationship between gender outcomes, economic development, and normative beliefs about the gender division of labor in the household.[14] The analysis proceeds in stages. We first show that gender outcomes are positively related to economic development. We then show that normative beliefs about household labor division between men and women explain cross-country deviations from this average relationship and that this residual heterogeneity is explained more by the normative beliefs others are assumed to hold than people's own personal beliefs.

14 This section is based on the background paper Bussolo and Warrinnier (2022).

Figure 3.21. The level of development influences women's time use for household chores, paid employment, and labor force participation



Source: Measures of self-reported time use are calculated from the Survey on Gender Equality at Home. Data on FLFP are retrieved from World Development Indicators.
Note: The horizontal axes measures hours that women spend on household chores (left), paid employment (middle), and labor force participation (right). The horizontal axis measures the logarithm of GDP per capita, 2020. The GDP per capita is PPP adjusted at constant 2017 international USD

Economic development is positively related to gender outcomes. For the first task, we estimate the relationship between per capita GDP and subjective[15] measures of the time women spend on household chores and paid employment[16] (Figure 3.21). At higher levels

15 Subjective perceptions of time use are not the best practice for collecting this variable, and mismeasurements likely affect these data.

16 In the Gender Equality at Home Survey women are asked how many hours per day they spend on household chores and working for pay on a typical day. In the question it is clarified that work for pay can be any kind of business, farming, or other activity to generate income.

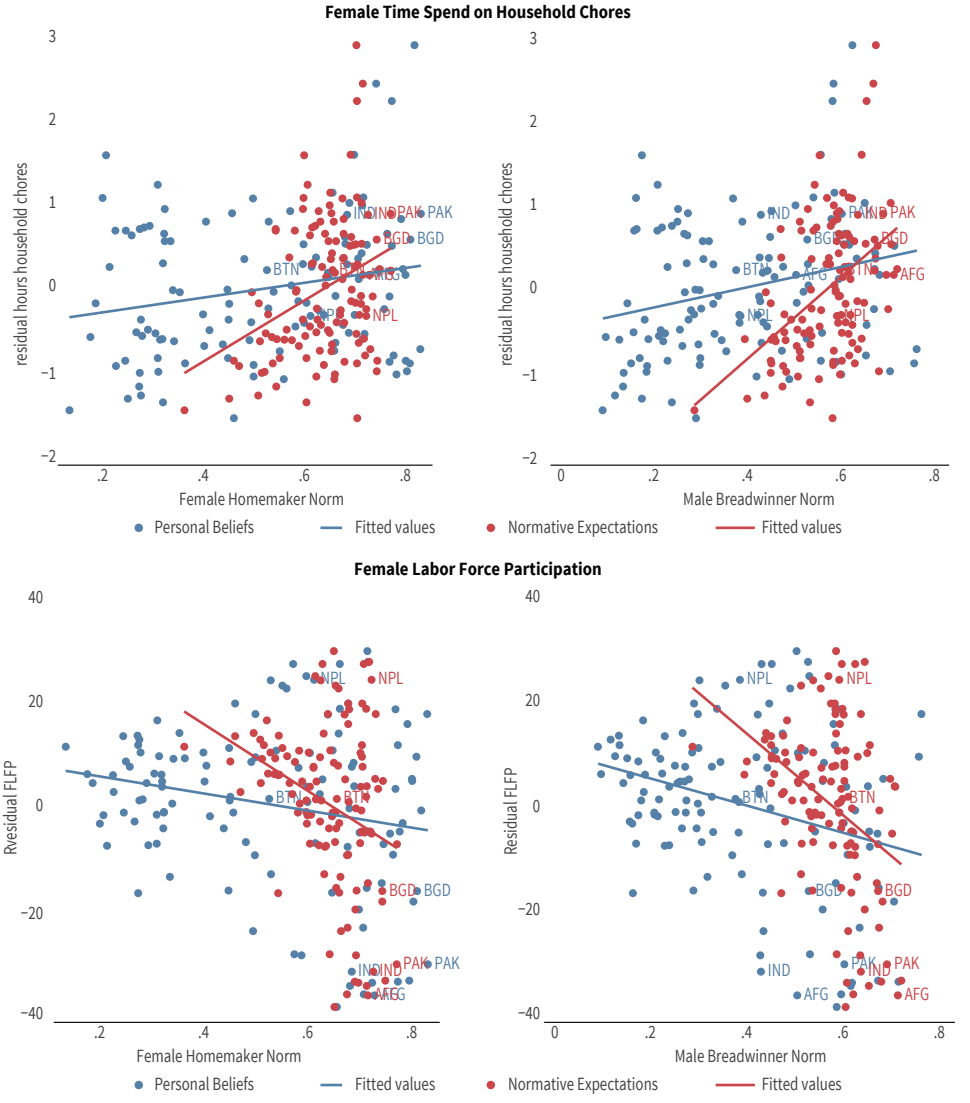
of development, women tend to spend less time doing household chores and more time in paid employment. We also estimate the relationship between GDP per capita and female labor force participation and find the same U-curve discussed in Section 3.1. for the sample of countries in the 'gender equality at home' survey. But a lot of variation around these regression lines remains unexplained, and, specifically, most South Asian countries deviate from these lines.

Normative beliefs about the gender division of labor in the household are significantly related to gender outcomes, after controlling for the level of development. In the next step, a series of country-level regressions are run where women's time use on either household chores or paid employment and female labor force participation are the dependent variables, and the level of development (log of GDP per capita) and beliefs about household labor division are used as controls. Countries with more conservative views tend to have worse gender outcomes conditional on their level of development. In countries where a large share of the population believes that a woman's place is in the household, women are significantly more likely to spend time on household chores and less likely to join the labor force. Similarly, countries where a large share of the population believes that men should be the family breadwinner have significantly lower female labor force participation. Across countries, a 10 percentage point lower share of conservative social expectations about gender labor divisions in the household is associated with seven percent point higher female labor force participation.

To graphically summarize these regression results we plot residual gender outcomes against population shares of beliefs about the gender division of labor in the household. We calculate the residual gender outcomes by first regressing the gender outcomes on per capita GDP and saving the residuals. These residuals represent how much more or less time women spend on household chores or in the labor market compared to women in countries with the same level of development. In South Asia the female labor force participation is 15 percent lower compared to equally developed countries, and women in India and Pakistan spend around an hour more per day on household chores than countries with comparable per capita GDP. The results from this procedure are shown in the scatter plots and regression lines in Figure 3.22.

These scatter plots emphasize three important points. First, normative beliefs about the gender division of labor in the household can explain some important part of the gender gaps in participation in economic activity conditional on the level of development. For example, in the top left panel, positive residuals for hours spent on household chores (after we have accounted for the level of development) are found for countries with the most conservative normative beliefs (the regression line has a positive slope). Similarly, lower FLFP rates are found in this same group of countries. Second, social normative expectations display a

Figure 3.22. Social norms account for the gap in women's engagement in the economy and women's time use conditional on level of development



Source: Data on personal beliefs, social expectations, and self-reported time use come from the Survey on Gender Equality at Home. Data on FLFP is retrieved from World Development Indicators.
Note: Personal beliefs are calculated as the share of the population that "agrees strongly" or "agrees" with the normative statement on gender labor division in the household for women as mothers and homemakers (Female Homemaker Norm) and men as financial providers (Male Breadwinner Norm). Social expectations are calculated as the share of the reference group believed to agree with the respective normative statements. Residual hours household chores are the residuals saved after regressing the number of hours women report to contribute to household chores on per capita GDP (log). Residual FLFP are the residuals saved after regressing the female labor force participation rate on per capita GDP (log) and its square.

stronger link with gender outcomes than do personal beliefs, as the regression lines have a significantly steeper slope. This is also reflected by the larger share of variance explained by regressions when the social expectations are used as controls vis-à-vis those with personal beliefs.[17]

The third point is about South Asia. With few exceptions, conservative beliefs about household labor division in South Asian countries account for their deviations from the expected gender gaps given their level of development. Assuming perceptions in South Asian countries about men's role as breadwinner were at levels similar to those of countries at the same income level (i.e. simulating that South Asian countries share would move from 65 percent to 60 percent) this would be associated with an increase of five percentage points in the share of women joining the labor market and a reduction of about 30 minutes in the time women spend on household chores. Closing the gap between the social expectations of men as breadwinners (65 percent) and the actual personal beliefs (47 percent) in South Asia would be associated with an increase of 14 percentage points in female labor force participation and a reduction of about an hour of female labor spend on household chores. No such gains are associated with closing the gap between social expectations and personal beliefs with respect to women as mothers and homemakers, given that these converge closely for South Asia.

These results have important implications for the effectiveness of policy interventions aimed at inducing change in social norms, as discussed in more detail in the next section.

3.3 Taking gender norms into account when designing policies

Policy changes can impact norms and propel improvements in gender outcomes. Observed differences in women's economic participation, changes in beliefs and values, and legal adjustments around the world and in South Asia indicate that norms do shift, even if their actual change is difficult to measure given that time series data on norms do not yet exist. However, the paucity of changes in observed outcomes in South Asia signals the need for policy action. These policies can accelerate change and promote new behaviors and attitudes that are more supportive of women's economic participation and of gender equality. This section discusses how social norms change and persist, with the aim of identifying channels for policy action and intervention. Then it highlights a few selected interventions (whether large-scale policies or specific programs) whose effectiveness in promoting gender equality has varied depending on their level of attention to gender norms.

17 R-squares for different specifications with personal beliefs range from 0.05–0.09, while R-squares for specifications with social expectations range between 0.10-021.

3.3.1 Persistence and change of social norms

Regressive gender norms may persist for several reasons. Gender norms may become embedded in institutions such as legal frameworks. For example, marital property laws that give husbands the control over common assets. More broadly, such norms may be maintained due to conformity traps.[18] Moving from a bad societal and economic equilibrium to an improved one, where investment in and returns to human capital are accessible to women and men equally, often means changing institutions as well as societal and power dynamics, as gender social norms are rooted, or embedded, to different degrees within social contexts (Cislaghi 2020). This challenge is particularly difficult in South Asian countries, due to the strength of the norms they upheld and their low tolerance for deviant behavior.[19] Difficulties in changing regressive gender norms may partly be due to the important role family and communities play in societies that are mostly rural, combined with patrilocality (women moving to live with her spouse's family) and patrilineality (strong value favoring sons for inheritance)[20] The persistence and limited change of practices such as early marriage, preference for sons, and dowry payments are reflections of these norms.

Some regressive gender norms are rooted in historical practices that are no longer relevant. Some norms originally may have had a rationale in protecting women from hardships or risks or may reflect old economic relationships. Observed gender differences in labor force participation can be traced back to traditional agricultural practices (Alesina et al. 2013; Giuliano 2020). Women's traditional specialization in home production might stem from a comparative male advantage in performing more physically demanding tasks. Dowry payment might have its roots in agricultural societies where women played a more limited productive role compared to men (Giuliano 2020). But this cannot explain its persistence today, when production has shifted from agriculture, agriculture has increased in mechanization, and education levels of women have increased, thus reducing the cost of "taking a woman" in marriage. Dowry persistence shows how a norm has shifted from an original differential in returns to reflect societies' valuing of sons more than daughters, and, more generally, women less than men.[21]

18 Andreoni et al. (2017) define conformity traps as those that keep groups and individuals in a bad equilibrium despite knowledge of inefficiency and preferences for a different status quo. The trap is due to the pressure to conform to the behavior of the majority and the resistance to be the first deviant from the established norm. Hence a norm will persist because of the strength of the social payoff to comply.

19 An insightful way of assessing the "strength" of the norms is provided by Gelfand et al. (2011) who measured differences between tight and loose cultures in a study of 33 countries which includes some from South Asia.

20 For more details see Khalil and Mookerjee (2019).

21 For a more detail account see Jayachandran (2015) and Bloch and Rao (2002).

Gender norms that directly reflect the power of one group and control over another group are the most resistant to change. Imbalances in power and privileges, including over control over assets and resources, and decision-making, stand in the way of changes in norms. Gender norms are also associated with differences in bargaining power between men and women (Agarwal 1997), and support the persistence of those power differences. Resistance to the redistribution of assets (inheritance or land) among spouses is an example of the persistence of backlash and norm avoidance, even in the face of legal changes that aim to introduce a new norm. In many cases a specific outcome is a combination of both proximal norms (that is, those that act directly or close to directly on a behavior or outcome) and meta norms (or second order norms) that influence multiple behaviors and the enforcement of a norm (Axelrod 1986; Heise and Manji 2016). In the case of gender norms, meta norms around authority, control and violence, and gender ideology have all been found extremely influential across multiple areas (The Social Norm Learning Collaborative 2021). Masculinity norms like the honor system are one example. If a daughter or wife transgresses expected behaviors (for example, leaves the house without permission, does not observe purdah, is seen in the company of men, etc.), the impact of her break from the social norm impacts not just the woman but the honor of the father/spouse and the family as a whole. The sanction or price to restore the male and family honor can take many forms, including "honor "killings (Solotaroff and Pande 2014). In these cases, the norm preserves male authority vis-à-vis other men in the community, not just within the household.

A persistent channel of norm transmission is identity. Social norms that support gender inequalities, like those related to gender roles, can be internalized and seen as part of the identity of an individual or a society. This is because several behaviors associated with these norms are widely held and practiced daily (West and Zimmerman 1987; Cislaghi 2020), to the point of being perceived as part of one gender's nature. If women specialize in home production, the time persistence of the behavior, intergenerational transmission, and the societal expectation and institutions around it reinforce this role as part of what is natural for women to do and can even curtail women's abilities and aspirations.[22]

On the other hand, norms are likely to experience inter-generational shifts and change as social and economic conditions do. Norms are passed on from one society and one generation to another, both as "the right way to do things" as well as modeled in behaviors (Fernandez 2007). Women from a culture where labor force participation of women is limited, when immersed in a different culture with higher levels of participation, will reproduce the patterns of their culture of origin (as has been shown for immigrants in the United States

22 Bertrand et al. (2015), for example, show how married women will drop out of the labor market or curtail their career chances to earn more than their spouses to preserve gender differences inside the household.

by Fernandez 2007, 2011).[23] But also, intergenerational transmission can support a change in norms. Fernandez, Fogli and Olivetti (2004) find that sons of working mothers are more likely to have a positive view of working women, and less of a preference for their spouse not to work. By observing previous generations and learning of the costs to specific behaviors and observing their change, women might, for example, join the labor force as they learn by looking at the cost-benefit of women who opted to work (Fernandez 2013). In a similar vein, younger generations behaviors can change normative views among older generations, who observe and adopt the change, normally when it happens at scale, as it was the case of young women joining the ready-made garment sector in Bangladesh (Lopez-Acevedo and Robertson 2016; Hosain 2012) Across generations, some norms might thus become obsolete or lose their grip on people's behaviors, and even become extinct as subsequent generations are not exposed to the norm (Inglehart 2018).

Crises can act as a catalyst to change norms or exacerbate existing norms. While some crises in the past havechanged norms (either as a catalyst or watershed), others have exacerbated regressive norms. The surge in female employment, necessitated by a shortage of male labor during World Wars I and II, is a typical example of progress in norm-related behavior both in the short and long runs. More recently, the COVID-19 pandemic has encouraged flexible work arrangements to accommodate the childcare needs of mothers (Alon et al. 2020), and also triggered increased fathers' involvement in childcare responsibilities (Hupkau and Petrongolo 2020). At the same time, it has reinforced for many women the norm that their role as childcare providers takes precedence over paid employment. While female labor force participation tends to increase[24] during economic crises and might stay up, these crises also mean more female school dropouts and early marriages, increases in the son preference, and other gender-unequal behaviors (Stavropoulou and Jones 2013; World Bank 2020; Brainerd 2013; DasGupta 2015; Nedoluzhko and Agadjanian 2015).

3.3.2 Norms and policy and program interventions

Policies in South Asia have, for the most part, ignored the role of social norms in keeping women out of the labor market. Not paying attention to the role of norms and how they interact with policy elements can lead to a "norms-blind" intervention. While some such policies have led to increases in FLFP by relaxing constraints and changing structures of opportunities, there is evidence to suggest that they are generally not, by themselves, sufficient. Awareness creation, unbiased design and implementation, effective enforcement, and continuous monitoring together with change in attitudes, norms, and beliefs are necessary

23 This approach—epidemiological approach—is further detailed in Fernandez 2011

24 Following the added-worker effect (Lundberg 1985).

to create equitable labor markets (Solotaroff and Pande 2014; Strachan, Adikaram, and Kailasapathy 2015; World Bank 2021).

Infrastructure changes can generate direct benefits for women. Improvements in electrification and transportation infrastructure have the potential to improve women's outcomes (Albanesi and Olivetti 2016; Dhak, Saggurti, and Ram 2019; Kondylis et al. 2020; Seki and Yamanda 2020). For example, the ability to move from one place to another safely remains a challenge for women in many South Asian countries. Fear of sexual harassment while commuting to work discourages women's employment and lowers their human capital investment due to safety concerns as well as entrenched norms about the importance of women's purity and its connection with family honor (Borker 2021; Chaudhari and Verick 2014; Chakraborty et al. 2018; Siddique 2018). In urban locations, the expansion of safe means of transport can increase female employment.[25] In rural areas, reducing travel distances impacts human capital investment and labor.[26] Similarly, reliable electrification access increases female labor force participation among rural households because it changes women's time allocation, something that, in turn, can shift their engagement in economic activities, shifting views about women's roles.[27]

An example of norms-blind policies are those that focus solely on equipping women (with skills, assets, education) as a way to address labor force supply. The blindness of these policies lies in the fact that they place the burden of change on women. In an environment of deeply entrenched gender norms, such changes can result in backlash, such as increased domestic violence as a way for men to assert their dominance (Eswaran et al. 2013; Amaral et al. 2015; Paul 2016). Similarly, lack of alternatives to support women's roles in the household can reduce program effectiveness. Findings from a systematic review of programs aimed at upskilling women in South Asia (Zahra et al. 2021) found that the programs had some positive effects, at least in the short-term. But in terms of economic participation, programs that did not address social and logistical constraints, such as household work, family obligations, and childcare, were less impactful than those that did. The review showed similar findings when it came to assets transfer programs. Education expansion has been instrumental in terms of gender equality in the South Asia region, however textbooks in many countries reproduce traditional gender norms (Islam and Asadullah 2018)

25 See, for example, Seki and Yamanda (2020) assessment of the expansion of the Delhi metro and the impact of living near a station on the female labor supply. New research from Pakistan demonstrated that women-only transport led to increased job search activity, highlighting the role of mobility norms and safety.

26 See, for example, Cheema et al. (2018) discussion of Skills for Market (SFM) skills training program in Pakistan, where vocational training delivery was adapted to take place in locations inside treatment villages, increasing both economic activity and monthly income among participants.

27 In India and Bangladesh, electrification increased women's hours of work, economic participation, and girls' hours of education (Samad and Zhang 2016, 2017).

Norm-sensitive policies consider norm conformity traps such as the structural and environmental factors that reinforce regressive gender norms and make deviation from them difficult. Without having to directly challenge the beliefs and expectations that allow norms to perpetuate, norm-sensitive policies address some of the barriers norms are rooted in. They also work by reducing sanctions or the perception of them, thereby enabling and encouraging positive deviance and fostering an environment where new norms can appear.

Shifting incentives is a first strategy to change norm conforming behavior. The use of economic incentives, in the form of transfers, subsidies, and access to finance instruments can make a difference when it comes to norms. Economic hardship can drive people to adhere to a norm. Parents who marry out their daughters early in their teenage years do so for various reasons, most of them non-financial.[28] Economic incentives have, for example, been successful in delaying marriage of young girls and keeping them in education for longer (as documented for Bangladesh by Buchmann et al. 2021, and worldwide in the review by Malhotra and Elnakib 2021). Large scale interventions like Pakistan's Punjab Female Secondary School Stipend (FSSS), a conditional cash transfer program for adolescent girls to stay in school, has resulted in education gains and also a later age of marriage (Chaudhury and Parajuli 2006).

A shift in incentives can also be achieved by introducing new sanctions and shifting the need to abide by the socially prescribed behavior. Amendments to the Hindu Succession Act, which granted daughters equal rights as sons to ancestral property inheritance, is one of these examples. The legal change was aimed at tackling an existing norm by creating a new one challenged the existing patrilineal default. The reform led to an increase in the share of daughters who inherited land from their dead fathers, from 8 percent before the reform to 16 percent after (Deininger et al. 2013) and was successful in terms of other outcomes besides land access. Women's labor supply increased (Heath and Tan 2020), as did daughters' educational attainment and entrepreneurial ventures (Deininger et al. 2019; Naaraayanan 2020) and women's autonomy within their marital families (Roy 2008). However, Anderson and Genicot (2014) report a rise in suicides, which they speculate is a result of a backlash because of the increase in female bargaining power, resulting in greater marital conflict.

A second strategy relates to information gaps and "gate opening," While providing information to close knowledge gaps (i.e. telling women and their families about job opportunities) does not seem to be very effective in shifting gender outcomes, information interventions

28 These reasons include poverty, high dowry, safety, and chastity (Jain and Kurz 2007; Loaiza and Wong 2012; Verma et al. 2013; Bicchieri, Lindemans and Jiang 2014)

combined with information that corrects misperceptions (pluralistic ignorance[29]) of what others do or think about a norm can be effective. Bursztyn et al. (2020) find strong evidence of norm-conforming attitudes and behaviors among Saudi Arabian men in terms of their willingness to help their wives search for jobs. Providing the husbands with information about the beliefs of other men increased their wives' job search activities and the husbands' support for those searches. In the same country, information about college women's work aspirations increased their peers' intention to work (Aloud et al. 2020). In the region, Jensen (2012) found that job recruiters increased young rural women's employment after sessions where information on work opportunities and how to apply for jobs was provided, combined with support to job applications. McKelway (2020) reaches similar conclusions when promoting concrete work opportunities for women through videos viewed by women as well as their in-laws and spouses.

Role model and other positive deviants can shift aspirations and show that norm deviation is possible. The visibility of women that have deviated from the main norm (and faced lower than expected or no sanctions) can influence women's aspiration as well as the views of their reference groups. Having women in leadership positions (for example, in India for women took political roles in the local Panchayats, or assemblies), increases not only aspirations among girls but also labor force participation (Beaman et al. 2012; Priyanka 2020). Women-centered self-help groups (SHGs) have been widely implemented in South Asia as a strategy to ensure positive deviation and deliver programs to women by creating a "critical mass" of women engaging in a new activity. Several SHG interventions have successfully improved FLFP and access to income and savings. For example, JEEVIKA in Bihar, India, a government-led women's SHG initiative successfully increased participants' LFP (Hoffman et al. 2021), and similar findings have been observed in West Bengal, Andra Pradesh, and other locations in India (Dutta et al. 2017; Prennushi and Gupta 2014; Jejeebhoy 2018).

Norms-aware policies cannot solely tackle one conformity trap, but need to be comprehensive and address all barriers, normative and others, to succeed. While it is possible to positively impact gender outcomes even if the underlying hindering gender norms are not directly targeted, this is not always the case. Take, for example, the need for affordable daycare, one of the core barriers to women's participation in the workforce. A program in rural India showed that the mere provision of care had no impact on women's workforce participation, as it didn't significantly change women's time allocation to other household or unpaid duties and had no impact on women's agency and decision-making abilities (Richardson et al. 2018). Similarly, wide-ranging programs that offer women a wide package of interventions

29 Pluralistic ignorance is the (inaccurate) belief that one's personal attitudes are different from the majorities' attitudes, and thus one goes along with what the majority attitude (Miller and McFarland 1991).

and appear to be transformative and sustain change over time for many beneficiaries who do not return to their original low-productivity activities (Misha et al. 2019). As an example, BRAC's Ultra Poor[30] provides women with a wide package of interventions, including the transfer of an income generating asset, training on income generating activities, subsistence allowances, health support, and awareness raising trainings, with positive impacts on women's employment and participation in economic activity in the medium term (Balboni et al. 2021).

Similarly, norms-changing interventions are less likely to succeed if not accompanied by incentives or other interventions to remove barriers. Information interventions on norms and gender attitudes have often not worked to address deep-seated gender attitudes, especially among adults (Dean and Jayachandran 2019). Though earlier and sustained interventions to shift attitudes show promise (Dhar et al. 2022), there is limited evidence of whether the effects are permanent, and whether behavior changes in turn also shift attitudes. In Nepal, the Sammanit Jeevan, "Living with Dignity" family-focused intervention had success. The program consisted of a workshop series targeting married women, their in-law, and their husbands. By ensuring that young married women led income generating activities with assistance from at least one family member, it increased income generating activities as well as modified the family's views about women's abilities to contribute financially to the household (Shai et al. 2020).

Changing systematic structures that prevent women from accessing the labor force, such as a lack of job opportunities or safe transport, may be necessary to ensure the success of norms interventions. Interventions that target social norms without a wider framing on the institutional, social, and political factors that perpetrate a harmful practice may have little positive impact (Cislaghi and Heise 2019). In developing policy to address harmful gender norms that prevent FLFP, some important questions to ask policymakers are: how will gender norms messaging be perceived by communities? How can we make it safe for women to change behaviors, keeping in mind backlash such as the risk of gender-based violence? What kind of popular programming exists—such as media outlets and soap operas—that we can partner with to facilitate gender norms messaging? (Paluck et al. 2010). It is critical that stakeholders think holistically about potential impacts of norms-aware policies, beyond simply the target norm of interest, given that social norms shape how policies play out in markets, institutions, and social networks. This practice will support accurate theories that link norms change with improved FLFP.

30 The Ultra Poor program is a multi-faceted poverty reduction program that includes four main elements (a) support to meet basic needs, such as a cash transfer or basic food supplies (b) income generation activities, (c) financial support and savings, and (d) social empowerment.

References

Agarwal, B. 1997. "'Bargaining' and Gender Relations: Within and Beyond the Household." *Feminist Economics* 3 (1): 1-51.

Albanesi, S. and C. Olivetti. 2016. "Gender Roles and Medical Progress." *Journal of Political Economy* 124 (3): 650-695.

Alesina, A. and P. Giuliano. 2014. "Family Ties." In *Handbook of Economic Growth*, edited by P. Aghion and S. N. Durlauf, 117-215. Amsterdam, The Netherlands: Elsevier.

Alesina, A., P. Giuliano, and N. Nunn. 2013. "On the Origins of Gender Roles: Women and the Plough." *The Quarterly Journal of Economics* 128 (2): 469-530.

Alon, T., M. Doepke, J. Olmstead-Rumsey, and M. Tertilt. 2020. "The Impact of COVID-19 on Gender Equality." NBER Working Paper w26947, National Bureau of Economic Research, Cambridge, MA.

Aloud, M.E., S. Al-Rashood, I. Ganguli, and B. Zafar, B. 2020. "Information and Social Norms: Experimental Evidence on the Labor Market Aspirations of Saudi Women." NBER Working Paper w26693, National Bureau of Economic Research, Cambridge, MA.

Amaral, S., S. Bandyopadhyay, and R. Sensarma. 2015. "Employment Programmes for the Poor and Female Empowerment: The Effect of NREGS on Gender-Based Violence in India." *Journal of Interdisciplinary Economics* 27 (2): 199-218.

Anderson, S. and G. Genicot. 2015. "Suicide and Property Rights in India." *Journal of Development Economics* 114 (C): 64-78.

Andreoni, J., J. M. Rao, and H. Trachtman. 2017. "Avoiding the Ask: A Field Experiment on Altruism, Empathy, and Charitable Giving." *Journal of Political Economy* 125 (3): 625-653.

Anukriti, S., C. Herrera-Almanza, P. K. Pathak, and M. Karra. 2020. "Curse of the Mummy-ji: The Influence of Mothers-in-law on Women in India." American Journal of Agricultural Economics 102(5): 1328-1351.

Anukriti, S., C. Herrera-Almanza, and M. Karra. Forthcoming. "Bring a Friend: Strengthening Women's Social Networks and Reproductive Autonomy in India." Policy Research Working Paper, World Bank, Washington, DC.

Axelrod R. 1986. "An Evolutionary Approach to Norms." *American Political Science Review* 80 (4): 1095–1111.

Balboni, C. A., O. Bandiera, R. Burgess, M. Ghatak, and A. Heil. 2021. *Why Do People Stay Poor?* NBER Working Paper 29340, National Bureau of Economic Research, Cambridge, MA.

Bhalotra, S. and M. Fernández. 2021. "The Rise in Women's Labor Force Participation in Mexico: Supply vs Demand Factors." WIDER Working Paper Series 2021/16, World Institute for Development Economic Research (UNU-WIDER).

Barro, R. J. and J. W. Lee. 2013. "A New Data Set of Educational Attainment in the World, 1950-2010." *Journal of Development Economics* 104 (C): 184-198.

Beaman, L. and J. Magruder, J. 2012. "Who Gets the Job Referral? Evidence from a Social Networks Experiment." *American Economic Review* 102 (7): 3574-3593.

Beaman, L., E. Duflo, R. Pande, and P. Topalova. 2012. "Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India." S*cience* 335(6068): 582-586.

Berg, J., A. Hilal, S. El, and R. Horne. 2021. World Employment and Social Outlook: Trends 2021. International Labour Organization.

Bertrand, M., E. Kamenica, and J. Pan. 2015. "Gender Identity and Relative Income Within Households." *The Quarterly Journal of Economics* 130 (2): 571-614.

Bicchieri, C. 2017. *Norms in the Wild. How to Diagnose, Measure, and Change Social Norms.* Oxford, UK: Oxford University Press.

Bicchieri, C. 2012. "Social Norms, Social Change." Lecture at the University of Pennsylvania-UNICEF Summer Program on Advances in Social Norms and Social Change. July. https://agora.unicef.org/course/info.php?id=2351.

Bicchieri, C. 2006. *The Grammar of Society: The Nature and Dynamics of Social Norms*. Cambridge, UK: Cambridge University Press.

Bicchieri, C., T. Jiang, and J. W. Lindemans. 2014. A Social Norms Perspective on Child Marriage: The General Framework. Behavioral Ethics Lab, University of Pennsylvania, Philadelphia, PA.

Bloch, F. and V. Rao. 2002. "Terror as a Bargaining Instrument: A Case Study of Dowry Violence in Rural India." *American Economic Review* 92 (4): 1029-1043.

Borker, G. 2021. "Safety First: Perceived Risk of Street Harassment and Educational Choices of Women." Policy Research Working Paper 9731, World Bank, Washington, DC.

Boserup, E. 1970. *Woman's Role in Economic Development*. London: Allen & Unwin.

Brainerd, E. 2013. Missing Women in the Former Soviet Union? Son Preference and Children's Health in the Transition from Communism. Unpublished manuscript, Brandeis University, Waltham, MA

Buchmann, N., E. M. Field, R. Glennerster, S. Nazneen, and X. Y. Wang. 2021. "A Signal to End Child Marriage: Theory and Experimental Evidence from Bangladesh." NBER Working Paper 29052, National Bureau of Economic Research, Cambridge, MA.

Bursztyn, L., A. L. González, and D. Yanagizawa-Drott 2020. “Misperceived Social Norms: Women Working Outside the Home in Saudi Arabia” *American Economic Review* 110 (10): 2997-3029.

Bussolo, M., N. Sarma, and A. Williams. 2021. “It Takes Two (To Make Things Right): Women’s Empowerment and Couple Concordance in South Asia.” Policy Research Working Paper 9545, World Bank, Washington, DC.

Bussolo, M., J. A. Ezebuihe, A. M. Munoz Boudet, T. Rahman, and N. Sarma. Forthcoming. “Gender Attitudes and Outcomes in South Asia: A Descriptive Study.” Policy Research Working Paper, World Bank, Washington, DC.

Bussolo, M., N. C. Warrinnier. Forthcoming. "Social Norms and Gender Gaps: Evidence from the Gender Equality at Home Survey" Policy Research Working Paper, World Bank, Washington, DC.

Chakraborty, T., A. Mukherjee, S. R. Rachapalli, and S. Saha. 2018. “Stigma of Sexual Violence and Women’s Decision to Work.” *World Development* 103 (C): 226-238.

Chang, W., L. Diaz-Martin, A. Gopalan, E. Guarnieri, S. Jayachandran, and C. Walsh. 2020. “What Works to Enhance Women’s Agency: Cross-Cutting Lessons from Experimental and Quasi-Experimental Studies.” J-PAL Working Paper.

Chaudhury, N., and D. Parajuli. 2006. “Conditional Cash Transfers and Female Schooling: The Impact of the Female School Stipend Program on Public School Enrollments in Punjab, Pakistan.” Policy Research Working Paper 4102, World Bank, Washington, DC.

Chaudhary, R., and S. Verick. 2014. “Female Labour Force Participation in India and Beyond.” ILO Working Paper 994867893402676, International Labour Organization, New Delhi.

Cheema, A., A. I. Khwaja, F. Naseer, and J. N. Shapiro. 2019. “Glass Walls: Experimental Evidence on Access Constraints Faced By Women.” Harvard University, Cambridge, MA.

Cialdini, R. B., C. A. Kallgren, and R. R. Reno. 1991. “A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior.” In *Advances in Experimental Social Psychology*, edited by M. Zanna, 24: 201-234. Cambridge, MA: Academic Press.

Cislaghi, B., and L. Heise. 2020. “Gender Norms and Social Norms: Differences, Similarities and Why They Matter in Prevention Science.” *Sociology of Health & Illness* 42 (2): 407-422.

Cislaghi, B., and L. Heise. 2018. “Theory and Practice of Social Norms Interventions: Eight Common Pitfalls.” *Globalization and Health* 14 (1): 1-10.

Cislaghi, B., and L. Heise. 2019. "Using Social Norms Theory for Health Promotion in Low-Income Countries." *Health Promotion International* 34 (3): 616-623. doi: 10.1093/heapro/day017.

Cuberes, D., and M. Teignier. 2016. "Aggregate Effects of Gender Gaps in the Labor Market: A Quantitative Estimate." *Journal of Human Capital*, 10(1): 1-32.

Das Gupta, M. 2015 " `Missing Girls' in the South Caucasus Countries: Trends, Possible Causes, and Policy Options." Policy Research Working Paper 7236, World Bank, Washington, DC.

Dean, J. T., and S. Jayachandran. 2019. "Changing Family Attitudes to Promote Female Employment." *AEA Papers and Proceedings* 109: 138-142.

Deininger, K., A. Goyal, and H. Nagarajan. 2013. "Women's Inheritance Rights and Intergenerational Transmission of Resources in India." *Journal of Human Resources* 48 (1): 114-141.

Deininger, K., S. Jin, H. K. Nagarajan, and F. Xia. 2019. "Inheritance Law Reform, Empowerment, and Human Capital Accumulation: Second-Generation Effects from India." *The Journal of Development Studies* 55 (12): 2549-2571.

Demirgüç-Kunt, A., L. Klapper, D. Singer, S. Ansar, and J. Hess. 2020. The Global Findex Database 2017.

Demographic and Health Survey (DHS). https://dhsprogram.com/

Dhak, B., N. Saggurti, and F. Ram. 2020. "Contraceptive se and its Effect on Indian Women's Empowerment: Evidence from the National Family Health Survey-4". *Journal of Biosocial Science* 52(4): 523-533.

Dhar, D., T. Jain, and S. Jayachandran. 2022. "Reshaping Adolescents' Gender Attitudes: Evidence from a School-Based Experiment in India." *American Economic Review* 112 (3): 899-927.

Dinkelman, T., and L. R. Ngai. (2022). "Time Use and Gender in Africa in Times of Structural Transformation." *Journal of Economic Perspectives* 36 (1): 57-80.

Donald, A., G. Koolwal, J. Annan K. Falb, and M. Goldstein, M. 2020. "Measuring Women's Agency." *Feminist Economics* 26 (3): 200-226.

Durand, J. D. 1975. *The Labor Force in Economic Development: A Comparison of International Census Data, 1946-1966*. Princeton University, Princeton University Press.

Dutta, S., A. Sarkar, and S. Shekhar. "Self Help Groups: Evidence from India." 2017. International Growth Centre, London School of Economics. I-35106-INC-1.

Elson, D. 1999. "Labor Markets as Gendered Institutions: Equality, Efficiency and Empowerment Issues." *World Development* 27 (3): 611–627

Eswaran, M., B. Ramaswami, and W. Wadh. 2013. "Status, Caste, and the Time Allocation of Women in Rural India." *Economic Development and Cultural Change* 61 (2): 311–333.

Fernández, R. 2013. "Cultural Change as Learning: The Evolution of Female Labor Force Participation Over a Century." *American Economic Review* 103 (1): 472-500.

Fernández, R. 2007. "Women, Work, and Culture." *Journal of the European Economic Association* 5 (2-3): 305-332.

Fernández, R., 2011. "Does Culture Matter?" In Handbook of Social Economics, edited by J. Benhabib, A. Bisin, and M. Jackson, 1: 481-510, Amsterdam: Elsevier.

Fernández, R., A. Fogli, and C. Olivetti. 2004. "Mothers and Sons: Preference Formation and Female Labor Force Dynamics." *The Quarterly Journal of Economics* 119 (4): 1249-1299.

Fernández-Duque, M. 2022. "The Probability of Pluralistic Ignorance." *Journal of Economic Theory* 202: 105449.

Field, E. and A. Ambrus. 2008. "Early Marriage, Age of Menarche, and Female Schooling Attainment in Bangladesh." *Journal of political Economy* 116(5): 881-930.

Field, E., S. Jayachandran, R. Pande and N. Rigol. 2016. "Friendship at Work: Can Peer Effects Catalyze Female Entrepreneurship?" *American Economic Journal: Economic Policy* 8(2): 125-53.

Fortin, N.M. 2005. "Gender Role Attitudes and the Labour-Market Outcomes of Women Across OECD Countries." *Oxford Review of Economic Policy* 21 (3): 416-438.

Gaddis, I., R, Lahoti, and H. Swaminathan, 2020. "Women's Legal Rights and Gender Gaps in Property Ownership in Developing Countries." Policy Research Working Paper 9444. World Bank, Washington, DC.

Gauri, V., Rahman, T. and I. K. Sen. 2019. "Measuring Social Norms About Female Labor Force Participation in Jordan." Policy Research Working Paper 8916, World Bank, Washington, DC.

Gelfand, M.J., J. L. Raver, L. Nishii, L. M. Leslie, J. Lun, B. C. Lim, L. Duan, A. et al. 2011. "Differences Between Tight and Loose Cultures: A 33-Nation Study." *Science* 332 (6033): 1100-1104.

Giavazzi, F., F. Schiantarelli, and M. Serafinelli. 2013. "Attitudes, Policies, and Work." *Journal of the European Economic Association* 11 (6): 1256-1289.

Giuliano, P. 2020. "Gender and Culture." *Oxford Review of Economic Policy* 36 (4): 944-961.

Goldin, C. 1995. "The U-Shaped Female Labor Force Function in Economic Development and Economic History." In *Investment in Women's Human Capital and Economic Development*, edited by T. P. Schultz, 61-90. Chicago: University of Chicago Press.

Heath, R., and S. Jayachandran. 2018. "The Causes and Consequences of Increased Female Education and Labor Force Participation in Developing Countries." In The Oxford

Handbook of Women and the Economy, edited by S. L. Averett, L. M. Argys, and S. D. Hoffman. New York: Oxford University Press.

Heath, R., and S. Jayachandran. 2016. "The causes and consequences of increased female education and labor force participation in developing countries." National Bureau of Economic Research.

Heath, R., and X. Tan. 2020. "Intrahousehold Bargaining, Female Autonomy, and Labor Supply: Theory and Evidence from India." *Journal of the European Economic Association* 18 (4): 1928-1968.

Heise, L. and K. Manji. 2016. Social Norms. GSDRC Professional Development Reading Pack 31. Birmingham, UK: Governance and Social Development Resource Centre.

Hoffmann, V., V. Rao, V. Surendra, and U. Datta. 2021. "Relief from Usury: Impact of a Self-Help Group Lending Program in Rural India." *Journal of Development Economics* 148 (January) 102567.

Hsieh, C.T., E. Hurst, C.I. Jones, and P. J. Klenow. 2019. "The Allocation of Talent and us Economic Growth." *Econometrica* 87(5): 439-1474.

Hupkau, C. and B. Petrongolo, 2020. "Work, Care and Gender During the Covid-19 Crisis." *Fiscal Studies* 41 (3): 623-651.

Inglehart, R. (2018). "Cultural Change, Slow and Fast: The Distinctive Trajectory of Norms Governing Gender Equality and Sexual Orientation." In *Cultural Evolution: People's Motivations Are Changing, and Reshaping the World,* 77-101. Cambridge: Cambridge University Press.

International Labor Organization (ILO). 2022. ILO Modelled Estimates: Methodological Overview. https://www.ilo.org/ilostat-files/Documents/TEM.pdf

Islam, K. M. M., and M. N. Asadullah. 2018. "Gender Stereotypes and Education: A Comparative Content Analysis of Malaysian, Indonesian, Pakistani and Bangladeshi School Textbooks." *PloS one* 13(1), e0190807.

Jain, S. and K. Kurz. 2007. *New Insights on Preventing Child Marriage: A Global Analysis of Factors and Programs*. Washington, DC: International Center for Research on Women.

Jayachandran, S. 2021. "Social Norms as a Barrier to Women's Employment in Developing Countries." *IMF Economic Review* 69 (3), 576-595.

Jayachandran, S. 2015. "The Roots of Gender Inequality in Developing Countries." *Annual Review of Economics* 7 (1): 63-88.

Jejeebhoy, S. J., and K. G. Santhya. 2018. "Preventing Violence Against Women and Girls in Bihar: Challenges for Implementation and Evaluation." *Reproductive Health Matters* 26 (52): 92-108. https://doi.org/10.1080/09688080.2018.1470430.

Jensen, R. 2012. "Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India." *The Quarterly Journal of Economics* 127 (2): 753-792.

Kandpal, E., K. Baylis, and M. Arends-Kuenning. 2012. "Empowering Women Through Education and Influence: An Evaluation of the Indian Mahila Samakhya Program." IZA Discussion Paper 6347, Institute of Labor Economics, Bonn, Germany.

Katz, D., F. H. Allport, and M. B. Jenness. 1931. "Students' Attitudes; A Report of the Syracuse University Reaction Study." *The Annals of the American Academy of Political and Social Science* 155 (1): 256-257.

Kenny, C. and D. Patel. 2017. "Gender Laws, Values, and Outcomes: Evidence from the World Values Survey." Working Paper 452, Center for Global Development, Washington, DC.

Khalil, U. and S. Mookerjee. 2019. "Patrilocal Residence and Women's Social Status: Evidence from South Asia." *Economic Development and Cultural Change* 67 (2): 401-438.

Klasen, S. 2019. "What Explains Uneven Female Labor Force Participation Levels and Trends in Developing Countries?" *The World Bank Research Observer* 34 (2): 161–197.

Kondylis, F., A. Legovini, K. Vyborny, A. Zwager, and L. Andrade. 2020. "Demand for `Safe Spaces': Avoiding Harassment and Stigma." Policy Research Working Paper 9269, World Bank, Washington, DC.

Lopez-Acevedo, G., and R. Robertson (Eds.) 2016. "Stitches to Riches? Apparel Employment, Trade, and Economic Development in South Asia." World Bank Publications.

Lundberg, S. 1985. "The Added Worker Effect." *Journal of Labor Economics* 3 (1): 11-37.

Mackie, G. 1996. "Ending Footbinding and Infibulation: A Convention Account." *American Sociological Review* 61 (6): 999-1017.

Mackie, G., F. Moneti, H. Shakya, and E. Denny. 2015. "What Are Social Norms? How Are They Measured?" UNICEF/San Diego Center on Global Justice, University of California, San Diego, CA.

UNICEF (United Nations Children's Fund). 2021. "How the COVID-19 Pandemic has Scarred the World's Children." UNICEF Stories. March 10. https:// www.unicef.org/coronavirus/COVID-19-pandemicscarred-world-children.

Malhotra, A., and S. Elnakib. 2021. "20 Years of the Evidence Base on What Works to Prevent Child Marriage: A Systematic Review." *Journal of Adolescent Health* 68 (5): 847-862.

McKelway, M. 2020. "Essays on the Empowerment and Employment of Women in India." PhD thesis. Massachusetts Institute of Technology, 2020.

Miller, D.T., and C. McFarland. 1991. "When Social Comparison Goes Awry: The Case of Pluralistic Ignorance." In *Social Comparision: Contemporary Theory and Research*, edited by J. Suls and T. A. Wills, 287-313. Mahwah, NH: Lawrence Erlbaum Associates.

Misha, F. A., W. A. Raza, J. Ara, and E. Van de Poel. 2019. "How Far Does a Big Push Really Push? Long-Term Effects of an Asset Transfer Program on Employment Trajectories." *Economic Development and Cultural Change* 68 (1), 41-62.

Munshi, K. (2020). "Social Networks and Migration." *Annual Review of Economics* 12: 503-524.

Naaraayanan, S. L., 2020. "Women's Inheritance Rights and Entrepreneurship Gender Gap." PhD thesis. Hong Kong University of Science and Technology.

Nahra, N., A. Javed, A.M. Munoz Boudet. 2022. "What Do We Know About Interventions to Increase Women's Economic Participation and Empowerment in South Asia (English)." South Asia Gender Innovation Lab Policy Brief Washington, DC. World Bank Group.

Nedoluzhko, L. and V. Agadjanian. 2015. "Between Tradition and Modernity: Marriage Dynamics in Kyrgyzstan." *Demography* 52 (3): 861-882.

OECD (Organisation for Economic Co-operation and Development) 2019. SIGI 2019 Global Report: Transforming Challenges into Opportunities. Paris: OECD Publishing.

Paluck, E. L., L. Ball, C. Poynton, and S. Sieloff. 2010. "Social Norms Marketing Aimed at Gender Based Violence: A Literature Review and Critical Assessment." International Rescue Committee, New York.

Paul, S., 2016. "Women's Labour Force Participation and Domestic Violence: Evidence from India." *Journal of South Asian Development* 11 (2): 224-250.

Prennushi, G., and A. Gupta. 2014. "Women's Empowerment and Socio-Economic Outcomes: Impacts of the Andhra Pradesh Rural Poverty Reduction Program." Policy Research Working Paper 6841, World Bank, Washington, DC.

Priyanka, S., 2020. "Do Female Politicians Matter for Female Labor Market Outcomes? Evidence from State Legislative Elections in India." *Labour Economics* 64 (C): 101822.

Richardson, R. A., S. Harper, N. Schmitz, and A. Nandi. 2018. "The Effect of Affordable Daycare on Women's Mental Health: Evidence from a Cluster Randomized Trial in Rural India." *Social Science & Medicine* 217 (C): 32-41.

Roy, S. 2008. "Female Empowerment Through Inheritance Rights: Evidence from India." Department of Economics, London School of Economics, London.

Roy, S., J. Ara, N. Das, and A. R. Quisumbing. 2015. "`Flypaper Effects' in Transfers Targeted to Women: Evidence from BRAC's `Targeting the Ultra Poor' Program in Bangladesh." *Journal of Development Economics* 117, 1-19.

Samad, H.A., and F. Zhang. 2016. "Benefits of Electrification and the Role of Reliability: Evidence from India." Policy Research Working Paper 7889, World Bank, Washington, DC.

Samad, H.A. and F. Zhang 2017. "Heterogeneous Effects of Rural Electrification: Evidence from Bangladesh." Policy Research Working Paper 8102, World Bank, Washington, DC.

Scott, S., P. H. Nguyen, S. Neupane, P. Pramanik, P. Nanda, Z. A. Bhutta, and K. Afsana, et al. 2021. "Early Marriage and Early Childbearing in South Asia: Trends, Inequalities, and Drivers from 2005 to 2018." *Annals of the New York Academy of Sciences* 1491 (1): 60-73. DOI: 10.1111/nyas.14531.

Seguino, S. 2007. "Plus Ça Change? Evidence on Global Trends in Gender Norms and Stereotypes." *Feminist Economics* 13 (2): 1-28.

Seki, M., and E. Yamada. 2020. "Heterogeneous Effects of Urban Public Transportation on Employment by Bender: Evidence from the Delhi Metro." JICA-RI Working Paper 207, JICA Research Institute, Toyko.

Shai, N., G. D. Pradhan, R. Shrestha, A. Adhikari, E. Chirwa, A. Kerr-Wilson, and R. Jewkes. 2020. "`I Got Courage from Knowing That Even a Daughter-In-Law Can Earn Her Living': Mixed Methods Evaluation of a Family-Centered Intervention to Prevent Violence Against Women and Girls in Nepal." PLoS One, 15 (5): e0232256. https://doi.org/10.1371/journal.pone.0232256.

Siddique, Z. 2018. "Violence and Female Labor Supply." IZA Discussion Paper 11874, Bonn, Germany.

Solotaroff, J. L. and R. P. Pande. 2014. *What Underlies Violence Against Women and Girls in South Asia?* Washington, DC: World Bank.

Stavropoulou, M. and N. Jones. 2013. "Off the Balance Sheet. The Impact of the Economic Crisis on Girls and Young Women. A Review of the Evidence." Plan International. https://www.refworld.org/pdfid/523ad1644.pdf.

Strachan, G., A. Adikaram, and P. Kailasapathy. 2015. "Gender (In)Equality in South Asia: Problems, Prospects and Pathways." *South Asian Journal of Human Resources Management* 2 (1): 1-11.

Vyas, S., and C. Watts. 2009. "How Does Economic Empowerment Affect Women's Risk of Intimate Partner Violence in Low- and Middle-Income Countries? A Systematic Review of Published Evidence." *Journal of International Development* 21 (5): 577-602.

West, C., and D. H. Zimmerman. 1987. "Doing Gender." *Gender & Society* 1 (2): 125-151.

World Bank. 2011. *World Development Report 2012: Gender Equality and Development*. Washington, DC: World Bank.

World Bank. 2020. *Women, Business and the Law 2020*. Washington, DC: World Bank.

World Bank. 2022. "Breaking Barriers: Female Entrepreneurs Who Cross Over to Male-Dominated Sectors." World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/36940 License: CC BY 3.0 IGO.

World Bank Gender Statistics. https://databank.worldbank.org/source/gender-statistics

World Values Survey. https://www.worldvaluessurvey.org/wvs.jsp

Appendixes

Appendix A.3.1. The Demographic and Health Survey

Demographic and Health Surveys (DHS) are nationally-representative household surveys that provide data for a wide range of indicators traditionally used to measure outcomes of women. The DHS covers seven out of the eight countries in the region, but we focus on six countries, Afghanistan, Bangladesh, India, Maldives, Nepal, and Pakistan. The DHS data have been collected in several waves roughly over a period of 20 years, from 1990 to 2018. The coverage however, varies by country. For instance, the DHS data is available for Afghanistan in one wave, Bangladesh in eight waves, India in four waves, Maldives in two waves, Nepal in five waves, and Pakistan in four waves. The DHS collects data from women aged 15-49 years and we trace these women born over half a century, 1940-2000. The length and breadth of coverage of the DHS data across countries in South Asia allows us to examine changes in key gender-related outcomes. Below are the outcome variables used for the analysis of this chapter:

i) Years of education

ii) Female employment

iii) Intimate partner violence experience (ever expereinced physical and sexual violence)

iv) Participate in household decision making (large household purchases, women's health care, and visit to relatives and friends)

Appendix A.3.2. The World Values Survey

The World Values Survey (WVS) is a frequently used source of data on cultural attitudes. Started in the 1980s, there have been seven waves of this survey covering an increasing range of topics and countries. In terms of attitudes toward gender, several questions are included in the most recent wave (wave 7, whose data were collected between 2017 and 2020) and in some of the earlier waves. These questions cover economic, political, and educational dimensions of attitudes toward gender disparities as well as, more generally, toward women's role in the family, and their agency and empowerment. Below are the survey questions used for the analysis are listed:

i) Political dimension:

- "On the whole, men make better political leaders than women do."
- "Women have the same rights as men."

ii) Educational:

- "A university education is more important for a boy than for a girl."

iii) Economic:

- "When jobs are scarce, men should have more of a right to a job than women."
- "On the whole, men make better business executives than women do."
- "Husband and wife should both contribute to income."

iv) Gender roles – agency – empowerment:

- "Having a job is the best way for a woman to be an independent person."
- "If a woman earns more money than her husband, it's almost certain to cause problems."
- "When a mother works for pay, the children suffer."
- "Do you think that a woman has to have children in order to be fulfilled or is this not necessary?"

Surveyed individuals can agree, disagree, or be neutral in their responses. There are some variations in the possible answers, as some include strong agreement or strong disagreement options or, for example, an even finer scale going from a 1 to 10 in agreement-disagreement level is available for the question, "women have the same rights as men."

Appendix A.3.3. Survey on Gender Equality at Home

The Facebook (2020) Survey on Gender Equality at Home is conducted in partnership by Facebook, CARE, Ladysmith, the World Bank, and UNICEF (for more details see here: https://dataforgood.fb.com/tools/gendersurvey/). This survey was rolled out in 2020 and 2021 through Facebook's online platform in which Facebook users across 208 countries, islands, and territories were invited to participate. Results of this large-scale survey were weighted to represent the online population in each country or region (not only the Facebook user population). One advantage of this survey method is the large reach of coverage and the possibility to collect valuable information in regions where organizing household surveys is often

difficult due to conflict or logistical barriers. For the analysis of this chapter, we used the 2020 survey round, which received over 461,000 complete responses from 126 geographies around the world. The survey questions used for the analysis are listed below:

i) Equal Opportunity:

- How much do you agree or disagree with the following statement? *"Men and women should have equal opportunities (e.g. in education, jobs, household decision-making*)."
- Out of 10 of your neighbors, how many do you think believe that men and women should have equal opportunities (e.g. in education, jobs, household decision-making)?

ii) Female Homemaker:

- How much do you agree or disagree with the following statement? *"Woman's most important role is to take care of her home and children."*
- Out of 10 of your neighbors, how many do you think believe that a woman's most important role is to take care of her home and children?

iii) Male Breadwinner:

- How much do you agree or disagree with the following statement? *"Household expenses are the responsibility of the man, even if his wife can help him."*
- Out of 10 of your neighbors, how many do you think believe that household expenses are the responsibility of the man, even if his wife can help him?

iv) Time Use:

- On a typical day, how many hours per day do you spend working for pay? (Work for pay can be any kind of business, farming, or other activity to generate income).
- On a typical day, how many hours per day do you spend on household chores?

For the analysis in this chapter, we calculate national and regional averages of the personal beliefs and social expectations of the above normative statements and the self-reported time use. Surveyed individuals can answer the questions about their personal beliefs on a fivepoint Likert scale, including following categories: agree strongly, agree, neutral, disagree, disagree strongly. The share of respondents who agree or strongly agree with the three normative statements measures the percentage of the population that believes in the social norm. Social expectations are calculated as the share of neighbors out of 10 that respondents believe agree with the normative statements.

Appendix A.3.4. Regression tables

Table 3.2. Results from regressions showing differences in attitudes toward gender across groups

	(1)	(2)	(3)	(4)
	Men have more right to a job	University for boys	Men make better political leaders	Problem if women earn more
female	-0.121***	-0.089***	-0.103***	-0.066***
	(0.01)	(0.01)	(0.01)	(0.01)
age (> 25)	-0.016	-0.016	0.024	0.002
	(0.02)	(0.02)	(0.02)	(0.02)
educated (secondary+)	-0.034***	-0.077***	-0.045***	-0.043***
	(0.01)	(0.01)	(0.01)	(0.01)
HH income scale	-0.002	0.008***	-0.003	-0.010***
	(0.00)	(0.00)	(0.00)	(0.00)
Country FE	yes	yes	yes	yes
Observations	5990	5947	5808	5849
Adjusted R^2	0.086	0.041	0.047	0.105

Source: Authors' calculations using data from the World Value Survey.
Note: Age is a dummy variable indicating the respondent is older than 25 years. Educated is a dummy variable indicating the respondent attained higher secondary education or more. The HH income scale is a self-reported scale ranging from 1 to 10, where 1 indicates the lowest income group and 10 the highest group in one's country. Countries included are Bangladesh, India, and Pakistan. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3.3. Results from regressions showing differences in personal beliefs and social expectations toward gender across groups

	Equal Opportunity		Female Homemaker		Male Breadwinner	
	(1) Personal Belief	(2) Normative Expectation	(3) Personal Belief	(4) Normative Expectation	(5) Personal Belief	(6) Normative Expectation
female	0.078***	-0.380***	-0.106***	0.329**	-0.203***	-0.380**
	(0.009)	(0.105)	(0.016)	(0.109)	(0.018)	(0.120)
age (> 25)	-0.022*	-0.118	0.058***	-0.153	0.029	0.120
	(0.009)	(0.109)	(0.017)	(0.112)	(0.018)	(0.122)
urban	0.012	0.228*	-0.051**	-0.025	-0.029	-0.054
	(0.009)	(0.107)	(0.017)	(0.110)	(0.018)	(0.122)
educated (secondary+)	0.016	-0.107	-0.047*	0.182	-0.016	0.386**
	(0.010)	(0.125)	(0.019)	(0.127)	(0.020)	(0.139)
HH asset index	0.011	-0.198**	-0.025*	0.233**	-0.051***	0.091
	(0.006)	(0.073)	(0.012)	(0.077)	(0.013)	(0.086)
Country FE	yes	yes	yes	yes	yes	yes
Observations	6369	3462	3241	2754	3263	2657
Adjusted R^2	0.030	0.074	0.067	0.015	0.072	0.024

Source: Authors' calculations using data from the Survey of Gender Equality at Home.
Note: Sample includes observations six South Asian countries: Afghanistan, Bangladesh, Bhutan, India, Nepal and Pakistan. Age is a dummy variable indicating the respondent is above 25 years old. Educated is a dummy variable indicating the respondent attained secondary education or more. The HH asset index is the first factor of following household assets owned by respondent: house, land, computer, phone, and motorized vehicle. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

SOUTH ASIA ECONOMIC FOCUS

SPRING 2022