

The Office of the
Chief Economist of
the South Asia Region

OCTOBER 2024

South Asia Development Update

Women, Jobs, and Growth



WORLD BANK GROUP



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Chief Economist of
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Foreword

South Asia remains the fastest-growing emerging market and developing economy region in the world. In fact, growth is now on track to be higher than anticipated six months ago, helped by strong domestic demand in India and faster recoveries in most other South Asian countries.

Undoubtedly, the outlook for the region is promising.

Yet, South Asia could still grow faster. This edition of our semi-annual regional economic outlook focuses on two areas of untapped potential: the integration of more women into the region's workforce, to benefit from the progress made in access to education; and greater openness to investment and trade, to benefit from the rearrangement of global value chains currently underway.

No economy can realize its full potential when half of its population is hindered from realizing their own. South Asia has made remarkable progress in establishing equality of access to educational opportunities for women and men, but too many South Asian women stay out of the labor force after graduation or following marriage.

Indeed, in South Asia only one-third of working-age women currently participate in the workforce. This is well below the three-quarters of South Asian men in the labor force and the 54 percent average for women in emerging markets and developing economies.

Many barriers constrain women in the region. Unsafe transport, lack of childcare, and limited freedom of movement hinder women's social and economic mobility and confine many to informal-sector roles with poor remuneration. Legal frameworks in South Asian countries—from business registration processes to inheritance laws—are among the least favorable to working women globally. And South Asia has some of the most conservative gender attitudes in the world.

As a result, female labor force participation rates in South Asian countries (except Bhutan) are 5–25 percentage points lower than in countries at similar levels of economic development.

Opening up opportunities for more South Asian women to work and earn an income would benefit society at large. Raising the participation rate of women to equal that of men could boost per capita incomes in the region by as much as 51 percent.

This endeavor requires contributions from all of society. Governments can enact and enforce legal reforms to improve gender equality. Firms can create more jobs that are open to women. Communities can challenge harmful gender norms, encouraging gender equality and acceptance of women working outside the home. In several places, this is already happening. If we can turn pilots into trends, South Asia's economic prospects would be even brighter.

The second major opportunity for South Asia to increase its long-term growth potential comes from the ongoing shifts in global value chains. Global investors are seeking locations with low geopolitical risks and strong economic fundamentals, and the region, especially India, is well-placed to benefit. However, for this to happen, trade and investment policies need to change. The region has among the highest tariff and non-tariff barriers and among the lowest shares of trade in aggregate output. Protective trade and investment policies shelter some domestic firms from competition and obstruct others from accessing foreign inputs. This raises firms' costs and delays the adoption of productivity-enhancing new technologies. It may also reduce the effectiveness of complementary industrial policies aimed at supporting the emergence of strong, internationally competitive champions.

An open palm can hold more rice than a closed fist. In the same spirit, opening up labor market opportunities to women, and global trade and investment opportunities to firms, would help unlock South Asia's considerable untapped potential.

Martin Raiser
Vice President, South Asia Region

Executive Summary

South Asia's growth is on track to exceed earlier expectations, in a broad-based upturn. The region is expected to remain the fastest-growing among emerging market and developing economies (EMDEs). Several risks could upend this generally promising outlook, including extreme weather events, social unrest, and policy missteps, such as reform delays. But South Asian countries also have considerable untapped potential that could help them further boost productivity growth and employment and adapt to climate change. In particular, with about two-thirds of the region's working-age women out of the labor force, raising female employment rates to those of men could increase per capita income by as much as one-half. Measures to accelerate job creation, remove obstacles to women working, and equalize gender rights would be more effective if combined with a shift toward social norms that looked more favorably on working women. Also, most South Asian countries rank among the EMDEs least open to global trade and investment. Greater openness could boost women's employment, spur the growth of firms, and allow the region to take better advantage of the reshaping of global supply chains and trade. Reducing the cost of conducting business could help the region better harness large-scale remittance inflows.

Chapter 1. Rising Tide, Hidden Rocks. Output growth in South Asia is on track to exceed earlier expectations, at 6.4 percent in 2024 and 6.2 percent a year in 2025–26, in a broad-based upturn. It is expected to remain higher than in all other emerging market and developing economy (EMDE) regions. This outlook is subject to downside risks from extreme weather events, social unrest, debt distress, and reform delays. The region's fragile fiscal and external positions leave few buffers against these downside risks. Boosting productivity growth and employment, especially among women, while adapting to climate change remain core policy challenges. Raising employment among women to levels comparable to those among men could raise output by as much as one-half in the long term. Increased openness to global trade and investment, along with the removal of obstacles to the growth of firms, could attract foreign investment, accelerate the diffusion of new technologies, and spur the private investment needed for job creation.

Box 1.1. Sheltered: Implications of Goeconomic Fragmentation for South Asia. The global economy is fragmenting along geopolitical lines. South Asian economies have limited exposure to geopolitical shocks as they are among the quarter of EMDEs that are least open to global trade and investment. However, their lack of openness is not only protective. It also limits their ability to take advantage of the reshaping of global supply chains and trade. Although South Asian countries maintain fairly diverse trade and investment ties,

they would benefit from further opening to global trade and investment, improvements in infrastructure and logistics, and greater institutional effectiveness. Cultivating diversified trading partners and creditors across the geopolitical spectrum could help South Asian countries mitigate vulnerabilities in a more open and dynamic economy.

Spotlight 1. Heat and Floods in South Asia: Household and Firm Exposure. Climate change is increasingly exposing South Asia to extreme heat, floods, and other weather shocks, but some groups are more exposed than others. Poorer South Asian households experience more heat than wealthier ones. In urban areas, poorer households also experience more damage and disruption from recurring flooding. And, in India, smaller firms are more exposed to both heat and flooding. These disparities highlight a need to remove obstacles to relocation, especially for the poor, and to spur the growth of firms. Information on the location of the most climate-affected people can inform targeting mechanisms for social protection systems that can readily respond to shocks.

Spotlight 2. Mind the Side Effects: Remittances and Economic Structure. Several South Asian countries are among the EMDEs with the highest remittance inflows relative to GDP. While remittances help reduce poverty and improve household education and health, large inflows can create currency appreciation pressures and international competitiveness losses, with adverse

consequences for exports, non-agricultural sectors, and private investment. Governments can encourage remittance inflows but offset the associated loss of competitiveness by reducing other costs of doing business. For example, they can shift away from trade-related taxes and create an environment conducive to faster productivity and employment growth.

Chapter 2. Empower to Prosper: Women Working for Growth. Over the past three decades, South Asia has benefited from strong economic growth, accompanied by a shift toward services sectors, growing exports, and stronger legal protections for women. These changes have expanded opportunities for all, including for many women. And yet, women's employment remains a source of untapped potential. South Asia's female labor force participation remains among the lowest in the world: only 32 percent of working-age women in the region participate in the labor force, far below the EMDE average of 54 percent. This low participation rate represents a costly misallocation of resources: raising this rate to that of men could boost per capita incomes by up to one-half. A wide range of policies could help women enter the workforce. These include legal reforms to improve gender equality, faster job

creation in non-agricultural sectors, and the removal of barriers to women working outside the home. Such measures are likely to be more effective if accompanied by a shift toward social norms that look more favorably upon women's employment.

Box 2.1. The Role of Laws, Beliefs, and Social Expectations in Labor Markets. Both restrictive laws and conservative social norms depress female labor force participation. In part, this may result from weak implementation of de jure rights because of more conservative personal beliefs and, particularly, social expectations.

Box 2.2. The Marriage Penalty in South Asia. Marriage reduces women's labor force participation in South Asia, even without factoring in child-rearing—a phenomenon known as the “marriage penalty.” On average in four South Asian countries (Bangladesh, India, Maldives, Nepal), the share of women employed after marriage is 12 percentage points (about one-third) lower than the share employed before marriage. In contrast, men enjoy a “marriage premium.” In South Asia, education can mitigate a woman's marriage penalty.

Abbreviations

AFG	Afghanistan
BDM	Becker Degroot Marschak
BGD	Bangladesh
BIS	Bank for International Settlements
BTN	Bhutan
CARE	Cooperative for Assistance and Relief Everywhere
COMTRADE	Commodity Trade Statistics Database
COVID-19	Coronavirus (SARS-CoV2)
CPI	Consumer Price Index
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
DECPG	The Development Economics Vice Presidency Prospect Group
DHS	Demographic and Health Survey
EAP	East Asia and Pacific
ECA	Europe and Central Asia
EMDE	Emerging Market and Developing Economy
ERA5	ECMWF Reanalysis 5th Generation Dataset
EU	European Union
FDI	Foreign Direct Investment
FE	Fixed Effects
FLFP	Female Labor Force Participation
GDP	Gross Domestic Product
GEGI	Gender Employment Gap Index
GLD	Global Labor Database
GST	Goods and Services Tax
ILO	International Labour Organization
IMF	International Monetary Fund
IND	India
ISIC	International Standard Industrial Classification
LAC	Latin America and the Caribbean
LHS	Left Hand Side
LKA	Sri Lanka
LR	Long Run
MDV	Maldives
MLFP	Male Labor Force Participation
MNA	Middle East and North Africa
NPL	Nepal
OLS	Ordinary Least Squares
PAK	Pakistan
PMI	Purchasing Managers' Index
RCEP	Regional Comprehensive Economic Partnership
RHS	Right Hand Side
RWI	Relative Wealth Index
SAR	South Asia Region
SARCE	Office of the Chief Economist for the South Asia Region

Abbreviations (continued)

SHRID	SHRUG (Socioeconomic High-resolution Rural-Urban Geographic Platform for India) Town and Village Identifiers
SHRUG	Socioeconomic High-resolution Rural-Urban Geographic Platform for India
SMEs	Small and Medium Enterprises
SR	Short Run
SSA	Sub-Saharan Africa
S&P	Standard & Poor's
UN	United Nations
UNICEF	United Nations' Children Fund
USD	U.S. Dollar
WBL	Women, Business and the Law
WDI	World Development Indicators
WVS	World Value Survey



CHAPTER 1

RISING TIDE, HIDDEN ROCKS

Chapter 1. Rising Tide, Hidden Rocks

Output growth in South Asia is on track to exceed earlier expectations, at 6.4 percent in 2024 and 6.2 percent a year in 2025–26, in a broad-based upturn. It is expected to remain higher than in all other emerging market and developing economy (EMDE) regions. This outlook is subject to downside risks from extreme weather events, social unrest, debt distress, and reform delays. The region’s fragile fiscal and external positions leave few buffers against these downside risks. Boosting productivity growth and employment, especially among women, while adapting to climate change remain core policy challenges. Raising employment among women to levels comparable to those among men could raise output by as much as one-half in the long term. Increased openness to global trade and investment, along with the removal of obstacles to the growth of firms, could attract foreign investment, accelerate the diffusion of new technologies, and spur the private investment needed for job creation.

Introduction

Global growth has surprised on the upside over the past six months. Similarly, in South Asia, output growth in 2024 is on track to exceed earlier expectations, largely because of stronger-than-anticipated domestic demand in India and faster recoveries elsewhere across the region (figure 1.1).

After peaking in 2022, inflation in South Asia has declined faster than in other emerging market and developing economies (EMDEs), down to its lowest since 2020. With inflation within or below policy target ranges in most South Asian countries, several central banks have cut policy rates. The exception is Bangladesh, where exchange rate depreciation, upward adjustments to administered energy and food prices, and import restrictions contributed to elevated inflation.

As in many other EMDEs, financial conditions have eased in South Asian countries that had been under fiscal and balance-of-payments pressures. Remittance inflows have strengthened and trade balances have improved. Nonetheless, international reserves remain critically low in some countries, including Maldives and Pakistan, and have declined in Bangladesh.

With growth of 6.2 percent per year over 2025–26, South Asia is expected to grow slightly faster than projected in April and remain the fastest-

growing EMDE region. The region’s expansion is being driven by robust growth in domestic demand and, in some countries, tourism and hydropower exports.

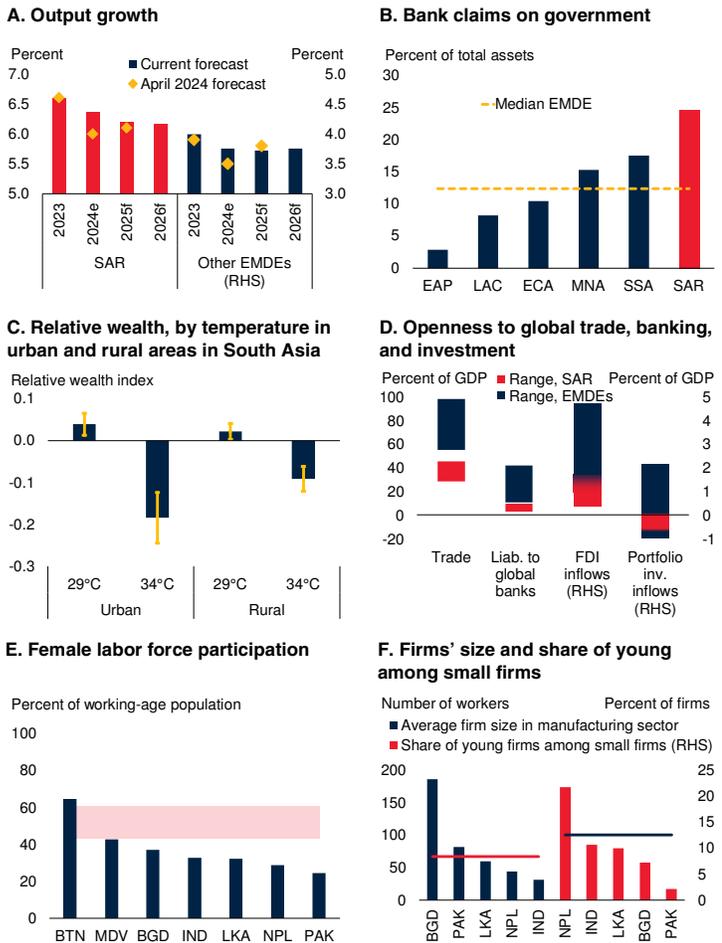
A number of risks, particularly those arising from domestic events, threaten to upend this outlook. Among domestic risks, slippages in planned reforms in International Monetary Fund (IMF)-supported programs, social unrest, and political instability could undermine investor confidence and disrupt economic activity. Externally, global financial market stress or creditors’ reluctance to defer debt service payments could raise debt service costs and force abrupt actions to reduce fiscal deficits. The region’s geography and dependence on agriculture makes it particularly vulnerable to climate changes and weather-related disasters, which have been increasing in frequency and intensity. Rising temperatures are likely to exacerbate poverty in hotter parts of the region. Most South Asian countries have limited capacity to absorb external or domestic shocks, given high levels of government debt and, in some cases, low levels of international reserves.

South Asia has considerable untapped potential to boost growth in the medium term. For example, South Asia currently only employs one-third of its working-age women. Creating jobs to raise women’s labor force participation rate to that of men would increase the region’s output in the long term by up to one-half, especially if the additional female employment is accompanied by private capital accumulation and a shift of women into equally productive jobs as men. Some of these additional jobs could be generated through greater

Note: This chapter was prepared by Zoe Xie, with contributions from Maurizio Bussolo, Lynn Hu, Patrick Kirby, Hagen Kruse, Md Shah Naoaj, Rully Prasetya, Jonah Rexer, Juan Felipe Serrano Ariza, Siddharth Sharma, Margaret Triyana, and Xiao’ou Zhu.

FIGURE 1.1 Overview

Output growth in South Asia is on track to exceed earlier expectations in a broad-based upturn. The region's growth is vulnerable to shocks in fiscal and external sectors, and to climate shocks that particularly threaten the poor. Greater openness to global trade and investment, higher female labor force participation, and faster-growing firms are key to rapid non-agricultural job creation, private investment growth, and climate adaptation.



Sources: Aiyar and Ohnsorge (2024); Balance of Payments and International Investment Position Statistics (IMF); CEIC; Consolidated Banking Statistics (BIS); Coordinated Direct Investment Survey (IMF database); ERA5-Land database; Haver Analytics; ILOStat (International Labour Organization); *Macro Poverty Outlook* (World Bank); Relative Wealth Index (Chi et al. 2022); World Bank; World Bank Enterprise Survey (database); World Development Indicators (database).

Note: e = estimate; f = forecast; BGD = Bangladesh; BTN = Bhutan; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDE = emerging market and developing economies; FDI = foreign direct investment; IND = India; inv = investment; LAC = Latin America and the Caribbean; Liab = liabilities; LKA = Sri Lanka; MDV = Maldives; MNA = Middle East and North Africa; NPL = Nepal; PAK = Pakistan; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Bars show the average for fiscal year. Aggregation method is weighted average.
 B. Bars show banks' claims on central government in percent of banks' total assets. Latest observation is from June 2024. Sample comprises 121 countries, whereas the South Asia sample consists of 5 countries. Median values are used for aggregation.
 C. The bars are regression coefficients relative to sample mean. Whiskers denote 95 percent confidence intervals. The estimation controls for state fix effects. Data are from 2014–18.
 D. Trade is defined as the sum of goods and services exports and imports. Excludes small states and Afghanistan. Data are the average for 2020–23. Only India has FDI inflows in the interquartile range for EMDEs (1.7 percent of GDP, compared to bottom quartile of 1 percent of GDP).
 E. Pink shaded region indicates interquartile range of EMDEs, excluding South Asia. EMDE averages are weighted by working-age population. Female (male) labor force participation rate is the share of the female (male) working-age population (15+) employed or looking for work, measured using ILO's ILOStat modeled data. Even when national data, based on national definitions, were used for South Asia, all countries except Bhutan and Maldives would remain in the bottom quartile among EMDEs. Afghanistan has not published any official statistics since 2021.
 F. Horizontal lines mark the median level firm size in manufacturing and share of young among small firms in other EMDEs.

openness to global trade and investment, especially if coupled with efforts to alleviate other constraints to women entering the workforce, such as access to safe transport and working environments. Such steps would be more effective if social norms became more favorable toward working women. Greater economic openness could give South Asian countries, which are currently among the world's least open, better access to global value chain participation. It could also help them take advantage of the reshaping of global value chains that is currently underway.

Economic activity

South Asia continues to be the fastest growing EMDE region. Growth in the region has exceeded earlier expectations, mainly because of stronger-than-anticipated domestic demand in India and faster-than-expected recoveries elsewhere in the region.

Global developments

Global growth continues to be near its estimated long-term sustainable rate. However, signs of weakness emerged in mid-2024. Global manufacturing activity weakened unexpectedly in July 2024 after six months of expansion (figure 1.2). This was mitigated by continued strength in global services.

Growth in the United States in 2024 is now widely expected to be stronger than projected in the April 2024 edition of this report. With moderating inflation and signs of a cooling labor market, the U.S. Federal Reserve cut the monetary policy rate by 0.5 percentage point in September 2024 and further rate cuts are widely expected.

Economic activity in the euro area has recovered steadily, led by the services sector. Although surveys point to continued stagnation in manufacturing and investment growth remains weak, euro area growth for the year as a whole is expected to exceed earlier expectations. In August 2024, inflation in the euro area declined sharply to 2.2 percent from 2.6 percent in July.

Activity in EMDEs appears to be firming, except in China, where growth continues to slow. This

slowing reflects softening consumption, partially offset by solid export growth. The Central Bank of China lowered its policy interest rate in July 2024 and rolled out plans in August to boost consumption by lowering effective lending rates for small loans and easing mortgage lending requirements.

Regional developments

South Asia (excluding Afghanistan) is projected to grow by 6.4 percent in 2024, 0.4 percentage point faster than projected in the April 2024 edition, reflecting better-than-expected growth in Bhutan, India, Nepal, Pakistan, and Sri Lanka. Once again, South Asia is expected to be the fastest-growing EMDE region.

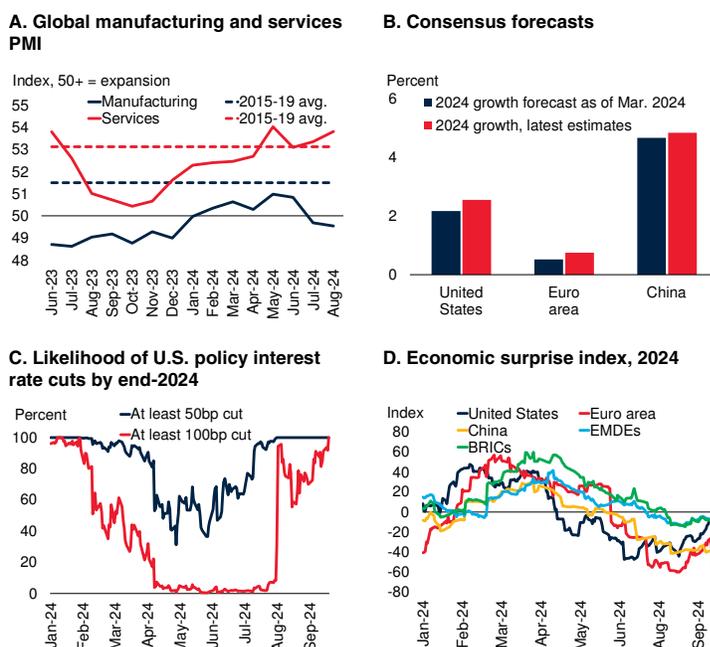
Manufacturing activity has strengthened more than in other EMDEs. India's manufacturing Purchasing Managers' Index (PMI) has recently shown solid expansion, well above the average for other EMDEs (figure 1.3). The region's merchandise export growth turned positive in February 2024 and has remained so even though it lost some momentum in June. Consumer sentiment has recovered to pre-pandemic levels in India, after lagging behind other EMDEs for two years, but remains deeply pessimistic in Pakistan amid elevated inflation.

Services activity has been more robust than manufacturing. India's services PMI has signaled expansion for more than 30 months and remains well above long-run averages and the manufacturing PMI. Tourist arrivals have recovered faster in South Asia than globally, although tourist spending in the region outside India has not rebounded as strongly as tourist arrivals.

In *Bangladesh*, output is estimated to have grown by 5.2 percent in FY2023/24 and is projected to slow to 4 percent in FY2024/25. An interim government took office following the resignation of the former Prime Minister on August 8, 2024, in response to widespread student-led protests. These events caused significant economic disruptions, including a decline in industrial and services sector activities, export shipments, and remittance inflows. Since then, the economy has stabilized and remittance inflows increased.

FIGURE 1.2 Global economic activity

A solid and strengthening expansion in global services has recently been accompanied by a faltering recovery in manufacturing. Financial conditions have continued to improve.



Sources: Bloomberg; CME FedWatch; Consensus Economics; Haver Analytics.

Note: bp = basis point; BRIC = Brazil, Russia, India, and China; EMDEs = emerging market and developing economies; PMI = Purchasing Managers' Index.

A. Readings above (below) 50 indicate expansion (contraction). Last observation is from August 2024.
 B. Bars denote the expected average real GDP growth from individual consensus forecasters' predictions for calendar year 2024. Last estimate is from September 2024.
 C. Probabilities refer to the likelihood—as implied by 30-day federal funds futures prices—of changes in the U.S. Federal Funds rate by December 18, 2024 of: at least 100 basis points and at least 50 basis points. Last data point is from September 18, 2024.
 D. Solid lines show the Citi Economic Surprise Index. A positive reading means that data releases have been stronger than expected, and a negative reading means that data releases have been worse than expected. Last observation is from September 23, 2024.

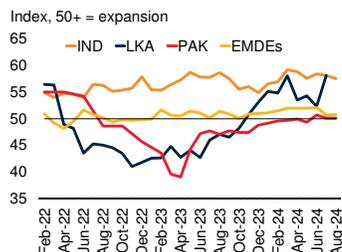
Bhutan's growth so far this year has been faster than expected, supported by a strong recovery in tourism.

In *India*, growth accelerated in the fiscal year that ended in March 2024 to 8.2 percent year-on-year, higher than expected and up from 7 percent in FY2023/24. Better-than-expected manufacturing performance in the first quarter of 2024 was supported by declining input costs as global oil prices moderated (World Bank 2024a). Growth normalized to 6.7 percent in the second quarter of 2024 and reflected a strong recovery in private consumption and resilient services exports. Robust growth is likely to have continued into the third quarter of 2024. In July, India's composite PMI stood at 61.4, well above both its long-term trend and the global average—with strong performance in both manufacturing and services.

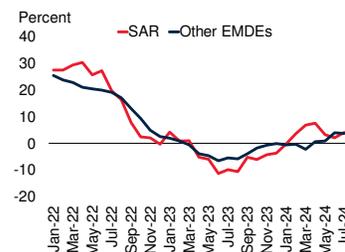
FIGURE 1.3 Economic activity in South Asia

Merchandise exports and tourism in South Asia have picked up faster than elsewhere. Purchasing managers' surveys suggest continued improvements in manufacturing and services. Consumer confidence has strengthened in India but remains deeply pessimistic in Pakistan.

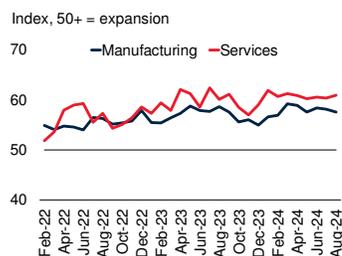
A. Manufacturing PMI



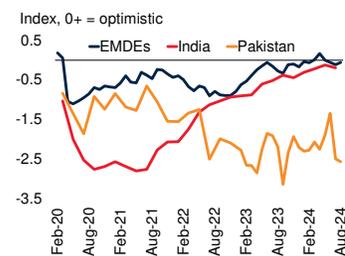
B. Merchandise export growth



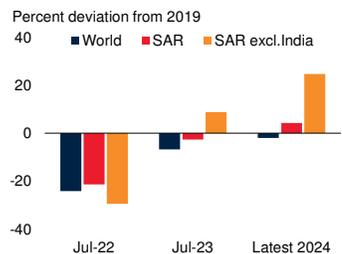
C. India: Manufacturing and services PMI



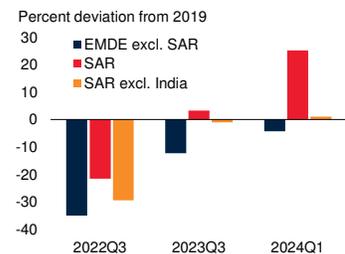
D. Consumer sentiment



E. Tourist arrivals



F. Tourist spending



Sources: CEIC; Direction of Trade Statistics (IMF); Maldives Bureau of Statistics; S&P Global/Haver Analytics; UN Tourism.

Note: EMDE = emerging market and developing economies; IND = India; LKA = Sri Lanka; PAK = Pakistan; PMI = Purchasing Managers' Index; SAR = South Asia.

A. Readings above (below) 50 indicate expansion (contraction). The series for Sri Lanka shows a three-month moving average. Last observation is from August 2024. "EMDE" is the weighted average value of 22 countries.

B. Value is a three-month moving average of the median year-on-year growth rate in each country group. "Other EMDEs" include 68 countries. The South Asia sample consists of Bangladesh, India, Maldives, Pakistan, and Sri Lanka.

C. Readings above (below) 50 indicate expansion (contraction). Last observation is from August 2024.

D. Standardized deviation of consumer confidence from the 2015-2019 average. The EMDE trend is based on the average across 12 economies. Latest data are for August 2024 for EMDE and Pakistan, and July 2024 for India.

E. Figure shows the percent deviation of monthly tourist arrival in South Asia and the World, compared to the same month in 2019. The latest 2024 data for South Asia are from June 2024, and for the World is from July 2024. The South Asia sample consists of India, Maldives, Nepal, and Sri Lanka.

F. Bars show the deviation of tourist spending from the same quarter in 2019. Tourist spending includes personal travel credit and personal transport credit. The latest 2024 data are from 2024Q1. The South Asia sample consists of Bangladesh, India, Maldives, Nepal, Pakistan, and Sri Lanka. The EMDEs sample covers 52 countries.

In *Maldives*, construction on major projects began to slow in the first quarter of 2024 with sector output down 12.8 percent from the previous quarter, in part driven by the government's efforts to curtail capital expenditure. The economy is on track for a contraction in the second quarter of 2024, as business activity in all sectors reportedly declined, and employment dropped steeply among businesses in the tourism sector and the construction sector.

In *Nepal*, remittance inflows have steadied after growing at double-digit rates in 2023 and early 2024. This steady inflow has continued to boost consumption in the remittance-dependent economy. Growth in the early part of FY2023/24 was supported by strong hydropower generation and a recovery in tourist arrivals.

Pakistan's economy grew by 3.1 percent year-on-year in the second quarter of 2024. This marks the fourth quarter of expansion following a contraction in early 2023. Income generated by bumper crops of rice and wheat supported a robust pickup in private consumption. Nevertheless, growth is less than half its long-run average and consumer confidence remains weak.

In *Sri Lanka*, growth strengthened to 5.3 percent year-on-year in the first quarter of 2024. Growth in 2024 as a whole is expected to reach 4.4 percent, 2.2 percentage points higher than anticipated six months ago, with output rebounding from the deep contraction of 2022–23. Tourist arrivals have recovered to levels close to those before the economic and political crisis of 2022, but remain below the 2018–19 levels.

Afghanistan's economic activity continues to be sluggish. Exports, which had supported growth in 2023, declined by 16 percent in the first five months of 2024 compared with the same period in 2023. This decline was driven by real currency appreciation and disruptions along trading routes (World Bank 2024b).

Inflation

Global inflation continues to normalize, and global commodity prices have been broadly stable. In most South Asian countries, inflation has fallen to within or below policy target ranges, allowing several central banks to further ease monetary policy.

Global developments

Global inflation continues to slow but remains above pre-pandemic averages (figure 1.4). In advanced economies, median headline consumer price inflation has declined by 0.7 percentage point since March 2024, but remains above target in most advanced economies. Major central banks have started, or continued, to reverse post-pandemic interest rate hikes, with the U.S. Federal Reserve cutting the policy rate by 0.5 percentage point in September in its first interest rate cut since March 2020. Among EMDEs, median headline consumer price inflation has increased by 0.7 percentage point since March but remains well below the pandemic-era high of 9.9 percent in July 2022.

Regional developments

Inflation has declined in South Asian countries and was below the EMDE median in July 2024. Median consumer price inflation in South Asia fell to 3 percent in July, 0.5 percentage point below the EMDE median, compared with 1.2 percentage points above the EMDE median in March 2024.

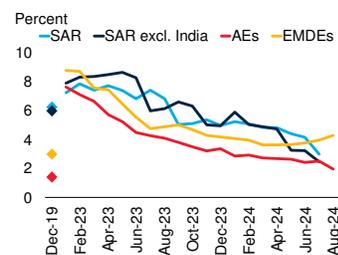
Headline inflation has fallen to within or below target ranges in most inflation-targeting countries in South Asia, the exception being Bangladesh. Food price inflation continues to account for half or more of consumer price inflation in most countries in the region.

Inflation in the region is expected to moderate further, as it is globally, as the impacts of currency depreciation and supply constraints over the past year fade. Easing inflation pressures have allowed central banks in Nepal, Pakistan, and Sri Lanka to cut monetary policy rates further since March 2024. That said, rates remain well above pre-pandemic levels.

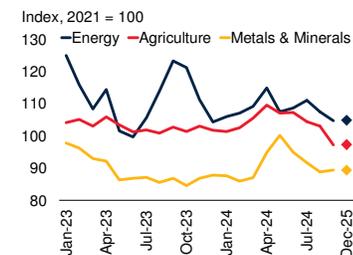
FIGURE 1.4 Inflation

Inflation has declined to within or below policy target ranges in most South Asian countries, as the impacts of currency depreciation and supply constraints over the past year fade and helped by broadly stable global commodity prices. The exception is Bangladesh where currency depreciation has contributed to continued above-target inflation. Monetary policy has eased only gradually in most South Asian countries as they await further rate cuts in major advanced economies.

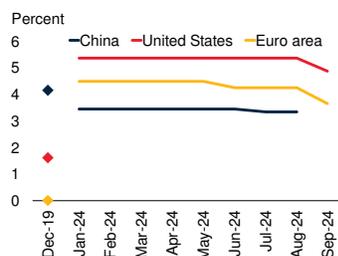
A. Headline CPI inflation



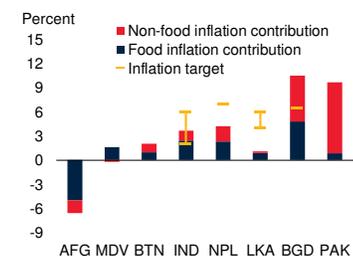
B. Global commodity prices



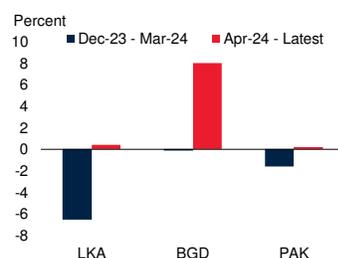
C. Monetary policy rates



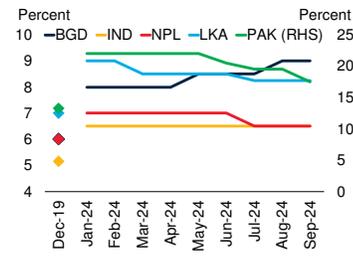
D. Headline CPI inflation in South Asia, latest



E. Currency depreciation against the U.S. dollar



F. South Asia: Monetary policy rates



Sources: CEIC; *Commodity Markets Outlook* (World Bank, April 2024); Federal Reserve Bank of New York; Haver Analytics.

Note: AEs = advanced economies; AFG = Afghanistan; BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

- A. Solid lines show the median of year-on-year headline inflation. Last observation is August 2024.
- B. Diamonds show 2025 forecasted values from the April 2024 edition of the World Bank's *Commodity Markets Outlook*. Last observation is August 2024.
- C. Solid lines show the policy rate for each country/area. Last observation is August 2024 for China and September 2024 for the United States and euro area. Diamonds show policy rates as of December 2019.
- D. Yellow whiskers denote inflation target bands of central banks. Last observation is from August 2024 for Bangladesh, India, Pakistan, and Sri Lanka, July 2024 for Afghanistan and Bhutan, and June 2024 for Maldives and Nepal.
- E. Positive values denote year-on-year depreciation of monthly average exchange rates against the U.S. dollar. Latest data point is from August 2024.
- F. Solid lines show the policy rate for each country, as of September 20, 2024. Diamonds show policy rates as of December 2019.

In *Bangladesh*, inflation has remained elevated and above Bangladesh Bank's target since June 2022. Headline inflation averaged 9.7 percent in FY2023/24, driven by a steady depreciation of the currency and increases in domestic prices of gas, electricity, and fuel. Headline inflation surged to 11.7 percent in July 2024 due to supply chain disruptions and political tensions. In response to inflationary pressures, the monetary policy rate has been increased by 2.5 percentage points since July 2023, to 9 percent in August 2024; however, the rate remains well below inflation.

In *India*, inflation has remained within the Reserve Bank of India's target range of 2–6 percent since September 2023, falling to just below the mid-point of the target range in July and August 2024 on easing food inflation. Inflation in food and beverage prices, which accounts for around half of the consumer price inflation basket, has been elevated since July 2023.

In *Pakistan*, headline inflation declined to 9.6 percent in August 2024 from a peak of 38 percent in May 2023, supported by a stabilizing currency, improved domestic supplies of perishables and staple foods, and a rebound in wheat and rice crops that were severely damaged by floods in 2022. As a result, the State Bank of Pakistan lowered its policy rate to 17.5 percent in September from 22 percent in May 2024.

In *Sri Lanka*, inflation has remained below the target range of 4–6 percent since March 2024. Headline consumer price inflation was 2.5 percent in July. A strengthening currency, reductions in administered energy prices that partly reflected lower global oil prices, and easing food prices helped lower inflation. Consequently, the Central Bank of Sri Lanka reduced its policy rate by 0.25 percentage point in July.

Elsewhere in the region, headline inflation remains below 5 percent. Afghanistan has experienced deflation since April 2023, reflecting weak demand.

Financial conditions

As in other EMDEs, financial conditions have eased in most South Asian countries, the exception being Bangladesh.

Global developments

Global and EMDE financial conditions have continued to ease, reflecting solid risk appetite and actual and expected monetary easing by advanced-economy central banks (figure 1.5). Global financial market volatility has been subdued for most of 2024, with the exception of a brief episode of volatility during August.

Regional developments

In most countries of South Asia, financial conditions have been easing, and, in some cases, have returned to pre-pandemic conditions. Currencies have generally appreciated or remained stable in foreign exchange markets and private sector credit growth has picked up or remained robust. The exception is *Bangladesh*, where the currency has depreciated further and private sector credit growth remains sluggish. Nonperforming loan ratios, a gauge of asset quality in the financial sector, have fallen or held steady in about half of South Asian countries since the first quarter of 2024.

In *Bangladesh*, despite further increases in the nominal policy rate, persistently high inflation has kept real (net of actual inflation) policy rates negative. For the banking system as a whole, the nonperforming loan ratio has been about 10 percent since the first quarter of 2023. For state-owned banks, however, the ratio rose to 27 percent in June 2024, signaling persistent challenges in the financial sector and among borrowers. Growth of credit to the private sector has been below the pre-pandemic average (2015–19). Financial conditions tightened during the social unrest in July and August and remain tight amid heightened uncertainty.

In *India*, the monetary policy rate remains at 6.5 percent. Domestic credit to the commercial sector grew by 13.5 percent in July—the fastest in South Asia. To slow lending, the Reserve Bank of India has increased regulatory scrutiny of lenders.

In *Maldives*, foreign exchange holdings of both the government and the financial sector remain low. The decision and subsequent reversal by the country's largest commercial bank on August 25

to limit foreign transactions was followed by significant volatility in the parallel exchange rate market and highlighted the severity of the foreign exchange shortage. Access to credit has remained tight in the first two quarters of 2024 and business surveys suggest an expectation of a further tightening, especially in the construction, transportation, and communication sectors.

In *Pakistan*, monetary policy remains tight. The key policy rate stands at 17.5 percent: in real terms, at around 8 percent, despite cumulative interest rate cuts of 4.5 percentage points in June–September 2024 as inflation declined even faster. Growth of credit to the private sector accelerated from 1 percent in March to 3 percent in July, below pre-pandemic levels, with banks' lending activities continuing to be constrained by sizable sovereign exposures. The quality of assets held by the banking sector remains broadly stable, with the nonperforming loan ratio at 7.6 percent in the second quarter of 2024.

In *Sri Lanka*, the central bank cut the policy rate by 0.25 percentage points in July 2024 as inflationary pressures had eased but monetary policy remains tighter than before the pandemic. Asset quality remains a concern as the economy recovers from the recession of 2022–23. The nonperforming loan ratio remained elevated at 13 percent in the first quarter of 2024, with the ratio above 30 percent in the tourism and transportation sectors despite the upturn in economic activity. Growth of credit to the private sector rebounded to 6 percent year-on-year in June, supported by decreasing interest rates, but remains below the pre-pandemic average.

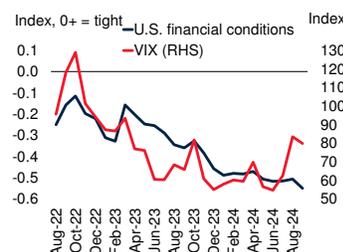
Trade and capital flows

Current account balances have improved in most South Asian countries, supported by robust remittance inflows, solid export growth and, in some cases, reduced imports. Foreign reserve levels have improved in some South Asian countries but remain critically low in others.

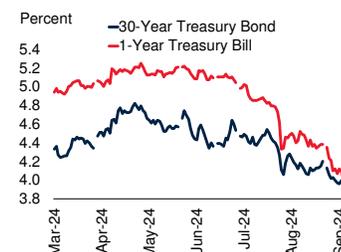
FIGURE 1.5 Financial conditions

Financial conditions have eased globally, including in many South Asian countries that were previously in crisis. Private sector credit growth in Pakistan and Sri Lanka has turned positive but remains weak.

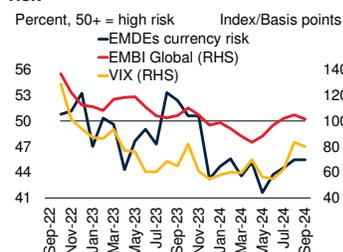
A. U.S. financial conditions and stock market volatility



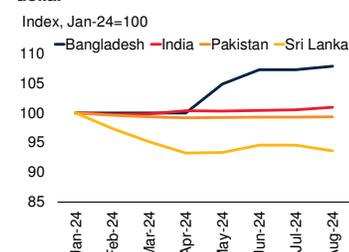
B. U.S. Treasury yields



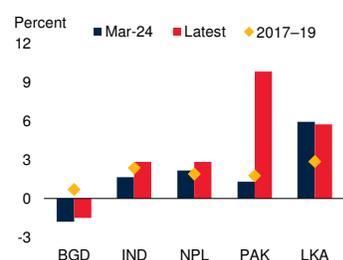
C. EMDE interest rates and currency risk



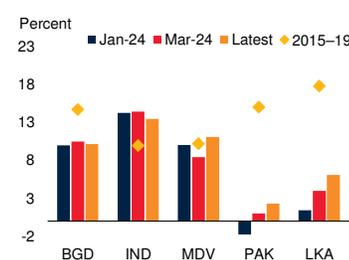
D. Exchange rates against the U.S. dollar



E. Real monetary policy rates



F. Private sector credit growth



Sources: CEIC; CME Group; Federal Reserve Bank of St. Louis; FedWatch; Haver Analytics; Financial Soundness Indicators (IMF database); J.P. Morgan EMBI emerging market bond index.

Note: BGD = Bangladesh; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan; VIX = Chicago Board Options exchange volatility index.

A. The U.S. index is the National Financial Conditions Index (NFCI), which provides a comprehensive weekly update on U.S. financial conditions in money markets, debt and equity markets and the traditional and "shadow" banking systems. Positive values of the NFCI indicate financial conditions that are tighter than average, while negative values indicate financial conditions that are looser than average. Last observation is from September 2024.

B. Lines show the daily U.S. 30-year Treasury bond yield and 1-year Treasury bill yield at constant maturity (percent per annum). Last data point is from September 16, 2024.

C. The EMDE currency risk uses the Citi Early Warning Signal, which measures stress in economic and financial variables that have historically been good predictors of currency weakness. Model is based on 12 equally weighted variables per country. The composite index equally weights 22 EMDE indices and ranges between 0 percent (low risk) and 100 percent (high risk), with 50 percent being neutral.

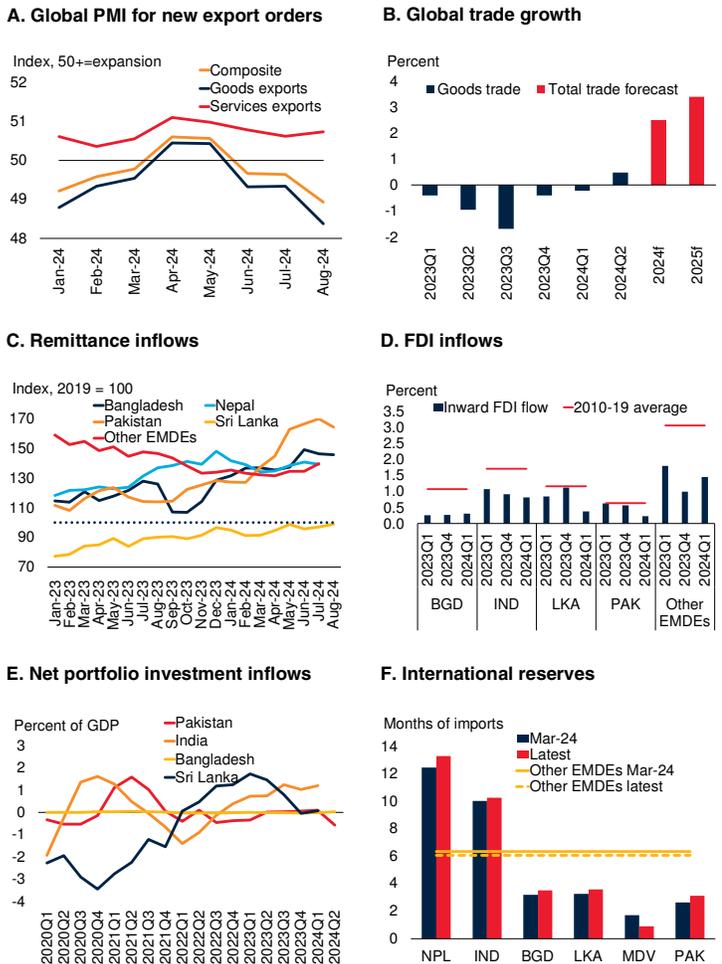
D. Official nominal exchange rate, in units of local currency unit per U.S. dollar.

E. Bars show real monetary policy rates for each country. Diamonds show the average real policy rate during 2017–19. Real policy rate is calculated as the difference between nominal policy rate and the headline inflation. Latest data are from August 2024 for Bangladesh, India, Nepal, Pakistan, and Sri Lanka.

F. Year-on-year growth of private sector credit. Growth of commercial credit for India. Latest data are from July 2024 for Bangladesh, India, and Pakistan, and June 2024 for Maldives and Sri Lanka.

FIGURE 1.6 Trade and capital flows

Robust remittance inflows, a recovery in Sri Lanka’s services exports, and robust growth in India’s services exports have contributed to improvements in current account balances in South Asian countries. However, foreign reserve import cover remains low in Maldives and Pakistan.



Sources: Balance of Payments and International Investment Position Statistics (IMF); CEIC; CPB Netherlands Bureau of Economic Analysis; *Global Economic Prospects* (World Bank, April 2024); Haver Analytics; *Macro Poverty Outlook* (World Bank); Maldives article IV consultation; World Bank.
 Note: BGD = Bangladesh; EMDEs = emerging market and developing economies; FDI = foreign direct investment; IND = India; LKA = Sri Lanka; PAK = Pakistan; PMI = Purchasing Managers’ Index.
 B. 2024Q2 is based on April–May 2024 data. Year-on-year growth rates reflect volume growth.
 C. Other EMDEs comprise Colombia, Georgia, Kenya, Morocco, Paraguay, the Philippines, and Türkiye.
 D. Other EMDEs comprise 58 economies. Weighted by GDP at market price, in U.S. dollars. Quarterly GDPs are converted from annual GDPs for other EMDEs, Nepal, and Pakistan.
 E. Quarterly GDP for Nepal and Pakistan are derived from current-year GDP from the World Bank’s *Macro Poverty Outlook*. 2024Q2 GDP for Bangladesh is assumed to be the same as 2024Q1.
 F. Other EMDEs comprise 37 countries. Latest is from July 2024 for all countries except for Pakistan and Sri Lanka (August 2024). Comparison data is from April 2024 for Maldives and March 2024 for all other countries.

Global developments

Global PMI indices suggest that after a brief expansion in April and May 2024, global goods trade resumed its contraction since June (figure 1.6). This partly reflects the effects of conflict,

the rising use of trade-restricting measures, and the post-pandemic unwinding of high demand for manufactured goods. Services exports continued to expand. Trade growth has increasingly been driven by trade among countries that are aligned on foreign policy (box 1.1). In 2025, global trade growth is expected to accelerate but remain below its 2015–19 average (World Bank 2024c).

Regional developments

While export growth has strengthened in all South Asian countries except Bangladesh and Afghanistan, import growth has remained muted. Slower import growth, coupled with increasing remittance inflows (Nepal, Pakistan, and Sri Lanka), has helped improve current account balances across much of the region, except in Afghanistan, where the current account deficit has widened. Pakistan is expected to have a near-zero current account balance, while Nepal and Sri Lanka are projected to run current account surpluses in 2024.

In *India*, growth in goods exports has remained muted, while services exports have continued to be resilient. Services exports growth has also remained robust in *Sri Lanka*. In *Bangladesh*, exports of ready-made garments slowed due to ongoing energy shortages, as well as disruptions amid social unrest. In addition, the recent revision of the balance of payments data by Bangladesh Bank revealed significantly lower merchandise exports than previously recorded for FY2022/23 and FY2023/24. In *Pakistan*, exports have continued to recover from the floods of 2022.

Import growth has picked up in *Sri Lanka* since the removal of most trade restrictions in 2023, and in *Afghanistan*, as domestic demand slowly recovers. In *Pakistan*, import growth remains slow, notwithstanding some pickup in year-on-year growth in May and June 2024. Elsewhere in the region, import growth has remained muted. Countries have continued to remove or relax trade restrictions. For example, *India* cut import tariffs on smartphones in July 2024 and Bhutan lifted import bans on cars in August.

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia^a

The global economy is fragmenting along geopolitical lines. South Asian economies have limited exposure to geopolitical shocks as they are among the quarter of EMDEs that are least open to global trade and investment. However, their lack of openness is not only protective. It also limits their ability to take advantage of the reshaping of global supply chains and trade. Although South Asian countries maintain fairly diverse trade and investment ties, they would benefit from further opening to global trade and investment, improvements in infrastructure and logistics, and greater institutional effectiveness. Cultivating diversified trading partners and creditors across the geopolitical spectrum could help South Asian countries mitigate vulnerabilities in a more open and dynamic economy.

Introduction

The global economy is fragmenting along geopolitical lines, a process that has been dubbed “geoeconomic fragmentation.” Over the past decade, the share of trade and foreign direct investment (FDI) between countries with similar geopolitical stances has been growing (Gopinath et al. 2024; IMF 2023a). This process has been accompanied by rising restrictions on international trade and financial transactions between both blocs (IMF 2023a).

Geopolitical concerns are creating incentives for firms to reorganize and diversify their supply chains by investing in a wider range of emerging market and developing economies (EMDEs). This strategy has been called a “lengthening” of existing supply chains and a “China-Plus-One” strategy (Freund et al. 2023; Qiu, Shin, and Zhang 2023; Seong et al. 2023). For some countries, the reshaping of global value chains presents a window of opportunity to engage with countries across the spectrum of geopolitical views (Aiyar and Ohnsorge 2024; Cerdeiro et al. 2024; Gopinath et al. 2024). Some South Asian countries, too, aspire to integrate into global value chains and bridge geopolitical blocs, building on their long history of being geopolitically non-aligned (Dinkel 2016; Reuters 2024).

Questions. This box examines the implications of geoeconomic fragmentation for South Asia. Specifically, it addresses two questions.

- How vulnerable is South Asia to geopolitical risks?
- Which policies could help South Asia thrive amid shifts in global supply chains and trade?

Contribution. This box adds to the existing literature in two ways. First, it provides a systematic empirical assessment of the implications of geoeconomic

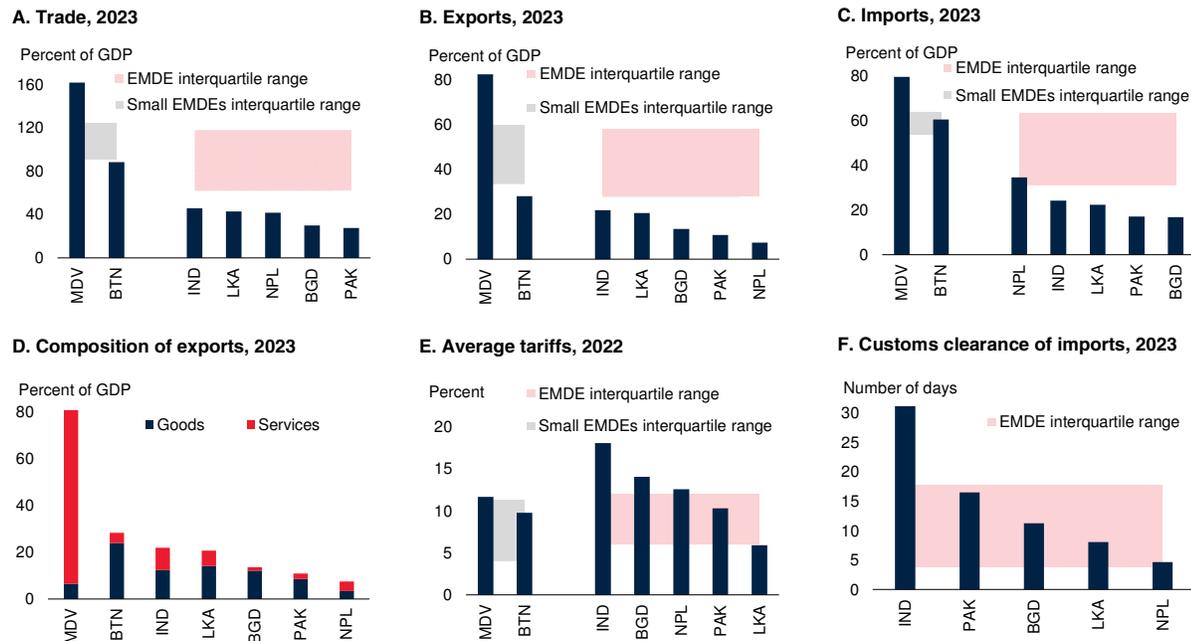
fragmentation for South Asia. Earlier research has largely focused on global trends and patterns (Aiyar, Malacrino, and Presbitero 2024; Aiyar and Ohnsorge 2024; Gopinath et al. 2024; IMF 2023b) or the effectiveness of country-specific trade policies (Alfaro and Chor 2023; Fajgelbaum et al. 2024; Freund et al. 2023). Second, this box elaborates on policies that could help South Asia leverage opportunities created by shifts in global supply chains and trade.

Methodology. Geopolitical distance is a concept that is difficult to measure. Here, in line with the existing literature, the geopolitical distance between two countries is measured using UN voting patterns (Bailey, Strezhnev, and Voeten 2017). This box defines an economy's *geoeconomic vulnerability* as the trade- or liability-weighted average geopolitical distance to its trading partners or creditors. A country or region is more vulnerable if it interacts with geopolitically more distant partners. The index is scaled by trade-to-GDP or by liabilities-to-GDP to account for the fact that less open economies are less vulnerable to all external shocks, including geopolitical ones. By construction, this measure of geoeconomic vulnerability cannot capture future cross-border interactions that have not yet emerged. Nor can it capture the vulnerabilities inherent in rare cross-border interactions such as debt relief negotiations. And it is constrained by the availability of bilateral data and therefore cannot capture important other cross-border transactions such as tourism exports or remittances. In addition to geoeconomic vulnerability, this box examines the diversity of South Asia's economic partners across the geopolitical spectrum. This is captured in the *geopolitical connectedness* index, defined as the trade- or liability-weighted standard deviation of geopolitical distance from trading partners and creditors (Aiyar and Ohnsorge 2024). The focus in this box is on foreign exchange-generating activities, that is exports and financial liabilities.

^a This box was prepared by Hagen Kruse and Xiao'ou Zhu.

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia (continued)**FIGURE B1.1.1 South Asia's openness to global trade**

South Asian countries are among the least open to global trade. In part, this reflects higher tariffs and more cumbersome customs procedures than in other EMDEs.



Sources: Aiyar and Ohnsorge (2024); World Development Indicators (database); WTO World Tariff Profiles (database); World Bank.

Note: Red shades denote interquartile ranges for other EMDEs. Gray shades denote interquartile ranges for other small states. BGD = Bangladesh; BTN = Bhutan; EMDE = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan.

A. Trade is defined as the sum of goods and services exports and imports. Maldives uses 2022 data. Other EMDEs comprise 72 economies, and other small states comprise 13 economies (as defined in World Bank 2024).

B.-D. Sub-components of overall trade in GDP by sector or trade flow. Same coverage and aggregation as in A.

E. Simple average of the ad valorem most favored nation duties applied in 2022. Sample comprises 120 other EMDEs, of which 25 are small states.

F. Other EMDEs comprise 68 economies between 2017 and 2023. Sri Lanka uses 2011 data. Nepal uses 2023 data. Bangladesh, Pakistan, and India use 2022 data.

Findings. This box presents several new findings.

- South Asia is more insulated from global shocks, including geopolitical ones, than most other EMDEs because most South Asian economies are less open to global trade and investment.
- Since 2016, the year before trade-restricting measures began to be more widely used globally, most South Asian countries have aligned their geopolitical stance more closely with their major export markets and creditors. This has helped lower their geoeconomic vulnerabilities.
- Although South Asia trades with and receives investment from an unusually diverse set of partner countries, its overall lack of openness limits its ability to take advantage of the foreign investment

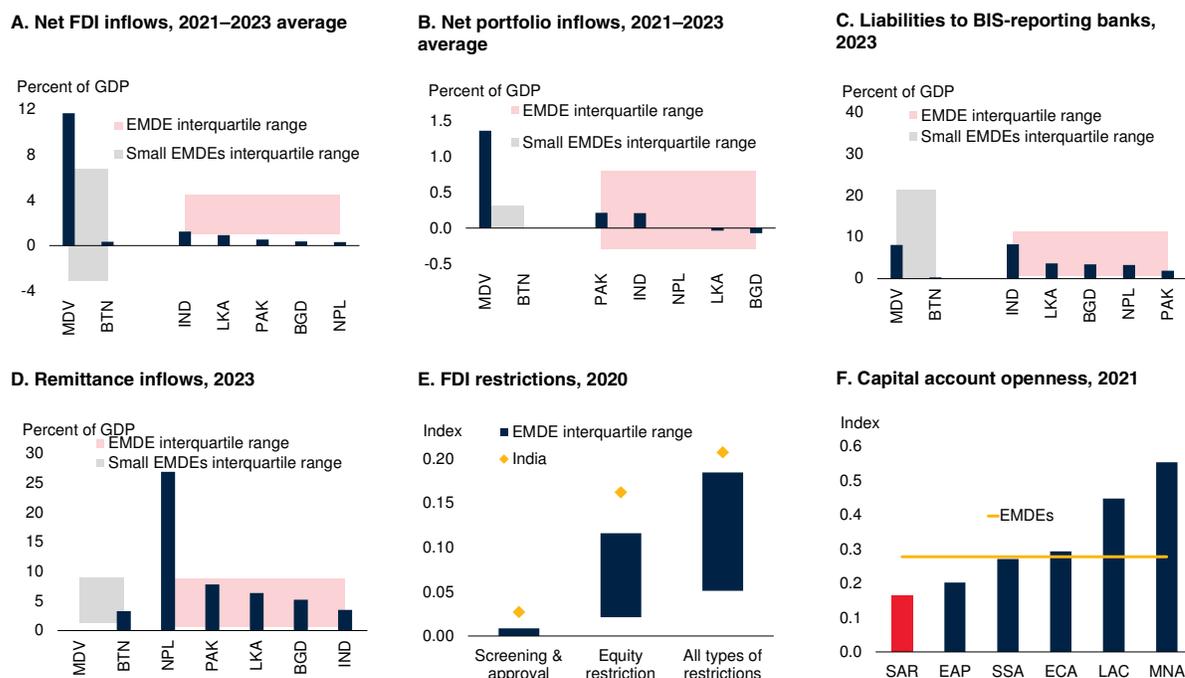
and export market opportunities that result from shifting global supply chains. To better seize such opportunities, South Asian economies may need to open further to global trade and investment, including by lowering import tariffs, easing restrictions on FDI, improving infrastructure and logistics, and deepening financial markets. Joining a wide range of different trade agreements can help maintain a diverse set of trading partners and creditors and mitigate vulnerabilities to external shocks.

Geoeconomic fragmentation: Implications for South Asia

Nearly all South Asian economies are among the quarter of least open EMDEs to global trade and investment,

BOX 1.1 Sheltered: Implications of Goeconomic Fragmentation for South Asia (continued)**FIGURE B1.1.2 South Asia's openness to global investments**

South Asian countries are among the least open to global finance, except for remittance inflows.



Sources: Aiyar and Ohnsorge (2024); IMF Balance of Payments and International Investment Position Statistics (database); OECD Foreign Direct Investment Regulatory Restrictiveness Index (database); World Bank Enterprise Survey (database); World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDE = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Other EMDEs exclude China.

A.-D. Red shades denote interquartile ranges for other EMDEs, comprising 67 economies (A), 64 economies (B), 174 economies (C), and 169 economies (D). Gray shades denote interquartile ranges for small state EMDEs (as defined by World Bank 2024), comprising 8 economies (A), 7 economies (B), 29 economies (C), and 28 economies (D).

C. Bank liabilities refer to stock data.

D. Maldives' share is 0.1 percent and data for Bhutan are for 2022.

E. Latest data are for 2020. Sample comprises 50 EMDEs. India is the only South Asian country covered.

F. Chinn-Ito index of capital account openness. Unweighted averages for each region. Latest available data are for 2021.

which limits their vulnerabilities to external shocks, including geopolitical ones (figures B1.1.1, B1.1.2). Since 2016, South Asia's goeconomic vulnerabilities have mostly fallen further.

Lack of openness

Openness. South Asian economies' lack of openness to global trade and investment limits their vulnerability to all global shocks, including geopolitical ones. All South Asian economies except Maldives are among the least open EMDEs to global trade, FDI, and lending from global banks and have limited portfolio investment liabilities. The only dimension in which South Asia is

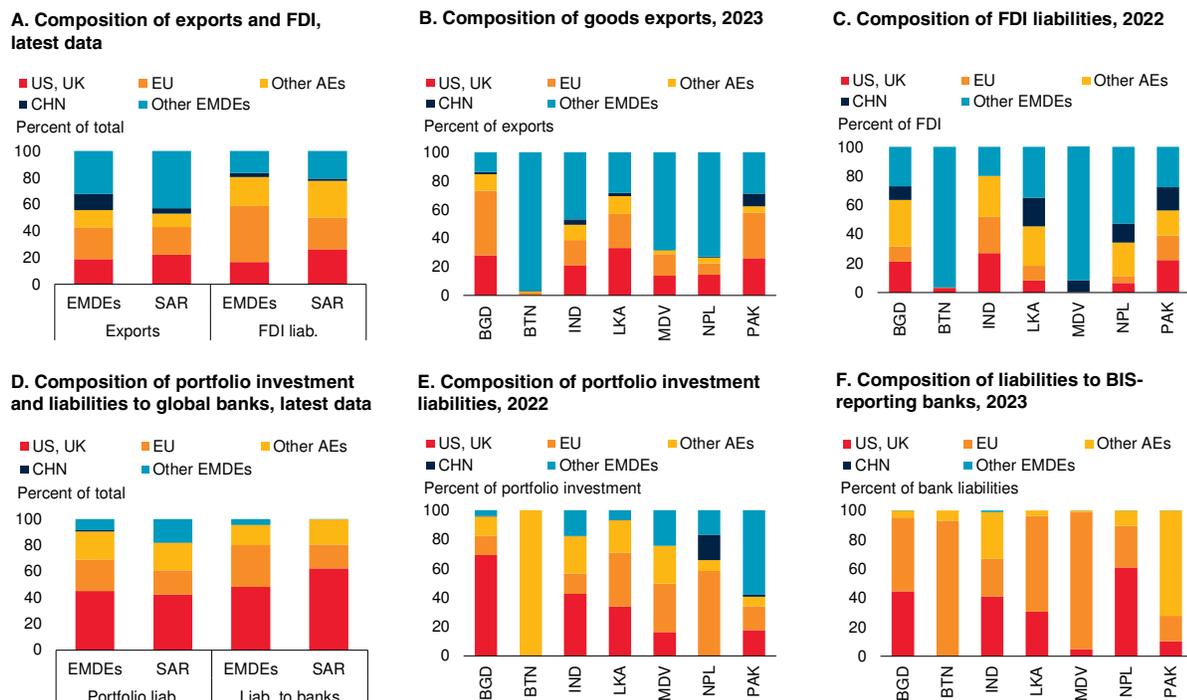
more open than other EMDEs is in remittance inflows (spotlight 2). In part, this has reflected explicit or implicit policy decisions, such as South Asia's above-average FDI-restrictions, capital controls, tariffs, and customs delays.

Composition of external partner countries. Similar to most EMDEs, South Asia's main export markets and creditors are advanced economies. Unlike most EMDEs, however, South Asia lacks an export market and source of FDI in China and the European Union. Instead, South Asia exports more to EMDEs other than China and receives more FDI from the United States and the United Kingdom (figure B1.1.3). That said, there is wide heterogeneity across South Asian countries.

BOX 1.1 Sheltered: Implications of Goeconomic Fragmentation for South Asia (continued)

FIGURE B1.1.3 Composition of South Asia's exports and liabilities

Similar to other EMDEs, South Asia's main export markets and largest investors are the United States and European countries, although with some cross-country variation. China, meanwhile, is a less important export market or source of FDI than for other EMDEs. Less portfolio investment and less bank lending to South Asia originates in Europe than for other EMDEs.



Source: Aiyar and Ohnsorge (2024); World Bank.

Note: AEs = advanced economies; BGD = Bangladesh; BTN = Bhutan; EMDE = emerging market and developing economies; FDI = foreign direct investment; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia. FDI, portfolio investment and bank liabilities all refer to stock data. China, Denmark, France, Netherlands, New Zealand, United Kingdom, and United States include their special administrative regions and overseas territories. Data are for 155 EMDEs.

A. Data are from 2023 for exports and from 2022 for FDI.

C. Only positive FDI stock data are considered.

D. Data are from 2022 for portfolio investment liabilities and from 2023 for liabilities to BIS-reporting banks.

E. Bhutan refers to 2020 data.

D.F. BIS-reporting banks do not include banks from mainland China and most EMDEs.

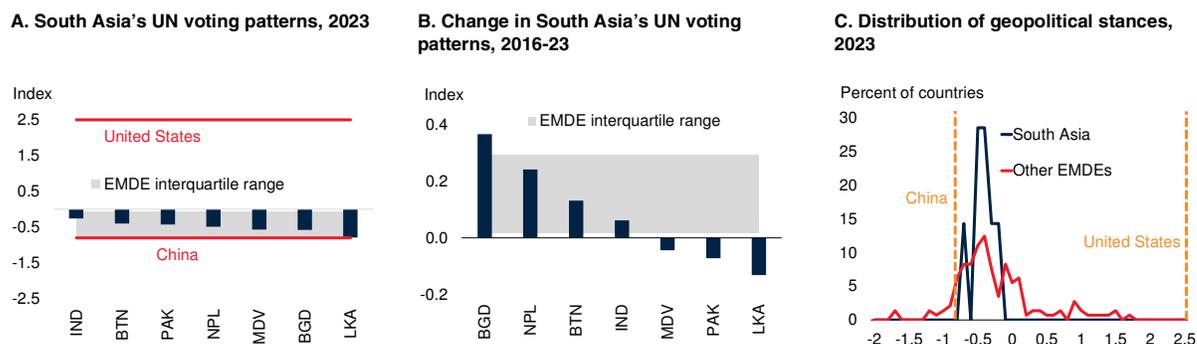
- **Exports.** Bhutan, Maldives, and Nepal ship particularly large shares of their exports to other EMDEs, including India, and Bangladesh and Pakistan to Europe.
- **FDI.** Sri Lanka and Pakistan receive above-average shares of FDI from China; Bhutan and Nepal from India; India from Mauritius; and Maldives from Thailand and Mauritius.
- **Portfolio investment.** Nepal stands out for receiving negligible portfolio investment from the United States but sizable investment from China; a large

share of Pakistan's portfolio investment is from other EMDEs (such as Saudi Arabia).

Geopolitical stance. Traditionally, the UN voting patterns of most EMDEs, including those in South Asia, have aligned more closely with China than with the United States (figure B1.1.4). Since 2016, however, most South Asian countries' voting patterns have moved closer to those of the United States—again, similar to most EMDEs. Maldives, Pakistan, and especially Sri Lanka were exceptions, consistent with evidence of geopolitical flexibility among countries with limited financial capacity (Brazys and Panke 2017).

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia (continued)**FIGURE B1.1.4 South Asia's geopolitical stance**

Like most EMDEs, South Asia's UN voting aligns more closely with China than with the United States, although most South Asian countries have moved closer to the United States since 2016.



Sources: Aiyar and Ohnsorge (2024); Bailey, Strezhnev and Voeten (2017); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDE = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Figures are based on the ideal point index of country voting patterns in the UN General Assembly. The index ranges from -2.5 to +2.5 points. Gray shades indicate the interquartile range of other EMDEs, including 137 economies.

Vulnerability to geoeconomic risks

Limited vulnerability. The vulnerability of most South Asian countries' exports to geopolitical disruptions is comparable to that of other EMDEs (figure B1.1.5). Nepal, Bhutan, and Maldives are the exceptions, ranking among the least vulnerable EMDEs. Nepal and Maldives are less vulnerable because of their low goods export openness, and all three predominantly rely on geopolitically close export markets, such as India and Thailand. For most South Asian countries, FDI has limited vulnerability to geopolitical shocks, largely because of their exceptionally low FDI inflows. Most countries in South Asia are in the least vulnerable quartile of EMDEs for exports and FDI, and in the less vulnerable half of EMDEs for portfolio investment.

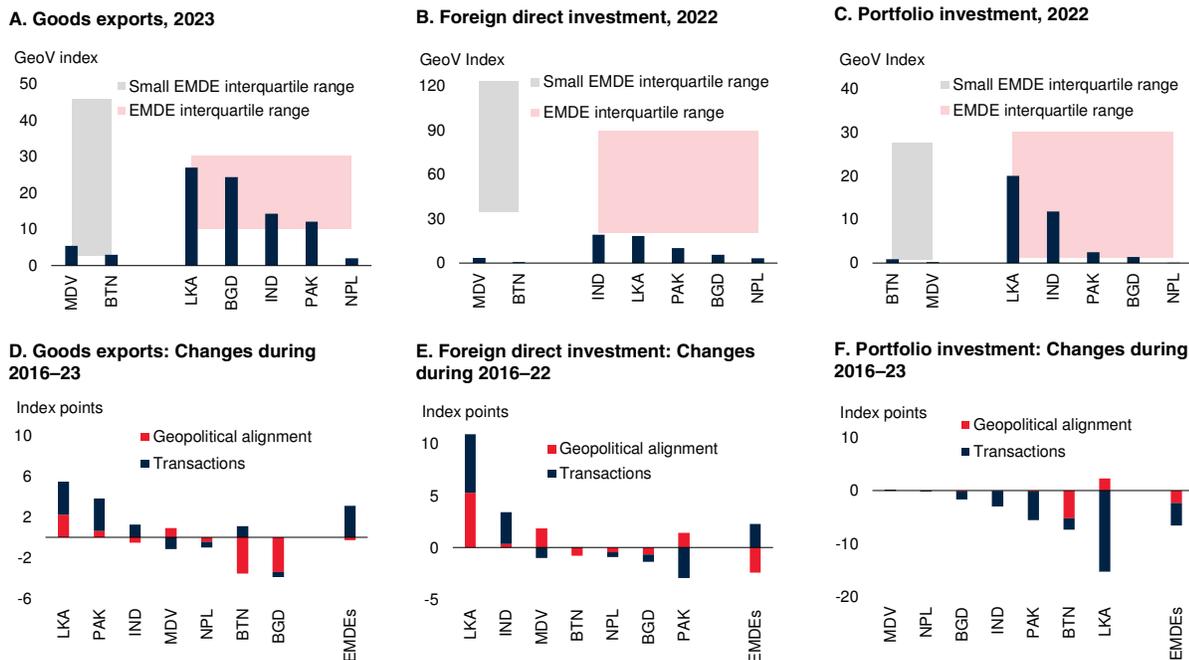
Mostly falling vulnerabilities since 2016. Geoeconomic vulnerabilities in South Asia have fallen more than in other EMDEs since 2016, the year before trade- and investment-restricting measures began to be used more widely around the world. However, there was considerable heterogeneity around this average. Geoeconomic vulnerabilities can change either because of changing geopolitical stances or because cross-border transactions change over time. In South Asia, these factors have sometimes offset each other, and sometimes worked in the same direction.

- **Bangladesh.** Bangladesh's geopolitical pivot toward advanced economies—the most pronounced among South Asian countries—aligned it more closely with its main source of foreign exchange inflows, exports, FDI and portfolio investment. As a result, the geoeconomic vulnerability of all of Bangladesh's main sources of foreign exchange declined.
- **Bhutan.** Bhutan's UN voting patterns have increasingly aligned with India and advanced economies. This has helped lower the measured geoeconomic vulnerability of its goods exports, as well as its FDI and portfolio investment sources.
- **India.** India's exports and FDI liabilities have shifted toward partner countries whose UN voting patterns differ considerably from India, that is, countries that are geopolitically distant. Specifically, an increasing reliance on exports to geopolitically distant markets (for example, the United States) and FDI from geopolitically distant sources (for example, the United Kingdom) have increased India's vulnerabilities to geopolitical shocks.
- **Maldives.** Maldives' UN voting patterns have diverged somewhat from its main sources of FDI (Thailand, Mauritius), suggesting a marginally higher geoeconomic vulnerability of its FDI.

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia (continued)

FIGURE B1.1.5 Geopolitical vulnerabilities of exports and liabilities

Most South Asian countries' goods exports, FDI inflows, and portfolio investment inflows are less vulnerable to geopolitical risks than those of other EMDEs. Changes in vulnerabilities have mostly been more favorable in South Asia than in other EMDEs since 2016.

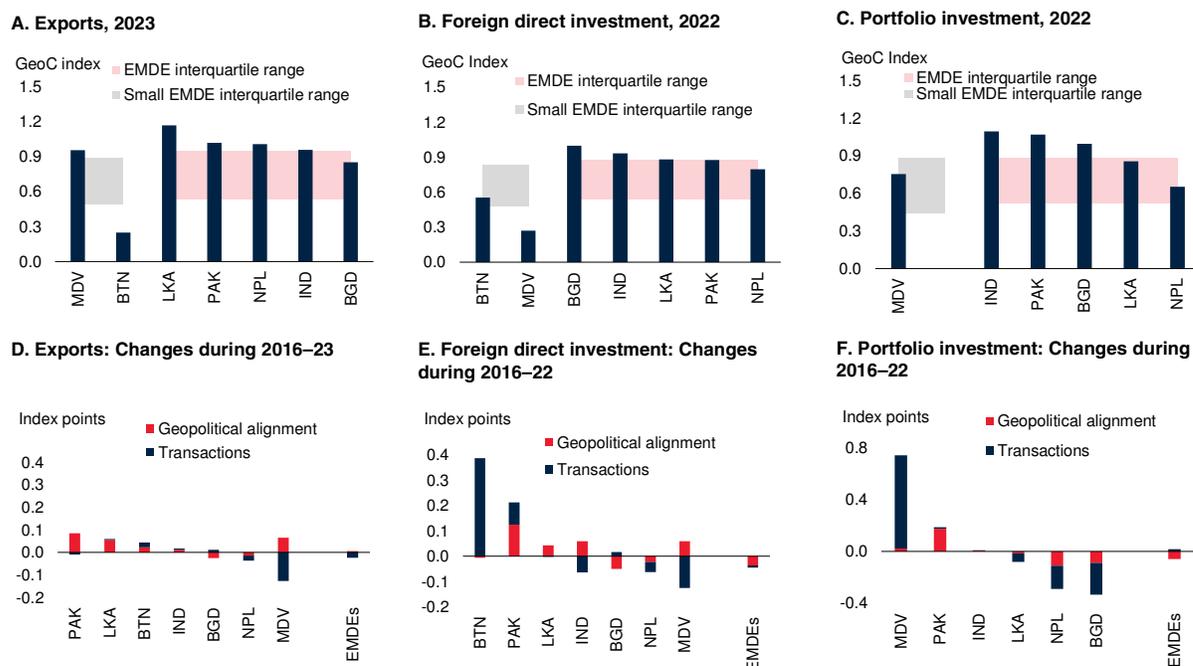


Sources: Aiyar and Ohnsorge (2024); IMF International Investment Position Statistics (database); World Bank.
 Note: BGD = Bangladesh; BTN = Bhutan; IND = India; EMDE = emerging market and developing economies; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Other EMDEs exclude China. Geoeconomic vulnerability (GeoV index) measures the trade- or liability-weighted average geopolitical distance of a country to its trading partners or creditors. Red shades in A-C denote interquartile ranges for other EMDEs. Gray shades denote interquartile ranges for other small-state EMDEs (as defined in World Bank 2024). Aggregates are GDP-weighted averages. All charts show geoeconomic vulnerability indices scaled by the share of total transactions in GDP; when aggregate transactions are not available, bilateral aggregates are used.
 A.D. Exports refer to merchandise exports. Bhutan uses 2022 data. Other EMDEs comprise 140 economies and 34 small states. Using share of total merchandises and services export as scaler for GeoV gives similar results. Bhutan uses 2022 data for GeoV index and both 2016 and 2022 data for tracking changes.
 B.C.E.F. Red shades denote interquartile ranges for other EMDEs, comprising 127 economies (B and E) and 117 economies (C and F). Gray shades denote interquartile range for small states, comprising 26 economies (B and E) and 20 economies (C and F).
 C.F. Bhutan uses 2020 data for GeoV index and both 2015 and 2020 data for tracking changes.

- Nepal.** Along with Bangladesh, Nepal stands out among South Asian countries in both having aligned geopolitically more closely with its main external partners (India and advanced economies) and increasingly shifting its external ties towards countries with more similar UN voting patterns. As a result, similar to Bangladesh, it has reduced all aspects of its current geoeconomic vulnerability.
- Pakistan.** Pakistan's geopolitical shift toward China has brought it geopolitically further from its main export markets in Europe. This has increased the vulnerability of Pakistan's exports while its portfolio investment and FDI vulnerabilities have fallen as a result of sharply higher inflows from other, geopolitically closer EMDEs (especially those in the Gulf).
- Sri Lanka.** Between 2016 and 2023, Sri Lanka's UN voting patterns, and hence its geopolitical alignment, diverged from those of the United States, the United Kingdom, Singapore, and India—its largest export markets and sources of FDI. This divergence was only partially reversed in 2023. As a result, the measured geopolitical vulnerability of Sri Lanka's exports and sources of FDI has increased.

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia (continued)**FIGURE B1.1.6 Geopolitical diversity of export markets and creditors**

Most South Asian countries have more diversified export markets and sources of foreign investment than other EMDEs. Shifts in geopolitical alignment have played a significant role in increasing connectedness since 2016.



Source: Aiyar and Ohnsorge (2024); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDE = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Geoeconomic connectedness (GeoC index) measures the trade or liability-weighted standard deviation of the geopolitical distances to export destinations (A, D) or creditors (B, C, E, F); the index captures the diversity of geopolitical views among partner countries. Charts show geoeconomic connectedness index (A-C) or change in geoeconomic connectedness index since 2016 (D-F). Red shades in A-C denote interquartile ranges for other EMDEs, and grey shades denote interquartile ranges for other small states. Other EMDEs exclude China. Aggregates are GDP-weighted averages.

A.D. Exports refer to merchandise exports. Other EMDEs comprise 139 economies and other small states comprise 33 economies.

B.C.E.F. Red shades denote interquartile range for other EMDEs, including 140 economies (B and E) and 121 economies (C and F). Gray shades denote interquartile range for small state economies, including 34 economies (B and E) and 22 economies (C and F).

C.F. Bhutan has no observation as it only has one partner in 2020, the latest available year.

This assessment is necessarily backward-looking since it is data-driven. Geoeconomic vulnerabilities may also arise in the context of future economic ties that have yet to be developed and whose development may be impeded by geopolitical considerations.

Services exports. In addition to vulnerabilities in goods exports, South Asia faces geoeconomic risks from services exports. South Asia has an above-average share of services exports in GDP (figure B1.1.1), especially services exported to geopolitically distant markets such as the United States and Europe (World Bank 2021a, 2024d). Services exports are particularly vulnerable to geopolitical tensions because services trade—whether tourism, call centers, or back-office functions—is closely linked to buyers' trust in the seller (Bhattacharya, Patnaik, and Shah 2012; Wagner 2014).

Diversification of geopolitical risks

Missed opportunities. South Asia's lack of openness to global trade and investment reduces its ability to benefit from the reshaping of global supply chains and trade (Khandelwal 2022). If South Asia were more open to global trade and investment, it might be in a good position to benefit from these shifts because of the diverse set of countries with which it already engages.

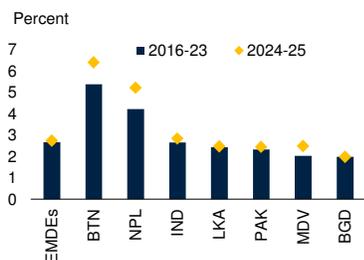
Diverse set of partner countries. Currently, most South Asian countries are in or near the quartile of EMDEs with the most geopolitically diverse export markets, FDI sources, and portfolio investment sources—as captured by the geoeconomic connectedness index, which measures the standard deviation of partner countries' geopolitical stances (figure B1.1.6). However,

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia (continued)

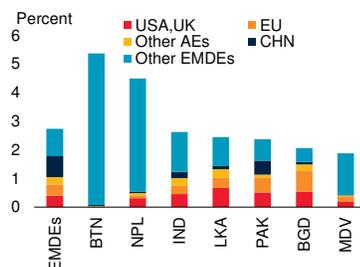
FIGURE B1.1.7 Exposure to growing markets

Since 2016, South Asia's export markets have grown more slowly than those of the average EMDE and are expected to continue to do so over the forecast horizon. Meanwhile, investment growth in most South Asian countries' (except India's) FDI sources has been faster than in the average EMDE and this is also expected to continue.

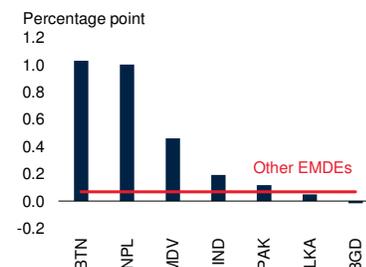
A. Export market growth



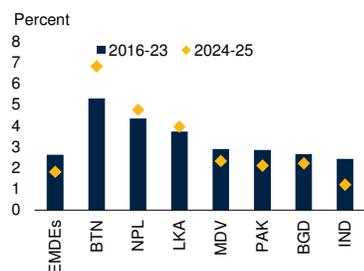
B. Composition of export market growth, 2023



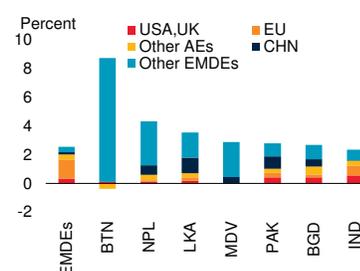
C. Changes in export market growth between 2016–23 and 2024–25



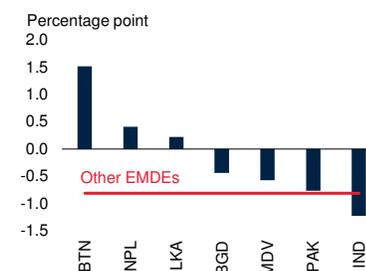
D. Investment growth of FDI sources



E. Composition of investment growth of FDI sources, 2023



F. Changes in investment growth of FDI sources between 2016–23 and 2024–25



Sources: Aiyar and Ohnsorge (2024); IMF World Economic Outlook (database).

Note: BGD = Bangladesh; BTN = Bhutan; EMDE = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Red lines denote the median level of other EMDEs. Other EMDEs comprise 146 economies and exclude China.

A–C. Growth of export markets is measured either as the annual average (A, B) or as the change (C) in annual export-weighted growth. Export market growth between 2016 and 2023 is derived as the export-weighted annual average growth across all export partners between 2016 and 2023. Export market growth between 2024 and 2025 is derived from first computing annual average forecast growth of each export market between 2024 and 2025, then aggregating using 2023 exports as weights, before computing the annual average of these two years.

D–F. Investment growth of FDI sources is measured as the annual average (D, E) or as the change (F) in FDI-weighted investment growth. FDI sources' investment growth between 2016 and 2023 is derived as the FDI-weighted annual average investment growth across all FDI sources between 2016 and 2023. FDI sources' investment growth between 2024 and 2025 is derived from first computing annual average forecast investment growth of each FDI sources between 2024 and 2025, then using 2022 FDI shares as weights, before computing the annual average of these two years.

official statistics may exaggerate the diversity of South Asia's FDI sources. For example, India receives an above-average share of FDI from geopolitically close Singapore and Mauritius, as well as from geopolitically distant Japan and the European Union—which covers much of the spectrum of geopolitical stances as captured by UN voting patterns. However, between 2004 and 2014, 90 percent or more of FDI from Mauritius and Singapore to India have been estimated to indirectly channel FDI from other countries—including from Indian investors (Jaiswal 2017; Kathuria, Yatawara, and Zhu 2021).

Growing diversity of partner countries. Since 2016, India, Pakistan, Sri Lanka, and Bhutan have increased

the diversity of their export markets, as well as their sources of FDI. Pakistan has also widened its sources of portfolio investment (figure B1.1.6). For Bangladesh, in contrast, the reduction in geoeconomic vulnerabilities was accompanied by a narrowing range of geopolitical views of the country's export markets and FDI sources as Bangladesh moved its geopolitical stance closer to that of its main export markets and sources of FDI in advanced economies.

Below-average growth in export markets, above-average growth in FDI sources. Because most South Asian countries have exported less than the average EMDE to China over the past decade, and China was

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia (continued)

one of the world's fastest-growing economies, South Asia's export market growth has mostly been below that in other EMDEs (figure B1.1.7). This lack of exposure to export markets in China is also expected to allow for an acceleration in most South Asian countries' export markets over 2024–25, whereas export market growth of the average EMDE is expected to be broadly stable. Even with this acceleration, however, export market growth for most South Asian countries (except Bhutan, Nepal, and India) is expected to remain below the EMDE average. Meanwhile, since 2016, most South Asian countries (except Bangladesh and India) have received FDI from sources with higher investment growth than other EMDEs—mainly because of their above-average reliance on FDI from other EMDEs. Above-average investment growth in South Asia's FDI sources is expected to continue to support FDI inflows in most countries in the region over 2024–25. Only India faces a considerably steeper investment growth slowdown in its sources of FDI than the average EMDE over the forecast horizon.

Policy implications

To take advantage of the reshaping of global value chains, policy priorities for South Asian countries include removing obstacles to trade and foreign investment, further improving infrastructure and logistics, and increasing institutional effectiveness.

Some South Asian countries may hope to build on their long-standing non-aligned geopolitical stance to become globally connected manufacturing and services hubs. In this ambition, they face competition from other EMDEs that are similarly non-aligned and also aim to take advantage of shifts in global supply chains. To achieve their aspirations in a competitive global environment, South Asian countries need to implement policies that attract FDI and unlock new export markets and sectors. Cultivating a diversified set of trading partners and creditors across the geopolitical spectrum could help them manage any increases in vulnerabilities in a more open, dynamic economic model. More connected countries tend to have lower tariffs, more efficient logistics, deeper financial markets, predictable policies, and participate in larger free trade areas (Aiyar and Ohnsorge 2024).

Further improving infrastructure and logistics

Upgraded transportation networks and efficient logistics can lower trade costs for exporters and firms importing intermediate inputs. This increases the cost competitiveness of domestic firms in international trade. In particular, the absence of delays related to unexpected transport disruptions at the border or within the country supports participation in global supply chains (Brancaccio, Kalouptsidi, and Papageorgiou 2024).

Multiple large public infrastructure projects, including road and railway networks, as well as ports and airports, have improved the connectivity of South Asia in recent years (EIU 2023; World Bank 2023a). India's National Logistics Policy, announced in 2022, and the Padma bridge construction in Bangladesh illustrate recent efforts by South Asian governments to upgrade the region's infrastructure and connectedness. Despite these improvements, South Asia still tends to score below the EMDE median on indicators for infrastructure quality, as well as on logistics performance (figure B1.1.8). India and Sri Lanka are the two notable exceptions. Both countries score above the median on timeliness of logistics and keeping track of shipments.

The WTO Trade Facilitation Agreement—which entered into force in 2017 and has been ratified by all South Asian countries except Bhutan—provides a clear roadmap for further policy measures. It aims to reduce non-tariff barriers to trade by simplifying, modernizing, and harmonizing import and export regulations and logistics across countries. Member countries can request technical assistance and monitoring for the implementation of specific reforms. As of July 2024, South Asia's median implementation rate has been 78 percent, but Nepal and Sri Lanka have implemented less than 40 percent of all measures.

Increasing institutional effectiveness

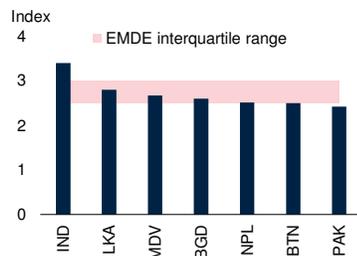
A stable political environment and effective public institutions promote international trade and attract foreign investment (Beverelli et al. 2024; Heilbron and Whyte 2019). Firm surveys have repeatedly identified policy and regulatory uncertainty as one of the most significant constraints on expanding activities to other countries, especially in EMDEs (Stamm and Vorisek 2024). Uncertainty can, for instance, arise from

BOX 1.1 Sheltered: Implications of Goeconomic Fragmentation for South Asia (continued)

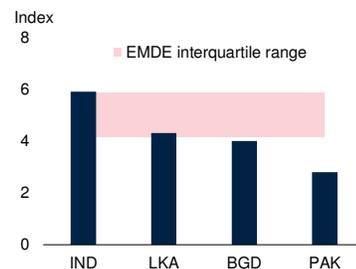
FIGURE B1.1.8 Factors associated with greater diversity of economic partners

Many South Asian countries score poorly on country characteristics associated with openness to trade and finance, as well as on measures of financial depth. South Asia's goeconomic connectedness might have been higher had its logistics performance been better and its tariffs lower.

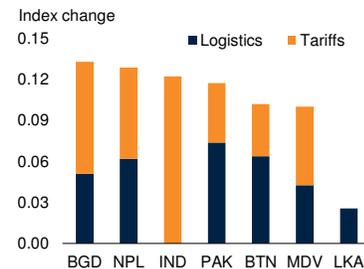
A. Logistics performance



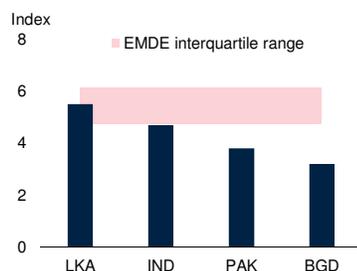
B. Political stability and institutional effectiveness



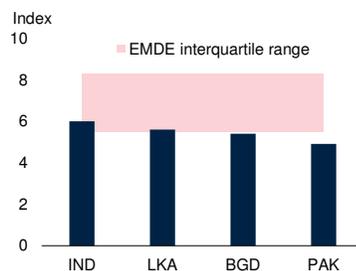
C. Predicted differences in goeconomic connectedness for exports



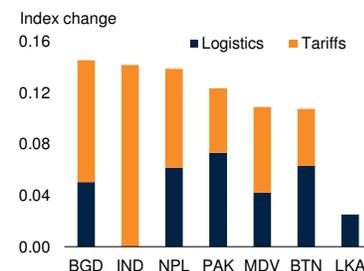
D. Quality of infrastructure



E. Openness of foreign trade and exchange regime



F. Predicted differences in goeconomic connectedness for intermediate inputs



Sources: Aiyar and Ohnsorge (2024); Economist Intelligence Unit Business Environment Rankings (database); World Bank International Logistics Performance Index (database); WTO World Tariff Profiles (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Red-shaded areas show the interquartile range for EMDEs. Unless noted differently, data from 2023.

A. Sample comprises 94 other EMDEs. Bars for Maldives, Nepal, and Pakistan show values for 2018.

B,D,E. Sample comprises 44 other EMDEs.

C,F. Estimated through bivariate ordinary least squares regressions in annex B1.1.1. Bars indicate the hypothetical difference in goeconomic connectedness in exports (C) or intermediate goods exports (F) if South Asia had the same logistics performance and the same average tariffs as the quartile of EMDEs with the lowest tariffs and the best logistics performance. This is derived by multiplying the correlations coefficients by the difference between the 75th percentile EMDE value and the country score on the respective explanatory variable. The goeconomic connectedness index measures the trade or liability-weighted standard deviation of the geopolitical distances to export destinations or creditors; the index captures the diversity of geopolitical views among partner countries. Sample covers 99 EMDEs for logistics regressions and 105 EMDEs for tariff regressions in 2023.

problems with contract enforcement or unlawful expropriation (for example, as described in Goel and Goel 2020). Reducing such uncertainties and streamlining regulatory frameworks can lower transaction costs for firms and improve the climate for foreign investment and trade (Gao et al. 2024).

The institutional and policy environment in the average South Asian country is considered less stable than in the median EMDE (figure B1.1.8). Three of the four largest South Asian countries rank in the bottom

quartile of EMDEs for their institutional and policy environment. This is consistent with firm surveys citing political uncertainty and corruption as significant constraints on doing business in South Asia (World Bank 2024d), which makes credible long-run policy commitments a priority. India's National Logistics Policy could serve as a promising example of such a long-run commitment. To be able to undertake large public investments in other countries, restoring and committing to sound macroeconomic policies will be an important prerequisite (World Bank 2024j, 2024k).

BOX 1.1 Sheltered: Implications of Geoeconomic Fragmentation for South Asia (*continued*)

Removing obstacles to trade

Besides reducing indirect costs through upgraded infrastructure, efficient logistics, and supportive institutions, countries can become more connected by lowering tariffs (Ohnsorge and Quaglietti 2024). Access to cheaper intermediate inputs, in turn, increases the cost competitiveness of domestic firms on international markets (Feng, Li, and Swenson 2016). However, tariffs in South Asia remain well above those in other EMDEs. Bangladesh, India, and Nepal rank among the quartile of EMDEs with the highest average applied tariffs (figure B1.1.1).

Removing obstacles to foreign investment

Openness to foreign investment is crucial to integrating into global supply chains. Multinational corporations, through FDI, establish local subsidiaries that incorporate host countries into their networks. This fosters the diffusion of advanced technology and managerial expertise through extensive supplier relationships and distribution channels. Increased competition also drives domestic firms to become more productive and improve international competitiveness, further embedding the host economy into global supply chains (Qiang, Liu, and Steenbergen 2021).

Many South Asian countries have introduced new restrictions on cross-border financial transactions since 2021. Such measures include increased profit repatriation requirements for foreign investors, foreign exchange quotas, and higher minimum financing requirements (World Bank 2023a). In some cases, legal frameworks specifically discriminate against foreign investors (World Bank 2023b). The removal or easing of these restrictions could help attract FDI.

Deep trade agreements

One option for deepening global trade and investment integration is to initiate or join deep trade agreements with other countries, which go beyond tariff reductions to include provisions that facilitate investment and trade. Deep trade agreements, which have become common, offer an opportunity to ease FDI restrictions.

Several Southeast Asian countries—such as Malaysia and Vietnam—have joined large trade and investment agreements, including the 2018 Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the 2020 Regional Comprehensive Economic Partnership (RCEP). Meanwhile, India does not participate in mega trade blocs such as RCEP, and some of its trade agreements have narrower scope than others. For example, the India-EFTA Trade and Economic Partnership Agreement (TEPA) excludes key sectors such as digital trade, e-commerce, pharmaceuticals, and small and medium enterprises (World Bank 2024a). None of the other South Asian countries is a member of RCEP or CPTPP. This means that there is ample potential for countries in South Asia to expand their network of regional trade agreements to include a wider range of countries along the geopolitical spectrum. This can help improve connectedness and reduce vulnerabilities to geopolitical shocks (Maloney et al. 2023).

Potential magnitude of gains

How much more diversified might South Asia's trading partners and creditors have been if South Asia's policy environment had matched that of the top EMDE quartile? Although they cannot establish causality, correlations suggest that economies with lower average tariffs and better logistics performance tend to be more connected in their exports (table B1.1.1). All but one South Asian country scores below the top EMDE quartile on either measure. If all these countries had the same logistics performance as the top EMDE quartile and the lowest EMDE quartile for tariffs, South Asia's median export diversification could have been about 13 percent higher, on par with Malaysia and Indonesia (figure B1.1.8).

A key channel for the positive association between exports and better logistics, or lower tariffs, is the increased availability of cheaper intermediate inputs. This is supported by a strong correlation between the connectedness of intermediate inputs and logistics performance or tariffs. The empirical estimates suggest that South Asia might have had the connectedness of major supply chain participants such as Vietnam or Poland in intermediate inputs if its logistics and tariffs had been on par with those in the best quartile of EMDEs.

In *Bangladesh*, current account balances improved in FY2023/24, as restrictions weighed on imports and remittances rose. In July 2024, remittance inflows fell to a 10-month low, as uncertainty rose amid social unrest, and internet and banking services were disrupted, before bouncing back in August. In *India*, a steady surplus in services trade helped offset a widening deficit in goods trade in April–August 2024. In *Nepal* and *Pakistan*, robust remittance inflows and growth in tourism (in Nepal) offset deficits in goods trade, with goods trade deficits declining in FY2024 but remaining large. In *Sri Lanka*, growth in services exports and remittance inflows have propelled the current account deficit into a surplus.

Meanwhile, portfolio investment and FDI inflows remain subdued across most of South Asia. Net portfolio investment inflows, in particular, have been close to zero in most South Asian countries. *India* is an exception, where net portfolio inflows have been robust and near pre-pandemic levels since March 2024. Net portfolio inflows have been positive and rising for eight quarters, mirroring trends in several other large EMDEs (except China) and driven in part by the inclusion of rupee-dominated Indian government bonds in global bond indices. For the region as a whole, FDI inflows have yet to recover to pre-pandemic levels and are well below the average for other EMDEs.

Improving current account balances and inflows of remittances have boosted official international reserves of *Pakistan* and *Sri Lanka*. In *Sri Lanka*, foreign reserves have increased to 3.6 months of import cover in August, up from 3.3 months in March 2024. In *Pakistan*, expectations of an approval of an IMF arrangement helped stabilize its foreign exchange market. Despite rising reserve levels, in both *Pakistan* and *Sri Lanka*, reserve covers remain significantly below the EMDE average.

In *Bangladesh* and *Maldives*, foreign reserve levels have declined since early 2024 as a result of persistent current account deficits. In *Bangladesh*, gross reserves at the end of June covered 3.3 months of prospective imports after a disbursement under the IMF arrangement. On May 8, 2024, a crawling peg exchange rate regime

was adopted, as a first step toward a more flexible foreign exchange policy, and the exchange rate was devalued to be closer to the kerb market rate. In *Maldives*, foreign reserves in August were sufficient to cover only one month of imports, with the currency under increasing pressure from external debt service commitments and declining foreign exchange earnings during the low tourism season, amid two rating downgrades by Fitch Ratings in June and August. The foreign exchange shortage constrained domestic economic activity by limiting imports in construction, wholesale, and retail trade sectors.

Outlook

Growth in South Asia is projected to remain above that of other EMDE regions. For most countries in the region, growth in 2024–26 is likely to be faster than previously projected in April.

Regional outlook

Growth in South Asia is projected to reach 6.2 percent in 2025–26, again higher than in other EMDE regions (figure 1.7). For five South Asian countries, forecasts have been upgraded from six months ago; only the forecasts for *Bangladesh* and *Maldives* have been downgraded (table 1.1). The widespread upgrades reflect robust growth in private consumption in *India*, and stronger tourism or hydropower exports in *Bhutan*, *Nepal*, and *Sri Lanka* than previously projected.

More than in other EMDEs, domestic demand is expected to remain the main driver of growth in South Asia. Nevertheless, domestic demand growth is expected to slow somewhat from 2023, reflecting the effects of tightening fiscal policies after elections in five South Asian countries over the past year. Export growth is expected to pick up, supported by India's initiatives to boost manufacturing exports and a broad recovery in tourism. Current account deficits are projected to remain at a median of 1 percent of GDP in 2024 and narrow slightly during 2025–26, remaining considerably smaller than the pre-pandemic average of 3 percent of GDP.

Headline inflation is expected to moderate further in most South Asian countries during 2024–26 from its 2023 levels, partly reflecting stabilizing exchange rates and broadly stable commodity prices. The exceptions are *Bangladesh* and *Maldives*, where disruptions from unrest (*Bangladesh*) and the removal of price subsidies resulting from fiscal reforms (*Maldives*) are expected to raise inflation in 2025.

Fiscal policies in the region are projected to tighten throughout the region. *Bangladesh*, *Pakistan*, and *Sri Lanka* are expected to implement reforms under their IMF-supported policy programs. The median fiscal deficit is expected to narrow to 5.6 percent of GDP during 2024–26, still wider than pre-pandemic levels but down from 6.8 percent in 2023. In *India*, the fiscal deficit is projected to shrink by 0.7 percentage point of GDP in FY2024/25 to 7.5 percent of GDP, as a result of higher revenues after improved compliance with the Goods and Services Tax (GST) and a broadening of the personal income tax base. With government debt levels expected to remain elevated in the region, debt service costs will continue to constrain fiscal policies.

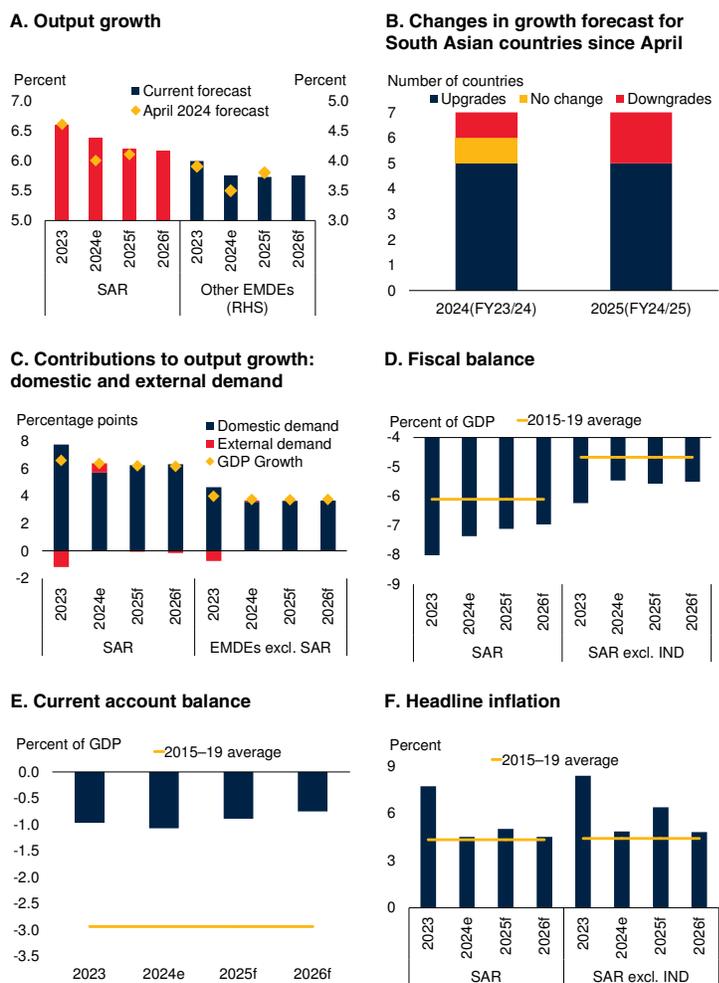
Country outlooks

In *Bangladesh*, output growth is expected to slow from 5.2 percent in FY2023/24 to within the range of 3.2–5.2 percent (with a mid-point of 4.0 percent) in FY2024/25. The wide range of the growth projection reflects the lack of available or reliable data in recent months, and significant uncertainties around the political and economic outlook following the recent political turmoil. In the short term, political uncertainties are expected to keep investment and industrial growth subdued. Recent floods are expected to set back agricultural production modestly. In the medium to long term, growth is expected to pick up gradually, benefiting from critical reforms in the financial sector, increased domestic resource mobilization, improved business climate, and increased trade.

Bhutan's economy is expected to grow by 7.2 percent in FY2024/25, a 1.5-percentage-point upgrade from April, boosted by a faster-than-expected recovery in tourism and strong public

FIGURE 1.7 Outlook for output growth

Growth in 2024 is projected to be faster than previously expected, driven by strong private consumption growth in India and stronger-than-expected tourism or hydropower export growth in Bhutan, Nepal, and Sri Lanka. Outside of India, growth is expected to pick up, with recovery firming in Pakistan and Sri Lanka. Fiscal consolidation is expected to shrink fiscal deficits, while inflation is projected to decline in most countries, with global commodity prices remaining stable.



Sources: *Macro Poverty Outlook* (World Bank); World Bank.

Note: e = estimate; f = forecast. EMDE = emerging market and developing economies; IND = India; SAR = South Asia.

A. Bars show average for fiscal year. Aggregation method is weighted average.

B. Sample includes seven South Asian countries with GDP forecast.

C. GDP aggregates are calculated using real U.S. dollar GDP weights at 2015 prices and market exchange rates. Contribution to growth from domestic demand and net exports is based on GDP forecasts. Sample comprises 117 EMDEs, of which 6 are in South Asia. Statistical discrepancies and change in inventories are included as part of the domestic demand.

D. Aggregation method is weighted average. Sample comprises seven countries in South Asia.

E. Bars show the median current account balance. Sample comprises seven countries in South Asia. Solid line shows the average median current account balance over the period 2015–19.

F. Bars show the median of the expected inflation. Horizontal line shows the average of the median inflation from 2015–19. Sample includes seven countries in South Asia.

investment at the beginning of a new five-year plan. Growth is expected to moderate to 6.6 percent in FY2025/26 as the effect of the tourism rebound fades.

TABLE 1.1 Growth in South Asia

Country fiscal year		Real GDP growth at constant market prices (Percent)				Revision to forecast from April 2024 (Percentage point)	
		2023	2024(f)	2025(f)	2026(f)	2024(f)	2025(f)
Calendar year basis							
South Asia region (excluding Afghanistan)		6.6	6.4	6.2	6.2	0.4	0.1
Maldives	January to December	4.1	4.7	4.7	4.6	0.0	-0.5
Sri Lanka	January to December	-2.3	4.4	3.5	3.1	2.2	1.0
Fiscal year basis		22/23	23/24(e)	24/25(f)	25/26(f)	23/24(e)	24/25(f)
Bangladesh	July to June	5.8	5.2	4.0	5.5	-0.4	-1.7
Bhutan	July to June	5.0	5.3	7.2	6.6	0.4	1.5
India	April to March	7.0	8.2	7.0	6.7	0.7	0.4
Nepal	mid-July to mid-July	2.0	3.9	5.1	5.5	0.6	0.5
Pakistan	July to June	-0.2	2.5	2.8	3.2	0.6	0.5

Sources: *Macro Poverty Outlook* (World Bank) and World Bank staff calculations.

Note: (e) = estimate; (f) = forecast. GDP measured in average 2010–19 prices and market exchange rates. Pakistan is reported at factor cost. Growth projections for Afghanistan are not available. To estimate forecasts for regional aggregates in the calendar year, fiscal year forecasts are converted to the calendar year by taking the average of two consecutive fiscal years for Bangladesh, Bhutan, Nepal, and Pakistan because quarterly GDP forecasts are not available.

Growth in *India* is projected to reach 7.0 percent in FY2024/25 and 6.7 percent in FY2025/26. Larger-than-expected agricultural output, along with policies designed to raise employment growth, are expected to contribute to strong private consumption growth, while growth in public consumption is projected to moderate in line with budgeted fiscal consolidation. Investment growth is expected to moderate from a high base. Projected growth is close to India's pre-pandemic, FY2016/17–FY2018/19, average growth rate and higher than for most other major EMDEs. Fiscal consolidation is expected to continue over the medium term, driven by robust revenue growth and a modest increase in current spending.

In *Maldives*, output growth is expected to remain modest, at 4.7 percent in 2025 and 4.6 percent in 2026. These represent a 0.5-percentage-point downgrade for 2025, and 0.5-percentage-point upgrade for 2026, mainly reflecting delays in the construction of the new airport to serve the tourism sector, which represents 25 percent of GDP. The growth outlook assumes that major government debt repayments coming due to bilateral creditors can be rescheduled to avoid a disorderly default.

In *Nepal*, growth is projected to pick up to 5.1 percent in FY2024/25 and 5.5 percent in FY2025/26, a slight upgrade from April, with economic activity outside the hydropower sector expected to be supported by monetary policy easing. Services sector activity is expected to strengthen amid growing tourist arrivals, an expanding hotel sector, and a recovery in goods imports after earlier restrictions were relaxed.

Pakistan's recovery from the recent balance-of-payments crisis is expected to continue. Growth in agricultural activity is expected to moderate after the bumper rice and wheat harvest in FY2023/24. Manufacturing activity is projected to pick up in FY2024/25 as import controls and monetary policy are loosened, lifting growth forecast to 2.8 percent in FY2024/25 and 3.2 percent in FY2025/26. Inflation is expected to remain high in late 2024 because of rising administered energy prices, but is projected to ease in FY2025/26 as this effect fades. The projected recovery assumes that the IMF-supported reform program remains on track.

In *Sri Lanka*, growth is expected to continue to strengthen to but remain below the pre-pandemic average. Output is projected to grow by 3.5

percent in 2025, a 1-percentage-point upward revision from April, and 3.1 percent in 2026, supported by stronger-than-expected rebounds in industrial activity and in tourism-related sectors. Inflation is expected to remain muted as depreciation pressures subside. The forecast assumes that debt restructuring and structural reform implementation remain on track.

No forecast has been produced for *Afghanistan*.

Vulnerabilities and risks

Risks to growth forecasts are tilted to the downside. Downside risks include reform delays and policy missteps, social unrest and political instability, climate shocks, and debt distress. The region's fragile fiscal and external positions leave little room for absorbing adverse shocks.

Limited room to absorb shocks

Both the public and private sectors in South Asia have limited room to respond to adverse shocks. Average government debt is 76 percent of GDP, the highest among EMDE regions. At 56 percent of GDP, private debt is also above the EMDE average (figure 1.8). The effective interest rates that governments pay on their debt are higher in most South Asian countries than in the median of other EMDEs, and government debt service payments are expected to remain higher than elsewhere (Das and Ghatge 2022).

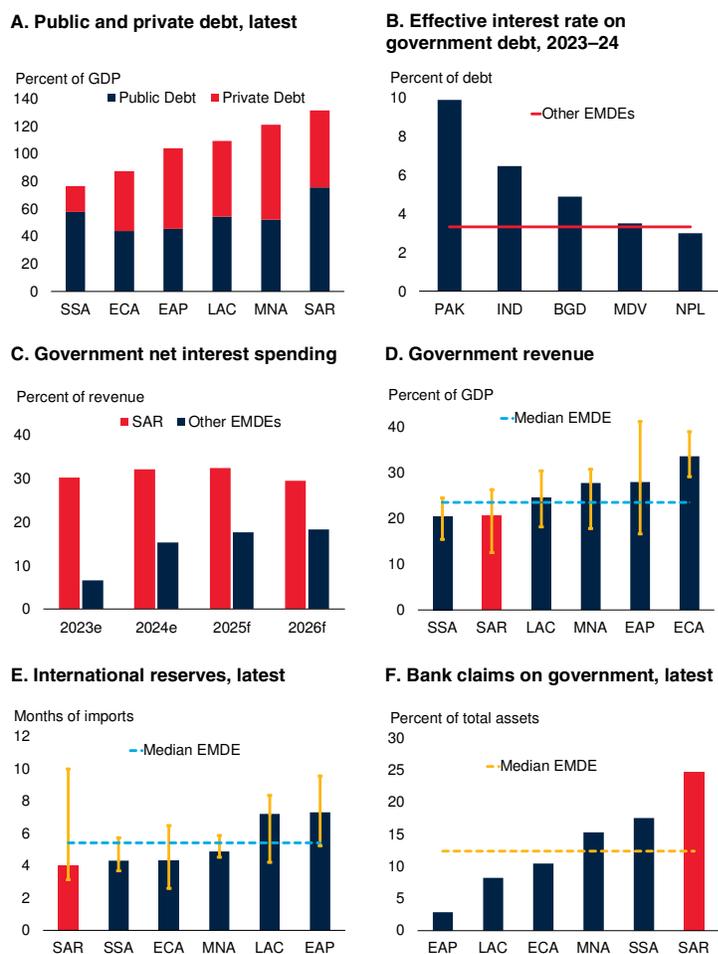
Elevated government debt in South Asia partly reflects low government revenues which, at 20 percent of GDP in 2024, are the lowest among EMDE regions. Moreover, the revenues rely heavily on trade-related taxes, with little revenue raised domestically—most notably in Bangladesh, Maldives, Nepal, and Sri Lanka—which discourages trade and limits revenue generation (World Bank 2024d).

The region's international reserve levels are also the lowest among EMDE regions. In part, this is a legacy of previous crises in countries where reserves have yet to return to adequate levels.

In *Maldives* high public spending, driven by infrastructure investment and financed by external debt, has raised debt and depleted foreign reserves.

FIGURE 1.8 Limited room to absorb shocks

South Asia has high debt, low government revenue, and low international reserves, leaving its countries with limited room to absorb shocks.



Sources: Bloomberg; CEIC; Global Debt Database (IMF); Haver Analytics; International Financial Statistics (IMF); *Macro Poverty Outlook* (World Bank); World Bank; *World Economic Outlook* (IMF).

Note: e = estimate; f = forecast. BGD = Bangladesh; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDEs = emerging market and developing economies; IND = India; LAC = Latin America and the Caribbean; MDV = Maldives; MNA = Middle East and North Africa; NPL = Nepal; PAK = Pakistan; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Public debt is the total stock of debt liabilities issued by the central government. Private debt includes debt, loans and debt securities. Latest observation for both private and public debt is 2022. For Sri Lanka, private debt data are from 2019, and for Bhutan, they are from 2021.

B. Bars show the average net government interest spending as a percent of general government gross debt. All indicators are in local currency. Other EMDEs consists of 147 countries. Median value is used for the aggregation.

C. Bars show yearly net government interest spending in percent of general government revenue. All indicators are in local currency. SAR comprises Bangladesh, India, Nepal, Pakistan, and Maldives. Other EMDEs comprises 147 countries.

D. Bars show the average of monthly medians for FY2024 data. Whiskers show the interquartile range. Dotted line represents the median EMDE economy.

E. Bars show simple average of monthly medians in 2024 through July. Sample includes up to 55 EMDEs of which 5 are in SAR. Whiskers show the interquartile range. Dotted line shows the median EMDE economy.

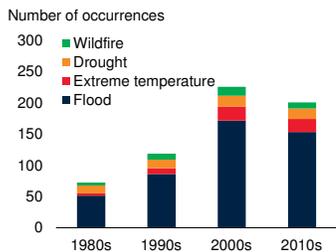
F. Bars show banks' claims on central government in percent of banks' total assets. Latest observation is June 2024. Sample comprises 121 countries, whereas the SAR sample consists of 5 countries. Median value is used for the aggregation.

Pakistan's high public debt, high interest-to-revenue ratios, and low international reserve coverage leave the economy vulnerable to increases in global interest rates and high global energy prices. Such shocks could lead to capital outflows,

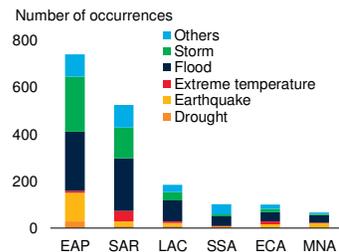
FIGURE 1.9. Climate risk

South Asia is especially vulnerable to extreme temperatures and flooding, the frequencies of which have increased over time. The poor in South Asia are especially vulnerable to heatwaves, the deaths from which have risen. Climate change could also exacerbate fiscal weaknesses.

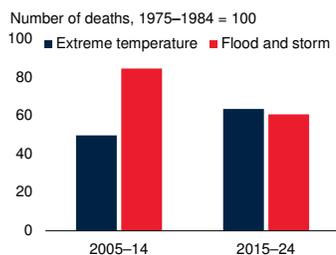
A. Number of extreme weather events



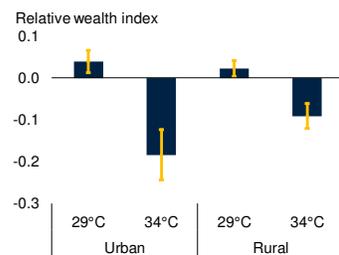
B. Number of extreme weather events by region, 1980–2024



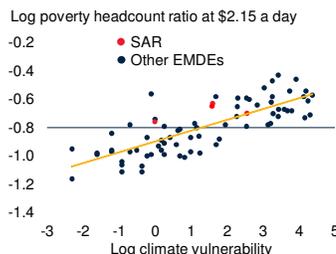
C. South Asia: Death by event type



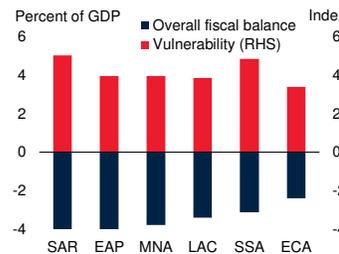
D. Relative wealth, by average temperature of urban and rural areas in South Asia, 2014–18



E. Climate vulnerability and poverty across countries



F. Climate vulnerability and overall fiscal balance



Sources: EM-DAT (International Disaster database); ERA5-Land database; Global Flood Database; Macro Poverty Outlook (World Bank); Notre Dame-GAIN Index; Poverty and Inequality (World Bank database); Relative Wealth Index (Chi et al. 2022); World Bank.

Note: AFG = Afghanistan; BGD = Bangladesh; BTN = Bhutan; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDEs = emerging market and developing economies; IND = India; LAC = Latin America and the Caribbean; LKA = Sri Lanka; MDV = Maldives; MNA = Middle East and North Africa; NPL = Nepal; PAK = Pakistan; SAR = South Asia; SSA = Sub-Saharan Africa.

B. Regional aggregates are computed as population-weighted averages of cumulative extreme weather events from 1980 to 2024.

C. Chart shows the number of deaths due to extreme temperature events and flood and storm events from 2005–14 and 2015–24. Numbers are indexed to 100 in the period 1975–84.

D. Chart shows the estimated average relative wealth index by average maximum temperature between 2014 and 2018. The estimation controls for state fixed effects. Whiskers show the 95 percent confidence interval.

E. Scatterplot shows the relationship between the natural logarithm of climate vulnerability and the poverty headcount ratio at US\$2.15 a day (2017 PPP), measured as a percent of the population. The poverty data are from the most recent period, 2018 to 2023, while the climate vulnerability data are from 2021.

F. Bars show overall fiscal balance as a percent of GDP and the climate vulnerability index. The climate vulnerability index is re-weighted for clarity. Regional aggregates computed using a simple average for 2010–23. Sri Lanka is not included because of a lack of data.

currency depreciation, and a credit crunch that threatens the government’s ability to refinance maturing government debt.

The region’s domestic banking sectors hold a larger share of their assets in government debt than those of other EMDEs. This high exposure to government debt leaves the region’s financial systems vulnerable to government financing pressures. Sovereign distress can lead to losses on banks’ holding of government securities and reduce banks’ profitability and ability to lend (World Bank 2023a).

High debt, low international reserves, and low revenues leave little room for policy mistakes and limit the scope for governments to provide economic support in the event of adverse shocks. With growth still below pre-pandemic averages in most South Asian countries, above-average debt and below-average job creation outside agriculture limit the private sector’s ability to cope with further downturns and, in particular, constrain households’ ability to respond to extreme weather events.

Extreme weather events

The frequency of climate-related disasters worldwide has risen significantly since the 2000s. The number of flood events has nearly doubled since the 1990s, and the number of extreme temperature events has more than doubled since the 1990s (figure 1.9). South Asia is more vulnerable to an increase in the frequency of floods and extreme temperatures than other EMDE regions, partly because of its large agriculture sector, which employs about 40 percent of its workforce and contributes 20 percent of total output. Severe floods in the southeast region of *Bangladesh* in August 2024 affected more than 5 million people and damaged nearly one-fifth of the country’s total croplands. In *Afghanistan*, climate-related shocks compound other drivers of fragility, exacerbating inequalities and disproportionately affecting the most vulnerable, notably women and girls.

Frequent or severe flooding reduces agricultural productivity, destroys infrastructure, and increases forced migration. The adoption of early warning systems, improved infrastructure, and community-based approaches have enhanced South Asia’s

resilience against flooding and landslides, particularly in the coastal areas of *Bangladesh*, mountainous regions in *India*, and urban areas in *Sri Lanka* (Grover and Sharma 2022; Rakapakse et al. 2022; World Bank 2024e). These climate adaptation efforts have contributed to reducing the number of deaths from flooding in the region during the past two decades.

By contrast, deaths from extreme temperatures have increased. Heatwaves pose a growing risk to lives and livelihoods, especially for the poor. The poor often live in at-risk areas, where they are disproportionately exposed to hazards (Hallegatte et al. 2020). Studies of South Asia show that households with less wealth are more exposed to extreme heat (spotlight 1). The poor also tend to rely on activities that are most affected by climate change, such as agriculture, forestry, and aquaculture (Hallegatte et al. 2016; Kahn 2005; World Bank 2022a). Poor households often lack the resources needed to invest in protective measures against climate risks, are less able to respond to shocks when they occur, and have limited access to post-disaster relief mechanisms (Anttila-Hughes and Hsiang 2013; Hallegatte, Fay, and Barbier 2018).

Because the poor are disproportionately impacted by climate shocks, climate change-related risks could increase poverty and upend development progress. Countries with higher poverty levels are more vulnerable to extreme weather events. Thus, increases in mortality rates following extreme weather events are generally larger in poorer countries (Kahn 2005). Globally, climate change is expected to push an additional 135 million people into extreme poverty by 2030 (Jafino et al. 2020).

Frequent extreme weather events strain South Asia's weak fiscal positions. The limited fiscal space also hampers the governments' to provide the climate adaptation infrastructure and support that are crucial for offsetting the impact of extreme weather events and expediting recovery (World Bank 2021a).

Risk of social unrest

Despite rapid improvement in per capita incomes over the past decade, people's life satisfaction has trended down relative to other EMDEs and growth remains below pre-pandemic rates in all South

Asian countries other than India (figure 1.10). There has been considerable social unrest and political instability in the region over the past five years. More large-scale protest events have taken place in South Asia since 2022 than in other EMDE regions except one (Europe and Central Asia).

If there were renewed social unrest or political instability in the region, the growth outlook would likely worsen. Around the world, past social unrest has been linked to diminished investor confidence, weaker financial market performance, and slower output growth (Acemoglu, Hassan, and Tahoun 2018; Ghosh 2016). The effects have been more pronounced following more prolonged periods of unrest, larger in more authoritarian regimes, and larger around violent uprisings than around collective protests (Ghate, Le, and Zak 2003).

The effects can be long-lived and larger in countries with weak institutions and limited policy space (Hadzi-Vaskov, Pienknagura, and Ricci 2023; Saadi Sedik and Xu 2020). This is a challenge for South Asia, where regulatory quality is weaker and public debt higher than in most other EMDE regions. Conversely, like other crises, social unrest may be an opportunity for emerging markets to implement the needed economic reforms (World Bank 2024f).

Reform slippages and policy mistakes

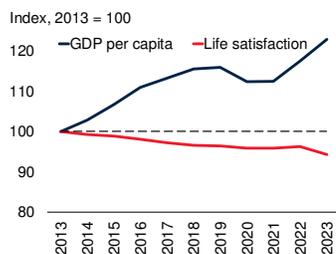
Most countries in the region are planning ambitious reforms, in some cases as part of IMF-supported programs (*Bangladesh*, *Nepal*, *Pakistan*, and *Sri Lanka*) or World Bank projects. The growth forecasts assume that policies will be implemented as planned and policy responses to unanticipated shocks will be appropriate.

Bangladesh plans to carry out financial sector and other reforms to help diversify its economy and build resilience. *Bhutan*'s Gelephu project aims to enhance infrastructure, economic development, and regional connectivity (World Bank 2024g). *India* plans to boost employment and increase worker skills, improve productivity and resilience in agriculture, and promote investment in manufacturing and services. *Maldives* plans to rationalize spending and reform state-owned enterprises. *Nepal* is negotiating trade and FDI agreements with Bangladesh and India.

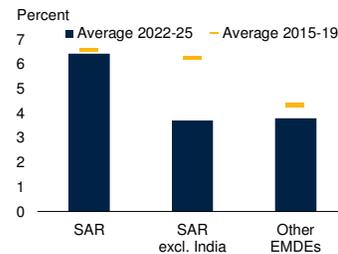
FIGURE 1.10 Risk of social unrest

Life satisfaction in South Asia has declined relative to other EMDEs over the past decade, and output growth outside India has slowed markedly since the pandemic. There have been more large-scale protests in South Asia than in most other EMDE regions. Studies suggest that economic disruptions from social unrest and political instability tend to be largest in countries with weak regulatory quality.

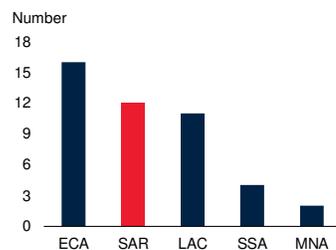
A. South Asia: GDP per capita and life satisfaction, relative to other EMDEs



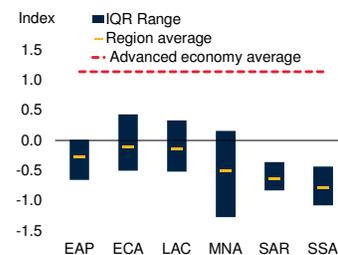
B. South Asia: Output growth



C. Large protest events, 2022–May 2024



D. Regulatory quality, 2018–22



Sources: Global Protest Tracker (database); *Macro Poverty Outlook* (World Bank); World Bank; World Development Indicators (database); World Values Survey (database); Worldwide Governance Indicators.

Note: AE = advanced economy; avg. = average; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Chart shows trends in GDP per capita (PPP in constant 2021 international dollars) and life satisfaction in South Asia relative to other EMDEs over the past ten years. Survey data are interpolated within countries. For countries with only one survey observation, data are assumed constant for the two years prior and after. The regional aggregation uses population as a weight and is then normalized to 2013 = 100. The final series displays trends in South Asia relative to other EMDEs.

C. Large events are defined as having a peak crowd size of above 10,000 people.

D. For each EMDE region, the bar shows the inter-quartile range in the region averaged over 2018–22, with the yellow line indicating the regional average, and the dashed red line showing the advanced-economy (“AE”) average. Scores range between -2.5 and 2.5. The aggregate number is an unweighted average.

Pakistan plans to privatize loss-making state-owned enterprises to reduce fiscal costs and improve efficiency. *Sri Lanka* has announced reforms to state-owned banks and plans further tax, trade, and investment reforms.

In addition, growth forecasts are predicated on the assumption that significant debt vulnerabilities will be addressed in *Maldives* and debt restructuring is successful in *Sri Lanka*. Delays in reaching an agreement with creditors, or failure to reach agreement, could put pressure on foreign reserves, increase fiscal costs, and diminish investor confidence.

Failure to implement planned policy reforms, or other policy missteps, could set back growth prospects. In *Pakistan*, political polarization has led to frequent government changes, which have contributed to delays in program implementation and a lack of consistency in policy direction. Renewed political tensions could lead to fiscally unsustainable policy decisions, particularly in the energy sector (World Bank 2024h). In *Bangladesh*, policy uncertainty could delay the implementation of planned reforms. *Maldives* is at a high risk of external and overall debt distress, and is highly vulnerable to rising sea levels and sea temperature. Failure to implement planned fiscal reforms could culminate in a crisis and delay measures to strengthen climate resilience (World Bank Group 2024).

Effects of reform delays could be particularly severe in countries where IMF support is critical to sustaining investor confidence. If confidence falters, capital outflows and fund withdrawals from financial systems could increase the risk of financial, fiscal, and currency pressures, raising borrowing costs for both governments and the private sector (World Bank 2024d). Private sectors could then cut back further their already-weak private investment.

Consider a scenario in which reform implementation is delayed and private investment in 2025–26 falls below the baseline by 1 percentage point of GDP per year—an effects that would be on par with the largest annual decline in South Asia’s private investment during 2015–19. In this scenario, model simulations suggest that South Asia’s output growth would be 0.5 percentage point lower per year over 2025–26 (figure 1.11). Labor productivity growth typically increases by 0.3 percentage point per year following successful reforms (World Bank 2020a). If, in addition to lower private investment, annual productivity growth was 0.3 percentage point lower due to delays in reform, then output growth would be 0.8 percentage point lower each year during 2025–26.

Several governments have implemented industrial policies intended to support domestic production or employment in priority sectors. These include *India*’s Production-Linked Incentives; *Bangladesh*’s policy to boost domestic technology; and *Pakistan*’s industrial park policies. The risk remains

that these fail to deliver on their goals and, instead, increase fiscal burdens, spending rigidities, and inefficiencies in resource allocation. As discussed below, historical evidence suggests that industrial policies can tackle market failures, such as environmental pollution, and drive meaningful structural change—provided the policies are implemented in the right enabling environment.

Geoeconomic fragmentation

Global trade growth has weakened over the past decade, in tandem with declining global output growth. Much of this slowdown originated in the major economies—including China, the United States, and the euro area—amid rising trade tensions and growing use of restrictive trade measures (figure 1.12). Some of these restrictions have been motivated by conflicts in Ukraine and the Middle East, and others by supply chain and security concerns (Evenett et al. 2024).

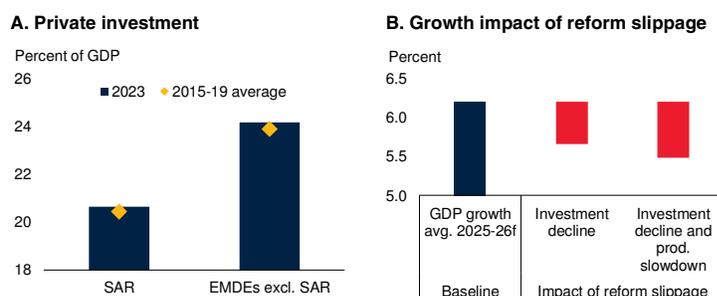
An intensification of such trade fragmentation motivated by geopolitical tensions (“geoeconomic fragmentation”) could further deepen the slowdown in trade growth already projected in the baseline for the forecast period (World Bank 2024c). Historically, countries’ increased participation in global markets, especially through global value chains, has been a driver of economic growth and poverty reduction in EMDEs (World Bank 2020b). A further slowdown in trade growth could diminish output and productivity growth by limiting competition, technology diffusion, and capital accumulation and by restricting local firms’ access to less costly inputs sourced from the global market.

Geoeconomic fragmentation may also obstruct the global energy transition. If geopolitical fragmentation limits access to the cost effective technologies produced by other EMDEs, EMDEs may struggle to transition to sustainable energy sources (Cerdeiro et al. 2024).

For South Asia, the risks from geoeconomic fragmentation are limited. Most South Asian countries rank among the least open EMDEs in terms of global trade, investment, and bank lending (box 1.1; World Bank 2024a). However, pockets of South Asia’s economic activity are highly sensitive to geopolitical risks. *Sri Lanka’s*

FIGURE 1.11 Risk of reform delays

Delays in planned reforms could create fiscal and currency pressures, further delaying accelerations in investment, productivity, and output.



Sources: *Macro Poverty Outlook* (World Bank) and World Bank.

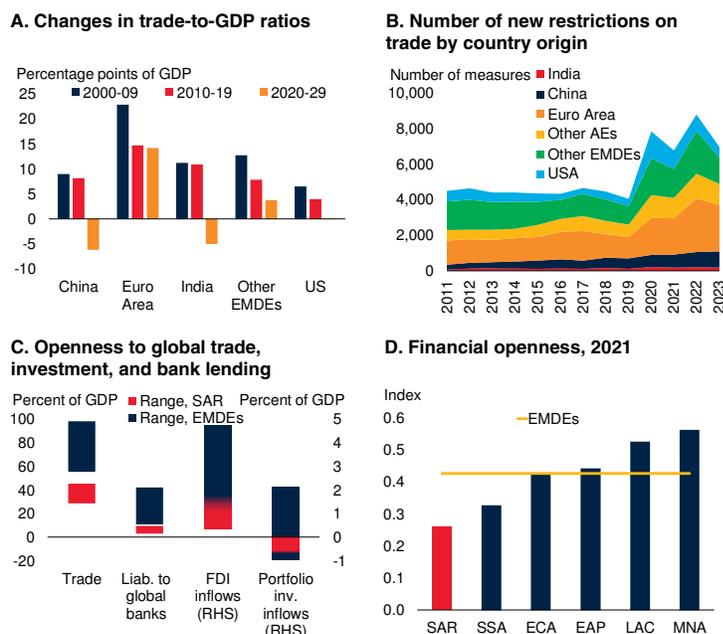
Note: f = forecast. avg. = average; EMDEs = emerging market and developing economies; prod. = productivity; SAR = South Asia.

A. Sample comprises 89 countries of which 5 are in South Asia.

B. The simulated impact of reform slippage assumes that fixed capital investment is, on average, one percentage point of baseline GDP lower in each year over 2025–26, and that the increase in trend productivity growth is 0.3 percentage point lower annually. South Asia excludes Afghanistan and Bhutan due to lack of data.

FIGURE 1.12 Risk from geoeconomic fragmentation

Geopolitical considerations of larger countries have contributed to a growing number of trade restrictions. Global trade growth has slowed since the first decade of the 2000s. South Asia’s low integration in global trade and FDI lowers the risk of geopolitical tensions.



Sources: Balance of Payments Statistics (IMF); Chinn and Ito (2008); Global Trade Alert (database); International Investment Position Statistics (IMF); World Bank; World Bank Enterprise Survey (database); World Development Indicators (database); *World Economic Outlook* (IMF); WTO World Tariff Profiles (database).

Note: AE = advanced economies; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDEs = emerging market and developing economies; FDI = foreign direct investment; inv. = investment; LAC = Latin America and the Caribbean; liab. = liability; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Chart shows the change in trade-to-GDP ratio during each of the three decades. Trade in future years is based on projections in the IMF’s *World Economic Outlook* database. Other EMDEs comprise 76 economies.

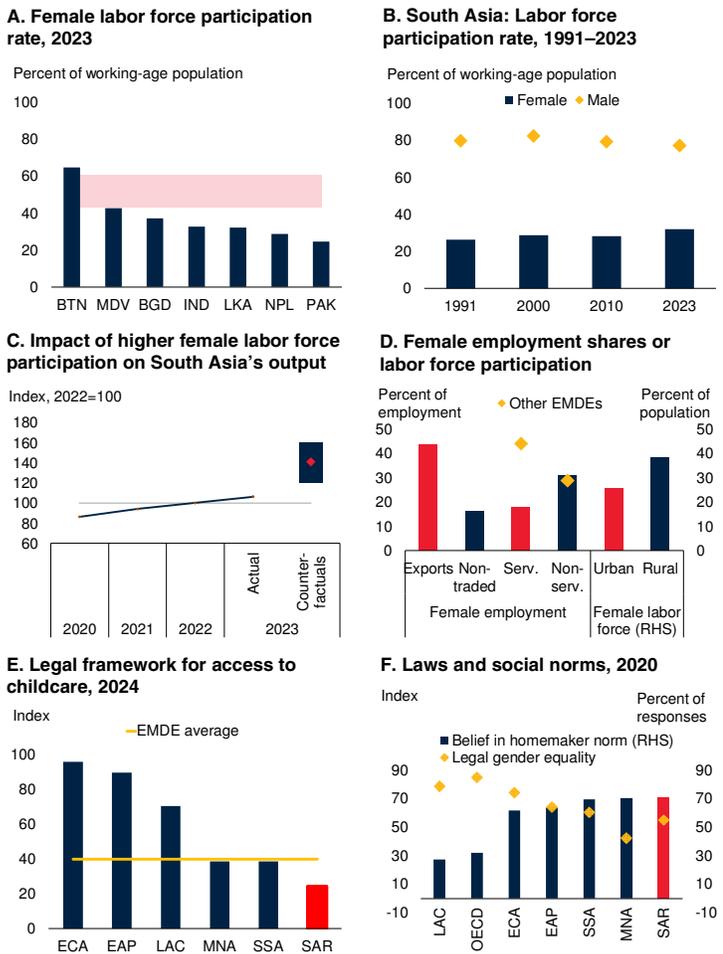
B. Sample comprises 187 economies.

C. Trade is defined as the sum of goods and services exports and imports. Excludes small states and Afghanistan.

D. Bars show the normalized Chinn-Ito Index for the year 2021. Sample comprises 136 countries of which 7 are in South Asia. Simple average of country groups.

FIGURE 1.13 Raising female labor force participation

Female labor force participation rates in most South Asian countries are in the bottom quartile among EMDEs and far below male participation rates. Female labor force participation is held back by supply-side constraints, restrictive laws, and conservative social norms, despite economic shifts that typically favor female employment.



Sources: Global Labor Database (World Bank, labor force survey microdata); ILOStat (International Labour Organization); Women, Business and the Law (World Bank); World Bank; World Bank-Facebook Survey on Gender Equality at Home; World Development Indicators (database).

Note: BGD = Bangladesh; BTN = Bhutan; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDEs = emerging market and developing economies; IND = India; LAC = Latin America and the Caribbean; LKA = Sri Lanka; MDV = Maldives; MNA = Middle East and North Africa; NPL = Nepal; PAK = Pakistan; SAR = South Asia; serv. = services; SSA = Sub-Saharan Africa.

A. Shaded region indicates interquartile range of non-South Asia EMDEs, weighted by working-age population. Female (male) labor force participation rate is the share of the female (male) working-age population (15+) employed or looking for work, using ILOStat modeled data. Afghanistan has not published any official statistics since 2021.

B. Female (male) labor force participation is the share of working-age women (men) aged 15 to 64 who are employed or looking for work.

C. Box indicates the range of model projections of the impact on South Asia's regional real GDP if female employment is raised to parity with male employment. Black line indicates prior GDP data from 2020–23. See chapter 2 and annex 2.2 for details on the models.

D. Bars indicate the female share of employment in export, non-traded, services, or non-services sectors, as well as the female labor force participation of urban and rural women in South Asia. Diamonds indicate values in other EMDEs. Export sectors are defined as in chapter 2. Female shares of services and non-services sectors come from ILO, and are the averages of 2021–23 weighted by female population in 2023. Female labor force participation rates come from GLD and SARLD microdata for: 2022 for BGD and IND, 2021 for LKA, 2020 for PAK, and 2017 for NPL.

E. Bars show the regional average score of childcare from the World Bank's Women, Business and the Law database, which measures the adequacy of legal frameworks concerning the availability, affordability, and quality of childcare. Regional averages are weighted by working-age population.

F. Bars show the share of respondents who agreed with the "female homemaker" norm by region, with data is from 2020. Diamonds represent the average legal index score by region. All regional averages are weighted by working-age population.

debt restructuring involves countries from both sides of the geoeconomic fault line and *Maldives* relies on tourists from both Europe and China.

Policy challenges

In the short term, South Asia's growth prospects are robust. The region has considerable untapped potential to raise them further over the medium term. Raising employment among women to levels comparable to male employment could raise per capita incomes by as much as one-half over the long term. Enhancing openness to global trade and investment, along with removing obstacles to the growth of firms, could attract foreign investment, accelerate the diffusion of new technologies, and spur the private investment needed for productivity growth and job creation.

Raising female labor force participation

Three decades of rapid economic growth in South Asia have been accompanied by major structural changes, including trade liberalization, a sectoral shift toward service-oriented activity, and legal changes favoring greater gender equality. Nevertheless, the region's employment rates among women remain exceptionally low (chapter 2). Female labor force participation rates in all South Asian countries except Bhutan are 5–25 percentage points lower than would be expected based on their per capita incomes.

Most of the women who would typically be employed are absent from the labor force entirely. Only 32 percent of working-age women in South Asia (excluding Afghanistan) were in the labor force in 2023—well below the 77 percent participation rate of South Asian men and the 54 percent EMDE average for women (figure 1.13). Across the region, female labor force participation is low, even across subnational areas.

Low female employment means a substantial loss of aggregate and per capita incomes. Raising women's labor force participation rate to parity with men would increase regional GDP by 13–51 percent, with larger impacts if capital and labor markets are more flexible.

Typically, the transition to services-based and more export-oriented economies is accompanied by rising demand for female labor (Petrongolo and Ronchi 2020). Indeed, women in South Asia earn substantial wage premiums in the services sector and export-oriented firms. And yet, female employment shares are low in key services sectors that, in other EMDEs, employ large shares of women.

The shortfall of female labor force participation and employment is most pronounced after marriage. Women in South Asia reduce their employment rates by 12 percentage points upon marrying, even before they have children (Rexer and Triyana 2024).

Despite a narrowing of the gender gap in education across South Asia, a lack of childcare, unsafe transport, limited mobility, and conservative social norms continue to act as barriers to female employment. On the demand side, hiring discrimination constrains female employment: a recent experiment revealed that employers in Pakistan would require a 15 percent wage subsidy to hire a woman (Bussolo et al. 2024).

South Asian countries have legal frameworks that are among the least favorable to gender equality in the world. They also have some of the globe's most conservative gender attitudes, with 70 percent of the population expressing opposition to women working outside the home. Both conservative social norms and legal institutions tend to be associated with low female labor force participation. Low female labor force participation in South Asia may also reflect large labor market frictions, including limited access to employment networks (Anukriti et al. 2020) and information asymmetries (Jensen 2012).

The diversity of factors influencing female labor force participation underscores the need for a multi-pronged policy effort. On the supply side, obstacles to women's desire to work outside the home—such as the lack of safe transport or quality childcare, as well as the legal biases—need to be removed. Increased use of working-from-home arrangements could help increase female employment within prevailing social norms (Jalota and Ho 2024).

On the demand side, a shift toward more export-oriented and more services-based economies would benefit female employment. Local labor markets in South Asia with greater export exposure have had higher rates of female labor force participation. Increased trade integration could bring more women into the workforce, provided local firms become sufficiently productive to compete in export markets.

Policies to promote female employment will be more effective if combined with a shift in gender norms. For example, increased visibility of female role models in public life (Beaman et al. 2009; Deininger et al. 2022; Pande 2003), information provision (Bursztyn et al. 2023), and women's economic empowerment (Field et al. 2021) have all been shown to shift gender norms and increase female employment.

Reducing impediments to the growth of firms

Growth of firms is crucial for rapid job creation and the expansion of private investment growth. As firms grow, they help create more, and more productive, jobs in the non-agricultural sector, where South Asia is lagging well behind other EMDEs (World Bank 2024d). Non-agricultural job creation is critical for climate adaptation by households (Rexer and Sharma 2024). More dynamic and faster-growing firms as well as fewer barriers to firm entry and exit could also support investment.

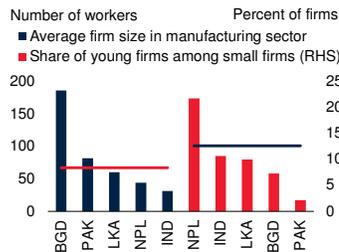
Faster growth of firms can result both from existing firms adopting new practices and technologies, and from the entry of more dynamic new firms into the market, with firms that are less productive exiting and releasing resources for more productive uses (Aghion and Howitt 1992; Akcigit 2024; Akcigit and Kerr 2018). Studies suggest that 50 to 70 percent of productivity growth results from resource reallocation among firms (Foster, Haltiwanger, and Krizan 2001; Lentz and Mortensen 2016).

In South Asia, firms often remain small and unproductive, in part because of policies that favor smaller establishments (World Bank 2024f). Compared with EMDEs in other regions, the average firm in India and Nepal is smaller than in other EMDEs, and the average small firm in all

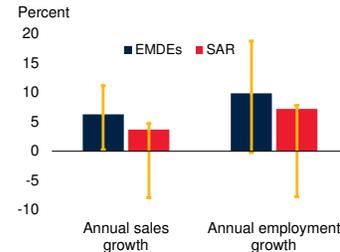
FIGURE 1.14 Reducing impediments to the growth of firms

Young, small, and medium-sized firms in South Asia face greater impediments to growth than their peers elsewhere and grow more slowly. Additionally, the region's large number of informal firms face

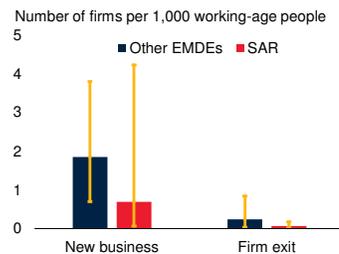
A. Firms' size and share of young among small firms



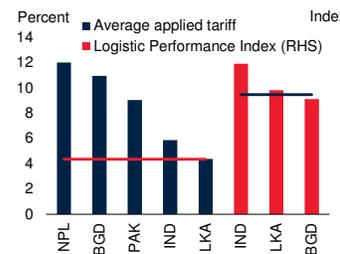
B. Growth of young SMEs, deviation from average



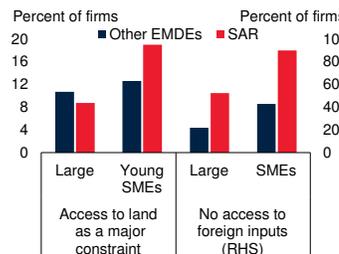
C. Firms' entry and exit



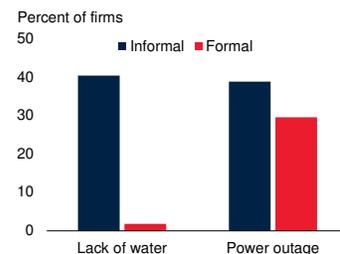
D. Applied tariff rate and Logistic Performance Index



E. Obstacles faced by firms



F. South Asia: Firms facing lack of water and power outages



Sources: Entrepreneurship Database (World Bank); World Bank; World Bank Enterprise Survey (database); World Development Indicators (database).

Note: BGD = Bangladesh; EMDE = emerging market and developing economies; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan; SAR = South Asia; SME = small and medium enterprises.

A. Horizontal lines mark the median level firm size in manufacturing and share of young firms (five years old or younger) among small firms in other EMDEs.

A.B.E. Young firms are firms that are five years old or younger. SMEs have 99 employees or fewer. Small firms have 20 employees or fewer. For the World Bank Enterprise Surveys, the South Asia sample comprises Bangladesh, India, Pakistan for 2022, Nepal for 2023, and Sri Lanka for 2011. EMDEs comprise 71 countries between 2017 and 2023. Total sample comprises 59,117 firms.

B. Chart shows the deviation of the growth of young SMEs from the average growth of all firms in all countries, adjusted for country-level sector composition. This is estimated using OLS regressions of firms' annual growth on year and sector fixed effects.

C. For new business, the South Asia sample includes Bhutan, India, Maldives, Pakistan, and Sri Lanka for 2022, and Nepal for 2020. EMDEs comprise 99 countries between 2020 and 2022. For firms' exit, the South Asia sample is India, Maldives, Pakistan, and Sri Lanka for 2022. EMDEs comprise 60 countries between 2020 and 2022.

D. Average applied tariffs are trade-weighted in 2021. The Logistic Performance Index is for 2023. Horizontal lines mark the median level of other EMDEs, which include 47 economies for applied tariff and 94 economies for the Logistic Performance Index.

F. For informal firms, South Asia uses 2021 data for India and 2022 data for Bangladesh and is the weighted average using real GDP in 2010–19 at average market prices and exchange rates.

South Asian countries except Nepal is older (figure 1.14). Young small and medium enterprises (SMEs) in South Asia grow more slowly in sales and employment than their peers in other EMDEs. Firms' entry and exit rates in South Asia are considerably lower than in other EMDEs, suggesting scope for greater competition.

South Asia's unusually small average firm size is accompanied by unusually large informal sectors. Close to 90 percent of workers in South Asia work in the informal sector, compared with 50 percent in other EMDEs. Nearly two-fifths of the world's informal workers are in South Asia (Ohnsorge and Yu 2022). Informal firms grow more slowly and are less productive, with sales per worker only 15 percent of those in formal firms (La Porta and Shleifer 2014). Compared with formal firms, informal firms in South Asia face greater operational disruptions, such as water or electricity outages, which set back their growth and deter innovation.

The literature has identified several common impediments to the growth of firms.

- *Lack of economic openness.* South Asia is more closed to international trade than other EMDE regions (box 1.1). This is associated with slower adoption of more advanced foreign technologies and practices, which tends to hold back growth (Coe and Helpman 1995; Keller 2004; World Bank 2024f). Trade and FDI are more restricted in South Asian countries than in other EMDEs, as reflected, for example, in higher applied tariff rates. Bangladesh and Bhutan exhibit lower logistics performance than other EMDEs. In Pakistan, increased import duties on intermediate inputs have been associated with lower productivity of firms (Lovo and Varela 2022; World Bank 2022b).
- *Inefficient land and product markets.* Land markets in South Asia are characterized by restrictive tenancy laws and poor quality of land records, which manifest in unusually low levels of land sales and use of land rental agreements (Bolhuis, Rachapalli, and Restuccia 2021; Vos 2019). Inefficient land markets are a significant constraint on young SMEs in South

Asia, more so than for large firms in the region or young SMEs in other EMDEs, preventing them from using land to secure finance or expand production. Compared with their peers in other EMDEs, SMEs in South Asia are also less likely to use inputs sourced from foreign markets in their production and hence less likely to benefit from lower production costs and higher productivity.

- *Government regulations.* Regulations can dampen business dynamism (Bachas, Fattal Jaef, and Jensen 2019; Dabla-Norris et al. 2018). More young SMEs in South Asia report that they encounter corruption and spend more time on regulatory compliance than in other EMDEs. Corruption and compliance costs divert resources from production and innovation and discourage informal firms from formalizing (Buera and Fattal-Jaef 2018; Li and Rama 2015). Size-dependent policies encourage firms to stay small (World Bank 2024f).
- *Large incumbents and market concentration.* Incumbent firms may collude to raise the barriers to entry, preventing new, more productive firms from entering the market and slowing productivity growth (Akçigit, Baslandze, and Lotti 2023; Cunningham, Ederer, and Ma 2021). State-owned and private conglomerates play critical roles in energy, infrastructure, food, and transportation in many South Asian countries, with the largest competitors having significantly higher market shares than their peers in EMDE regions.

These common obstacles tend to keep young SMEs in South Asia small and unproductive. Reforms that increase openness to global trade and investment, enhance the efficiency of input markets and improve governance could stimulate the growth of firms in the region.

- *Greater openness to global trade and investment.* Reducing tariff and non-tariff barriers to trade and easing restrictions on FDI can foster competition, encourage firms' entry and exit, and incentivize incumbents to upgrade

productivity. Less restrictive capital controls could help firms purchase advanced technologies from abroad (World Bank 2024f). Successfully competing in international trade is a strong signal that local firms are becoming more productive and attaining global standards rather than benefiting from a protected position in the domestic market.

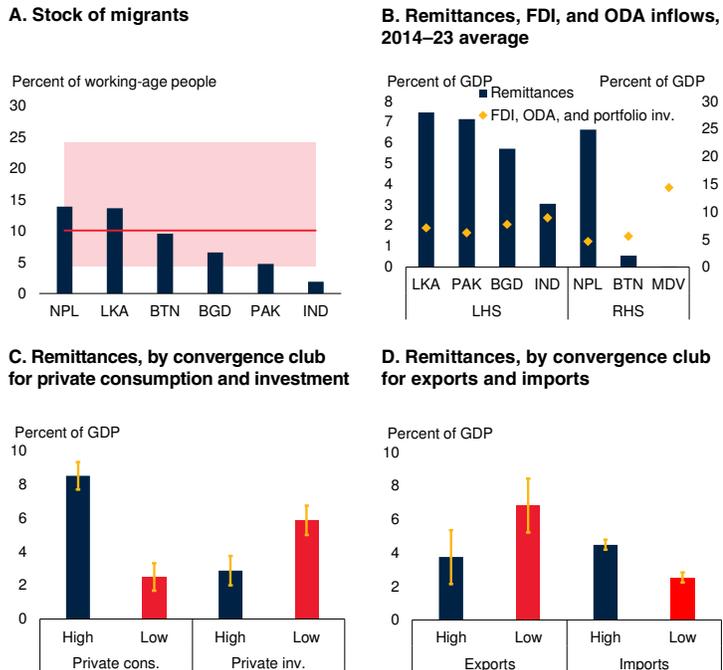
- *More efficient input markets.* Creating and maintaining up-to-date land registries, revising land regulations to improve security of tenure, and removing barriers to land rental and sales could help create more efficient land markets (Chen, Restuccia, and Santaaulalia-Llopis 2022; Deininger and Feder 2001; Fenske 2011; Lawry et al. 2017). The spread of digital payment systems could provide opportunities to expand access to finance (Balyuk 2023; Dubey and Purnanandam 2023; Gopal and Schnabl 2022).
- *Regulatory and policy reforms.* Streamlining administrative processes, including moving compliance processes online, could reduce regulatory burdens on firms and curtail opportunities for corruption. Size-dependent policies, which may inadvertently encourage firms to remain small, could be relaxed. For example, the removal of India's Small-Scale Reservation Laws has been found to promote firm growth and job creation (Martin, Nataraj, and Harrison 2017).
- *Disciplining incumbents.* Competition policies could level the playing field to allow greater firm entry and exit. This requires strong institutions to prevent large incumbents from abusing market power (World Bank 2024f). A relaxation of size-dependent policies could weaken incentives to remain small.

Making the most of remittances

Poor prospects for non-agricultural jobs and income growth have contributed to large-scale emigration from South Asia. The remittances sent home by the diaspora now far exceed FDI, development financing, and portfolio inflows

FIGURE 1.15 Boosting and using remittances

South Asian countries have large remittance inflows, which have tended to be associated with lower private investment, exports, and non-agricultural employment.



Sources: *Macro Poverty Outlook* (World Bank); United Nations; World Bank; World Development Indicators (database).

Note: BGD = Bangladesh; BTN = Bhutan; cons. = consumption; EMDE = emerging market and developing economies; FDI = foreign direct investment; IND = India; inv. = investment; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; ODA = official development assistance; PAK = Pakistan.

A. Data is from 2020. Pink shaded region is the interquartile range of other EMDEs. Red line refers to median level of other EMDEs. Other EMDEs comprise 137 economies.

B. Remittances as a percent of GDP, and the sum of FDI, ODA, and portfolio inflows as a percent of GDP for each SAR country except Afghanistan.

C.D. Bars show average remittances as a percent of GDP for countries in the high and low convergence club during 1990–2022. “High” indicates the convergence club with the highest private consumption, private investment, goods and services exports, or goods and services imports as a percent of GDP; “low” indicates the club with the lowest private consumption, private investment, exports, or imports as a percent of GDP. Whiskers indicate 90 percent confidence intervals.

combined in all South Asian countries except for Bhutan and Maldives (figure 1.15).

Remittances tend to increase household incomes, improve education and health outcomes, and help smooth consumption around domestic income shocks. However, large-scale remittances can create real exchange rate appreciation pressures that dampen the most productivity-enhancing engines of growth: private investment, exports, and non-agricultural sector activity (spotlight 2). Indeed, countries, including those in South Asia, that have had higher remittances have also had lower private investment, lower non-agricultural employment ratios, and weaker exports—all challenges with which most South Asian countries have been struggling (World Bank 2023a, 2024d).

To better leverage remittances as a powerful source of inclusive growth, policy measures can encourage remittance inflows through official channels, such as by reducing fees on remittance transfers. Policies can also limit the adverse side effects of large remittances. For example, tax structures can be shifted away from trade and labor to encourage trade and job creation. Better business climates can support firms that face competitive pressures from real exchange rate appreciation. Measures to encourage domestic job creation can help reduce the number of people seeking opportunities abroad, increasing output and reducing any distortions from large remittance flows.

Implementing well-designed industrial policy

Industrial policies have been used to promote growth in priority sectors around the world. Between 2017 and 2022, the use of industrial policies surged six-fold (Juhász, Lane, and Rodrik 2024). These policies had a spectrum of economic objectives, from stimulating innovation, productivity, and economic growth, to facilitating climate transition, creating quality jobs, and promoting exports or import substitution. Industrial policies can take various forms, including subsidies, import protection, and regulatory exemptions.

Industrial policies can be helpful in overcoming externalities, such as those associated with pollution or climate change. Green industrial policies have successfully fostered innovation in climate change mitigation, exemplified by Morocco’s solar and wind energy sector and China’s electric vehicle industry (Altenburg, Feng, and Shen 2017; Vidican Auktor 2017). In South Asia, industrial policies appear to have been motivated more by the objectives of strategic competitiveness and resilience in non-food supply, and less by climate change, than in other EMDEs (figure 1.16).

Historically, countries including Japan in the 1950s, the Republic of Korea in the 1970s, and China since the 1990s, have utilized industrial policies to foster growth in specific sectors (Juhász, Lane, and Rodrik 2024; Song, Storesletten, and Zilibotti 2011). But industrial policies have often disappointed, such as in Africa and Latin America.

A large body of studies suggests that industrial policies can be successful in driving structural change given the right implementation and institutional setup (Aghion et al. 2015; Choi and Levchenko 2021; Liu 2019).

Since 2009, advanced economies have outpaced EMDEs in adopting industrial policies (Juhász et al. 2022). Nearly half of all industrial policies implemented in 2023 originated in the largest economies—China, the European Union, and the United States—at fiscal costs of 0.3–1.5 percent of GDP (DiPippo et al. 2022; Evenett et al. 2024). Current industrial policies are typically geared toward promoting exports, in contrast to the inward-looking, protectionist policies of the past. Recently, policies have often been applied to specific firms, rather than the broad import tariffs characteristic of earlier industrial policies (Juhász et al. 2022).

In 2023, South Asian countries implemented over 140 new industrial policies, a significant increase from an average of 44 per year during 2009–19 (Juhász et al. 2022). The policies introduced in recent years have yielded varying outcomes.

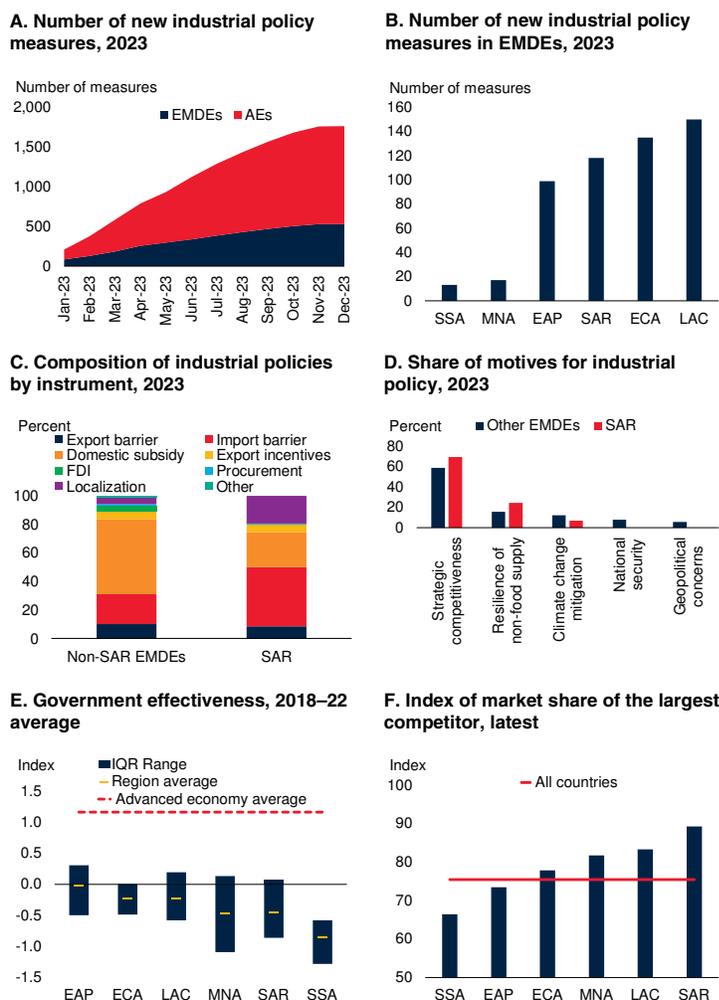
India's “Production Linked Incentives” scheme targets 14 key sectors and has been accompanied by significant FDI and exports in electronics, medical devices, and pharmaceuticals, although not in other targeted sectors such as textiles (Shukla 2024). The scheme offers incentives of up to 20 percent on the value added by successful applicant firms for up to five years (Government of India 2024).

In *Bangladesh*, industrial policies aimed at boosting domestic technological development and employment—such as technology transfer caps, sectoral equity caps, and stringent controls on expatriate skilled workers—have hindered private investment by preventing a reallocation of credit and labor toward more productive firms (World Bank 2018).

Pakistan's industrial park policies, designed to create clusters of export-oriented, green, and women-friendly industries, have fallen short of expectations, in part because of a failure to select locations suitable to industrial development (World Bank 2021b).

FIGURE 1.16 Implementing well-designed industrial policy

Industrial policy measures have increased since 2017, especially among advanced economies and large EMDEs. Compared with other EMDEs, South Asia's industrial policies have made more use of import barriers and localization approaches, and have been less motivated by climate change mitigation. Limited government effectiveness and competition could curtail the impact of industrial policies in South Asia.



Sources: Global Trade Alert database; New Industrial Policy Observatory; World Bank; World Bank Enterprise Survey (database); World Development Indicators (database); Worldwide Governance Indicators.

Note: AEs = advanced economies; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDEs = emerging market and developing economies; FDI = foreign direct investment; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Figure shows the number of trade-distorting new industrial policies implemented in 2023. Aggregate numbers are calculated as unweighted averages.

C. Figure shows the share of distortive industrial policies by policy instrument in SAR and non-SAR EMDEs, 2023. Aggregate number is unweighted average.

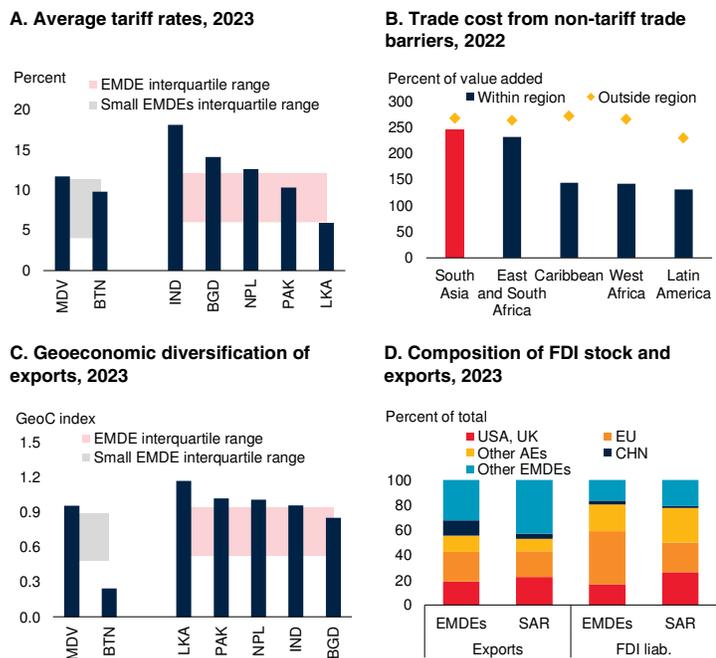
D. Policy measures from 2023. Each policy measure can have more than one motive. “Other EMDEs” comprise 30 jurisdictions, including the economic areas of Eurasian Economic Union, the Gulf Cooperation Council, Mercosur, and Southern Africa Customs Union. South Asia comprises Bangladesh, India, Nepal, and Pakistan.

E. Figure shows worldwide governance indicator (2018–22 average). The yellow line shows EMDE regional average, the blue bar shows the interquartile range in each EMDE region, and dashed red line shows the advanced economy average. The Worldwide Governance index captures perceptions of the quality of public services, the quality of the civil service and its independence from political pressures, the quality of policy formation and implementation, and the credibility of the government's commitment to these policies. WGI scores range between -2.5 and 2.5. Aggregate number is unweighted average.

F. Index reflects the market share of firms' largest competitor, in terms of sales, in the market where these firms sold their main product or offered their main service. Sample comprises 50 EMDEs. South Asia includes Bangladesh, Nepal, and Pakistan. Latest data are from 2021–23.

FIGURE 1.17 Opening to global trade and investment

South Asia has diversified trading partners and sources of foreign investment, but high tariffs and non-tariff restrictions could cause the region to miss out on opportunities created by shifting global value chains.



Sources: Aiyar and Ohnsorge (2024); World Bank; World Development Indicators (database); WTO World Tariff Profiles (database); UN ESCAP-World Bank Trade Costs database.

Note: AEs = advanced economies; BGD = Bangladesh; BTN = Bhutan; CHN = China; EMDEs = emerging market and developing economies; FDI = foreign direct investment; IND = India; liab. = liability; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A. Simple average of the ad valorem most favored nation duties applied in 2023. Sample comprises the South Asian countries and 120 other EMDEs, of which are 25 small states.

B. Chart shows the non-tariff component of costs of goods traded internationally (within and outside the region) in excess of the same goods traded domestically, expressed as ad valorem tariff equivalents. Regional groups are South Asia (South Asian Association for Regional Cooperation), East and South Africa (Common Market for Eastern and Southern Africa), Caribbean (Caribbean Community), West Africa (Economic Community of West African States), and Latin America (Southern Common Market). Data are for 2022. Bilateral trade costs, defined as the excess cost of a good traded internationally compared with the same good traded domestically, are expressed as ad valorem tariff equivalents. When 2022 data are not available, latest available data are used.

A.C. Pink shading denotes interquartile ranges for other EMDEs. Grey shading denotes interquartile ranges for other small states.

C. Geoeconomic diversification is captured by the geoeconomic connectedness index of Aiyar and Ohnsorge (2024).

C.D. EMDEs consist of 153 economies for exports and 155 economies for FDI.

These examples underscore the need for adequate institutional capacity for effective industrial policy implementation. On average, South Asian countries lag their counterparts in other EMDE regions and advanced economies in government effectiveness. Improved governance practices, including regular and transparent monitoring and evaluation of firms' performance, are crucial to curbing favoritism and ensuring accountability during the implementation of industrial policies (Altenburg and Rodrik 2017). Stronger institutional capacity allows governments to identify sectors in the economy to target (Reed 2024).

It is also important that supported industries face adequate market competition (Cherif and Hasanov 2019). The success of industrial policy in the Republic of Korea relied on intense competition in both domestic and international markets. Product markets in South Asia are often dominated by a few large players that do not face such intense competition. Because global markets are often more competitive than domestic ones, industrial policies that encourage participation in export markets tend to be more successful. However, among export-oriented industrial policies, those that have aimed to attract foreign firms have sometimes disappointed. For example, Malaysia's focus on attracting multinational companies and technology transfers limited the effectiveness of its industrial policy (Cherif and Hasanov 2019).

Successful industrial policies often use a broader range of instruments beyond the traditional subsidies and trade protection measures (Juhász, Lane, and Rodrik 2024). Compared with their EMDE peers, South Asian countries are more likely to rely on import barriers and localization policies. Such policies can discourage trade and FDI, areas where South Asia already lags other EMDEs. Bangladesh, Maldives, and Nepal rely more on subsidies than other EMDEs, which can be fiscally costly. The government of Nepal, for example, provides subsidies of 3–5 percent for the exports of some products. The provision of public services—such as infrastructure, education, and legal systems—that boost local business productivity and that are tailored to business needs, could be a more effective and cost-efficient approach than relying on subsidies or import barriers.

Opening to global trade and investment

With the world economy currently fragmenting along geopolitical fault lines and large economies increasingly implementing industrial policies to protect their interests, South Asia could benefit from policies that promote openness to global trade and investment. This could boost South Asia's non-agricultural job creation, especially for women, foster competition and the growth of firms, improve productivity through technology adoption, and promote more efficient use of remittances.

Currently, trade policies in South Asia are more restrictive than in other EMDEs. Average tariff rates in half of South Asia's countries are in the top quartile of EMDEs (figure 1.17). The costs associated with non-tariff barriers are higher than among countries that are members of other regional trade agreements and are among the highest for goods traded outside regional trade agreements.

South Asia's lack of openness limits its ability to take advantage of the reshaping of global supply chains that is underway. The region has an exceptionally diverse set of export markets and sources of investment, with five countries in the top quartile of comparable EMDE groups for geoeconomic

diversification (box 1.1). Were the region more open, it might be able to leverage its diverse set of trading and investment partners and non-aligned political stance to position itself as a connector that bridges the global geoeconomic divide.

By trading with, and attracting investment from, countries across the geopolitical spectrum, South Asian countries could integrate further into global supply chains. With the increasing global demand for low-carbon goods and services, greening trade could also speed up export diversification (World Bank 2024a, 2024i). Indeed, India recently announced the lifting of import taxes on minerals crucial for the adoption of clean energy.

ANNEX TABLE B1.1.1 Correlates of geoeconomic connectedness

Variables	(1) Exports	(2) Intermediate inputs	(3) Exports	(4) Intermediate inputs
Logistics performance	0.1272** [0.0523]	0.1260*** [0.0418]		
Average tariff			-0.0101** [0.0047]	-0.0117*** [0.0044]
Constant	0.3941*** [0.1443]	0.3924*** [0.1244]	0.8387*** [0.8387]	0.8160*** [0.0465]
Observations	99	99	105	105
R-squared	0.047	0.064	0.031	0.052

Sources: Aiyar and Ohnsorge (2024); World Bank International Logistics Performance Index (database); WTO World Tariff Profiles (database); World Bank.

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors reported in brackets. Ordinary least squares estimation. All specifications are for EMDEs only. Number of observations reflect number of EMDEs covered in both the respective policy variable and in Aiyar and Ohnsorge (2024).

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SPOTLIGHT 1

HEAT AND FLOODS
IN SOUTH ASIA:
Household and Firm Exposure

Spotlight 1. Heat and Floods in South Asia: Household and Firm Exposure

Climate change is increasingly exposing South Asia to extreme heat, floods, and other weather shocks, but some groups are more exposed than others. Poorer South Asian households experience more heat than better-off ones. In urban areas, poorer households also experience more chronic flooding. And, in India, smaller firms are more exposed to both heat and flooding. These disparities suggest the need to remove obstacles to relocation, especially for the poor, and to spur firm growth. Information on the location of the most climate-affected people can be one of the inputs into targeting mechanisms for social protection systems that can readily respond to shocks.

Introduction

High and rising exposure to extreme heat.

Climate change is expected to raise global mean temperatures by between 0.9 degrees and 5.4 degrees Celsius by the end of this century (Hsiang and Kopp 2018; IPCC 2014). This rise in temperature has serious implications for South Asia—a region where the average maximum temperature is already 30 degrees Celsius, about 6 degrees Celsius above the average for other EMDE regions (figure SL1.1). For comparison, the United States defines 30 degrees Celsius as the threshold at which heat becomes a threat to occupational safety and health (U.S. Occupational Safety and Health Administration 2017). South Asia is predicted to experience more extreme heat as a result of climate change (Watts et al. 2017). Under a moderate future climate change scenario of a warming of 2 degrees Celsius, the average number of hours per day in South Asia when it would be too hot to work outside is estimated to increase from 6.6 in 1999–2001 to 7.6 by 2050 (figure SL1.1).

High and rising incidence of flooding. Climate change is also expected to change precipitation patterns, raise sea levels, and cause more frequent and intense natural disasters, such as floods. Flooding is a major climate-related hazard in South Asia: the average share of land area that is flooded in the region is above the EMDE average, which is also true for virtually all South Asian countries individually (figure SL1.1). The region is

expected to experience an increase in extreme rainfall events and flooding (Letsch, Dasgupta, and Robinson 2023; Nanditha and Mishra 2024; Otto et al. 2023; Trancoso et al. 2024). India and Bangladesh are among the 10 countries with the largest number of people projected to experience excessive rainfall (figure SL1.1).

Adverse impacts of extreme heat and floods.

High and rising exposure to heat and floods poses a threat to both health and productivity in South Asia. Heat leads to increased mortality and morbidity (Carleton et al. 2022; Ebi et al. 2021), lower test scores among students (Garg, Jagnani, and Taraz 2020; Graff Zivin, Hsiang, and Neidell 2018), costly migration (Hoffmann et al. 2020; Mueller, Gray, and Kosec 2014), reduced agricultural yields (Aragon, Francisco, and Rudd 2021; Carleton 2017; Schlenker and Michael 2009; Zhang, Malikov, and Miao 2024), and lower labor productivity (Rode et al. 2022; Somanathan et al. 2021). At the macroeconomic level, warming is associated with large declines in GDP.¹ As with heat, flooding increases mortality and morbidity (Ahern et al. 2005; Bearpark, Patankar, and Rode 2024), harms education because schools close (Dahlin and Barón 2023), changes migration patterns (Chen et al. 2017; Giannelli and Canessa 2022), and lowers productivity because of lost days of work and crop damage.² These short-term effects can persist and cumulate to dampen economic growth (Guiteras, Jina, and Mobarak 2015; Krichene et al. 2021; Lane 2024).

Note: This spotlight was prepared by Patrick Behrer, Jonah Rexer, Siddharth Sharma, and Margaret Triyana.

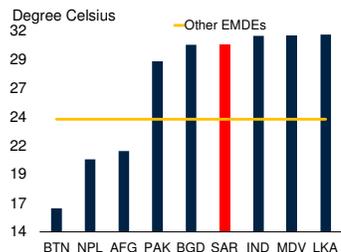
¹ See Bilal and Kanzig (2024), Burke, Hsiang, and Miguel (2015), Dell, Jones, and Olken (2014), and Nath, Ramey, and Klenow (2024).

² See Balboni, Boehm, and Waseem (2023), Banerjee (2010), Mueller and Quisumbing (2011), and Patel (2024).

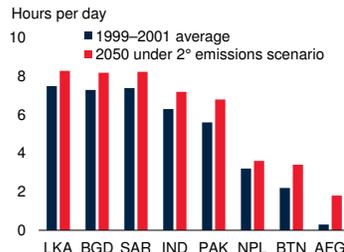
FIGURE SL1.1 South Asia’s exposure to heat and flooding

South Asia is more exposed to heat and flooding than the average EMDE, although these climate risks are concentrated in specific areas in the region.

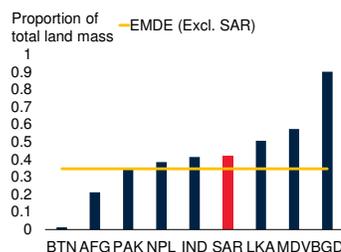
A. South Asia’s average temperature



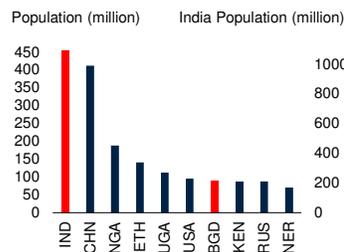
B. Average number of hours per day when it is too hot to work outside



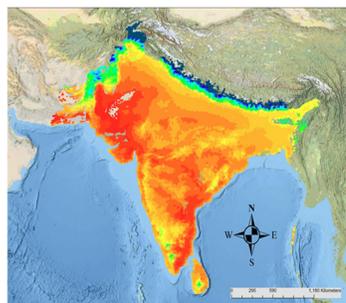
C. South Asia’s land mass exposed to flooding



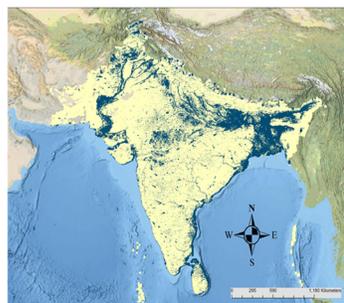
D. Population affected by excessive rainfall under the Coupled Model Intercomparison Project



E. Distribution of South Asia’s heat exposure



F. Distribution of South Asia’s flood exposure



Sources: Dartmouth Flood Observatory; ERA5-Land (Hersbach et al. 2019); Lancet countdown on health and climate change data sheet (2023); The Observed Climate Data Climatic Research Unit Gridded Time Series 4.07 0.5-degree dataset (University of East Anglia); Trancoso et al. (2024).

Note: AFG = Afghanistan; BGD = Bangladesh; BTN = Bhutan; EMDE = emerging market and developing economy; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A. The chart shows the average maximum daily temperature between 2017 and 2021. “Other EMDEs” are EMDEs excluding SAR countries.

B.E. Based on the “moderate” heat stress risk classification, as outlined in the 2021 Sports Medicine Australia Extreme Heat Policy, which categorizes estimated heat stress risk according to ambient temperature and relative humidity.

B. The number of hours (average per person per day) during which high heat posed at least a moderate heat stress risk during light outdoor physical activity. Projections for 2050 for scenarios in which global temperatures increase by 2°C.

C. The proportion of total land mass flooded in South Asia compared with other EMDEs.

D. Top 10 countries ranked by population exposed to projected excessive rainfall under the Coupled Model Intercomparison Project phases 5 and 6 across 146 Global Climate Model runs (Trancoso et al. 2024).

E. The average daily maximum temperature in South Asia between 2017 and 2021. Darker blue indicates coolest temperature (20 degrees Celsius or lower), darker green indicates cooler temperature (20 to 26 degrees Celsius), darker yellow indicates higher temperature (27 to 30 degrees Celsius), darker red indicates highest temperature (30 degrees Celsius or higher).

F. The presence of flood events in South Asia between 2000 and 2018. Dark blue-shaded areas were flooded at least once, while yellow-shaded areas were not flooded during this time period.

Unequal household exposure to heat and floods. Although the climate in most of South Asia is hot by global standards, there is variation in average temperatures within the region. Sizable areas are mountainous with low average temperatures. In non-mountainous areas, average maximum temperatures range from 28 to 34 degrees Celsius (figure SL1.1). Similarly, although flooding affects almost one-third of South Asia, exposure varies within provinces and districts (figure SL1.1). A large body of literature suggests that, globally, the poor are hurt more severely by extreme heat, floods, and other climate shocks, even though they are not always more exposed to these shocks (Hallegatte, Vogt-Schilb et al. 2016; Kahn 2005; Triyana et al. 2024). Information on the location of the most climate-affected people—“hotspot” areas of recurrent shocks (World Bank 2020)—can be one of the inputs into targeting mechanisms for social protection systems that can readily respond to shocks.

Unequal firm exposure to heat and floods. Larger non-agricultural firms are generally better at adapting to climate change than farmers and households, which often have informal microenterprises (Rexer and Sharma 2024). If South Asian places that are more exposed to climate shocks are also home to smaller firms, climate adaptation by the private sector will be less effective.

Questions. This spotlight focuses on the relationship between exposure to climate shocks and wealth or firm size, using granular geographic data. It examines the following questions:

- In South Asia, do poorer locations experience more extreme heat and floods?
- Does this relationship between poverty and exposure to heat and floods differ between urban and rural areas?
- In India, what is the relationship between firm size and exposure to heat and floods?

Contributions: This spotlight contributes to the large body of literature on climate shocks and poverty by assembling and analyzing new high-resolution spatial data.

First, the disproportionate *effects* of extreme heat and flooding on poorer households are well documented, including in the World Bank's recently published Country Climate and Development Reports (CCDRs), Hallegatte, Bangalore et al. (2016), Hallegatte, Vogt-Schilb et al. (2016), and Triyana et al. (2024). However, less is known about the incidence of exposure to these shocks. This analysis is the first to examine the correlation between local wealth and exposure to heat and floods at a finely detailed geographical level, exploiting cross-sectional data with recently published estimates of relative wealth on a 2.4 km-by-2.4 km grid (Chi et al. 2022). The analysis is also one of the first to use a standardized measure of urbanicity to explore rural-urban differences in exposure to climate shocks—a definition that can be applied uniformly across countries and overcomes the arbitrary administrative categorization upon which much of the literature relies (Nelson et al. 2019).

Second, a case study on India contributes to the growing literature on the relationship between climate shocks and firm outcomes.³ It is the first to use granular cross-sectional data to examine the relationship between exposure to climate shocks and firm outcomes in urban and rural areas in a large EMDE.

Differential exposure to climate shocks versus climate change. This spotlight examines whether poorer households are more exposed to extreme heat and floods using cross-sectional, historical data. It does not use climate change projections to examine how this incidence of exposure could change in the future.

Main findings. The main findings of this spotlight are the following.

First, places with lower wealth are more exposed to heat in both urban and rural areas of South Asia.

Second, in South Asian urban areas, places with lower wealth are exposed to more frequent flooding. In South Asian rural areas, places with lower wealth are less exposed to occasional flooding.

Third, in India, smaller firms are more exposed to floods and heat than larger firms.

Fourth, because poor households and small firms are concentrated in places that are more exposed to heat and floods, South Asian policy makers should consider reducing barriers to out-migration among the poor and facilitating firm growth in exposed locations. Information on the most affected locations (“hotspots” of recurrent shocks) can be one of the inputs into the targeting mechanisms for social protection systems that can readily respond to shocks.

Methodology

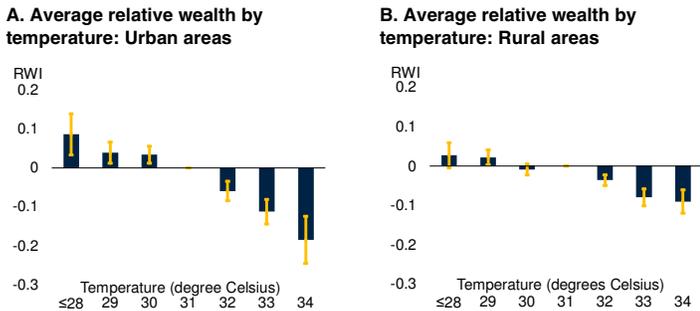
Data. Flood data come from the Global Flood Database (Tellman et al. 2021), and temperature data come from ERA5-Land (Hersbach et al. 2019). The Relative Wealth Index (RWI) is used as the main measure of wealth. The RWI is created using a deep learning model based on multi-country, household-level, nationally representative survey data linked to additional data, such as satellite imagery (Chi et al. 2022). The underlying survey data refer to wealth between 2014 and 2018. The RWI has been validated using several datasets that include poverty, and is highly correlated with survey-based indicators of wealth and poverty (Chi et al. 2022). The merged RWI and temperature dataset contains about 606,000 spatial units covering Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. The analysis of exposure and firm size in India is based on village- or town-level data aggregated from the 2013 Economic Census of India, an official census of all non-agricultural enterprises (Asher et al. 2021; Government of India 2013). This dataset contains about 505,000 spatial units. Urbanicity is an indicator that takes the value of 1 for spatial units whose vehicular travel time to cities with populations of 10,000 or more is less than 10 minutes (Nelson et al. 2019).

Estimation. Ordinary Least Squares (OLS) regressions are run to estimate the correlation between temperature and relative wealth, as measured by the RWI, or between temperature and firm size. The average temperature used is the five-year average maximum daily temperature for the period between 2014 and 2018.

³ See Goicoechea and Lang (2023), Grover and Kahn (2024); Peng et al. (2018), Rexer and Sharma (2024), and Somanathan et al. (2021).

FIGURE SL1.2 Relative wealth and temperature

Households with lower wealth are more exposed to heat in both urban and rural areas.



Sources: ERA5; Relative Wealth Index; World Bank.

Note: RWI refers to the Relative Wealth Index (Chi et al. 2022). OLS regression coefficients showing the relationship between relative wealth and temperature in urban and rural areas. Temperature bins (in degrees Celsius) on the X-axis. Relative wealth, measured by the RWI, on the Y-axis. The bars indicate the mean Relative Wealth Index estimate for a given temperature bin. Whiskers indicate 95 percent confidence intervals. State fixed effects included. Standard errors are clustered at the district level. The regression results are shown in annex table SL1.A1.

For households, the main specification regresses the RWI on dummy variables for temperature bins, where each bin represents a different average temperature range. This approach allows for a non-linear relationship between temperature and RWI. As robustness checks, linear regressions of the RWI on the five-year average maximum daily temperature and the number of days above 35 degrees Celsius are also estimated. The analysis includes regressions with state- or province-level fixed effects to estimate the correlation between temperature and relative wealth within sub-national units. Separate regressions are estimated for urban and rural areas, in part to control for significant differences in wealth distributions between urban and rural areas. A similar set of regressions is run for flooding and RWI. For firms, a similar set of spatially granular regressions is estimated with average firm size as the outcome variable. Firm-level data are available only for India.

Extreme heat and relative wealth

Exposure to heat. South Asian households with lower wealth are more exposed to higher temperatures than are better-off households, in both urban and rural areas (figure SL1.2). The magnitude of the estimated relationship can be illustrated by comparing locations at the 25th percentile of the temperature distribution (29 degrees Celsius) to those in the 75th percentile (32 degrees Celsius). In urban South Asia, within the same state or province,

the RWI is 0.3 standard deviations lower in locations with an average temperature of 32 degrees Celsius than in locations with an average temperature of 29 degrees Celsius. This difference is approximately 40 percent of the wealth gap between urban and rural areas, and is statistically significant. In rural South Asia, the estimates imply that the RWI is approximately 0.2 standard deviations lower in locations with an average maximum temperature of 32 degrees Celsius than in locations that average 29 degrees Celsius. This is about the difference between the 70th and 75th percentiles of RWI in rural areas. While small, this difference is statistically significant. The relationship between RWI and heat is imprecisely estimated at temperatures above 35 degrees Celsius, possibly because the sample size with temperatures above 35 degrees Celsius is relatively small. These results are robust to varying how the relationship between temperature and RWI is modeled in the regressions. The results in this spotlight are consistent with findings from recent reviews: as in the rest of the world, the poor are more exposed to heat in South Asia (Hallegatte, Bangalore et al. 2016; Hallegatte, Vogt-Schilb et al. 2016; Triyana et al. 2024).

Mechanisms. The negative association between temperature and relative wealth could reflect several channels. First, it may reflect that heat lowers economic output in firms (Somanathan et al. 2021) and farms (Aragon, Francisco, and Rudd 2021; Zhang, Malikov, and Miao 2024), and firms find it difficult to adapt to heat in the long run—which together, would tend to make hotter locations persistently poorer. Second, these results are consistent with residential sorting; that is, richer households are more likely to move away from extremely hot locations, leaving the poor behind. For example, Cattaneo and Peri (2016) find that heat is associated with increased migration in higher-income countries but decreased migration in lower-income countries, and suggest that this is because the poor find it harder to afford to migrate. Third, impoverished regions may be unable to pay for investments that have a cooling effect, such as tree planting. The relative absence of tree cover and green spaces has been shown to be a major contributor to the greater heat intensity of poorer neighborhoods in cities in the United States (Chakraborty et al. 2019).

Flooding and relative wealth

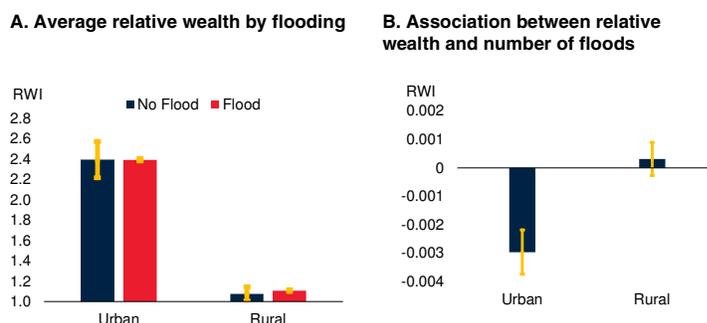
Household exposure to floods. In urban areas, locations that experienced a flood between 2000 and 2018 have a lower RWI than locations that did not experience a flood in that period. The difference is small, less than 0.1 standard deviation of RWI, and is statistically not significant. However, among urban locations that were flooded at least once between 2000 and 2018, a higher number of flood events during this period is associated with a significantly lower RWI (figure SL1.3). Hence, the overall association between recurrent flooding and RWI is significantly negative in urban parts of South Asia. In contrast, in rural areas, flooded locations have a significantly higher RWI than non-flooded locations (figure SL1.3). These results—that the poor are systematically more exposed to flooding in urban areas but not in rural areas—are consistent with prior findings (Gandhi et al. 2022; Hallegatte et al. 2020).

Mechanisms. The conclusion that households with lower wealth are more exposed to flooding is consistent with earlier findings on the urban poor’s exposure to flooding in Vietnam (World Bank 2022). It may reflect the residential sorting of richer households into less flood-prone locations (Kim 2012), as well as the direct effects of asset damage from flooding. The finding that households with a higher relative wealth index in rural areas are more exposed to flooding might reflect an important facet of South Asia’s geographic characteristics and its dependence on agriculture in rural areas: the region’s floodplains are fertile areas and hence productive for agriculture (Banerjee 2007, 2010). The long-term productivity benefits of living in such flood-prone but fertile areas may outweigh the risk of being flooded.

Number of floods experienced and relative wealth. The significantly negative correlation between the number of flood events and RWI in “ever-flooded” urban locations suggests that the relationship between RWI and floods in urban areas is driven by the damage and losses from floods: the greater the number of floods, the greater the cumulative damage. In contrast, in rural locations the experienced at least one

FIGURE SL1.3 Relative wealth and flooding

In urban areas, households with lower wealth are more exposed to recurrent flooding. Conversely, in rural areas, households with lower wealth are less exposed to flooding.



Sources: Dartmouth Flood Observatory; Relative Wealth Index; World Bank.

Note: RWI refers to the Relative Wealth Index (Chi et al. 2022).

A. Linear regression coefficients showing average relative wealth as measured by the RWI (Y-axis) versus a binary indicator that takes the value of 1 if a location was ever flooded between 2000 and 2018 (X-axis). State fixed effects are included. Standard errors are clustered at the district level. Whiskers indicate 95 percent confidence intervals. The regressions results are shown in annex table SL1.A1.

B. Linear regression coefficients showing the relationship between relative wealth as measured by the RWI (Y-axis) and the number of floods in urban and rural areas, respectively (X-axis). State fixed effects are included. Standard errors are clustered by at the district level. Whiskers indicate 95 percent confidence intervals. The regression results are shown in annex table SL1.A1.

flooding during 2000–18, the relationship between the number of flood events in the period and RWI is weak and statistically not significant (figure SL1.3). This suggests that in rural areas, being located on a floodplain matters more for RWI than the actual incidence of floods. This is consistent with the conjecture that the higher agricultural fertility of floodplains drives the relationship between floods and RWI in rural South Asia.

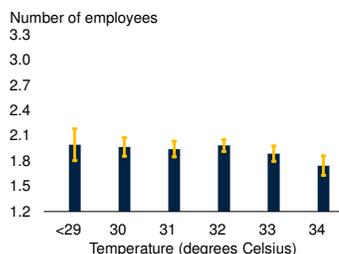
Case study: Firms and climate shocks in India

Exposure to heat. Within Indian states, hotter places have smaller firms (figure SL1.4). This difference is statistically significant when comparing places at or below the median of the temperature distribution of India (31 degrees Celsius) to those in the 80th to 90th percentile (33 degrees Celsius). For example, firms in places with average temperatures at 31 degrees Celsius are 0.24 employees larger than firms in places with average temperatures of 33 degrees Celsius. This difference is economically meaningful given that India’s mean firm size is two employees. This observed relationship is stronger in urban areas

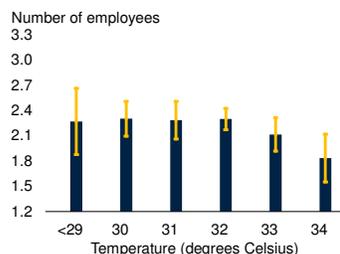
FIGURE SL1.4 India: Firm size and climate shocks

Smaller firms are more exposed to high heat in urban India. Flood exposure is greater among small firms.

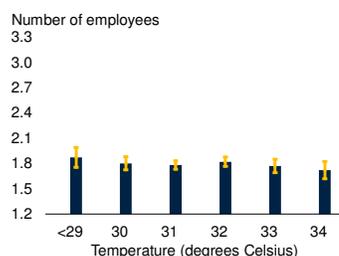
A. Average firm size by temperature



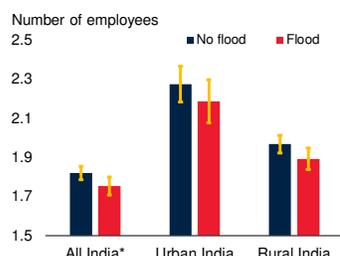
B. Average firm size by temperature: Urban areas



C. Average firm size by temperature: Rural areas



D. Average firm size by flooding



Sources: Dartmouth Flood Observatory; Economic Census of India 2013; ERA5; World Bank.

A.-C. OLS regression coefficients showing the relationship between average private firm size and temperature. Firm size (Y-axis) is measured by the number of employees. Temperature bins (in degrees Celsius) shown on the X-axis. Each bar depicts the mean estimated firm size in a given temperature bin. Whiskers indicate 95 percent confidence intervals. The regressions include state fixed effects. Standard errors are clustered at the district level. The regression results are shown in annex table SL1.A2.

D. OLS regression coefficients showing average firm size versus a binary indicator that takes the value one if a location is ever flooded between 2000 and 2018. Standard errors are clustered at the district level. Whiskers indicate 95 percent confidence intervals. The regression results are shown in annex table SL1.A3.

(figure SL1.4). However, firms in places with average temperatures at 34 degrees Celsius are, on average, 0.1 employees larger than those at 31 degrees Celsius. This difference is imprecisely estimated due to the small sample size of locations at 34 degrees Celsius in India. A potential explanation for this seeming inconsistency is that the most industrialized states in India—Gujarat, Maharashtra, and Tamil Nadu—also are among its hottest. It may be that the advantages of locating in these states outweigh considerations of heat exposure.

Exposure to floods. Smaller firms are more exposed to flooding in both urban and rural India (figure SL1.4). To the extent that firm size is correlated with productivity, the results of this spotlight are consistent with a recent review that finds that less productive firms appear to be more exposed to climate shocks (Rexer and Sharma 2024).

Mechanisms. There are multiple mechanisms that could explain a negative relationship between non-agricultural firm size and such climate shocks as floods and extreme heat. First, climate shocks reduce productivity. For example, worker productivity in Indian garment factories falls by almost 15 percent on hot days, which reduces output (Somanathan et al. 2021). Recurrent exposure to negative productivity shocks from heat or floods may reduce long-term firm growth in the non-agricultural sector. This productivity channel would operate in both urban and rural locations in several ways: unlike agricultural households, which may benefit from higher fertility in floodplains, non-agricultural firms may gain no productivity advantage if located in a floodplain. Second, climate shocks may reduce local demand, limiting the size of local non-agricultural firms (Liu, Yogita, and Taraz 2023). Third, larger firms may be more able to relocate when faced with natural disasters. In Pakistan, formal sector firms affected by flooding moved to less flood-prone areas (Balboni, Boehm, and Waseem 2023).

Conclusion

Targeting policy support. It is well documented that poorer households experience more severe impacts from climate shocks. However, the disproportionate exposure of the poor to climate shocks in South Asia is less well documented, and therefore, not given due consideration when planning investments for climate resilience. Because the poor are disproportionately exposed to extreme heat and, in urban areas, to floods, more detailed heat and flood exposure projections from climate models could improve the targeting of policy support. For example, some city governments in South Asia are preparing libraries, malls, and public buildings for readiness to serve as heat wave shelters or “cooling centers” (e.g., Knowlton et al. 2014), and it may be useful to factor in the excess exposure of the urban poor to heat when assessing such future investment needs. Similarly, the excess exposure of the poor could be factored into the targeting and cost assessment of subsidized insurance programs for climate-related hazards.

Addressing constraints to mobility and residential choice.

Dealing with factors that prevent poor households from moving to more desirable locations would help reduce their disproportionate exposure to heat and other natural hazards. Access to micro-credit (Cai 2020) and the provision of small cash incentives (Bryan, Chowdhury, and Mobarak 2014) have been found to spur internal migration among the poor by easing liquidity and risk-related constraints to migrating. Given the preponderance of informational and behavioral biases in low-income settings (Bertrand, Mullainathan, and Shafer 2004; Mullainathan 2006), governments could consider measures to address informational and psychological barriers to moving, such as status quo bias (the well-documented preference to maintain one's current situation) and uncertainty about conditions in destination locations (McKenzie 2022). Difficulties in selling or buying land due to land market inefficiencies or weak property rights can also deter mobility, and as a result, land reform programs have also been found to increase migration in rural areas (de Janvry et al. 2015). Affordable housing policies and reforms to urban zoning regulations (Gandhi and Nagpal 2023) could help the urban poor move to less exposed locations by increasing the availability of affordable housing.

Addressing constraints to firm growth in exposed locations.

Agriculture is the most climate-sensitive sector (Nath 2020). As a result, the ability of the non-agriculture sector to absorb displaced workers is critical in places that are poorer and more exposed to extreme heat, floods, or other natural hazards. But these places also tend to have smaller firms, as suggested by the India case study in this spotlight. Addressing constraints to non-agricultural firm growth in highly exposed locations would not only generate better jobs for the poor but also reduce their vulnerability to climate shocks.

ANNEX SL1.1 Data and Methodology

Data. Data from multiple sources were used to analyze the relationship between flooding and extreme heat and relative wealth, proxied by Meta's Relative Wealth Index (RWI). A similar dataset for firms was constructed using the Indian Economic Census.

Estimation. The following specifications are used for households:

$$RWI_{sg} = Temp28_{sg} + Temp29_{sg} + Temp30_{sg} + Temp31_{sg} + Temp33_{sg} + Temp34_{sg} + Temp35_{sg} + Temp36_{sg} + v_s + u_{sg}$$

and

$$RWI_{sg} = Anyflood_{sg} + v_s + u_{sg}$$

where RWI_{sg} is the average RWI at grid cell g in state or province s . In the first specification, the variable $temperature_{sg}$ includes indicators for the average maximum temperature between 29 degrees Celsius or lower and 36 degrees Celsius, relative to 32 degrees Celsius (annex table SL1.A1). The third specification uses the variable $Anyflood_{sg}$, an indicator that takes the value of 1 if a location is ever flooded between 2000 and 2018 (annex table SL1.A1). To analyze the relationship with the number of flooding events, the same specification is run on places that were flooded at least once between 2000 and 2018. The analysis includes state fixed effects, v_s . All standard errors are clustered at the district level (third administrative unit). The regressions are run separately for urban and rural samples.

A similar set of specifications is used for firms:

$$FirmSize_{sg} = Temp28_{sg} + Temp29_{sg} + Temp30_{sg} + Temp32_{sg} + Temp33_{sg} + Temp34_{sg} + Temp35_{sg} + v_s + u_{sg}$$

and

$$FirmSize_{sg} = Anyflood_{sg} + v_s + u_{sg}$$

where $FirmSize_{sg}$ is the average firm size at village g in state s . The first specification's variable $temperature_{sg}$ includes indicators (bins) for the average maximum temperature between 29 degrees Celsius or lower and 35 degrees Celsius, relative to 31 degrees Celsius, for the years 2009 to 2013, since the latest available data on firms are from 2013 (annex table SL1.A2). The third specification uses the variable $Anyflood_{sg}$, an indicator that takes the value one if a location is ever flooded between 2000 and 2013 (annex table SL1.A3). The analysis also includes state fixed effects, v_s . All standard errors are clustered at the district level.

Robustness. For robustness, one specification uses the average maximum temperature between the years 2014 and 2018. Another specification uses the average number of days above 35 degrees Celsius between the years 2014 and 2018. Similarly, alternative measures are used to estimate the relationship between firm size and heat, using the average maximum daily temperature and the average number of days above 35 degrees Celsius between the years 2009 and 2013. Results can be found in Behrer et al. (2024).

Data	Description
Relative Wealth Index	The Relative Wealth Index, developed by Meta's Data for Good team, uses a combination of machine learning algorithms, satellite data, ground survey data, and other publicly available datasets to estimate the wealth distribution at a granular spatial resolution. Each RWI data point represents the center of a 2.4 km by 2.4 km square. It uses cross-sectional household-level data from the nationally representative Demographic and Health Survey from multiple countries, linked to additional data such as satellite imagery (Chi et al. 2022). The Demographic and Health Survey (DHS) is a series of nationally representative surveys conducted in many countries, including South Asia. Urban and rural areas are defined and measured based on population density, night light activities, built environment characteristics, infrastructure indicators, and other relevant data. It is possible to compare the RWI between urban and rural areas in the same country. However, because the urban RWI is systematically higher, the analysis separates the urban and rural samples.
Average private firm size in India	The most recent cross-sectional firm-level data were obtained from the Government of India's Ministry of Statistics and Programme Implementation. The Sixth Economic Census, conducted in 2013, captured detailed information for more than 58 million non-agricultural firms across India, including employee counts for each firm (Government of India 2013). This comprehensive dataset was utilized by the Socioeconomic High-resolution Rural-Urban Geographic Platform for India (SHRUG), which aggregates the firm-level data to broader geographic units by matching Economic Census data with the 2011 Population Census of India, including demographic data at the town and village levels (Asher et al. 2021). This aggregation facilitates integration at the village level, resulting in a "shrid," level dataset. A <i>shrid</i> describes a geographical unit that can be mapped consistently across multiple rounds of the Indian economic censuses. In most cases, a <i>shrid</i> is a village or town. This dataset includes the number of private firms and their employees, which is used to calculate the average size of private firms in more than 500,000 villages as of 2013 (Asher et al. 2021).
Temperature	The temperature data consist of the annual average daily maximum temperature in the South Asia region (Hersbach et al. 2019). The data are then averaged to compute the five-year average daily maximum temperature. The five-year average daily maximum temperature is calculated for the period between 2014 and 2018, aligning with the latest available flood data and approximate DHS survey year. The temperature data are then matched to RWI grids. For firms, the five-year period ranges between 2009 and 2013. The temperature data are then matched to the <i>shrid</i> -level firm data.
Flood	The flood data were compiled by the Dartmouth Flood Observatory. The data represent a comprehensive collection of all flood events that occurred worldwide between 2000 and 2018 (Tellman et al. 2021). Floods are identified through a combination of news reports, government data, instrumental observations, and remote sensing technologies, including satellite imagery. Floods of Severity Level 1 and higher are included in the analysis, where a Level 1 flood represents "significant damage to structures or agriculture, fatalities, and/or a 5–15 year interval since the last similar event." Based on these data, RWI grids that have been flooded were identified. The flood data were used to count how many times the grids have been flooded. A similar process was repeated to identify firms' experiences with flooding using <i>shrid</i> -level firm data.
Urbanicity	Whether a location is defined as urban is based on the travel distance from it to a city. Places within 10 minutes of driving time from cities with more than 10,000 people are coded as urban. The rest are defined as rural. According to our definition, about 30 percent of South Asia is in urban areas. The travel distance is defined as the travel time from a given location to the nearest settlement and is calculated using a least-cost path algorithm on a friction surface where each pixel has a cost and travel time associated with it (Nelson et al. 2019). The friction surface incorporates a variety of factors such as connectivity, elevation, road network, land cover, and slope. The travel time obtained is validated against actual travel times from Google Maps.

Note: RWI is the relative wealth within a country or country group, not an absolute measure of wealth.

ANNEX TABLE SL1.A1 Relationship between relative wealth, temperature, and floods**Panel A. Relationship between RWI and average maximum temperature**

	Urban	Rural
Maximum temperature ≤ 29 degrees Celsius	0.086** (0.027)	0.027 (0.017)
29–30 degrees Celsius	0.039** (0.014)	0.022* (0.100)
30–31 degrees Celsius	0.034** (0.011)	-0.009 (0.007)
32–33 degrees Celsius	-0.059*** (0.013)	-0.036*** (0.007)
33–34 degrees Celsius	-0.112*** (0.016)	-0.080*** (0.011)
34–35 degrees Celsius	-0.184*** (0.031)	-0.091*** (0.015)
35–36 degrees Celsius	-0.106 (0.055)	-0.050 (0.037)
Fixed-effects	State	State
Standard error: Clustered	District	District
Observations	138,587	467,404
R-squared	0.1133	0.0859

Panel B. Relationship between RWI and flooding

	Urban	Rural	Urban	Rural
Any flood	-0.002 (0.005)	0.031*** (0.004)		
Number of floods			-0.003*** (0.0004)	0.0003 (0.0003)
Fixed-effects	State	State	State	State
Standard error: Clustered	District	District	District	District
Observations	198,384	446,571	65,106	104,783
R-squared	0.094	0.087	0.123	0.108

Note: RWI = Relative Wealth Index. Urban = places within 10 minutes from cities with more than 10,000 people. Panel A uses dummy variables for temperatures bins ranging from below 29 and 36 degrees Celsius. The omitted temperature bin is 31–32 degrees Celsius. Panel B includes an indicator for any flooding and the number of floods between 2000 and 2018. The relationship between the number of floods and RWI is estimated on the sample of ever-flooded areas. Standard errors are clustered at the district level. Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

ANNEX TABLE SL1.A2 Firm size and temperature in India

	All India	Urban India	Rural India
Maximum temperature in degrees Celsius <29	0.009 (0.113)	-0.029 (0.230)	0.053 (0.073)
Maximum temperature in degrees Celsius between 29 and 30	-0.018 (0.059)	0.003 (0.108)	-0.019 (0.046)
Maximum temperature in degrees Celsius between 30 and 31	-0.042 (0.049)	-0.013 (0.119)	-0.038 (0.030)
Maximum temperature in degrees Celsius between 32 and 33	-0.097 (0.051)	-0.182 (0.108)	-0.049 (0.045)
Maximum temperature in degrees Celsius between 33 and 34	-0.239*** (0.070)	-0.463** (0.170)	-0.099 (0.059)
Maximum temperature in degrees Celsius between 34 and 35	0.098 (0.224)	-0.051 (0.472)	0.230 (0.128)
Observations	510,233	164,939	345,294
Fixed-effects	State	State	State
Standard error: Clustered	District	District	District
R-squared	0.001	0.001	0.002

Note: Only non-agricultural private firms from the Indian Economic Census 2013 are included. Urban = places within 10 minutes from cities with more than 10,000 people. The panel uses indicators for temperatures ranging from below 29 and 35 degrees Celsius, relative to 31–32 degrees Celsius with the state-level fixed effect. Standard errors are clustered at the district level. Significance: * p<0.10, ** p<0.05, *** p<0.01.

ANNEX TABLE SL1.A3 Firm size and flooding in India

	All India	Urban India	Rural India	All India	Urban India	Rural India
Any flood	-0.07471* (0.03076)	-0.08720 (0.06606)	-0.06692 (0.02616)	-0.12822*** (0.02841)	-0.31682*** (0.06245)	-0.07443** (0.02295)
Observations	511,095	164,939	345,294	511,097	164,941	345,294
Fixed-effects	State	State	State	None	None	None
Standard error: Clustered	District	District	District	District	District	District
R-squared	0.00076	0.00094	0.00158	0.00006	0.00016	0.00006

Note: Only non-agricultural private firms from the Indian Economic Census 2013 are included. Urban = places within 10 minutes from cities with more than 10,000 people. Any flood between 2000 and 2013. Columns 1 to 3 are controlled with the state-level fixed effect. Columns 4 to 6 are not controlled with the state-level fixed effect. Standard errors are clustered at the district level. Significance: * p<0.10, ** p<0.05, *** p<0.01.

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SPOTLIGHT 2

MIND THE SIDE EFFECTS:
Remittances and Economic Structure

Spotlight 2. Mind the Side Effects: Remittances and Economic Structure

Several South Asian countries are among the EMDEs with the highest remittance inflows relative to GDP. While remittances help to reduce poverty and improve household education and health, large inflows can create currency appreciation pressures and international competitiveness losses, with adverse consequences for exports, non-agricultural sectors, and private investment. Governments can encourage remittance inflows but offset the associated loss of competitiveness by reducing other costs of doing business. For example, they can shift away from trade-related taxes and create an environment conducive to faster productivity and employment growth.

Introduction

Governments in Bangladesh, Nepal, Pakistan, and Sri Lanka—South Asia’s most remittance-reliant countries—struggle to accelerate export growth, productivity growth, and private investment. In 2023, labor productivity in these countries was 40–80 percent of the average for emerging markets and developing economies (EMDEs), exports were 4–18 percentage points of GDP below the EMDE average, and private investment was 2–17 percentage points of GDP below the EMDE average.

These difficulties may partly reflect a deeply entrenched economic structure that has been shaped by more than a decade of rapidly growing and sizable inflows of remittances. Since 2017, remittances have been a larger source of foreign exchange inflows to EMDEs (other than China) than any capital inflow (figure SL2.1). This has also been the case in South Asia. And because remittances are often transmitted through unofficial channels, they may be considerably larger than reported in official data.

Four South Asian countries—Afghanistan, Bangladesh, India, and Pakistan—are among top-10 sources of migrants in the world. One South Asian country (Nepal) ranked among the quarter of EMDEs with the highest remittance inflows relative to GDP in 2023, and Pakistan and Sri Lanka received above-average remittance inflows (figure SL2.1).

Note: This spotlight was prepared by Jakob de Haan (University of Groningen, the Netherlands), Franziska Ohnsorge, and Rully Prassetya.

A large body of literature has documented that remittances increase household incomes, education, and health and help smooth consumption during income shocks (see annex SL2.1 for a review of the literature). Conversely, a reduction in remittances has been shown to raise poverty and delay economic mobility (World Bank 2024a). However, as a side effect, remittances also create unique policy challenges.

Over the longer term, large-scale remittances have been associated with real exchange rate appreciation, a shift in demand from tradable to non-tradable goods, consumption and housing booms, trade deficits, export and manufacturing weakness, and lower labor force participation. In turn, weak exports and private investment have been shown to slow productivity growth, capital accumulation, and structural transformation from agriculture to non-agriculture—ultimately weakening long-term sustainable (“potential”) growth. This suggests that large remittance inflows can adversely shape the economic structure and development path of EMDEs, including in South Asia.

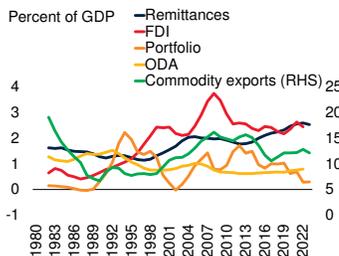
Questions. This spotlight addresses the following questions:

- How do large remittance inflows alter the structure of economies over the long term?
- Does the long-term impact of remittances on the economic structure and development path differ from that of other sources of foreign exchange, such as official development assistance (ODA), foreign direct investment (FDI), portfolio inflows or commodity exports?
- Which policies can help mitigate the distorting effects of large-scale remittance inflows?

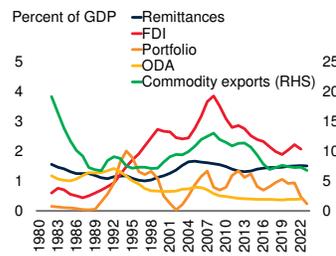
FIGURE SL2.1 Remittances, capital inflows, and commodity export earnings in EMDEs

In EMDEs, remittances have been larger than foreign direct investment, official development assistance and portfolio investment inflows since 2017. South Asia's remittances are above-average and Nepal's are in the top quartile of EMDEs. In most South Asian countries, remittances are a larger source of foreign exchange inflows than foreign direct investment, official development assistance, and portfolio investment combined.

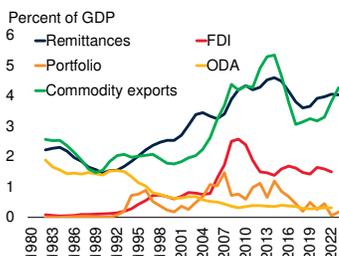
A. Foreign exchange inflows: EMDEs excluding China



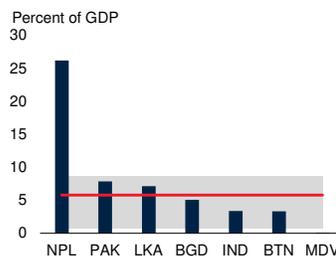
B. Foreign exchange inflows: EMDEs including China



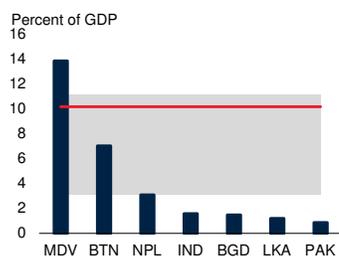
C. Foreign exchange inflows: South Asia



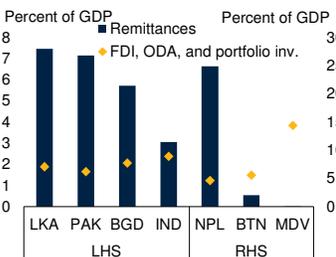
D. Remittances: South Asia and other EMDEs



E. FDI and ODA: South Asia and other EMDEs



F. Remittances and other foreign exchange inflows, 2014–23 average



Sources: International Financial Statistics (IMF), World Development Indicators (database), World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; FDI = foreign direct investment; IND = India; LHS = Left-hand side; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; ODA = official development assistance; PAK = Pakistan; RHS = Right-hand side; SAR = South Asia Region (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka). Commodity exports are the sum of agriculture raw materials exports, food exports, fuel exports, and ores and metals exports. Data for remittances, portfolio investment inflows, and commodity exports are through 2023; data for FDI and ODA are through 2022. All aggregates are nominal GDP-weighted averages. Afghanistan is excluded because of a lack of data.

A.B. Figure shows three-year moving average of inflows of remittances, ODA, FDI, portfolio investment, and commodity exports earnings in percent of GDP into up to 150 EMDEs (excluding China in A, including China in B).

C. Figure shows three-year moving average of inflows of remittances, ODA, FDI, portfolio investment, and commodity exports earnings in percent of GDP into South Asia.

D.E. Figure shows the remittances-to-GDP ratio in 2023 (D) and FDI- and ODA-to-GDP ratio in 2022 (E) for South Asia. Grey shade indicates interquartile range for non-SAR EMDEs. Red line indicates non-SAR EMDE average. Data for Bhutan in D refer to 2022.

F. Figure shows remittances in percent of GDP and the sum of FDI, ODA, and portfolio investment in percent of GDP for each SAR country. Data are 2014–23 average for remittances and net portfolio investment inflows and 2014–22 average for FDI and ODA.

Main findings. This spotlight has several new findings.

First, in a global sample of EMDEs, remittance-reliant EMDEs generally lag behind in some key engines of short-term growth and long-term development. They exhibit significantly lower export-to-GDP ratios, private investment-to-GDP ratios, and non-agricultural employment ratios compared with other EMDEs. Conversely, they have higher consumption-to-GDP ratios and import-to-GDP ratios, in line with findings in the microeconomic literature on remittances.

Second, even after controlling for their level of development, remittance-reliant EMDEs around the world tend to converge toward having smaller private investment, exports, and non-agricultural sectors—all symptoms of weaker development paths.

Third, in contrast to remittances, FDI, portfolio investment inflows and foreign exchange inflows from commodity exports are not associated with convergence toward lower exports or private investment. This is in part by construction, as these inflows are subcomponents of exports and private investment. ODA, however, is associated with weak exports, private investment (but higher total and public investment), and non-agricultural sectors, similar to remittances.

Fourth, since a large literature has established that remittances are a critical foundation of household income in remittance-reliant economies, policies should focus on removing obstacles to remittance inflows. The policy challenge is to offset the related loss of competitiveness by reducing the cost of doing business, including by shifting taxation away from trade and payroll taxes and adopting more business-friendly regulations and practices. This approach could also entice households to allocate more remittances into investment, including investments in their own start-ups (Piras 2023) and human capital (Askarov and Doucouliagos 2020). If more remittances are channeled through the official financial system, they can be intermediated into greater savings and private investment.

Contributions. The spotlight makes several contributions to the literature reviewed in annex SL2.1.

First, this study highlights the impact of remittances on EMDEs' long-term growth path. Many studies have shown the short-term stabilizing impact of

remittances or the cross-country differences in macroeconomic outcomes between remittance-reliant economies and other EMDEs (annex SL2.1). To the authors' knowledge, no study has yet examined whether remittance-reliant economies have different points of convergence compared with other EMDEs.

Second, this study systematically explores asymmetries in the impact of remittances to illustrate how remittances change the *structure* of output, rather than the *level* of output. For example, many studies show that remittances affect consumption or investment, but none analyzes the relative size of these two effects.

Third, to draw on best practices for policies, this study explicitly compares the varied long-term correlates of remittances with those of aid, FDI, portfolio inflows, and large commodity exports. Theoretically, these inflows may have similar effects on the structure of the economy to those of remittances, as they all create real appreciation pressures. Some studies have compared the real exchange rate appreciations associated with remittances and aid (Balde 2011; Jayaraman, Choong, and Chand 2016; Martins 2013), FDI (Ahmed 2009; Hao et al. 2021; Upadhyaya, Dhakal, and Thapa 2013) or commodity exports (Jayaraman, Choong, and Chand 2016; Ma and Wang 2023). However, none of the previous empirical studies has systematically documented the economic structure and long-term development paths associated with all types of large foreign exchange inflows.

Methodologies. Two approaches are used to establish differences in economic structures between high-remittance and low-remittance economies. Specifically, the analysis focuses on differences in consumption and investment (in percent of GDP) and their ratio, exports and imports (in percent of GDP), and agricultural and non-agricultural employment (in percent of the working-age population). First, to document that there are meaningful differences, this spotlight tests differences in average macroeconomic outcomes between high-remittance EMDEs (those with remittances in the top quartile among EMDEs) and low-remittance EMDEs (those with remittances in the bottom quartile among EMDEs).

Second, to focus on long-term development, this spotlight draws on the convergence literature to identify “convergence clubs”. As pointed out by

Tomal (2024), in contrast to standard economic theory, research has shown that not all economies converge to the same long-run equilibrium. Baumol (1986) was the first to suggest that economies may be grouped into so-called convergence clubs—groups of countries that follow similar growth paths and share specific economic characteristics. Instead of all countries converging to a single steady state equilibrium, the convergence club literature suggests that each convergence club moves toward a different point in the long run (Durlauf and Johnson 1995; Quah 1997). The spotlight uses a two-step approach (annex SL2.2). In the first step, the algorithm by Philips and Sul (2007; 2009) groups countries into convergence clubs defined by their narrowing cross-country differences over time (dubbed “sigma” convergence). In the second step, clubs are tested for statistically significant differences in their remittances, FDI, ODA, or portfolio investment inflows or commodity exports (all in percent of GDP).

While the annex tables present additional indicators, the main text focuses on convergence clubs for non-agricultural employment, private investment, and exports. Exports and private investment are key engines of productivity growth and capital accumulation, which form the foundation for long-term sustainable, potential growth (Kose and Ohnsorge 2024). Rapidly growing non-agricultural sectors are a key feature of the structural transformation that characterizes a robust long-term development path (Herrendorf, Rogerson, and Valentinyi 2014; World Bank 2024b).

Neither methodology establishes any causal relationship, although the next section relies on the literature to show the channels through which remittances may affect economic structure. The purpose of this spotlight is not to establish causality, but to document empirically the challenges faced by remittance-reliant countries. The spotlight refers to international remittances only.

Data. Most of the data have been drawn from the World Bank's *World Development Indicators* database. The portfolio inflow data have been taken from the IMF's *International Financial Statistics*. The real effective exchange rate, private investment and consumption data are from the World Bank's *Macro Poverty Outlook* database. The agriculture and non-agriculture employment share data come from Ohnsorge, Rogerson, and Xie (2024). These data yield a sample of up to 154 EMDEs for 1980–2023.

Symptom or cause?

Remittances can be both a symptom and a cause of weaker engines of long-term growth. Poor prospects for income growth or job creation, especially outside of agriculture, encourage migration. This is consistent with significantly higher remittances in countries with small labor markets (figure SL2.2). There is empirical evidence that weak structural characteristics and poor growth are important drivers of remittance flows. For instance, Beaton et al. (2017) find that remittances are driven by structural variables in the home country of migrants, including low per capita income and a high share of the rural population. Fagiolo and Rughi (2023) find a robust U-shaped relation between per capita income at home and remittance flows.

Once out-migration generates large remittance inflows, the challenges can become self-perpetuating. Large remittance inflows into foreign exchange markets create real appreciation pressures that can resemble the “Dutch disease” that has been documented for large commodity exports or ODA inflows.¹

By supporting household incomes, remittances reduce poverty and improve education and health outcomes—but they also raise consumption. Remittances have been associated with greater household consumption in Bangladesh (Lee et al. 2021) and Nepal (Mishra, Kondratjeva, and Shively 2022), greater non-housing consumption in China (Zhu et al. 2014), and greater luxury consumption in Jamaica (Stephenson and Wilsker 2016).

However, increased consumption has sometimes come at the expense of weaker private investment. This has been shown for India (Mallick 2012), East Asian countries (Tung 2018), and a group of large emerging markets (Su et al. 2021).

Real exchange rate appreciation caused by remittances has been documented in Latin America and the Caribbean (Amuedo-Dorantes and Pozo 2004; Vargas-Silva 2009); in Asia (Hien et al. 2020); in Sub-Saharan Africa (Owusu-Sekyere, van Eyden, and Kemegue 2014), in large cross-country samples

(Acosta, Lartey, and Mandelman 2009; Azizi 2021; Polat and Andres 2019; Zhang et al. 2021), in countries with large numbers of emigrants (Ratha and Moghaddam 2020), and in several individual countries (Al-Assaf and Al-Tarawneh 2016; Eltalla 2019; Ito 2017).

The loss of competitiveness caused by real appreciation dampens exports. It also discourages investment in tradables sectors, which tends to be predominantly private rather than public investment.

By sapping momentum in private investment and exports—typically two major segments of non-agricultural sectors—remittances can also hold back non-agricultural activity and employment. In addition, a steady and large flow of remittances might substitute for labor income, raise reservation wages (the lowest wage at which workers accept a job), and discourage labor supply (Bussolo and Medvedev 2008). This could particularly slow non-agricultural employment, which typically requires relocation out of rural areas.

This impact of remittances may vary depending on the economic environment. In particular, some studies have found that better institutional quality and deeper financial markets are associated with more investment-oriented remittances flows. For example, in countries with stronger financial, political, or policy institutions, remittances tend to be associated with higher private investment (Issifu 2018; Su et al. 2021). In countries with deeper financial systems, remittances have been associated with stronger growth accelerations, partly because financial systems channel remittances toward productive investments (Lartey 2013; Lartey and Nigatu 2021).

Development paths

Economic structure. Remittance-reliant economies have structures that are tilted away from non-agriculture sectors, exports, and private investment—tilted away from the parts of an economy that are typically associated with faster productivity, output, and employment growth, as well as faster structural transformation along the development path (Dieppe 2021; World Bank 2024b). This is already apparent in a comparison of averages between the quartile of countries and decades with the highest remittances relative to GDP and the quartile with the lowest remittances

¹ “Dutch disease,” a term coined in 1977 by the Economist magazine to describe events following the discovery of the Groningen gas field in the Netherlands, captures how a sudden development of one economic sector causes a real appreciation of the country’s currency—which hurts exports, jobs and investment in other sectors, while increasing imports and consumption.

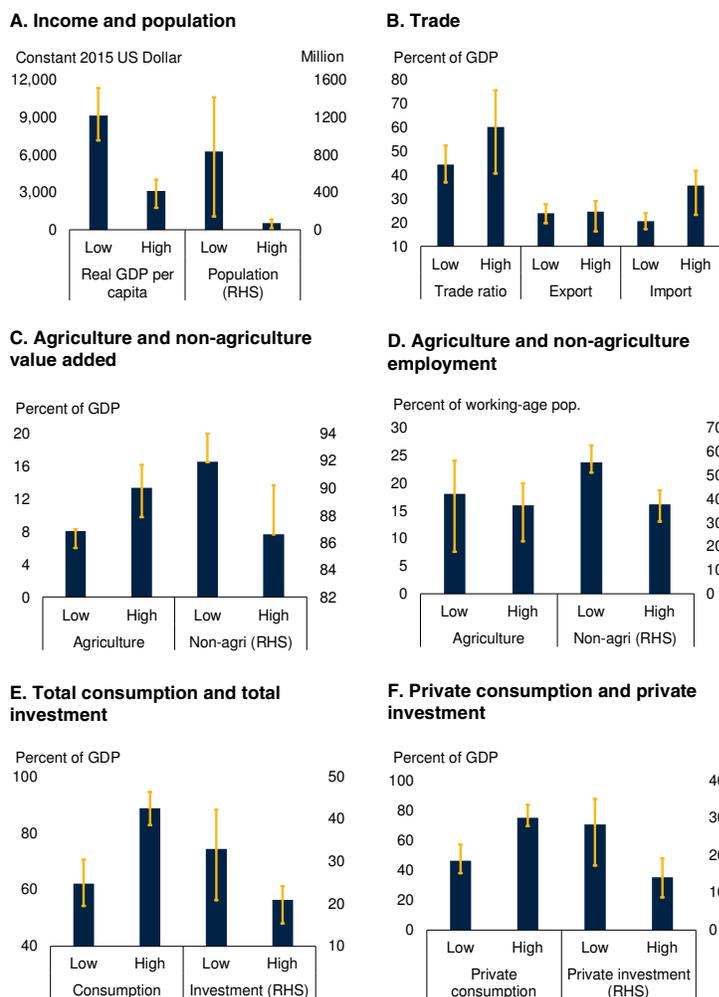
(figure SL2.2). Compared with the quartile of country-decade pairs with the lowest remittances (relative to GDP), private investment was, on average, 14 percentage points of GDP lower in those with the highest remittances; non-agricultural employment was 18 percentage points of the working-age population lower; and imports were 15 percentage points of GDP higher.

Convergence clubs. The long-term development paths of remittance-reliant EMDEs also suggest that the key engines of growth run weaker in these countries. While remaining agnostic about causality, EMDEs can be split into several convergence clubs with different development paths. The methodology described in annex SL2.2 yields two convergence clubs based on imports, private consumption, private investment (all in percent of GDP), and non-agricultural employment (in percent of working-age population) and four convergence clubs based on exports in percent of GDP. There is considerable overlap between club members: around 20–40 percent of the members belonging to the clubs with the highest private investment, highest exports, and highest non-agricultural employment overlap.

- **Non-agricultural employment.** One set of countries has been on a trajectory of steadily rising non-agricultural employment ratios, whereas another group of countries has been on a near-flat trajectory. By 2022, the average non-agricultural employment in the group on the rising trajectory was 20 percentage points of the working-age population higher than in the group with the near-flat trajectory. The group with the near-flat trajectory included India, Maldives, and Pakistan, whereas Bangladesh, Bhutan, and Sri Lanka were part of the club with a rising trajectory.
- **Private investment.** One group of countries has been on a trajectory of gradually rising private investment relative to GDP, while another group has been on a declining trajectory. By 2022, on average, the former group had 11 percentage points of GDP higher private investment than the latter. In South Asia, Pakistan is part of the club with declining investment ratios. Bangladesh, Bhutan, and India are part of the club with a rising trajectory, largely because of their high private investment-to-GDP ratios in the late 2010s (Bangladesh), early 2010s (Bhutan), or mid-2000s (India) that have since subsided.

FIGURE SL2.2 EMDE characteristics, by magnitude of remittance inflows

High-remittance economies tend to be lower-income and less populous, with greater agricultural dependency and weaker investment.



Source: *Macro Poverty Outlook* (World Bank), World Development Indicators (database), World Bank.

Note: Bars represent country-decade real GDP-weighted average of EMDE country characteristics for the top ("High") and bottom ("Low") quartiles, based on average remittances-to-GDP ratios. The data refers to 1980–2023. The whiskers are interquartile ranges.

A. GDP per capita is measured in constant 2015 U.S. dollars, with the sample including up to 153 EMDEs. Total population is measured in millions, with the sample including up to 154 EMDEs.

B. Total exports and imports, exports and imports of goods and services, in percent of GDP. Sample includes up to 139 EMDEs.

C. Value added in agriculture, forestry, and fishing, in percent of GDP, and non-agriculture value added, in percent of GDP. Sample includes up to 150 EMDEs.

D. Employment in agriculture, forestry, and fishing, in percent of working-age population and non-agriculture employment, in percent of working-age population. Sample includes up to 139 EMDEs.

E. Final consumption expenditure, in percent of GDP, and gross fixed capital formation, in percent of GDP. Sample includes up to 135 and 131 EMDEs, respectively.

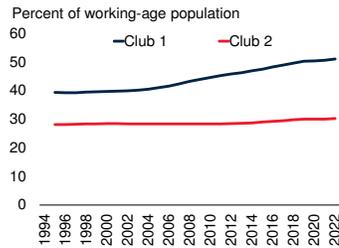
F. Households and non-profit institutions serving households in final consumption expenditure, in percent of GDP, and private gross fixed capital formation, in percent of GDP. Sample includes up to 134 and 131 EMDEs, respectively.

- **Exports.** One group of countries has been on a trajectory of gradually rising exports relative to GDP, while another three groups have been on a declining trajectory. By 2022, the first group had on average 20–31 percentage points of

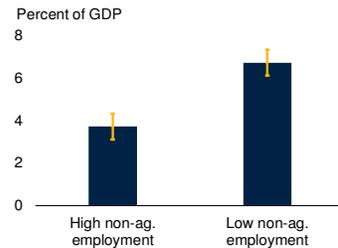
FIGURE SL2.3 Macroeconomic outcomes, by convergence club

Countries in convergence clubs that are associated with slower development paths and structural transformation—characterized by lower exports, smaller non-agricultural sectors, and less investment—have experienced higher remittance inflows.

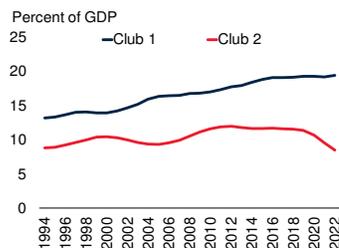
A. Non-agricultural employment



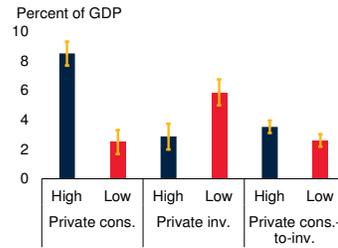
B. Remittances, by convergence club for non-agricultural employment



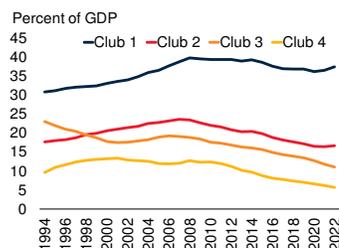
C. Private investment



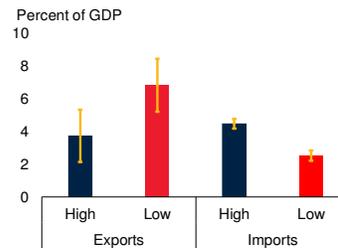
D. Remittances, by convergence club for private consumption, investment or their ratio



E. Exports



F. Remittances, by convergence club for exports and imports



Sources: *Macro Poverty Outlook* (World Bank), World Development Indicators (database), World Bank.

Note: Convergence clubs are groups of countries whose differences in macroeconomic outcomes narrow over time. This analysis is based on the convergence clubs estimated using the methodology of Phillips and Sul (2009). The methodology is detailed in annex SL2.2.

A.C.E Five-year moving averages of cross-country average of macroeconomic outcomes in each convergence club.

B.D.F. Bars show average remittances in percent of GDP for each club during 1990–2022. Whiskers indicate 90 percent confidence intervals. Data is based on annex table SL2.A2A. "High" indicates average for convergence club with highest macroeconomic outcome (non-agricultural employment in percent of working-age population [B]; consumption and investment in percent of GDP, and consumption-to-investment ratio [D]; or exports and imports in percent of GDP [F]). "Low" indicates average for convergence club with lowest macroeconomic outcome.

GDP higher exports than the latter three. In South Asia, Bangladesh, Nepal, and Pakistan were part of a club with declining exports ratios, while Bhutan and India belonged to the club with rising export ratios.

Remittances in convergence clubs. Countries with higher remittances (relative to GDP) have been in convergence clubs characterized by lower private investment, lower non-agricultural employment, and lower exports (figure SL2.3). On average, remittances were about 3 percentage points of GDP higher in convergence clubs with the lowest private investment, the lowest non-agricultural employment, or the lowest exports compared with convergence clubs with the highest levels.

Convergence: Remittances versus other foreign exchange inflows. The long-term development paths of remittance-reliant countries differ considerably from those of EMDEs that rely heavily on other types of foreign exchange inflows (figure SL2.4). Only ODA inflows are associated with the same combination of weak exports, weak private investment, and low non-agricultural employment.

- **Commodity exports.** Commodity-reliant economies tend to be in convergence clubs with high exports and investment. This partly reflects the fact that commodity exports are a constituent part of exports. It may also reflect the heavy construction and maintenance investment that is often needed to extract and export commodities.
- **FDI.** FDI-reliant economies tend to be in convergence clubs with higher exports. This may reflect the fact that FDI is often concentrated in export sectors and aimed at global value chain participation.
- **ODA.** Similar to remittance-based economies, ODA inflows are larger in countries that are members of convergence clubs with smaller non-agricultural employment, less private investment, and weaker exports. However, ODA inflows are also bigger in clubs with higher total investment, which suggests that ODA is often designed to support public investment projects.
- **Portfolio investment.** High portfolio investment inflows are not associated with convergence toward lower investment, exports, or non-agricultural employment, perhaps because portfolio investment itself is often targeted at export sectors and funds investment in non-agricultural sectors. Portfolio investment can also be more volatile than the other types of inflows and may therefore have less impact on long-term convergence.

Remittance surges

Nepal and Pakistan offer examples of the impact of shifts or accelerations in remittances on the structure of recipient economies.

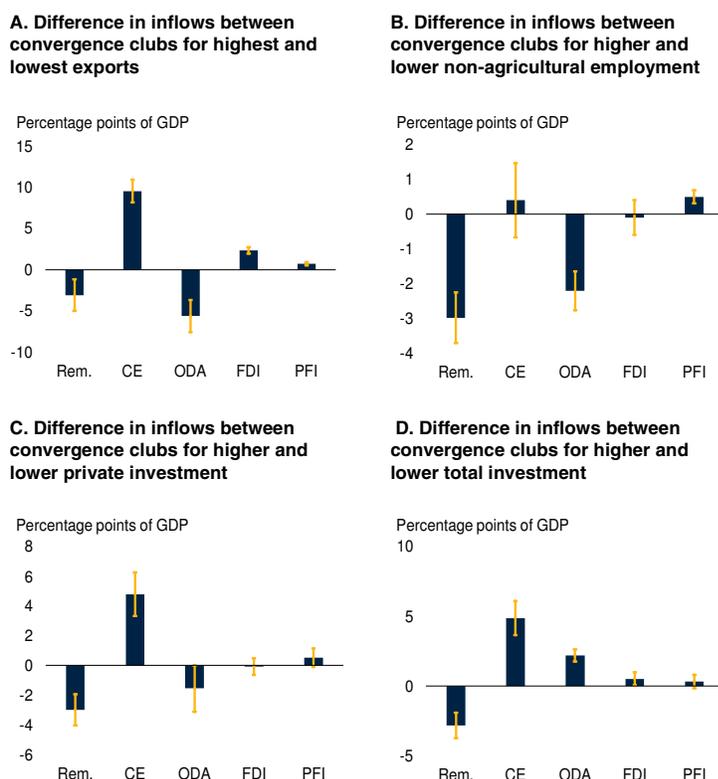
Nepal: Remittances. In 2001, an intensification of conflict and political instability coincided with increasing demand for labor in East Asia, the Middle East, and India, as well as with policies to facilitate labor migration. For example, in the early 2000s, a formal memorandum of understanding was agreed upon between Nepal and Malaysia, and various initiatives were undertaken to channel remittances through formal channels (Pant 2006; World Bank 2005). As a result, remittances inflows accelerated sharply starting in 2002 until 2016—in both years structural breaks are identified by the Bai-Perron test (annex SL2.3, figure SL2.5). Before the acceleration period, remittances were about 1 percent of GDP, whereas since the acceleration they have hovered around 23–27 percent of GDP.

Nepal: Shifts in economic structure. The significant increase in remittances was accompanied by changes in Nepal's economic structure. Macroeconomic outcomes differed statistically significantly between the pre-surge period (1993–2001) and the period after the surge leveled off (2017–23).

- **Exports** fell by 9 percentage points of GDP after the remittance surge and Nepal lapsed into the convergence club with the lowest export ratios around the time the surge started (annex table SL2.A7A). Meanwhile, imports increased by 12 percentage points, and current account deficits widened.
- **Consumption** increased by 2 percentage points to 82 percent of GDP—well above the EMDE average. In contrast, investment benefited from new hydropower projects, supported by financing from international institutions and FDI. These factors propelled Nepal into the convergence club with the highest total investment-to-GDP ratios.
- **Non-agricultural employment** increased by 10 percentage points of the working-age population, but from an exceptionally low starting point. By 2022, non-agricultural sectors still accounted for only 30 percent of the

FIGURE SL2.4 Foreign exchange inflows, by convergence club

Only official development assistance—not foreign direct investment or commodity exports—is associated with the weakness in private investment, exports, and non-agricultural employment that accompanies large remittance inflows.



Sources: International Financial Statistics (IMF), *Macro Poverty Outlook* (World Bank), World Development Indicators (database), World Bank.

Note: CE = commodity exports; FDI = foreign direct investment; ODA = official development assistance; PFI = portfolio investment; Rem. = remittances. Whiskers indicate 95 percent confidence intervals. Charts show the average difference in remittances, FDI inflows, portfolio investment inflows, ODA inflows, and commodity exports (all in percentage points of GDP) between the convergence clubs with the highest and lowest exports in percent of GDP (A), the highest and lowest non-agricultural employment in percent of working-age population (B), highest and lowest private investment in percent of GDP (C), or highest and lowest total investment in percent of GDP (D).

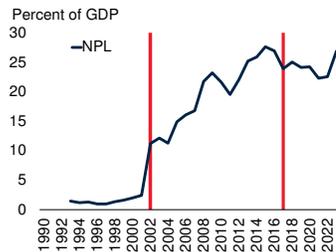
working-age population, well below the 44 percent average in other EMDEs, and were converging toward significantly below-average long-run levels (World Bank 2024b).

Pakistan: Remittances. As oil prices began to rise steeply in 2002, migration to the Gulf Cooperation Council countries soared, drawing in many South Asians, including Pakistanis. At the same time, remittances into Pakistan, which had declined for a decade, also began to surge and this surge appears to be ongoing. During 2002–23, remittances have averaged 5.5 percent of GDP per year, compared with 3.1 percent of GDP per year during 1987–2001.

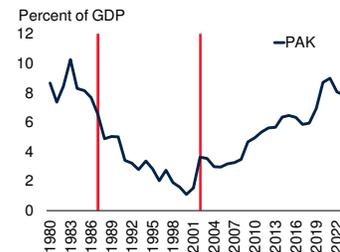
FIGURE SL2.5 Remittance surges in Nepal and Pakistan

Nepal's remittances surged between 2002 and 2016 and Pakistan's remittances began to grow sharply in 2002. Both surges were accompanied by slowing exports and, in Pakistan, by slowing private investment and below-average non-agricultural employment ratios.

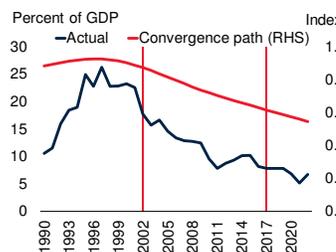
A. Remittances: Nepal



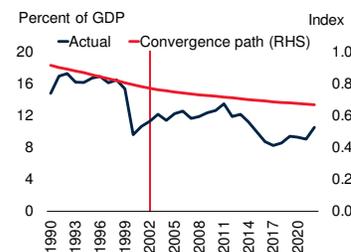
B. Remittances: Pakistan



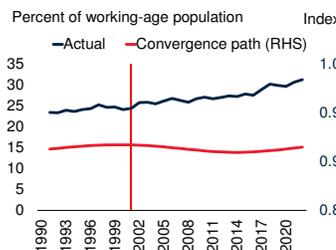
C. Exports: Nepal



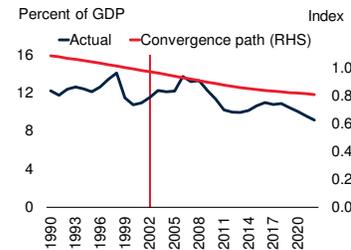
D. Exports: Pakistan



E. Non-agricultural employment: Pakistan



F. Private investment: Pakistan



Sources: *Macro Poverty Outlook* (World Bank), World Development Indicators (database), World Bank.

Notes: NPL = Nepal; PAK = Pakistan.

A.B. Charts show the remittances-to-GDP ratio. The vertical line shows the year(s) of the structural break. The structural break year is estimated using the Bai-Perron test, which identifies a break in the data in a linear regression of remittances on a constant term and a time trend, without a predetermined break date. Coefficients of constant term and time trend are allowed to vary across breaks.

C.D. Blue line shows Nepal's (C) or Pakistan's (D) exports-to-GDP ratio. Red line shows convergence path for exports-to-GDP ratios (that is, the relative transition paths, as explained in annex SL2.2, rescaled by the EMDE average exports-to-GDP ratio).

E. Blue line shows Pakistan's non-agricultural employment in percent of the working-age population. Red line shows convergence path for Pakistan's non-agricultural employment ratio (that is, the relative transition paths, as explained in annex SL2.2, rescaled by the EMDE average).

F. Blue line shows Pakistan's private investment-to-GDP ratio. Red line shows convergence path for Pakistan's private investment-to-GDP ratio (that is, the relative transition paths, as explained in annex SL2.2, rescaled by the EMDE average private investment-to-GDP ratio).

Pakistan: Shifts in economic structure. In Pakistan, as in Nepal, the surge in remittances after 2002 (as well as growing fiscal and financial sector challenges) coincided with a period of pronounced weakness in private investment, exports, and non-agricultural employment ratios. Macroeconomic outcomes differed statistically significantly between the pre-surge period (1987–2001) and the surge period (2002–23).

- *Exports* fell by 4 percentage points of GDP once the remittance surge got underway. Throughout the sample period, Pakistan has been in the convergence club with the lowest export ratios (annex table SL2.A7B).
- *Private investment* declined by 1 percentage point of GDP while private consumption strengthened by 7 percentage points of GDP. Consequently, around the time of the surge in remittances, Pakistan dropped into a convergence club that was associated with lower private investment.
- *Non-agricultural employment* increased by 8 percentage points of the working-age population during 1990–2022, broadly in line with the average EMDE but starting from barely half the initial level in 1990. By 2022, non-agricultural sectors still accounted for only 31 percent of the working-age population, well below the 44 percent average in other EMDEs, and were converging toward significantly below-average long-run levels (World Bank 2024b).

Subnational economic structure. Similar shifts have also sometimes occurred at the subnational level. For example, India's state of Kerala received remittance inflows amounting to around 20 percent of net state domestic product, on average, between 1991 and 2013 (Kannan and Hari 2020). During this period, Kerala's economic growth was driven by construction and services, while private investment and non-agricultural job creation were subdued (Balasubramanyam and Balasubramanyam 2015; Kannan 2023).

Conclusion

An extensive literature has documented that remittances are a critical source of household income in remittance-reliant economies. They help smooth consumption in the event of shocks, support the most vulnerable households, and fund household investment, especially in education and health. Therefore, removing obstacles to remittance inflows should be a policy priority, including by improving access to formal financial channels for such flows and by reducing transaction fees or taxation of remittances. A better remittance infrastructure could further unlock gains from migration (World Bank 2022).

To capitalize on migration, several best practices for major host countries have been identified (World Bank 2023a). In addition to reducing remittance cost and incentivizing remittance flows through the financial system, they include strengthening knowledge spillovers from the diaspora through improved business climates, support for returnees, support for migrants with robust consular services, and skill upgrading in areas that benefit both domestic markets and destination countries. A large diaspora may also be a source of stable bank deposits or stable government financing, although, thus far, the amount of financing raised in EMDEs through diaspora bonds is low (World Bank 2023b).

At the same time, policies are also needed to mitigate the adverse side effects of large remittance inflows: weak private investment, exports, and non-agricultural sectors. These macroeconomic side effects themselves may have distributional consequences. For example, the number of people affected by adverse side effects may outweigh the number of direct beneficiaries of remittances, and those household that are adversely affected by the side effects may be less affluent than those that directly receive remittances.

Some of the macroeconomic side effects of remittances discussed in this spotlight have also been observed in countries that rely heavily on commodity exports or inflows of ODA or FDI or portfolio investment. For these countries, the macroeconomic management of such exports or inflows has been extensively discussed in the literature. Best practice for managing large commodity export inflows includes establishing sovereign wealth funds (Das, Mazarei, and Hoorn 2010; James et al. 2022), while best practice for managing large, volatile portfolio inflows involves introduce macroprudential regulation (IMF 2022).

Although the policy challenges created by large remittances have some parallels to those created by large inflows of capital or commodity export receipts, no such best practices have been established.² In part, this may reflect the nature of remittances. Because recipients are often informal and dispersed across households, remittances are less

readily taxed or regulated than export revenues generated by one or a few large companies or portfolio flows channeled through a regulated financial system.

Nevertheless, governments can mitigate the adverse side effects of large remittance inflows with policies that will enhance the economy's competitiveness and improve prospects for firm productivity and employment growth.

- ***Sterilize inflows.*** Where monetary policy is unencumbered by exchange rate pegs, central banks can consider sterilizing remittance inflows to accumulate foreign reserves and lean against the accompanying real exchange rate appreciation. This policy response is likely to be more effective in the case of temporary remittance surges than in the case of permanently large inflows. Over the longer term, it has been shown to hinder financial development (Oliva and Khinashvili 2024).
- ***Deepen financial systems.*** Measures to channel remittances through formal channels—such as reducing fees and taxes, financial and entrepreneurship training, and savings incentives—can enhance the short-term benefits of remittance flows while also helping to deepen the financial system and widen access. In turn, deeper financial systems may improve the allocation of large foreign exchange inflows, including remittances, into productive private investment. Such measures are likely to be most effective when combined with a strengthened institutional environment.
- ***Lower trade and payroll taxes.*** Lowering trade taxes could encourage productivity gains associated with exports and more productive intermediate imports (Goldberg et al. 2010; Halpern, Koren, and Szeidl 2015; Topalova and Khandelwal 2011). This is especially important in South Asia, where economies are among the least open to global trade and governments raise an above-average share of revenues from trade taxes. In addition, the negative association between heavy remittances inflows and non-agricultural employment in part reflects disincentives to labor force participation. Higher remittances raise reservation wages and, hence, discourage employment, especially in the non-farm sector. A revenue-neutral shift in taxation

² Some studies have found that flexible exchange rate regimes are associated with a weaker non-tradable bias of remittances (Lartey 2016; Lartey, Mandelman, and Acosta 2012).

away from trade and payroll taxes could help counteract these pressures (Bussolo and Medvedev 2008). That said, such changes in tax structure need to be embedded in broader fiscal policy to ensure that the most vulnerable groups are protected from the effects of higher consumption taxes.

- **Improve the business climate.** To offset some of the loss of competitiveness from real exchange rate appreciation and lower labor force participation, governments can take measures to cut other costs faced by firms and encourage productivity improvements (World Bank 2024b). These include, in particular, reducing the cost of regulatory compliance by streamlining regulations, digitizing compliance, and controlling corruption. They also include lowering the cost of accessing markets and inputs but providing reliable infrastructure and expanding access to finance, skilled labor, and other inputs. And they include measures to foster competition by accelerating dispute resolution and leveling the playing field with large state-owned enterprises or incumbents. Some findings in the literature suggest that, by facilitating entrepreneurial activity, improvements in the business climate can also entice households to invest a greater fraction of their remittance in business ventures or human capital improvements.
- **Strengthen resilience to loss of remittances.** In countries where remittances are a critical source of household income, sudden losses of remittances could trigger economic downturns. Political changes, natural disasters, or economic downturns abroad could be sources of shocks to remittance flows. Social security systems can be put in place to protect the most vulnerable households in the event of remittance losses.

Annex SL2.1 Literature review: Economic impact of remittances

A vast literature has examined the economic impacts of remittances, using both microeconomic and macroeconomic data. This annex summarizes the main themes.

Microeconomic studies

A literature review of microeconomic studies through 2009 documented that remittances raise household income, improve household health, and reduce household labor supply (Adams 2011). Effects on education and investment were mixed. Since then, studies based on micro data have increasingly found significant effects of remittances on education and on housing investment but mixed effects on other types of household investment. The World Bank's World Development Report on migration also notes that remittances reduce poverty, raise consumption and foster entrepreneurship (World Bank 2023a).

Consumption. If remittance inflows are considered permanent, they would be expected to be spent more on consumption than on investment. Indeed, remittances were associated with greater non-housing consumption in China (Zhu et al. 2014), greater luxury consumption in Jamaica (Stephenson and Wilsker 2016), and greater household consumption in Bangladesh (Lee et al. 2021) and Nepal (Mishra, Kondratjeva, and Shively 2022).

Investment in human capital. A meta-regression analysis of estimates from 73 studies showed that remittances raise school enrolment (Askarov and Doucouliagos 2020). Remittances increase household spending on education in Ghana (Adams and Cueduecha 2013; Gyimah-Brempong and Asiedu 2015), El Salvador (Ambler, Aycinena, and Yang 2015); Nepal (Acharya and Leon-Gonzalez 2014; Mishra, Kondratjeva, and Shively 2022; Raut and Tanaka 2018), the Philippines (Quisumbing and McNiven 2010; Yang 2008), Bangladesh (Ahmed, Dzator, and Zhang 2021), Colombia (Medina and Cardona 2010) and Kenya (Hines and Simpson 2019). Remittances also raise household spending on health in Peru (Berloffia and Giunti 2019), Bangladesh (Ahmed, Dzator, and Zhang 2021), Jamaica (Beuermann, Ruprah, and Sierra 2016), but not in Cambodia (Treleven 2019). Similar to health expenditure, most studies find a positive impact of remittances on health outcomes (Beuermann, Ruprah, and Sierra 2016). Remittances also improved school attendance in El Salvador (Acosta 2011). Finally, remittances to recipient households may generate

spillovers to other households by stimulating job creation and raising the rate of return to education and, hence, encouraging investment in human capital (Kugler and Lotti 2007).

Housing investment. Remittances lead to higher household housing investment in Peru (Berloff and Giunti 2019), Nigeria (Osili 2004), the Philippines (Quisumbing and McNiven 2010), Jamaica (Stephenson and Wilsker 2016), and Fiji (Kakhkharov et al. 2022). They raise household spending on housing and improve the affordability of housing, but not its quality, in Sri Lanka (Jayaweera and Verma 2023).

Other investment. Remittances increase investment in irrigation infrastructure in Moldova (Pilarova, Kandakov, and Bavorova 2022) and Pakistan (Adams 1998), in automobiles and machinery in Mexico (Woodruff and Zenteno 2007), in farming or business in Kenya (Jena 2018), in urban business development in Moldova (Manic 2017), in households in Mexico (Zarate-Hoyos 2004), and in consumer durables in the Philippines (Quisumbing and McNiven 2010) and Albania (Castaldo and Reilly 2007). In contrast, in the Dominican Republic, households with remittance incomes are not more likely to own a business (Amuedo-Dorantes and Pozo 2004) and, in Pakistan, households that received remittances have lower farm output (Mughal et al. 2023).

Labor supply. Remittances are reported to lower labor force participation in Haiti, Mexico, and Tajikistan (Bansak and Chezum 2009; Jadotte and Ramos 2016; Vadean, Randazzo, and Piracha 2019), but not in Mexico (Alcaraz, Chiquiar, and Salcedo 2012) and El Salvador (Acosta 2020). Remittances reduce child wage labor in El Salvador (Acosta 2011); conversely, a loss of remittances increases child labor in Mexico (Alcaraz, Chiquiar, and Salcedo 2012).

Macroeconomic studies

Many macroeconomic studies have documented that remittances help smooth consumption during shocks and support foreign exchange reserves during economic downturns (World Bank 2023a). They are also often associated with reduced competitiveness (reflected in higher imports and

lower exports), higher consumption, and higher investment, while the impacts on aggregate GDP are modest at best.

Output. A large body of literature has examined the relationship between remittances and output growth. A recent meta-analysis shows that the effect of remittances on growth is positive but economically small (Cazachevici, Havranek, and Horvath 2020). Some studies have found that this effect is more pronounced in less financially developed countries (Giuliano and Ruiz-Arranz 2012; Sobiech 2019), where remittances can be a substitute for lending from financial institutions.

Consumption. The macroeconomic literature has focused on the consumption smoothing properties of remittances (Balli and Balli 2011; Combes and Ebeke 2011; Kimberly, Serhan, and Reza 2018; Mondal and Khanam 2018; Shapiro and Mandelman 2016). Very few studies examine the link between remittance inflows and consumption levels. A few studies find that higher remittances are associated with higher consumption in large cross-country samples (Qamruzzaman and Jianguo 2020) or in Latin America and the Caribbean (Ramcharan 2020) whereas a study of three South Asian countries finds no significant effect (Lim and Basnet 2017).

Investment. Remittance inflows have been correlated with higher aggregate investment-to-GDP ratios in large cross-country samples (Dash 2023; Gheeraert, Mata, and Traca 2010; Giuliano and Ruiz-Arranz 2009); in Sub-Saharan Africa (Balde 2011; Issifu 2018; Lartey 2013); and in South Asia (Dash 2020). In many cases, the effect on investment-to-GDP ratios is stronger in countries with more developed financial systems (Dash 2023; Gheeraert, Mata, and Traca 2010; Lartey 2013) or better institutions (Issifu 2018; Su et al. 2021). Deeper financial systems and better institutions may improve the allocation of capital into productive investment in these countries. There have been some exceptions where remittances were associated with weaker private investment and higher household consumption, such as in India (Mallick 2012), East Asian countries (Tung 2018), and in the seven largest emerging markets (Su et al. 2021). Piras (2023)

reports that the impact of remittances on the creation of new firms is inversely mediated by economic complexity. As economic complexity is positively correlated with economic development, remittances are more likely to facilitate the establishment of new firms in less developed economies rather than in more advanced ones.

Housing investment. Remittances have increased household housing investment in Ghana (Adams and Cueduecha 2013) and Jordan (Hamouri 2020).

Trade. Remittances have been associated with larger imports in Nigeria (Olubiyi 2014), Nepal (Bhatta 2013), and countries in the Middle East and North Africa (Farzanegan and Hassan 2020). In South Asia and in Moldova, remittances were also associated with lower exports (Ito 2017; Jena and Sethi 2019). Remittances also appear to be associated with greater export complexity and value added (Saadi 2020).

Manufacturing or activity in other tradable sectors. Manufacturing of goods tends to be more capital intensive than non-manufacturing activities such as services (Chen 2020). Hence, manufacturing should benefit from large capital inflows, including remittances, provided they fund investment. Some studies have shown weaker manufacturing activity in countries with higher remittances, such as in African countries (Efobi et al. 2019), although this effect may reflect lack of financial development (Lartey and Nigatu 2021), and Bangladesh (Taguchi and Shammi 2018). However, this was not the case in more diverse samples of EMDEs (Daway-Ducanes 2019; Dzansi 2013). Several studies have shown that tradables activity falls relative to non-tradables activity (Acosta, Lartey, and Mandelman 2009; Lartey, Mandelman, and Acosta 2012).

Non-tradable sector activity. A modeling exercise shows the channels through which remittances can tilt consumption toward non-tradables (Acosta, Lartey, and Mandelman 2009).

Labor supply. Several macroeconomic modelling exercises show that the channels through which remittances reduce labor supply include higher reservation wages and increased leisure (Acosta,

Lartey, and Mandelman 2009; Bussolo and Medvedev 2008; Lim, Morshed, and Turnovsky 2023; Shapiro and Mandelman 2016).

Financial development. Remittances have been associated with increased financial development in cross-country studies (Azizi 2020; Efobi et al. 2019; Gheeraert, Mata, and Traca 2010; Ojapinwa and Nwokoma 2018), including in South Asia (Shahzad et al. 2014) and especially over the long run (Fromentin 2017). However, Doucouliagos, de Haan and Sturm (2022) conclude in their meta-regression analysis that the literature has not yet robustly established that remittances matter for financial development.

Prices

The literature has documented real appreciation and higher house prices associated with remittances, with limited research on real wages and none on relative real investment deflators.

Real exchange rate. Real exchange rate appreciations caused by remittances have been shown in Latin America and the Caribbean (Amuedo-Dorantes and Pozo 2004; Vargas-Silva 2009); in Asia (Hien et al. 2020); in Sub-Saharan Africa (Owusu-Sekyere, van Eyden, and Kemegue 2014); in large cross-country samples (Azizi 2021; Polat and Andres 2019; Zhang et al. 2021); in countries that are large sources of migrants (Ratha and Moghaddam 2020); and in individual countries (Al-Assaf and Al-Tarawneh 2016; Eltalla 2019; Ito 2017).³ For South Asia, too, cross-country studies (mainly covering Bangladesh, India, Nepal, Pakistan, and Sri Lanka) have found that remittances lead to real exchange rate appreciation (Basnet, Donou-Adonsou, and Upadhyaya 2019; Roy and Dixon 2016; Uddin and Murshed 2017). Similar results have been found in individual-country studies for Bangladesh (Basu and Datta 2007; Chowdhury and Rabbi 2014), India (Dutta and Sengupta 2018), Nepal (Essayad, Palamuleni,

³ In contrast, a widely cited study by Rajan and Subramanian (2005), based on data from the 1980s and 1990s, does not find evidence of real exchange rate appreciation due to remittance inflows. The result might differ from more recent papers because remittances have increased significantly since 2000.

and Satyal 2018), Pakistan (Ahmed 2009; Makhoul and Mughal 2013), and Sri Lanka (White and Wignaraja 1992). The real appreciation caused by remittances appears to be particularly large in fixed exchange rate regimes (Lartey, Mandelman, and Acosta 2012).

House and other non-tradable consumer prices. Remittances have raised house prices in Bangladesh (Mottaleb, Sene, and Mishra 2016), Ghana (Jack, Okyere, and Amoah 2019), Kenya (Chege, Gholipour, and Yam 2023), and Mexico (Nath and Vargas-Silva 2012).

Real wages. A modeling exercise for Jamaica show how remittances can drive up real wages by raising reservation wages (Bussolo and Medvedev 2008).

Annex SL2.2 Methodology: Convergence clubs

A two-step procedure is conducted to create convergence clubs and to estimate differences in foreign exchange inflows between them. In the first step, the Phillips and Sul (2007; 2009) approach is used to identify convergence clubs for several macroeconomic aggregates. In a second step, each convergence club is tested for significant differences in inflows of remittances, FDI, portfolio, and ODA flows, as well as resource exports.

Step 1: Identifying convergence clubs

A commonly used methodology to identify convergence clubs among countries with similar characteristics was developed by Phillips and Sul (2007, 2009). In the initial stages, countries within the same convergence club will exhibit different distances from the common “attraction point”—the point to which economies in a club converge. To form a convergence club, the deviations of a group of economies from the common attraction point should diminish over time.

The methodology uses factor decompositions, a log regression test, and sorting algorithms to evaluate all possible combinations of economies for common convergence trends. It starts by decomposing (multiplicatively) the data series of interest into time-varying *common* and components. The time-varying common

component represents the common steady-state path, while the time-varying idiosyncratic component represents each economy’s transition toward the common steady-state path. The idiosyncratic components are rescaled relative to the cross-country average of idiosyncratic components (called the relative transition parameter). For each point in time, the cross-country variance of these rescaled idiosyncratic components is calculated.

Phillips and Sul (2007, 2009) then test for the presence of a convergence club in a log regression of the changes in this cross-country variance over time. A convergence club is present if the coefficient on time indicates a significantly diminishing variance over time (Apergis et al. 2018). An iterative sorting algorithm reconfigures the country groups until there are no countries left that converge toward any club. This means that convergence clubs are groups of countries whose cross-country variance diminishes over time (sigma-convergence; Tomal 2024).

This approach reduces estimation bias from omitted variables, reduces the need for specific assumptions, and allows for heterogeneity across countries and years. As a result, it is robust to structural breaks (Du 2017; Gao et al. 2021; Tomal 2024). Further refinements to the approach of Philip and Sul (2007, 2009) have been proposed for the log time regression and the sorting algorithm, but some have argued that the resulting differences in findings from these refinements are often negligible (Tomal 2024).

The resulting transition paths for each convergence club are shown in figure SL2.3, are relative to the panel average. The procedure is conducted separately for each of the macroeconomic aggregates listed in annex table SL2.A1. FDI and portfolio inflows are gross inflows; commodity exports are defined as the sum of agricultural raw materials exports, food exports, fuel exports, and ores and metals exports.⁴

⁴ Agricultural raw materials comprise SITC section 2 (crude materials except fuels) excluding divisions 22, 27 (crude fertilizers and minerals excluding coal, petroleum, and precious stones), and 28 (metalliferous ores and scrap). Food comprises commodities in SITC sections 0 (food and live animals), 1 (beverages and tobacco), and 4

Step 2: Estimating the role of remittances

In the second step, convergence clubs are ranked by the average macroeconomic outcome at the end of the sample period, such that Club 1 always has higher outcomes than Club 2. In the baseline results, a t-test is conducted to test the differences in average remittances between the clubs with the highest and lowest outcomes for statistical significance.

The following foreign exchange inflows are considered: remittances, FDI, ODA, portfolio investment flows, and resource exports, all expressed in percent of GDP. Annex table SL2.A1 summarizes the differences in foreign exchange-generating inflows between the club with the highest macroeconomic outcome and the club with the lowest macroeconomic outcome. Annex table SL2.A2 documents average foreign exchange inflows by convergence club.

Robustness

Two robustness tests to the identification of convergence clubs are conducted: a sub-sample estimation and an algorithm that is more stringent in its club selection.

Sub-samples. The baseline results—higher remittances being associated with convergence clubs with higher exports, lower private investment, and lower non-agricultural employment ratios—are mostly confirmed in an exercise that compares convergence club membership during the first half of the sample period (1990–2005) and during the second half of the sample period (2006–2022). Several countries that were not in the highest convergence club during 1990–2005 moved to the highest club in the full sample. Annex table SL2.A3 compares the remittances-to-GDP ratio for the full sample between countries moving to the highest convergence club and those that did not move to the highest club. The result shows that countries that moved to the highest convergence club by

exports-to-GDP received fewer remittances than those that remained in their lower-export club. Countries that moved to the highest convergence club by private investment-to-GDP ratios had significantly lower remittances than those that remained in their clubs. For non-agricultural employment ratios, however, the results are not statistically significant. This may reflect the slow-moving nature of non-agricultural employment ratios: over the short, 15-year period of the subsample, there is insufficient variation to distinguish between convergence clubs.

More stringent club selection. Schnurbus, Haupt, and Meier (2017) amended the original algorithm of Phillips and Sul (2007, 2009) to merge clubs that are too similar. Despite the more stringent club selection algorithm, the number of clubs remains the same for all variables except aggregate investment in percent of GDP (where only a single club is identified) and the consumption-to-investment ratio (where the number of clubs falls by one). The pattern of remittances across the clubs matches the baseline results: countries with higher remittances (relative to GDP) have been in convergence clubs with lower private investment, lower non-agricultural employment, and lower exports (annex table SL2.A4). The baseline patterns for other types of foreign exchange inflows are also robust to this change (annex table SL2.A5).

Controlling for initial per capita GDP. As a robustness test, for each macroeconomic outcome, a panel random effects regression is estimated, regressing remittances in percent of GDP on dummy variables for convergence club membership, initial real GDP per capita, and year fixed effects (annex table SL2.A6). The coefficient estimates on the dummy variables for each club are tested for statistically significant differences. The sample includes up to 154 EMDEs, 1990–2022. Some of the baseline results, especially for exports, lose their statistical significance but continue to show the same signs.

(animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels). Fuels comprise the commodities in SITC section 3 (mineral fuels, lubricants and related materials). Ores and metals comprise the commodities in SITC sections 27 (crude fertilizer, minerals not elsewhere specified); 28 (metalliferous ores, scrap); and 68 (non-ferrous metals).

Annex SL2.3 Methodology: Structural breaks in remittance inflows

For the case studies of Nepal and Pakistan, structural breaks in remittance-to-GDP ratios are estimated using the Bai-Perron test for a structural break with an unknown break date as identified in a linear regression. The linear regression allows breaks in the coefficient for a constant term to capture level shifts and a time trend to capture

growth accelerations. This yields structural breaks in 2002 and 2017 for Nepal and in 1987 and 2002 for Pakistan. After 2017, Nepal's remittances-to-GDP ratio plateaus, whereas remittances-to-GDP ratios continue to rise rapidly after 2002 in Pakistan. Macroeconomic outcomes are compared for different sample periods. For Nepal, this corresponds to 1993–2001 (pre-acceleration) and 2017–23 (post-acceleration). For Pakistan, this corresponds to 1987–2001 (pre-acceleration) and 2002–23 (acceleration). Annex tables SL2.7A and B show the average macroeconomic outcomes in the two periods.

ANNEX TABLE SL2.A1 Summary of difference in foreign exchange-generating inflows between club with highest macroeconomic outcome and club with lowest outcome

Indicators	Remittances	ODA	Commodity	FDI	Portfolio
Exports (percent of GDP)	Lower	Lower	Higher	Higher	Higher
Imports (percent of GDP)	Higher	Higher	Higher	Higher	Higher
Total consumption (percent of GDP)	Higher	Higher	Lower	Lower	
Total investment (percent of GDP)	Lower	Higher	Higher	Higher	
Total consumption to investment	Higher	Higher	Lower		Higher
Private consumption (percent of GDP)	Higher	Higher	Lower	Lower	Lower
Private investment (percent of GDP)	Lower	Lower	Higher		
Private consumption to investment	Higher	Higher	Lower		Higher
Agricultural employment (percent of working-age population)	Higher	Higher	Lower	Lower	Lower
Non-agricultural employment (percent of working-age population)	Lower	Lower			Higher
Real GDP per capita (log)	Higher	Lower	Higher	Higher	Higher

Source: World Bank.

Note: "Higher" ("Lower") means that the convergence club with the highest macroeconomic outcome has significantly higher (lower) foreign exchange inflows than the convergence club with the lowest macroeconomic outcome, at the 90 percent confidence level. Missing entries indicate statistically insignificant differences.

ANNEX TABLE SL2.A2A Differences in remittances across first and last clubs defined by macroeconomic outcomes

Indicators	First Club	Last Club	Difference	Standard error	P-value
Exports (percent of GDP)	3.7	6.8	-3.1***	1.0	0.0023
Imports (percent of GDP)	4.5	2.5	1.9***	0.2	0.0000
Total consumption (percent of GDP)	4.6	1.6	3.1***	0.2	0.0000
Total investment (percent of GDP)	3.5	6.3	-2.8***	0.5	0.0000
Total consumption to investment	3.9	0.1	3.8***	0.1	0.0000
Private consumption (percent of GDP)	8.5	2.5	6.0***	0.5	0.0000
Private investment (percent of GDP)	2.9	5.9	-3.0***	0.5	0.0000
Private consumption to investment	3.5	2.6	0.9***	0.3	0.0003
Agricultural employment (percent of working-age population)	2.8	1.2	1.6***	0.3	0.0000
Non-agricultural employment (percent of working-age population)	3.7	6.7	-3.0***	0.4	0.0000
Real GDP per capita (log)	3.6	0.6	3.0***	0.2	0.0000

Source: World Bank.

Note: The table shows the differences in average remittance inflows between countries in the first and last convergence club for each indicator. The sample includes up to 154 EMDEs from 1990 to 2022. *** represents significant at the 1 percent significance level; ** represents significant at the 5 percent significance level; * represents significant at the 10 percent significance level. The first club is the convergence club with the strongest outcome for the variable listed in each row, while the last club is the one with the weakest outcome.

ANNEX TABLE SL2.A2B Differences in ODA across first and last clubs defined by macroeconomic outcomes

(Percent of GDP)

Indicators	First Club	Last Club	Difference	Standard error	P-value
Exports (percent of GDP)	4.9	10.5	-5.6***	1.0	0.0000
Imports (percent of GDP)	5.9	3.4	2.5***	0.3	0.0000
Total consumption (percent of GDP)	5.2	2.4	2.7***	0.2	0.0000
Total investment (percent of GDP)	5.1	2.9	2.2***	0.2	0.0000
Total consumption to investment	4.6	0.2	4.4***	0.1	0.0000
Private consumption (percent of GDP)	6.9	4.5	2.4***	0.3	0.0000
Private investment (percent of GDP)	4.6	6.2	-1.5*	0.8	0.0540
Private consumption to investment	5.3	3.9	1.4***	0.4	0.0002
Agricultural employment (percent of working-age population)	10.8	8.5	2.3**	1.1	0.0418
Non-agricultural employment (percent of working-age population)	4.7	7.0	-2.2***	0.3	0.0000
Real GDP per capita (log)	4.2	19.2	-15.0***	1.1	0.0000

Source: World Bank.

Note: The table shows the differences in average ODA between countries in the first and last convergence club for each indicator. The sample includes up to 154 EMDEs from 1990 to 2022. *** represents significant at the 1 percent significance level; ** represents significant at the 5 percent significance level; * represents significant at the 10 percent significance level. The first club is the convergence club with the strongest outcome for the variable listed in each row, while the last club is the one with the weakest outcome.

ANNEX TABLE SL2.A2C Differences in commodity exports across first and last clubs defined by macroeconomic outcomes

(Percent of GDP)

Indicators	First Club	Last Club	Difference	Standard error	P-value
Exports (percent of GDP)	14.8	5.2	9.6***	0.7	0.0000
Imports (percent of GDP)	13.8	12.4	1.3**	0.5	0.0131
Total consumption (percent of GDP)	10.9	17.5	-6.7***	0.6	0.0000
Total investment (percent of GDP)	13.6	8.8	4.9***	0.6	0.0000
Total consumption to investment	12.3	25.8	-13.4***	3.8	0.0008
Private consumption (percent of GDP)	9.4	16.8	-7.5***	0.5	0.0000
Private investment (percent of GDP)	12.1	7.3	4.8***	0.7	0.0000
Private consumption to investment	11.1	14.2	-3.1***	0.8	0.0002
Agricultural employment (percent of working-age population)	11.8	50.0	-38.2***	2.1	0.0000
Non-agricultural employment (percent of working-age population)	15.5	15.1	0.4	0.5	0.4644
Real GDP per capita (log)	15.8	4.5	11.3***	0.5	0.0000

Source: World Bank.

Note: The table shows the differences in average commodity exports between countries in the first and last convergence club for each indicator. The sample includes up to 154 EMDEs from 1990 to 2022. *** represents significant at the 1 percent significance level; ** represents significant at the 5 percent significance level; * represents significant at the 10 percent significance level. The first club is the convergence club with the strongest outcome for the variable listed in each row, while the last club is the one with the weakest outcome.

ANNEX TABLE SL2.A2D Differences in FDI across first and last clubs defined by macroeconomic outcomes

(Percent of GDP)

Indicators	First Club	Last Club	Difference	Standard error	P-value
Exports (percent of GDP)	3.6	1.2	2.4***	0.2	0.0000
Imports (percent of GDP)	3.5	2.0	1.5***	0.1	0.0000
Total consumption (percent of GDP)	2.9	3.5	-0.6***	0.2	0.0098
Total investment (percent of GDP)	3.2	2.6	0.5**	0.2	0.0295
Total consumption to investment	3.2	3.6	-0.4	0.4	0.3904
Private consumption (percent of GDP)	2.7	3.4	-0.7***	0.2	0.0000
Private investment (percent of GDP)	2.8	2.9	-0.1	0.3	0.7917
Private consumption to investment	2.8	2.7	0.2	0.3	0.5662
Agricultural employment (percent of working-age population)	3.3	5.0	-1.7***	0.6	0.0061
Non-agricultural employment (percent of working-age population)	3.8	3.9	-0.1	0.3	0.6854
Real GDP per capita (log)	4.5	0.7	3.8***	0.2	0.0000

Source: World Bank.

Note: The table shows the differences in average FDI between countries in the first and last convergence club for each indicator. The sample includes up to 154 EMDEs from 1990 to 2022. *** represents significant at the 1 percent significance level; ** represents significant at the 5 percent significance level; * represents significant at the 10 percent significance level. The first club is the convergence club with the strongest outcome for the variable listed in each row, while the last club is the one with the weakest outcome.

ANNEX TABLE SL2.A2E Differences in portfolio investment inflows across first and last clubs defined by macroeconomic outcomes

(Percent of GDP)

Indicators	First Club	Last Club	Difference	Standard error	P-value
Exports (percent of GDP)	0.8	0.0	0.7***	0.1	0.0000
Imports (percent of GDP)	0.8	0.5	0.3**	0.1	0.0130
Total consumption (percent of GDP)	0.8	0.6	0.2	0.1	0.2156
Total investment (percent of GDP)	0.7	0.4	0.3	0.2	0.1908
Total consumption to investment	0.7	0.4	0.3**	0.1	0.0273
Private consumption (percent of GDP)	0.5	0.9	-0.4***	0.1	0.0021
Private investment (percent of GDP)	1.1	0.5	0.5	0.3	0.1004
Private consumption to investment	1.1	0.4	0.8**	0.3	0.0236
Agricultural employment (percent of working-age population)	0.3	2.8	-2.6***	0.7	0.0004
Non-agricultural employment (percent of working-age population)	0.9	0.4	0.5***	0.1	0.0000
Real GDP per capita (log)	1.0	0.1	0.9***	0.1	0.0000

Source: World Bank.

Note: The table shows the differences between average portfolio inflows between countries in the first and last convergence club of each indicator. The sample includes up to 154 EMDEs, 1990-2022. *** represents significant at the 1 percent significance level; ** represents significant at the 5 percent significance level; * represents significant at the 10 percent significance level. First club is the convergence club with the strongest outcome for the variable listed in each row, last club is the one with weakest outcome.

ANNEX TABLE SL2.A3 Robustness test: Differences in average remittances-to-GDP ratio of countries moving convergence clubs between 1990–2005 and 2006–22

(Percent of GDP)

Indicators	Not moving to top club	Moving to top club	Difference	Standard error	P-value
Exports (% of GDP)	5.6	4.6	-0.9**	0.4	0.0170
Imports (% of GDP)	4.6	2.9	-1.7***	0.4	0.0000
Total consumption (percent of GDP)	2.8	6.2	3.4***	0.2	0.0000
Total investment (percent of GDP)	4.6	6.0	1.5***	0.3	0.0000
Total consumption to investment	5.1	5.7	0.6	0.4	0.1046
Private consumption (percent of GDP)	2.8	4.1	1.2***	0.3	0.0002
Private investment (percent of GDP)	5.9	3.8	-2.1***	0.3	0.0000
Private consumption to investment	4.4	7.1	2.7***	0.6	0.0000
Agricultural employment (percent of working-age population)	5.4	4.3	-1.1***	0.4	0.0089
Non-agricultural employment (percent of working-age population)	5.9	6.1	0.2	0.4	0.5603

Source: World Bank.

Note: This table compares the remittances-to-GDP ratio in 2005-2022 period between countries that move to the top convergence club in the second half of the sample period (1990-2022) relative to the first half of the sample period. Countries that remain in the first club in both sample period are excluded. The convergence club is identified using the Phillips and Sul (2009) methodology. Sample includes 154 EMDEs, from 1990 to 2022.

ANNEX TABLE SL2.A4 Robustness test: Differences in remittances across first and last clubs defined by macroeconomic outcomes (alternative identification of clubs)

(Percent of GDP)

Indicators	First Club	Last Club	Difference	Standard error	P-value
Exports (percent of GDP)	3.7	6.8	-3.1***	1.0	0.0023
Imports (percent of GDP)	4.5	2.2	2.3***	0.2	0.0000
Total consumption (percent of GDP)	4.6	1.6	3.1***	0.2	0.0000
Total consumption to investment	4.3	0.1	4.2***	0.1	0.0000
Private consumption (percent of GDP)	8.5	2.5	6.0***	0.5	0.0000
Private investment (percent of GDP)	2.9	5.9	-3.0***	0.5	0.0000
Private consumption to investment	3.4	1.1	2.4***	0.2	0.0000
Agricultural employment (percent of working-age population)	2.8	1.2	1.6***	0.3	0.0000
Non-agricultural employment (percent of working-age population)	3.7	6.7	-3.0***	0.4	0.0000
Real GDP per capita (log)	3.6	0.6	3.0***	0.2	0.0000

Source: World Bank.

Note: The table shows the differences between average remittance inflows between countries in the first and last convergence club for each indicator. The sample includes up to 154 EMDEs from 1990 to 2022. *** represents significant at the 1 percent significance level; ** represents significant at the 5 percent significance level; * represents significant at the 10 percent significance level. The result for total investment is not shown because it converges to one club only. The convergence club is based on the Philips and Sul (2009) approach using the modification suggested by Schnurbus, Haupt, and Meier (2017). The first club is the convergence club with the strongest outcome for the variable listed in each row, while the last club is the one with the weakest outcome.

ANNEX TABLE SL2.A5 Robustness test: Summary of difference in foreign exchange-generating inflows between club with highest macroeconomic outcome and club with lowest outcome (alternative identification of clubs)

Indicators	Remittances	ODA	Commodity	FDI	Portfolio
Exports (percent of GDP)	Lower	Lower	Higher	Higher	Higher
Imports (percent of GDP)	Higher	Higher	Higher	Higher	Higher
Total consumption (percent of GDP)	Higher	Higher	Lower	Lower	
Total consumption to investment	Higher	Higher	Lower		Higher
Private consumption (percent of GDP)	Higher	Higher	Lower	Lower	Lower
Private investment (percent of GDP)	Lower	Lower	Higher		
Private consumption to investment	Higher	Higher	Lower	Lower	
Agricultural employment (percent of working-age population)	Higher	Higher	Lower	Lower	Lower
Non-agricultural employment (percent of working-age population)	Lower	Lower			Higher
Real GDP per capita (log)	Higher	Lower	Higher	Higher	Higher

Source: World Bank.

Note: "Higher" ("Lower") means that the convergence club with the highest macroeconomic outcome has significantly higher (lower) foreign exchange inflows than the convergence club with the lowest macroeconomic outcome, at the 90 percent confidence level. Missing entries indicate statistically insignificant differences. The result for total investment is not shown because it converges to only one club. The convergence club is based on the Philips and Sul (2009) approach using the modification suggested by Schnurbus, Haupt, and Meier (2017). The underlying estimates are available from the authors upon request.

ANNEX TABLE SL2.A6 Robustness test: Summary of difference in foreign exchange-generating inflows between club with highest macroeconomic outcome and club with lowest outcome (controlling for per capita GDP)

Indicators	Remittances	ODA	Commodity	FDI	Portfolio
Exports (percent of GDP)			Higher	Higher	Higher
Imports (percent of GDP)	Higher	Higher		Higher	
Total consumption (percent of GDP)	Higher	Higher	Lower		
Total investment (percent of GDP)		Higher	Higher		
Total consumption to investment					
Private consumption (percent of GDP)	Higher	Higher	Lower	Lower	Lower
Private investment (percent of GDP)					
Private consumption to investment					Higher
Agricultural employment (percent of working-age population)			Lower	Lower	
Non-agricultural employment (percent of working-age population)	Lower	Lower			Higher
Real GDP per capita (log)	Higher	Lower	Higher	Higher	Higher

Source: World Bank.

Note: "Higher" ("Lower") means that the convergence club with the highest macroeconomic outcome has significantly higher (lower) foreign exchange inflows than the convergence club with the lowest macroeconomic outcome, at the 90 percent confidence level. Missing entries indicate statistically insignificant differences. The comparisons are based on the test for statistically significant differences between the coefficient estimates on dummy variables for each convergence club, from a random effects panel regression of remittances in percent of GDP on dummies for each club, year fixed effects, and initial per capita GDP. The underlying estimates are available from the authors upon request.

ANNEX TABLE SL2.A7A Nepal: Comparison of structural indicators between pre-acceleration (1993–2001) and post-acceleration (2017–23) period

Indicators	Mean (Pre-accel.)	Mean (Post-accel.)	T-statistics	P-value
Exports (percent of GDP)	16.2	7.0	4.1	0.0003
Imports (percent of GDP)	26.0	38.3	-4.8	0.0000
Total consumption (percent of GDP)	79.6	82.0	-1.8	0.0781
Total investment (percent of GDP)	19.3	30.1	-11.3	0.0000
Total consumption to investment	4.2	2.8	6.3	0.0000
Agricultural employment (percent of working-age population)	63.6	45.9	14.5	0.0000
Non-agricultural employment (percent of working-age population)	20.2	30.0	-12.6	0.0000

Source: World Bank.

Note: The table shows the mean of structural indicators before and after the acceleration. The null hypothesis is that the difference between the periods before and after the acceleration is zero. Data for private investment are only available from 2011 and therefore excluded from this table.

ANNEX TABLE SL2.A7B Pakistan: Comparison of structural indicators between pre-acceleration (1987–2001) and acceleration (2002–23) periods

Indicators	Mean (Pre-accel.)	Mean (Acc.)	T-statistics	P-value
Exports (percent of GDP)	15.0	11.0	6.4	0.0000
Imports (percent of GDP)	18.7	18.1	0.7	0.5172
Total consumption (percent of GDP)	72.7	80.8	-9.5	0.0000
Total investment (percent of GDP)	16.7	14.1	5.6	0.0000
Total consumption to investment	4.4	5.8	-7.3	0.0000
Private consumption (percent of GDP)	73.6	80.8	-8.9	0.0000
Private investment (percent of GDP)	12.1	11.0	2.5	0.0178
Private consumption to investment	6.1	7.6	-5.2	0.0000
Agricultural employment (percent of working-age population)	20.8	19.5	2.3	0.0288
Non-agricultural employment (percent of working-age population)	24.0	27.6	-7.5	0.0000

Source: World Bank.

Note: The table shows the mean of structural indicators before and during the acceleration. The null hypothesis is that the difference between the period before and during the acceleration is zero.

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CHAPTER 2

EMPOWER TO PROSPER: Women Working for Growth

Chapter 2. Empower to Prosper: Women Working for Growth

Over the past three decades, South Asia has benefited from strong economic growth, accompanied by a shift toward the services sector, growing exports, and stronger legal protections for women. These changes have expanded opportunities for all, including for many women. And yet, women’s employment remains a source of untapped potential. South Asia’s female labor force participation remains among the lowest in the world: only 32 percent of working-age women in the region participate in the labor force, far below the EMDE average of 54 percent. This low participation rate represents a costly misallocation of resources: raising this rate to that of men could boost per capita incomes by up to one-half. A wide range of policies could help women enter the workforce. These include legal reforms to improve gender equality, faster job creation in the non-agricultural sector, and the removal of barriers to women working outside the home. Such measures will be more effective if accompanied by a shift in social norms toward greater acceptance of women’s employment.

Introduction

South Asia has grown briskly over the past three decades. Since 2000, the region has grown, on average, by 5.6 percent per year, and chapter 1 projects that growth will be sustained at more than 6.0 percent during 2025–2026, propelled in part by a rising working-age population (Kose and Ohnsorge 2024).

This rapid growth has been accompanied by major structural changes. Between 1990 and 2023, the share of South Asia’s population living in urban centers increased from 25 percent to 36 percent. The services sector grew from 39 percent of GDP to 50 percent. Average tariffs declined from 53.3 percent to 6.5 percent. Since the 1990s, legal reforms have been introduced that improve gender equality, including inheritance and asset ownership rights, and employment opportunities (World Bank 2024a).

Although South Asia’s projected growth rates are higher than of other EMDEs, they are not sufficient to reach the region’s development goals. For example, most South Asian countries aim to attain high-income status within the next three decades. But even if the growth rates expected for the 2020s can be sustained through the 2030s and 2040s, Bangladesh, India, and Sri Lanka would reach high-income status about a decade later than desired.

South Asia benefits from a relatively youthful population, but to fully reap this “demographic dividend” the region needs to put its people to work. Employment-to-population ratios are low and have been falling for two decades, with job creation failing to keep pace with increases in the working-age population. South Asia employed 55 percent of its working-age population in 2023, compared with 70 percent in other EMDEs.

Much of this jobs shortfall is driven by unusually low employment rates among women, many of whom are absent from the labor force entirely, seeking neither employment nor engaging in education or training (World Bank 2024b). Only 32 percent of working-age women in South Asia were in the labor force in 2023—well below the region’s male labor force participation rate of 77 percent and the EMDE-average female labor force participation rate of 54 percent (figure 2.1). Even in Bhutan, the country with the highest female labor force participation rate, only 64 percent of working-age women were in the labor force.¹

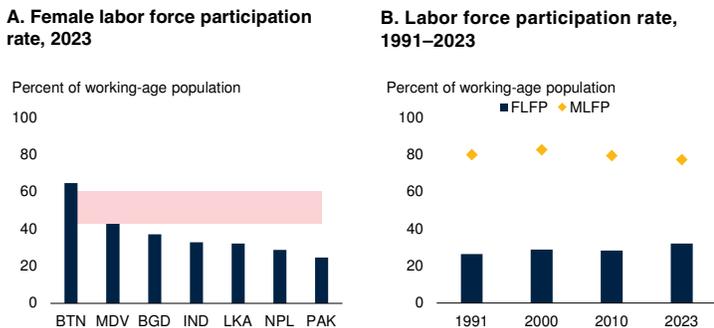
South Asia’s rates of female labor force participation remain low despite faster-than-average progress over the past three decades. Between 1991 and 2023, female labor force participation in South Asia has risen by 6 percentage points of the working-age population to 32 percent, even as it has fallen by 5 percentage

Note: This chapter was prepared by Maurizio Bussolo and Jonah Rexer, with inputs from Maggie Triyana, Jean Nahrae Lee, Lynn Hu, Tillmann Spindeldreier, Issac Yurui Hu, and Andy Jiang.

¹ILO modeled estimates of labor force participation rates are used where appropriate throughout this report to facilitate standardized comparisons across countries and over time. These numbers may differ from national estimates, which often use varying definitions and methodologies. For India, the 2023 ILO modeled

FIGURE 2.1 Female labor force participation

Female labor force participation rates in most South Asian countries remain in the bottom quartile among EMDEs and far below male labor force participation rates.



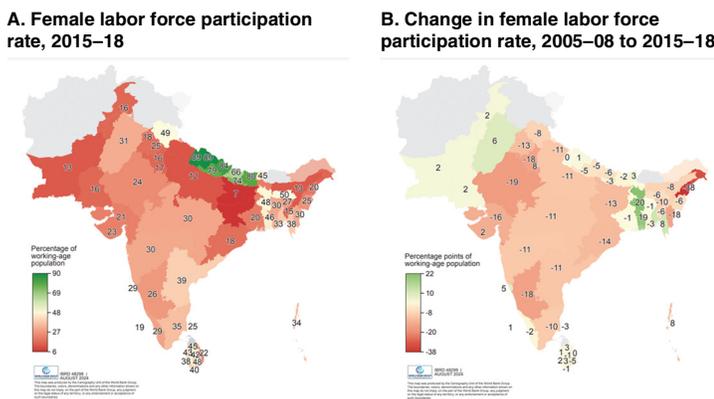
Sources: International Labour Organization (ILO); World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; FLFP = female labor force participation; IND = India; LKA = Sri Lanka; MDV = Maldives; MLFP = male labor force participation; NPL = Nepal; PAK = Pakistan.

A. B. Red shaded region indicates interquartile range of EMDEs excluding South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). EMDE averages are weighted by working-age population. Female (male) labor force participation rate is the share of the female (male) working-age population (15+) employed or looking for work, measured using ILO’s ILOStat modeled data. Even if national data, based on national definitions, were used for South Asia, all countries except Bhutan and Maldives would remain in the bottom quartile among EMDEs. All regional averages are weighted by working-age population. Afghanistan has not published any official statistics since 2020.

FIGURE 2.2 Female labor force participation in subnational units

There were almost no South Asian subnational units that posted sizable gains in female labor force participation between 2005–08 and 2015–18.



Source: World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank.

Note: A. B. Labor force participation is measured as the share of women of working age (15–64) who were actively engaged in the labor force during the seven days preceding the survey. Subnational boundaries are fixed for the first year in which GLD data are available for each country. GLD data are available for Pakistan, India, Nepal, Bangladesh, and Sri Lanka. Surveys used are in annex table 2.1. Subnational labor force participation rates are averaged across all available survey waves for two periods: 2005–08 and 2015–18.

points on average across other EMDEs. However, there has been substantial variation across countries. Bangladesh, Maldives, and Pakistan all posted double-digit gains over this period, albeit from a low base. Gains were more modest in Bhutan, India, and Nepal, while the female labor force participation rate declined in Sri Lanka.

Afghanistan is excluded from most of the analysis in this chapter because of a lack of recent data: no official statistics have been published since 2021. Recent phone-based monitoring surveys conducted by the World Bank suggest that the prolonged economic crisis following the 2021 Taliban takeover has brought about a large increase in female labor force participation, from 14 percent in 2020 to 43 percent in 2023. However, given social norms, economic conditions and legal restrictions, the market has struggled to absorb the female labor market entrants, nearly half of whom remained unemployed in 2023 (World Bank 2023).

Within South Asian countries, female labor force participation has also been consistently low across states, regions, and other first-level subnational units (figure 2.2). Based on the latest available comparable subnational data across five countries (2015–18), no Indian state had a female labor force participation rate above 51 percent. Even in Kerala, which has the highest female literacy rate in India, female labor force participation stood at just 29 percent. In Sri Lanka, the highest province-level rate was 49 percent, while in Bangladesh no division surpassed 38 percent. In Pakistan, female labor force participation rates did not exceed 31 percent in any province. Only in Nepal did female labor force participation approach male levels, although this was primarily due to differences in measurement that treated some forms of women’s household work as participation. Similarly, there were almost no subnational units that posted sizable gains in female labor force participation between 2005–08 and 2015–18. Female participation rates fell in nearly all Indian states and rose only in a handful of provinces in Pakistan and divisions in Bangladesh. However, national trends since 2018 have demonstrated a notable uptick in female labor force participation for India of 7–14 percentage points under official definitions, ILO estimates, and harmonized labor force survey data.

estimate is 32.7 percent, while the national estimate is 37 percent or 31.6 percent, depending on recall period, according to estimates from the Periodic Labour Force Survey provided by the Ministry of Statistics and Programme Implementation. In any case, India remains in the bottom quartile of EMDEs. However, disagreements remain about the most appropriate methodology for measuring female labor force participation.

Ultimately, female labor force participation is the outcome of the interplay between labor supply, demand, and the ease of labor market adjustment (Bhalotra, Clarke, and Walther 2023; Bhalotra and Fernández 2024; Heath et al. 2024). On the supply side, the literature analyzing what affects the ability and willingness of women to join the workforce points to the importance of education, marriage and childrearing behavior, social norms, subsidized childcare, safety on the streets, commuting costs, and the incentives generated by welfare policies (Blundell et al. 2016; Eckstein and Lifshitz 2011; Eckstein and Wolpin 1989; Psacharopoulos and Patrinos 2018). On the demand side, the stylized, cross-country U-shaped relationship between female labor force participation and per capita income suggests that female employment is closely related to the development process (Goldin 1994; World Bank 2022b). That is, changes in the spatial and sectoral patterns of economic activity that often accompany long-run economic growth—such as urbanization, the shift to services, and increasing trade openness—may generate demand for female labor, opening up opportunities for women to join the workforce. Finally, recent evidence suggests that labor market frictions, such as incomplete information about job opportunities or the inability to signal qualifications (for example, through references) also play an important role in limiting female labor force participation (Abel, Burger, and Piraino 2020; Jensen 2012; Lowe and McKelway 2024).

Key questions

This chapter explores the drivers and implications of South Asia's low female labor force participation, and policies to raise female participation, by addressing the following questions:

- What are the economic costs of low female labor force participation?
- What has been the impact of growth and structural change on female labor force participation?
- What has been the impact of supply constraints and labor market frictions on female labor force participation?

- What has been the impact of the legal framework and social norms on female labor force participation?
- What policy interventions might raise female labor force participation?

Contributions

This chapter provides an in-depth analysis of the primary factors identified in the literature as key drivers of female labor force participation. In doing so, it makes several novel contributions.

Compares estimates of output effects. Previous work typically uses accounting (Woetzel et al. 2015), production function (Çelik et al. 2023; Pennings 2022), or semi-structural (Eberhard-Ruiz and Michel-Gutierrez 2022) approaches to estimate the output gains from increasing female labor force participation. This chapter compares these different estimators and identifies the role played by different assumptions about capital flexibility, complementarities in inputs, and the composition of employment. Some key policy recommendations emerge from this comparison.

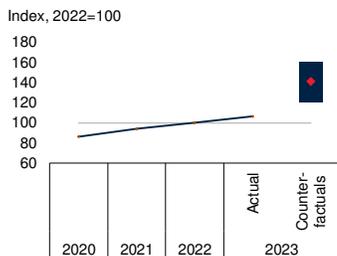
Compares the effects of multiple structural changes. Previous work has tested the effects of individual structural changes on female labor force participation, either in cross-country data or within individual countries (Heath and Mobarak 2015; Hyland, Islam, and Muzi 2020; Petrongolo and Ronchi 2020). This chapter is the first to use subnational microdata to compare the impacts of different structural changes on female labor force participation, both within countries and across South Asia. In particular, this chapter compares the effects of growth in the services sector, urbanization, and trade openness across South Asian labor markets.

Examines the effects on female participation of the interaction between urbanization and social norms. The rural-urban gap in female labor force participation in South Asia has been a topic of substantial investigation (Chatterjee, Murgai, and Rama 2015; Klasen and Pieters 2015). This chapter offers a new explanation: the interaction between social norms and labor market structure. Although urban areas offer high-wage opportunities to educated women, these are

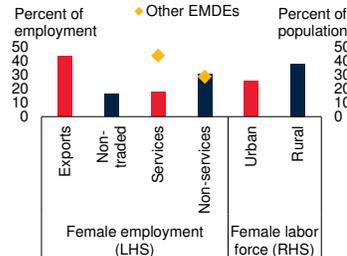
FIGURE 2.3 Female labor force participation and its drivers

Female labor force participation rates in most South Asian countries are in the bottom quartile among EMDEs and far below male labor force participation rates. Were female labor force participation rates with the same as men's, output could be 13–50 percent higher. Demand-side and supply-side factors, social norms, and legal provisions are holding back female labor force participation.

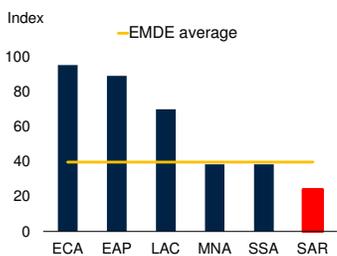
A. South Asia's output: Actual and counterfactual



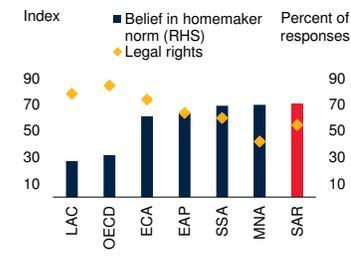
B. South Asia: Female employment shares labor force participation rate



C. Childcare provision



D. Women's legal rights and social norms



Sources: UN Comtrade; World Bank World Development Indicators (database); World Bank Women, Business, and the Law (database); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank-Facebook Survey on Gender Equality at Home (database); World Bank.

Note: EAP = East Asia and the Pacific; ECA = Europe and Central Asia; EMDE = emerging market and developing economy; FLFP = female labor force participation; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; OECD = Organisation for Economic Co-operation and Development; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Blue range shows counterfactual model estimates if South Asia's female employment shares were raised to parity with those for men. Blue line indicates prior GDP data from 2020–2023. Red diamond shows median model estimate. See main text and annex 2.2 for details on the models.

B. The female employment share is the proportion of women in a sector's workforce. Bars show female employment shares in export or non-tradable sectors, services and non-services sectors, or the female labor force participation of urban and rural women in SAR. Diamonds indicate the female share of services and non-services in other EMDEs. Export sectors are the top five sectors based on export share in total trade for that sector-year, (that is, the top-ranked export sector is the net exporting sector s in country c at year t for which $x_{sct}/(x_{sct} + m_{sct})$ is the highest). Non-tradeable sectors are those for which $x_{sct} = m_{sct} = 0$. Labor force participation is the share of women of working aged 15–64 in the labor force within seven days of the survey. Female shares of export and non-tradeable sectors from GLD and UN Comtrade are available only for SAR. The female shares of services and non-services sectors come from ILO, and are the averages of 2021–2023 shares weighted by the female population of 2023. The female labor force participation rates come from GLD and SARLD microdata and only included the most recent available year of data: BGD – 2022, IND – 2022, LKA – 2021, NPL – 2017, PAK – 2020.

C. Bars show the regional average legal score of the provision of childcare services for children below three years of age. The horizontal line shows EMDE average excluding SAR countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). All regional averages are weighted by the working-age population.

D. Diamonds show the share of respondents who agreed with the "female homemaker" norm by region; data is from 2020. Bars show the average legal index score by region. All regional averages are weighted by the working-age population.

insufficient to overcome social norms that pressure women to stay at home. Since urban labor markets are characterized by more formal employment relationships outside the home relative to home-

based self-employment in farming and household businesses, social norms against women's work bind more strongly. Other labor supply constraints, including availability of safe transport and accommodation, as well as quality childcare, may also bind more strongly in urban areas.

Examines the role of social norms and laws. The chapter combines several novel datasets to quantify, for the first time, how female labor force participation varies with the restrictiveness of social norms and the legal framework. However, the gap between the *de jure* legal framework and its *de facto* implementation may be wide. This chapter studies how social norms, institutional quality, and economic development jointly determine the implementation of gender equality laws. The chapter also provides the first estimation of the dampening effects of marriage on female employment in South Asia—a phenomenon closely related to social norms. This extends previous studies that have estimated the child penalties for 134 countries, and the marriage penalty only for a limited set of countries (Kleven et al. 2019; Kleven, Landais, and Leite-Mariante 2023).

Main findings

Output losses. Overall, increasing women's labor force participation rate to the male rate would increase regional GDP by 13–51 percent (figure 2.3, 2.5). The effect would be greatest if additional capital accumulation accompanied the increase in labor supply, and if labor markets were sufficiently flexible to allow women to access higher-productivity jobs without crowding out men.

Barriers to employment. Despite a dramatic narrowing of gender gaps in educational attainment across South Asia, women's ability to supply their labor is constrained by such factors as the lack of safe transport, childcare, and legal protections. South Asia ranks last among EMDE regions on providing a legal framework for adequate childcare, and second-lowest on legal restrictions on women's mobility and overall legal equality for women.

Development and structural change. In all South Asian countries except Bhutan, female labor force participation rates in 2023 were lower—by 5–25 percentage points—than would be expected based

on their level of development. In line with international experience, female participation has tended to be higher in South Asian labor markets with greater export exposure. But in contrast to international experience, shifts toward services activity and urbanization have not been associated with greater female labor force participation. This highlights that, even when opportunities (such as from urbanization or service sector growth) have been created, women have faced obstacles to exploiting them.

Social norms versus labor market signals. Women in urban areas in South Asia earn an 8–51 percent wage premium compared with women in rural areas and a 10–63 percent wage premium in services compared with other sectors. An additional year of schooling increases the market wage by 10 percent for urban women but only 7.5 percent for urban men. Still, despite smaller wage gaps and higher returns to education in urban areas, female labor force participation is lower in urban centers than in rural areas. Similarly, female employment shares in key service activities that employ large shares of women in other EMDEs remain low in South Asia. This suggests that social norms and other supply-side constraints, such as childcare access, mobility, and safety, override labor market signals. The shortfall of women in the labor force and employment is most pronounced after marriage. Women in South Asia reduce their employment rates by 12 percentage points after marrying, even before they have children.

Social norms and laws. South Asian countries have legal frameworks—from business registration processes to inheritance laws—that are among the least female-friendly in the world. They also have among the most conservative gender attitudes in the world, with 70 percent of the population expressing beliefs that are opposed to women working outside the home. Conservative social norms strongly correlate with low female labor force participation. They deepen the impact of gender-biased legal frameworks, erode the implementation of more gender-neutral legislation, and dampen the effect of structural change in raising female labor force participation.

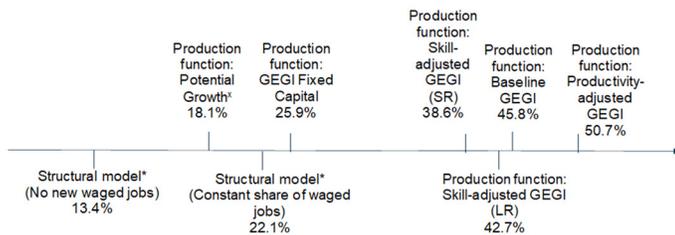
Policies. The diverse drivers of female labor force participation suggest the need for a multi-pronged policy effort to raise it. On the supply side, obstacles to women's employment outside the home, such as the lack of safe transport or quality child and elder care, as well as remaining legal biases (and shortcomings in their implementation) need to be removed. As supply constraints are relieved, demand-side measures that support continued shifts toward a more open, more services-based, and more urban economy are likely to facilitate greater female participation, especially if they are accompanied by productivity- and investment-enhancing measures. Such policies will be more effective if combined with a shift toward social norms that look more favorably on women working outside the home.

Data

This chapter compiles data from numerous sources to study the costs of, and reasons for, low female labor force participation in South Asia (annex 2.1). Microdata on female labor force participation in South Asia are drawn from the World Bank's Global Labor Database (GLD) and are available for Bangladesh, India, Sri Lanka, Nepal, and Pakistan from 1990–2022. Cross-country data on female labor force participation are drawn from the World Bank's World Development Indicators (WDI), extended to 2023 using the International Labour Organization's ILOstat database, and are available for up to 187 countries, including 139 EMDEs, for 1992–23. Since much of this chapter relies on cross-country comparisons, these data are used to ensure cross-country comparability. That said, annex 2.1 shows that all South Asian countries other than Bhutan and Maldives fall into the bottom quartile of EMDEs in female labor force participation even if national definitions using the most recent national data are used. Other data sources include UN Comtrade statistics, the World Values Survey, the Demographic and Health Surveys, and the World Bank-Facebook Survey on Gender Equality at Home (note that the measurement of social norms is in its infancy; few datasets are available and their representativeness of the full population is imperfect).

FIGURE 2.4 Impact on GDP of raising female labor force participation to the male rate

In South Asia, raising women's labor force participation rates to those of men could lift output by 13–51 percent, with larger impacts if the capital stock is increased to equip the additional female workers and if barriers to women's access to higher-productivity jobs are removed.



Sources: World Bank. Authors' estimations using different analytical approaches. See main text and annex 2.2 for details on the models.

Note: GEGI = gender employment gap index; LR = long run; SR = short run. The numbers show the percent difference in aggregate GDP between a scenario with no gender gaps in labor force participation and the baseline scenario with persistent gender gaps. The symbol x indicates this estimate includes only India, Pakistan, and Bangladesh, and the symbol * denotes the exclusion of Afghanistan, Bhutan, and Maldives.

Macroeconomic impact of closing the gender gap in labor force participation

Estimates of the effect on GDP of raising the female employment rate to that of men range from 13 to 51 percent, depending on assumptions and modeling methods. Larger GDP impacts are obtained when the increase in female labor force participation is accompanied by capital accumulation and does not crowd out men, and when women can access all, including higher-productivity, jobs.

In 2012, the World Bank's World Development Report argued that "greater gender equality is smart economics, [because it enhances] productivity and improves other development outcomes" (World Bank 2012, p. xiii). In 2015, the McKinsey Global Institute published the study "The Power of Parity: How Advancing Women's Equality Can Add \$12 Trillion to Global Growth," which showed the large potential effect that fostering gender equality could have on economic growth (Woetzel et al. 2015). This section explores the current empirical evidence relating to these statements using a range of macroeconomic modeling approaches. This exercise shows that large economic gains could be reaped from raising female to male labor force participation rates in South Asia.

The impact of raising female labor force participation rates to those of men will depend on three sets of mechanisms: (i) the time horizon and, in particular, whether it is long enough to allow an increase of physical capital to accompany the expansion of female employment; (ii) the differentiation between more and less productive jobs and the gender gap in access across job types; and (iii) the technology and how it combines different types of labor and capital.

Annex 2.2 describes in detail the approaches used in this chapter, which fall into two categories: production function models and empirical structural models; within these categories, there are eight model variants which produce a range of estimated effects. The most comprehensive approach is the productivity-adjusted Gender Employment Gap Index (GEGI) model of Pennings (2022) and Fiuratti, Pennings, and Torres Coronado (2024). The most restrictive approach is the potential growth approach (Celik, Kose, and Ohnsorge 2023), which allows neither for capital accumulation nor for productivity distinctions between jobs. Figure 2.4 summarizes the estimated effects on output of closing the gap between male and female labor force participation in South Asia as various assumptions are adjusted.

The exercises conducted here rest on several strong assumptions. First, they assume that the women drawn into the labor force are fully employed. Second, they assume that female employment does not crowd out male employment. Third, they assume that whatever tasks women were engaged in before they entered the labor market were not income-generating and that there is no loss of output when women switch out of them into employment. This assumption is unavoidable given existing data, but some evidence shows that women's economic contributions might be underestimated given current measurement approaches (Amir et al. 2018; Mancini 2021). Fourth, they assume that the increase in female labor force participation is achieved through the removal of barriers to women's employment rather than through the introduction of distortionary policies that could generate offsetting losses. Finally, very large increases in female employment are required to achieve gender parity, a situation that does not prevail even in advanced economies. These

scenarios should be viewed as aspirational rather than as explicit targets, quantifying the total losses associated with gender inequality in labor markets.

Regional impact

Impact on South Asia's output: 13–51 percent. If labor force participation rates for women were raised to those of men, South Asia's regional GDP (and, by construction, also per capita income) would be 13–51 percent higher (figure 2.1). The largest 51 percent impact would be achieved if, on average, additional women entering employment are equipped with the same machines and tools as incumbent workers and can access jobs anywhere in the economy, including jobs with higher labor productivity, where gender participation gaps tend to be larger. This largest impact will be realizable only in the long term, once short-term barriers to mobility across sectors and jobs and impediments to capital accumulation are overcome. The smallest impacts occur when labor productivity declines as women's participation rises.

Mechanisms of impact. Comparisons between the results from the different models indicate several channels through which larger output impacts can be achieved when female labor force participation rises.

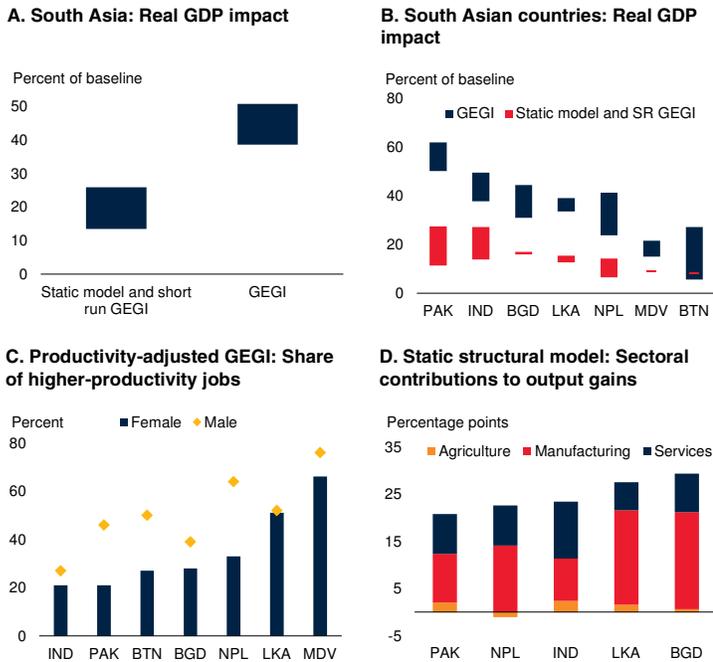
- **Capital accumulation and technology.** In the long term, capital stocks can increase to equip the increased labor supply, and raising the effect on output. A comparison between short-term and long-term versions of the GEGI model (Fiuratti, Pennings, and Torres Coronado 2024; Pennings 2022) indicates that this effect can account for nearly half of the total output impact (20 percentage points). If capital is complementary only to skilled, but not unskilled labor and if gender gaps are larger among unskilled labor, capital accumulation over the long term would be limited and the output gains from flexible capital would be lower.
- **Mobility and productivity differentials.** Gaps between female and male employment tend to be particularly large in sectors where labor productivity is relative high (annex table

A2.2.3). The effect of the openness to women of employment in all sectors is captured by the difference between two versions of the GEGI model, with and without a productivity adjustment. This suggests that the ability of women to enter all, including high-productivity, sectors could increase the gain in output by about 5 percentage points, from 45.8 percent to 50.7 percent.

- **Differences in gender gaps across skill levels.** Gender employment gaps in South Asia tend to be narrower for highly educated workers and wider among less educated ones. Raising female employment rates to those of men across all sectors will therefore lower average skills and labor productivity in the economy. The comparison between the baseline GEGI model and a skill-adjusted version that takes into account the difference in gender gaps suggests that closing South Asia's current gender gaps would mean increasing employment predominantly of less skilled women. Without further improving their skills, this could lower the gains in output impact by about 3 percentage points, from 45.8 to 42.7 percent (figure 2.4).
- **Occupational choice.** If competencies are distributed equally between women and men, and if women and men have the same preferences among occupations, then the differences in types of occupation between men and women reflect barriers to women choosing the jobs that best match their skills (Eberhard-Ruiz and Michel-Gutierrez 2022; Hsieh et al. 2019). By equalizing male and female employment rates across sectors, this misallocation is reduced and output rises. This is partially offset by falling value-added per worker, because of diminishing returns, as each sector's labor supply rises. The occupational choice model suggests that the net effect of raising female to male employment rates in all sectors would be an output increase of about 13 percent. Output gains would rise to 22 percent when allowing waged jobs to increase within each sector such that their share remains constant as female employment rises.

FIGURE 2.5 Effects of raising female labor force participation to the male rate

Output gains from raising female participation would be largest in countries with the widest current gender gaps, when physical capital is allowed to increase, and when high-productivity jobs are open to women.



Sources: World Bank. Authors' estimations using different analytical approaches. See main text and annex 2.2 for details on the models.

Note: BGD = Bangladesh; BTN = Bhutan; GEGI = gender employment gap index; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan.

A. Bars show the range of regional GDP model estimates, reflecting the impact of raising female employment to parity with men on regional real GDP in South Asia. The left bar shows the range of estimates from the accounting and short-run (fixed capital) GEGI model, and the right bar shows other GEGI models.

B. Bars show the range of model estimates. Estimates reflect the impact of raising female employment to parity with men on country-level real GDP across South Asia. Red bar show the range of estimates from the accounting and short-run (fixed capital) GEGI model ("SR GEGI"). Blue bar show the range of estimates from the other GEGI models ("GEGI").

C. Bars show the share of higher-productivity waged jobs for women (bars) and men (diamonds), used in the productivity-adjusted GEGI model. Higher-productivity jobs include formal employment and non-agricultural jobs. Estimates are in annex table A2.2.3.

D. Estimates show sectoral contributions to GDP gains from the static structural model, using a constant share of waged jobs. Estimates are in annex table A2.2.4.

Country impact

Initial conditions. The same methodologies are applied to individual country data. Countries with the widest initial employment gaps (such as India and Pakistan) would enjoy the largest output increases (annex table A2.2.3). The baseline GEGI estimates of long-term output gains range from below 20 percent in Bhutan, to around 40 percent in Bangladesh, and over 50 percent in Pakistan (figure 2.5). Impacts could be even larger if women have access to employment

opportunities in higher productivity activities, such as those in the formal and non-agricultural sectors. In the short term, when capital stocks are fixed, the output gains would be only about half the long-run gains.

Sectoral composition. In all South Asian countries, output gains from closing the gender gap in labor force participation would be driven by the manufacturing sector, followed by the services sector (annex table A2.2.4). The structural approach which estimates changes in productivity across sectors makes it possible to estimate the contributions of individual sectors to output gains. If more women were to access manufacturing jobs, output would rise by 9 percent in India and as much as 21 percent in Bangladesh, because of Bangladesh's higher initial labor productivity in manufacturing. Despite progress in the garment industry, gender gaps in employment across the broader manufacturing sector in Bangladesh remain sizable. The results also show that only modest gains can be expected from the agriculture sector because of low labor productivity and smaller gender gaps in employment.

Labor demand: Development and structural change

As in other EMDEs, South Asia's development path over the past three decades has been accompanied by major structural changes, including a shift toward service activities, urbanization, and greater trade openness. A large literature on each of these topics, spanning a multitude of countries and techniques, has found that these changes are usually associated with greater demand for female labor. In South Asia, indeed, women's earnings in urban areas, service sectors, and export-oriented activities are closer to men's earnings than elsewhere in the economy. However, the stronger demand, implied by these narrower wage gaps, has not been matched by higher female employment: neither urbanization nor the shift to services has been accompanied by greater female labor force participation. The exception is rising exports, which have been associated with greater female labor force participation in South Asia, but the effect has been small.

Development: rising per capita incomes

Findings from the literature. Typically, female labor force participation has had a U-shaped relationship with economic development, measured by per capita income (Boserup 1970; Durand 1975; Goldin 1994). At a low level of development, female participation rates are high because the need to raise income for subsistence overcomes the substitution effect of low earnings on the choice between work and leisure. As per capita incomes rise, the supply of labor is initially reduced as the income effect—increased demand for leisure time—outweighs the substitution effect, with female wages remaining too low to pull women out of their home-making specialization, so that female participation falls. But as per capita incomes rise further, the substitution effects again dominates, with women being pulled into the labor market by rising wages that converge with men's. The interplay between income and substitution effects is reinforced by shifts in the structure of the economy. The initial predominance of self-employment in agriculture—where women are often unpaid workers in small family farms—shifts to employment first in manufacturing and finally in services. The U-curve, however, remains a correlational and not necessarily a causal relationship (Gaddis and Klasen 2014).

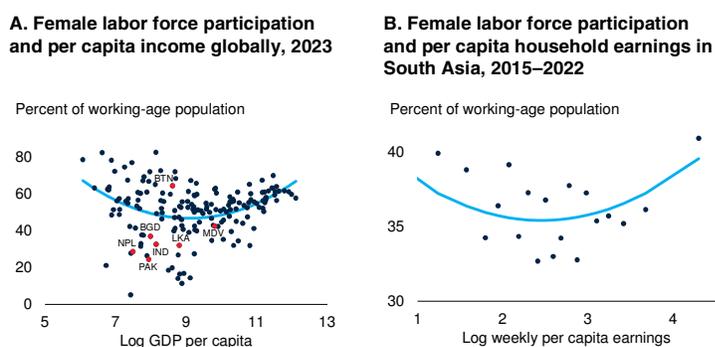
South Asia's position in the U-curve. Female labor force participation rates in all South Asian countries except Bhutan are well below the global U-shaped curve, by 5 to 25 percentage points (figure 2.6). The same forces that operate across countries also operate across households within a country. Data from household surveys in five South Asian countries show a U-shaped relationship between weekly per capita earnings and the share of women employed.

Shift toward services

Findings from the literature. Inter-sectoral transformation—the process by which labor shifts from low-productivity agriculture to high-productivity manufacturing and services—may play an important role in expanding employment opportunities for women (Lewis 1954; McMillan, Rodrik, and Verduzco-Gallo 2014). For Asia, it was the rapid expansion of opportunities, both in

FIGURE 2.6 Female labor force participation and development

Female labor force participation has a U-shaped relationship with income, both across countries and across subnational units within South Asian countries. All South Asian countries, except Bhutan, fall well below the international U-curve.



Sources: International Labor Organization (ILO); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan.

A. Panel shows scatterplot of natural log per capita GDP and the female labor force participation rate. Blue line represents a quadratic fit. Female labor force participation rates are modeled International Labour Organization estimates for the female population ages 15+ in 2023. Per capita GDP is for the most recent survey year: BGD – 2016, IND – 2022, LKA – 2021, NPL – 2017, and PAK – 2020. Weekly per capita household earnings are the sum of all wage labor income divided by the number of household wage earners, converted to 2022 U.S. dollars. Blue line represents a quadratic fit of the underlying data.

B. Binned scatterplot of 20 quantiles of weekly natural log of per capita household earnings using Global Labor Database microdata for working-age women (15–64). Estimation sample is from the most recent survey year: BGD – 2016, IND – 2022, LKA – 2021, NPL – 2017, and PAK – 2020. Weekly per capita household earnings are the sum of all wage labor income divided by the number of household wage earners, converted to 2022 U.S. dollars. Blue line represents a quadratic fit of the underlying data.

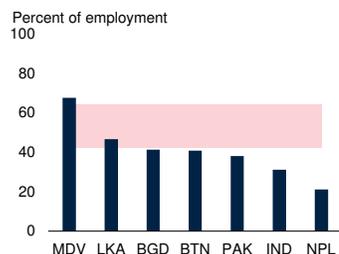
factory work and services, that drew women into the labor force (Brinton 2001). Historically, in the advanced economies, the services sector, in particular, has often served as an entry point for women to join the labor market (Petrongolo and Ronchi 2020). The rise of white-collar professional service occupations—such as stenographers, bookkeepers, and secretaries—accounts for a large share of the dramatic rise in female labor market participation in the United States after World War II (Ngai and Petrongolo 2017). Service sector jobs facilitate women's entry into employment since they do not place the same premium on physical strength as do jobs in agriculture and manufacturing (Borghans, Ter Weel, and Weinberg 2014; Galor and Weil 1996; Rendall 2024; Weinberg 2000). Thus it is not surprising that cross-country regressions show that as economies shift to services, more women enter the labor market (Ostry, Alvarez, and Papageorgiou 2018).

Shift toward services in South Asia. In South Asia, the services sector has grown rapidly in the past three decades, although from a somewhat

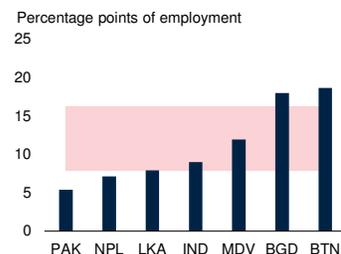
FIGURE 2.7 Shift toward services

Rising shares of service sector employment in South Asia have not been associated with growing female labor force participation, unlike in other countries.

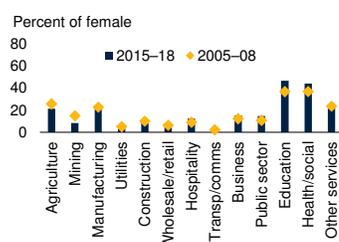
A. Employment in services, 2022



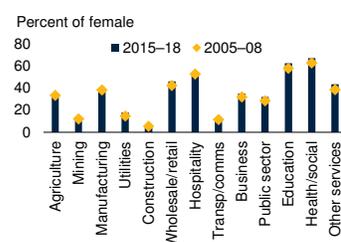
B. Changes in employment shares of services, 1991–2022



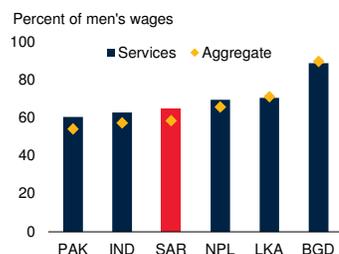
C. Female employment: South Asia



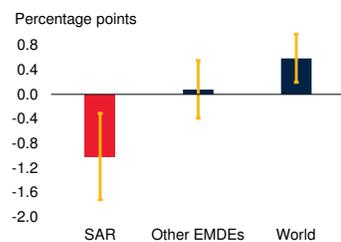
D. Female employment: EMDEs



E. Women's wages relative to men's



F. Correlation between services employment share and female labor force participation



Sources: International Labor Organization (ILO); World Development Indicators (database); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank South Asia Region Labor Database (SARLD) labor force survey microdata (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka); Trans/comms = transportation and communication.

A. Bars show the services share in total employment in 2022. Red shaded area is interquartile range for other EMDEs. EMDE average is weighted using working-age population. The EMDE average is weighted by the working-age population.

B. Bars show the change in the services share of total employment from 1991–2022. Red shaded area is interquartile range for other EMDEs. The EMDE average is weighted by the working-age population.

C.D. Plot shows women as a share of total employment for each sector for SAR (C) and other EMDEs (D). SAR data is from Global Labor Database (GLD) and South Asia Region Labor Database (SARLD) microdata, other EMDEs from the International Labour Organization (ILO). Sectors are harmonized and coded according to the ISIC3.1 Revision. Comparison years are selected based on maximum data availability. Shares represent the averaged shares from 2005–08 and 2015–18 and are weighted using the average female population during these two time periods (D) and survey weights divided by the number of survey waves (C).

E. The gender wage gap is calculated as the ratio of female to male average wages, conditional on education, in each sector. Estimates are derived from coefficients of country-specific regressions of log wages on interactions between gender and sector indicators, controlling for education and survey wave fixed effects. Survey waves are shown in annex 2.3. Estimates of gender wage premium by sectors are in annex table 2.3.

F. Residual relationship between services labor market concentration and female labor force participation is calculated by regressing the ratio of (log) female to male labor force participation on the share of services employment, controlling for log GDP per capita and country fixed effects. Country-level data from 1992–2022 is for 129 EMDEs, or for 171 countries, excluding those in South Asia. South Asian data at the subnational unit (state)-survey, are for Bangladesh, India, Nepal, Pakistan, and Sri Lanka for 1987–2022. SAR data is from GLD and SARLD microdata, and other EMDEs from ILO. GLD and SARLD survey waves are shown in annex table 2.1. Regression results for South Asia subnational data are from annex table 2.2.

lower starting point in the 1990s than other EMDEs (figure 2.7). From 1991 to 2022, services employment in the region as a whole grew broadly in tandem with other EMDEs, with the median change in the share of services employment across South Asian countries near the median for other EMDEs. However, because of the lower starting point, the share of services in 2022 remained below the EMDE average in all countries except Maldives, where the tourism sector dominates the labor market. Across South Asian countries, the fastest increase occurred in Bhutan, in part reflecting liberalization and rapid growth in the technology sector (Mason 2019), while the slowest increase was in Pakistan, where limited progress in raising education levels has held back higher-skill jobs in the services sector.

Below-average female employment shares in services. Globally, greater services employment has been associated with higher female labor force participation. But in South Asia greater services employment has been associated with lower female labor force participation at the subnational level, in part because the growing services sector has not absorbed women leaving agricultural employment (figure 2.7 and annex table 2.2). Except in education and health care, female employment shares have barely grown across services subsectors in South Asia and, for most services subsectors, remain lower than in agriculture and even manufacturing. In other EMDEs, women account for 30–50 percent of employment in subsectors such as retail, hospitality, business, and public administration and even more in social subsectors such as education, health, and social work. In South Asia, female employment shares in these services subsectors are 15 to 42 percentage points below those in other EMDEs (figure 2.7). Job creation in the non-agricultural sectors opens opportunities for female employment. However, supply-side constraints must be lifted for these opportunities to be realized.

Wage differentials in services. Female employment shares in the services sector are low despite gender wage differentials that are more favorable to women than in other sectors. On average across South Asia, women earn only 58 percent of men's earnings, but this gap narrows in the services sector, where women earn 64 percent

of men's earnings (figure 2.7, annex table 2.3). This is a pattern in all South Asian countries except Bangladesh and Sri Lanka, but it is most pronounced in India and Pakistan.

Urbanization

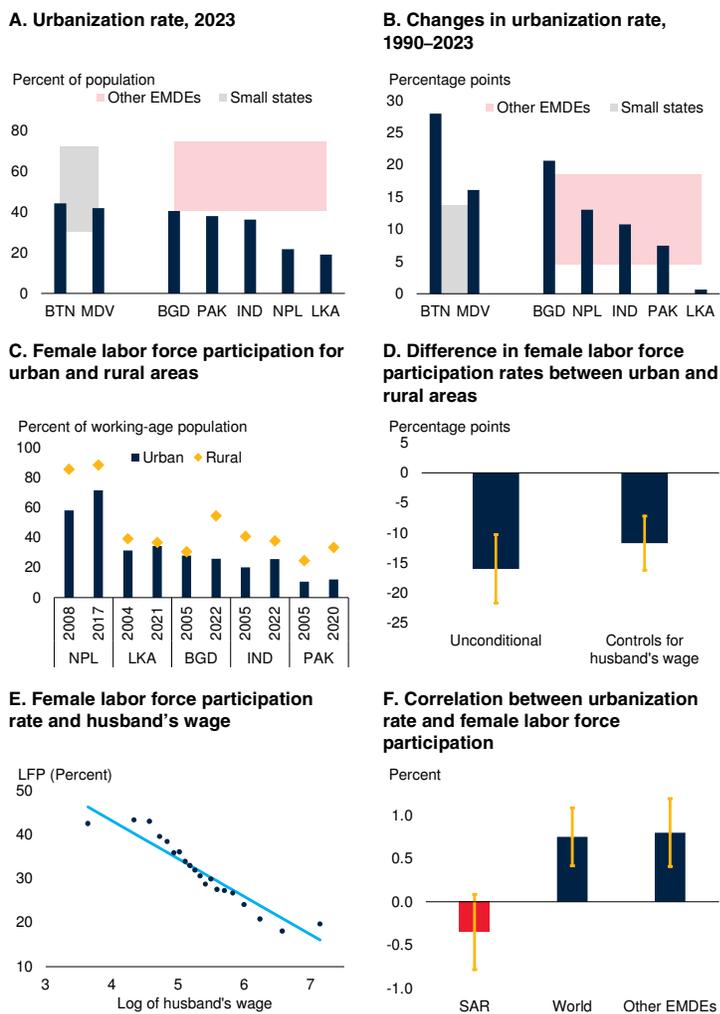
Findings from the literature. In urban areas, social norms tend to be less restrictive than in rural areas so that barriers to women's employment tend to be lower (Asher et al. forthcoming; Hyland, Islam, and Muzi 2020). Urban firms are also exposed to greater product and labor market competition, increasing incentives to forgo gender discrimination (Ashenfelter and Hannan 1986; Becker 1995; Cooke, Fernandes, and Ferreira 2019). Labor demand in urban areas is more concentrated in the services sector, both in South Asia (Desmet et al. 2015) and more generally, including in advanced economies (Michaels, Rauch, and Redding 2012), which typically employ a larger share of women. Finally, cities exhibit greater demand for skilled workers (Glaeser and Maré 2001), which benefits women, who tend to have higher returns to education (Psacharopoulos and Patrinos 2018). Conversely, higher salaries of husbands and fewer extended-family members for child care may discourage women in urban areas from working (Behrman et al. 1999).

Urbanization in South Asia. South Asia's population has rapidly moved to urban centers, although current urbanization rates remain lower than in other EMDEs. Between 1990 and 2023, the share of the population living in urban centers in South Asia has risen from 25 percent to 36 percent, still well below the 2023 average in other EMDEs of 60 percent (figure 2.8). Growth in employment that has accompanied urbanization in South Asia appears to have mainly benefited sectors that have historically disproportionately employed men (Klasen and Pieters 2015).

Below-average female employment in cities. Globally, greater urbanization has been associated with *higher* female labor force participation in both advanced economies and EMDEs (figure 2.8). But across South Asia, female labor force participation rates have been lower in urban centers than in rural areas (figure 2.8). The largest such gap is in Pakistan, where the female

FIGURE 2.8 Urbanization

In South Asia, urbanization is lower than elsewhere, although it has risen rapidly in recent years. In contrast to other EMDEs, urbanization has not been accompanied by rising female labor force participation.



Sources: International Labor Organization (ILO); World Development Indicators (database); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank South Asia Region Labor Database (SARLD) labor force survey microdata (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LFP = labor force participation; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A. Bars show the urban share of total population in 2023. Red and gray shaded indicate the interquartile ranges for other EMDEs and small states EMDEs.

B. Bars show the change in urbanization rate from 1990–2023. Red and gray shaded areas indicate the interquartile ranges for other EMDEs and small states EMDEs. The 25 percent quartile of change in urbanization rate for small states EMDEs is below 0 (–0.7 percent) and is not shown in the graph.

C. Bars show female labor force participation as a share of the urban working-age (15–64) female population. Diamonds show female labor force participation as a share of the rural working-age (15–64) female population. Data is shown for the earliest available date from 2005–2008 and the most recent year.

D. Bars show estimates from a regression of a female employment indicator on an urban indicator, as well as age, survey year, and country fixed effects, in the sample of working-age women with wage-earning husbands. Controls for husband's income include the log of husband's daily wage and its square. The 95 percent confidence intervals are calculated from standard errors clustered at the state level.

E. Binned scatterplot using 20 quantiles shows the relationship between the log of husband's wages and female employment rate. Sample is all working-age women in SAR Global Labor Database (GLD) data. The regression model controls for country and year fixed effects as well as the spousal age gap. Blue line indicates a linear fit after residualizing covariates.

F. Residual relationship between urbanization rate and female labor force participation is obtained by regressing the (log) ratio of female to male labor force participation on the share of the urban population, controlling for log GDP per capita and country fixed effects. Country-level data from 1992–2022 for 132 EMDEs, or for 192 countries, excluding those in South Asia. South Asian data at the subnational unit (state)-survey, for Bangladesh, India, Nepal, Pakistan, and Sri Lanka for 1987–2022. SAR data is from GLD and SARLD microdata; other EMDEs is from International Labour Organization. GLD and SARLD survey waves are shown in annex table 2.1.

participation rate is 22 percentage points lower in urban centers than in rural areas. Administrative definitions of rural and urban areas are arbitrary and not comparable across countries, potentially yielding misleading results, but consistent measures of urbanization based on spatial data on the geographical distribution of population show that the negative association between urbanization and female participation remains robust (annex table 2.4).

Wage differentials. Female labor force participation in cities is low in South Asia despite considerably higher wages and smaller wage differentials favoring men, in cities than in rural areas. Women earn 35–50 percent higher wages in cities than in rural areas in India and Sri Lanka and 23–24 percent higher wages in Nepal and Pakistan—considerably larger differentials than those for men (figure 2.9). This larger urban wage premium for women appears mainly to reflect the greater prevalence of services in urban employment. Once sectoral composition is controlled for, on average across South Asia the urban wage premium falls to 32 percent of rural wages for women, lower than the 38 percent of rural wages for men (annex table 2.5). The still-substantial residual urban premiums for men and women are likely driven by greater productivity among urban workers, due to both selection and agglomeration effects (Glaeser and Maré 2001; Glaeser and Resseger 2010; Moretti 2011).

Other factors. Several other factors may depress female labor force participation in South Asia's cities below that in rural areas, despite higher relative wages.

- **Social norms.** In urban centers, formal and outside-the-home employment arrangements are more common, while in rural areas, women are more likely to be employed in household agriculture or self-employment (figure 2.9). Employment as a wage worker conflicts with social norms that discourage women from working outside the home; these norms may therefore be more binding in cities, even if they are less conservative than in rural areas. In urban India, household norms have been shown to restrict female labor supply (Jalota and Ho 2024).
- **Discrimination.** Women often face hiring and employment discrimination by employers, which becomes more relevant in urban areas where women are more likely to seek formal employment. A randomized control trial in Pakistan suggests that firms are willing to forego a wage subsidy of 15 percent to hire a man over a similarly qualified woman (annex 2.3; Bussolo et al., forthcoming).
- **Income differentials.** Incomes tend to be higher in urban areas, and higher spousal incomes are associated with lower female labor market participation (figure 2.8). Higher incomes may allow women to abandon their main home-based activities in rural areas: unpaid labor and self-employment (annex table 2.6). However, this income effect only explains 27 percent of the urban-rural female employment gap.

Trade openness

Findings from the literature: Exports. Studies using cross-country panel regressions have found mixed evidence on whether export orientation promotes female labor market participation. Several cross-country studies have found a positive association (Bussmann 2009; Chen and Hu 2023; De Hoyos, Bussolo, and Núñez 2012; Özler, Taymaz, and Yilmaz 2009; Rocha and Winkler 2019;), while others have documented a negative association (Cooray, Dutta, and Mallick 2017; Gray, Kittilson, and Sandholtz 2006; Joekes 1999; Meyer 2006; Ozler, Wamboye, and Seguino 2015). In single-country studies, however, export orientation has been found to correlate with greater female labor force participation with several possible transmission mechanisms identified:

- **Cost competition.** Exporters compete in a larger, external market. In a more highly competitive environment, gender discrimination is more costly (Becker 2010; Heyman, Svaleryd, and Vlachos 2013; Weber and Zulehner 2014). Since women typically receive lower wages than men, and may often be no less productive, hiring women can be a cost-competitive strategy for exporters (Black and Brainerd 2004; Chen, Zhao, and Yu 2017; Ederington, Minier, and Troske 2009).

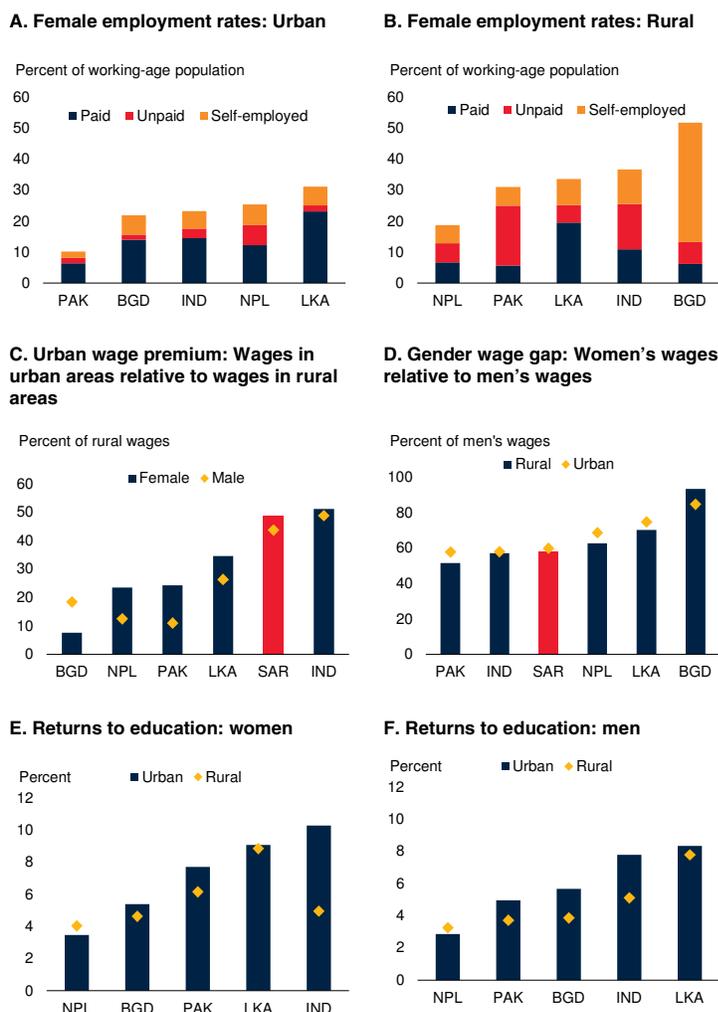
- **Technology upgrading.** Trade-induced competition may encourage firms to upgrade their technologies, reducing demand for labor to conduct physically demanding tasks and increasing female comparative advantage. For example, in response to tariff reductions in the North American Free Trade Agreement, Mexican firms increased exports, upgraded technology, and increased female employment (Juhn, Ujhelyi, and Villegas-Sanchez 2014).
- **Structural change.** If exports and output expand in initially female-intensive sectors, more women will tend to be drawn into the labor force (Aguayo-Tellez et al. 2014). For instance, rapid growth in ready-made garment exports in Bangladesh and Myanmar boosted the labor force participation of women living near garment factories (Heath and Mobarak 2015; Molina and Tanaka 2023).

Findings from the literature: Imports. How firms change the gender composition of their workforce in response to import competition is, in principle, ambiguous because different forces pull in different directions.

- **Comparative advantage.** A large literature in both advanced economies and EMDEs, a shows that increased exposure to import competition from tariff reductions can reduce employment prospects of lower-skill workers (Autor, Dorn, and Hanson 2013; Dix-Carneiro 2014; Dix-Carneiro and Kovak 2019; Dix-Carneiro, Soares, and Ulyssea 2018; Pierce and Schott 2016; 2017). Import competition may therefore reduce female employment in labor markets where women are disproportionately lower-skilled. It may also disproportionately reduce women's wages, as shown for India in sectors that competed with rising Chinese imports between 1990 and 2012 (Saha 2024).
- **Labor market rigidities.** Import competition may exacerbate gender gaps if women are more tenuously attached to labor markets or have more difficulty shifting their employment to expanding sectors. Mansour, Medina, and Velasquez (2022) found that in Peru, shocks that increased imports have had larger and more persistent negative

FIGURE 2.9 Employment arrangements and wage differentials in cities

High female labor force participation rates in South Asia's rural areas mainly reflect unpaid labor and self-employment; both are less common in urban areas. Women earn significantly higher wages in cities than in rural areas and, in most South Asian countries, their wage gap with men is smaller. Returns to education are higher for women in urban areas as well.



Sources: Global Labor Database (GLD) labor force survey microdata (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; IND = India; EMDEs = emerging market and developing economies; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A.B. Figures show the composition of employment for women in urban (A) and rural (B) areas, as a share of the total female working-age population (age 15–64). Survey waves used can be found in annex table 2.1.

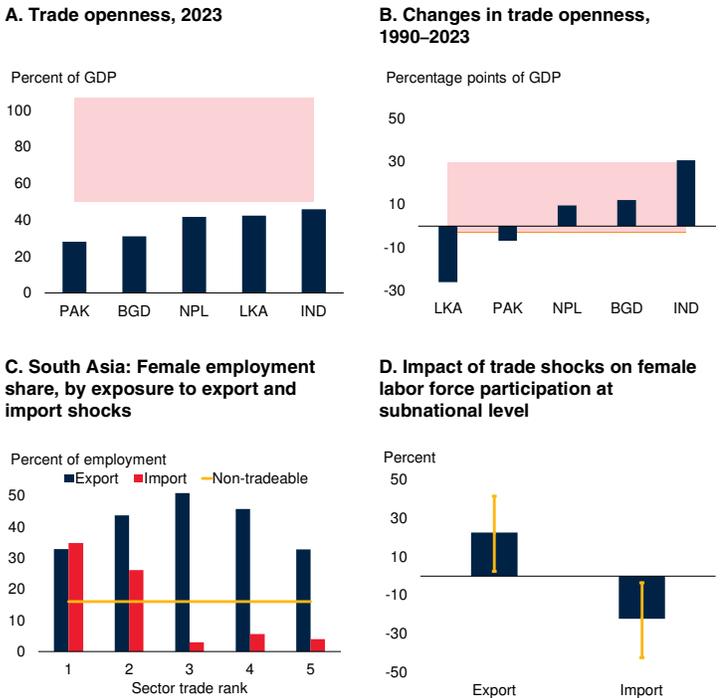
C. Urban wage premiums, measured as the percentage increase over rural wages, are the coefficients of an individual-level regression of log wages on an urban indicator interacted with gender, controlling for education level. Estimates are in annex table 2.5.

D. Gender wage gap is calculated as the ratio of female to male average wages, conditioned on education, in urban and rural areas. Estimates are in annex table 2.5.

E.F. Figure shows estimated returns to education for women (E) and men (F) from country-wise regressions of log wages on years of schooling interacted with urban and gender indicators, controlling for age and state-by-year fixed effects.

FIGURE 2.10 Trade openness

South Asian countries are in the least open quartile of EMDEs. Within the region, greater export orientation has been associated with higher female employment across sectors and local labor markets.



Sources: International Labor Organization (ILO); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Development Indicators (database); UN Comtrade.
 Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.
 A. Bars show trade-to-GDP ratio in 2023. Trade is defined as the sum of goods and services exports and imports. Red shaded area is the interquartile range for other EMDEs. Data on Bhutan and Maldives are not available.
 B. Bars show change in trade-to-GDP ratio from 1990–2023. Red shaded area is the interquartile range for other EMDEs. Red line is the EMDE average weighted by GDP (constant 2015 US\$). Data on BTN and MDV are not available.
 C. Figure shows the female share of total sector employment by sector trade rank across all South Asian countries. Sectors are ranked at the country-year level based on their export or import share in total trade for that sector-year. For net export and import sectors, the top-ranked export sector is the net exporting sector s in country c at year t for which $x_{sect}/(x_{sect} + m_{sect})$ is the highest. Sample years are 2010–21. Non-tradeable sectors are those for which $x_{sect} = m_{sect} = 0$.
 D. Figure shows estimated coefficients from a subnational panel regression of relative female labor force participation, defined as the (log) ratio of female labor force participation to male labor force participation, on the log of state-year-level export or import exposure. Export and import exposure are calculated as the weighted average of national export or import volumes across sectors, where weights based on state-level sector employment shares. The OLS model includes only export and import shocks, while the fixed effects model includes state and year effects.

employment effects on women, who moved away from traded sectors or left the labor market entirely. In Brazil, however, such import shocks have hurt male and female workers similarly (Gaddis and Pieters 2017).

- **Household income losses.** Heckl (2024) found that in local labor markets in Mexico facing greater import competition, women increased their labor force participation through self-employment to offset household income losses. Similar effects are observed for women

of lower socioeconomic status as a result of tariff liberalization in India (Anukriti and Kumler 2019).

- **Informality.** Any negative impact of import competition on employment may be muted in the presence of a large informal sector, including in agriculture, which provides a margin of adjustment on quantity (Dix-Carneiro and Kovak 2019).

Low trade openness in South Asia. In the early 1990s, several South Asian countries underwent transformative trade liberalizations that ended decades of protectionist economic planning. After its exchange rate crisis in 1991, India abolished the government controls on the economy known as the “license raj,” slashed tariffs, and replaced negative lists of trade restrictions with positive lists (Aghion et al. 2008; Topalova and Khandelwal 2011). Bangladesh opened the garment sector to foreign trade and investment in 1993 (World Bank 2005). Pakistan and Nepal implemented large tariff reductions in the 1990s (Pathak, Leu, and Siriwardana 2023; Ul-Haq, Khanum, and Raza Cheema 2020). Sri Lanka liberalized more than a decade earlier in 1977 (Athukorala 2022). As a result, between 1990 and 2023, exports from countries in the region rose from an average of 8 percent of GDP to 20 percent, and imports increased from 11 percent of GDP to 23 percent (figure 2.10). These increases were slightly larger than for the other EMDEs. However, there was substantial variation across the region: changes in exports over this period ranged from a drop of 10 percentage points of GDP in Sri Lanka to a gain of 14 percentage points of GDP in India. Despite the increases across most of the region, trade-to-GDP and export-to-GDP ratios in all South Asian countries remain within the lowest quartile of EMDEs, except for the region’s two smallest states (Bhutan and Maldives). It has been estimated that South Asia has recently been exploiting only about 30 percent of its underlying export potential (World Bank 2019).

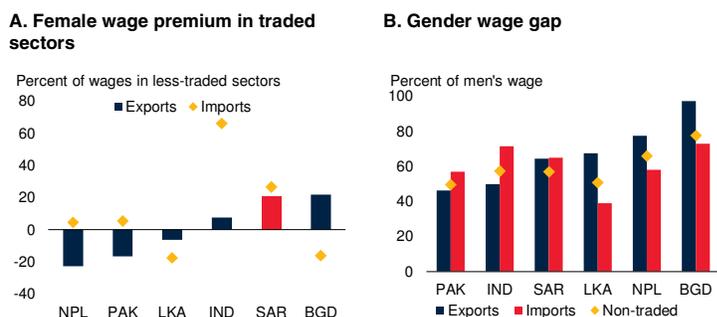
Positive association between export orientation and female labor force participation. In South Asia, export orientation appears to have expanded labor market opportunities for both men and women, but particularly for women.

- *At the sector level*, more export- or import-oriented sectors (that is, sectors that accounted for a larger share of national exports or imports) had greater shares of female employment, whereas the least traded sectors had negligible shares of female employment (figure 2.10). This is consistent with evidence of higher female employment shares in a range of export-oriented sectors across South Asia, such as ready-made garments in Bangladesh, call centers in India, and textiles in Sri Lanka.
- *At the subnational level*, the South Asian states or provinces with the highest exposure to export shocks (that is, national exports weighted by subnational sector employment) had significantly higher female labor force participation rates (figure 2.10, annex table 2.7). A 1-percent increase in export exposure was associated with a 6.9-percentage-point increase in labor force participation rates for women and a 3.3-percentage-point increase for men. Conversely, the states or provinces with the highest exposure to import shocks had significantly lower female labor force participation relative to men (figure 2.10, annex table 2.7). Consistent with the existing literature, import shocks reduced labor force participation rates substantially more for women than for men.

Wage premium in export-oriented sectors. Several studies have found evidence of a wage premium at exporting firms in both advanced and EMDEs, which is typically larger for skill-intensive exports (Brambilla, Depetris Chauvin, and Porto 2017; Egger et al. 2020; Fontes, Granitoff, and Tiing Tai 2020). In India, rising exports have driven wage gains across the economy, but mainly for higher-skilled workers (Artuc et al. 2019). Across South Asia as whole, wages for women are 20 percent higher in the most export-oriented goods-producing sectors than in the production of less traded goods, while for men, the premium is just 6 percent. However, this finding is primarily driven by Bangladesh and India; there is no export wage premium in Nepal, Pakistan, or Sri Lanka (figure 2.11). Because the models on which these estimates are based control for education, wage premiums are not driven by

FIGURE 2.11 Wage premium in export-oriented sectors

Women generally earn higher wages in traded sectors than in non-traded sectors, and gender wage gaps in traded sectors tend to be smaller.



Sources: Global Labor Database (GLD) labor force survey microdata (database); International Labor Organization (ILO); World Development Indicators (database); UN COMTRADE; World Bank.

Note: EMDEs = emerging market and developing economies. BGD = Bangladesh; BTN = Bhutan; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka).

A. Bars and diamonds are estimates from country-specific regressions of log wages on indicators for employment in a top five export and/or import sector, interacted with gender indicators, controlling for education and survey wave fixed effects. Estimates are wage premium relative to less-traded sectors. Sample is all wage-earning adults in South Asia, for years in which national trade data is available. Employees in the service sector are dropped, because Comtrade data are only available for goods trade. Survey waves used can be found in annex table 2.1.

B. Bars and diamonds show average female wages as a share of male wages for top five export and import sectors, as well as less-traded sectors. These estimates are derived from coefficients of the regression described in A.

differences in sectoral skill intensity, but more likely by differences in firm-level productivity and patterns of export product specialization. Across South Asia, gender wage gaps in traded sectors are narrower than in non-traded sectors.

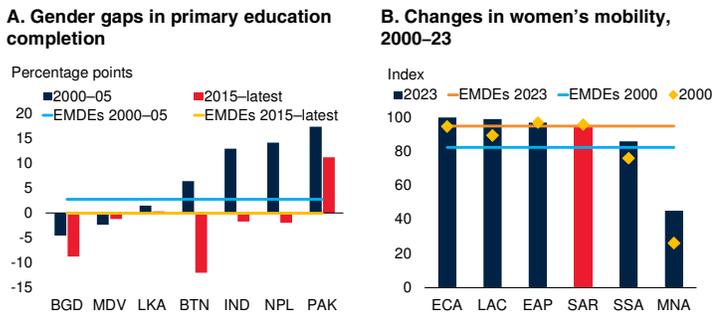
Labor supply: Barriers to female labor force participation

While improved education outcomes for South Asia's women, relative to men, coupled with high wage premiums for education, have increased women's labor market potential, significant barriers to their participation in the labor force still persist. These include limited availability of safe transport and childcare, as well as unfavorable social norms regarding women working outside the home.

A woman's decision to enter the labor market is affected by supply-side factors that range from education to childcare to incentives arising from welfare policies (Bhalotra and Fernández-Sierra 2023; Blundell et al. 2016; Eckstein and Lifshitz 2011; Eckstein and Wolpin 1989). Alleviating supply-side barriers can increase female labor force participation through its direct impact on women's ability to enter the labor force, but also by helping break down demand-side barriers.

FIGURE 2.12 Supply-side barriers to women's employment

Educational attainment for men and women has converged in South Asia, but South Asia is one of only two EMDE regions in which barriers to women's mobility have increased.



Sources: Women, Business, and the Law; World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EAP = East Asia and the Pacific; ECA = Europe and Central Asia; EMDE = emerging market and developing economy; IND = India; LAC = Latin America and the Caribbean; LKA = Sri Lanka; MDV = Maldives; MNA = Middle East and North Africa; NPL = Nepal; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Bars show the difference in primary education completion rates between men and women (calculated as rate for men minus rate for women) for the years 2000 to 2005 and 2015 to latest available data. Annual averages are used. Dotted lines indicate primary completion gap in EMDEs excluding South Asian countries.

B. Bars show the regional average mobility score in 2023. Diamonds represent the regional average mobility score in 2000. Horizontal bars show EMDE averages in 2000 and 2023, excluding SAR countries.

Skills

Education. As recently as the early 2000s, women's education outcomes in South Asia fell well short of men's, and in more than half of the countries in the region, the gap was wider than the EMDE average. Since then, women's education outcomes have improved considerably more than men's (figure 2.12). Since 2015, the gender gap in primary school completion rates has been lower than the EMDE average in every country except Pakistan, in several cases favoring girls.

Training. To complement formal education, training for girls and women can improve women's economic engagement. In Rajasthan, life skills training for adolescent girls has been shown to be successful and reduce school dropout rates (Edmonds, Feigenberg, and Leight 2023). In Zambia, teaching adolescent girls negotiation skills improved their education outcomes over the following three years (Ashraf et al. 2020). A recent meta-analysis found that skills training for entrepreneurs raised profits of their firms by 5–10 percent, with several studies finding sizable positive effects for women (McKenzie 2020). Such training programs may fill gaps in formal education and prepare women for productive engagement in the workforce.

Access to work outside the home

Safe transport. Women's lack of access to safe transport is often a barrier to labor force participation (World Bank 2023). This is particularly salient for South Asia: it is one of only two EMDE regions in which women's mobility has not improved in the past two decades (figure 2.12). Poor safety in transit to and from work, particularly in urban areas, has been shown to reduce mobility and depress female labor force participation in both Pakistan (Field and Vyborny 2022) and Bangladesh (Buchmann, Meyer, and Sullivan 2023). Recent evidence from Dhaka shows that women who feel safe outside the home are almost 10 percentage points more likely to participate in the labor market (Kotikula, Hill, and Raza 2019). Policies that improve public safety may therefore also affect labor markets: in a field experiment with the Hyderabad City Police, increased policing reduced the incidence of severe street harassment against women (Amaral et al. 2023).

Caregiving. Since women typically spend more time on childcare than men, the availability of quality and affordable childcare may increase female labor force participation. South Asia scores the lowest among EMDE regions, and substantially below the EMDE average, on its legal framework around access to childcare (figure 2.3). However, evidence on how female labor force participation responds to the availability of childcare is mixed. In both advanced economies and EMDEs, childbearing and childrearing have been identified as responsible for a large share of the gender gap in employment outcomes (Kleven et al. 2019; Kleven, Landais, and Leite-Mariante 2023; Aaronson et al. 2021). Access to childcare has been shown to increase female labor force participation in several EMDEs outside South Asia (Evans, Jakiela, and Knauer 2021; Halim, Perova, and Reynolds 2023) and, inside South Asia, national childcare legislation and publicly-provided daycare have been associated with higher female labor force participation (Alderman and Friedman 2018; Anukriti et al. 2023). In India, access to preschool has been associated with higher maternal labor force participation (Jain 2016) and lack of childcare has been cited as a reason women turn down paid work in Bangladesh (Elsej et al.

2020). However, in India, recent randomized experiments show no impact of offering childcare on female employment outcomes (Nandi et al. 2020; Richardson et al. 2018) and take-up rates of work offers among women with and without childcare responsibilities are almost identical (Ho, Jalota, and Karandikar 2024).

Social norms and flexible work. Other constraints, including unfavorable views of women working outside the home, may discourage women from participating in the labor force. Indeed, a recent experiment among married Indian women found very little take-up of well-paid job offers that included on-site childcare and were within a five-minute walk from home. But offers allowing remote work increased take-up from 27 to 56 percent (Jalota and Ho 2024). Home-based work options could encourage higher female labor force participation, particularly if they have a “gateway effect” that leads to subsequent engagement outside the home, as shown in an experiment in India (Ho, Jalota, and Karandikar 2024). However, this effect may not materialize. Recent evidence from Sub-Saharan Africa (Devoto et al. 2024) shows that women who had taken up (outside the home) jobs in a public works program, reverted back to non-participation when the temporary program ended.

Labor market frictions

Unusually low female labor force participation rates in South Asia may in part reflect labor market frictions, especially in typically female occupations. Such frictions include information asymmetries and limited access to employment networks. Digital platforms could ease such frictions by improving transparency.

Information asymmetries: Labor demand. Since firms often have limited information on the ability of potential workers, they tend to use education metrics for screening (Arcidiacono, Bayer, and Hizmo 2010). In South Asia, however, the low quality of education may reduce the value of such metric (Singh 2020). Other ways for jobseekers to signal their skills include apprenticeships and skill-based tests (Groh, McKenzie, and Vishwanath 2015; Hardy et al. 2019). These may be particularly valuable for

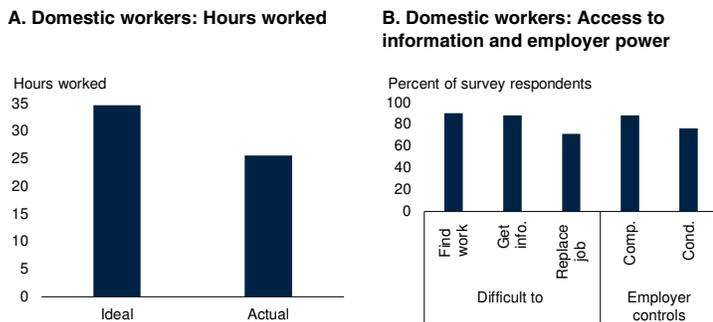
groups that firms have limited experience with and who may not have access to local educational systems. Refugees are a salient example: firms often lack information about their abilities and even their legal status (Loiacono and Silva Vargas 2019). Similar considerations may apply in the case of potential female workers: training programs with their credentialing function can be used by firms that have limited experience with employing female workers. Similarly, when ability is not readily observable, employers may tend to rely on references, which women may find harder to obtain, although a study in South Africa found that when reference letters are obtained, they tend to benefit women more than men (Abel, Burger, and Piraino 2020).

Information asymmetries: Labor supply. Workers may have limited information about potential jobs or may not even know where to search for employment. In rural India, for example, women were much more likely to invest in education, enter the labor market, and delay child bearing when they were provided information on labor market opportunities in nearby call centers (Jensen 2012). Women may also have limited information on the competitiveness of the labor market, and information on the number of applications can encourage more women to apply and enter the labor market (Gee 2018). The evidence on job search assistance for refugees suggests that job counseling is especially beneficial for populations, such as women, that face difficulties accessing the labor market (Battisti, Giesing, and Laurentsyeveva 2019).

Lack of support networks. Workers’ networks can affect their labor market outcomes, especially in lower-income settings where network-based hiring is common (Calvo-Armengol and Jackson 2004; Chandrasekhar, Morten, and Peter 2020). For women, the labor force participation of a woman’s peers has been shown to affect her labor market participation (Maurin and Moschion 2009; Nicoletti, Salvanes, and Tominey 2018). However, married women in South Asia have tightly circumscribed social networks that may limit their access to information about employment opportunities and working conditions (Anukriti et al. 2020; Anukriti, Herrera Almanza, and Karra 2024).

FIGURE 2.13 Labor market frictions

Domestic workers in Bangladesh would like to work more but have difficulty finding information about work opportunities. Wage setting and work conditions are typically determined by employers.



Sources: Survey data from Anukriti et al. (forthcoming); World Bank.

Note: Comp. = compensation; Cond = work condition.

A. Bars show the average actual and ideal weekly hours worked as reported by survey respondents. Sample is 4,391 domestic workers in Dhaka, Bangladesh, in 2023.

B. Bars show the share of survey respondents answering “yes” to the questions indicated on the categorical axis. The question on compensation is: “The people I work for in this house have more say in my compensation than I do.” The question on working conditions is: “The people I work for in this house have more say on my working conditions and hours than I do.” The sample consists of 4,391 domestic workers in Dhaka, Bangladesh, in 2023.

Digital platforms and employer market power.

By easing information frictions, digital platforms might improve access to employment, reduce employer market power, and improve conditions of work for informal workers. Several recent studies have shown that employer market power is an important feature of labor markets, both in EMDEs (Amodio and Roux 2023; Sharma 2023; 2024) and in advanced economies (Deb et al. 2022; Yeh, Macaluso, and Hershbein 2022). For example, increases in labor demand at former coworkers’ firms affect the wages that workers are paid, likely through information sharing among workers (Caldwell and Harmon 2019). For workers in markets with severe information frictions and limited opportunities for documenting skills, employer market power is likely to be greater. An example is the market of domestic workers. This is large, especially in urban areas, and most of the workers are women. By increasing information and transparency, digital platforms can improve employer-employee matching and be especially supportive for women in this market. In addition, digital platforms may facilitate enforcement of labor market regulations, such as minimum wages.

Evidence from domestic workers in Bangladesh.

A randomized control trial introduced a digital app that improved access to information on the

marketplace for domestic work in Dhaka, Bangladesh (Anukriti et al., forthcoming). About four-fifths of the 1.3 million domestic workers in Bangladesh are female, with a high prevalence of child labor (Oxfam 2020). Domestic workers are not protected under the labor law (the Bangladesh Labour Act of 2006) and are among the most underprivileged in the country—with poor living conditions, low wages, long working hours, and a lack of contracts or other labor protections. Hiring of domestic workers is highly dependent on referrals, making employees dependent on employers for assistance with finding future work. When the app was introduced, female domestic workers were surveyed about their working conditions. They were typically dissatisfied with underemployment in their current job but information on alternative opportunities was difficult to find, according to about 90 percent of them. Large majorities viewed employers’ market power as a significant factor in wage negotiations and in determining working conditions (figure 2.13).

Laws and social norms

A country’s legal framework and social norms set the context in which labor demand, labor supply, and labor market frictions operate. Among EMDEs, South Asian countries have some of the most restrictive legal frameworks—both as written and as applied—and some of the most conservative social norms regarding women’s economic activity. More restrictive laws and more conservative social norms are associated with significantly weaker labor market outcomes for women.

Legal framework

Findings from the literature. The legal framework helps determine women’s ability and willingness to participate in the labor market. It affects such factors as women’s freedom of movement, the presence of discrimination in employment and harassment in the workplace; and whether there is equal remuneration for work of equal value, parity in marriage and in parenthood, equal treatment for pensions, and equal rights of asset ownership, entrepreneurship, and inheritance. Many studies have documented that more gender-equal legislation is associated with higher female labor force participation. This has been shown in correlations in large cross-country datasets

spanning several decades (Gray, Kittilson, and Sandholtz 2006; Hallward-Driemeier, Hasan, and Rusu 2013; Hyland, Djankov, and Goldberg 2020) and in causal evidence from such diverse contexts as Ethiopia (Hallward-Driemeier and Gajigo 2015), India (Heath and Tan 2020; Naaraayanan 2019), and the United States (Stevenson 2008). These studies show that the effect runs through both labor demand and supply.

- **Labor demand.** In a large cross-country sample, the prohibition of gender discrimination in hiring and remuneration was associated with higher female labor force participation (Hyland, Djankov, and Goldberg 2020). In Ethiopia, the removal of work restrictions on women was associated with higher female employment outside the home in paid full-time jobs (Hallward-Driemeier and Gajigo 2015). In India, however, the introduction of legislation to combat workplace sexual harassment increased the perceived cost of hiring women for regulated firms, reducing demand for female labor more than it increased its supply (Bhalotra et al. 2023).
- **Labor supply.** In Ethiopia, legislation to improve wives' property rights encouraged more women to seek education and employment outside the home (Hallward-Driemeier and Gajigo 2015). In several OECD countries, the introduction of parental leave policies was associated with an increase in female employment rates (Olivetti and Petrongolo 2017). In large cross-country samples spanning decades, legal frameworks with more equal women's rights were associated with better education and health outcomes, and greater female entrepreneurship, as well as higher female labor force participation (Gonzales et al. 2015; Hallward-Driemeier, Hasan, and Rusu 2013). Similarly, in a large cross-country sample of firms, less restrictive laws on women's rights to inheritance, property ownership, and finance were associated with higher female employment and entrepreneurship (Islam, Muzi, and Amin 2017). In India, an inheritance law reform that equalized rights between sons and

daughters increased female bargaining power within the household, leading to greater labor force participation (Heath and Tan 2020).

Laws in South Asia. South Asian countries have made great strides over the past three decades in expanding their laws to protect women's rights, except for some slippage in the legal protection of women's freedom of movement (figure 2.14). Nevertheless, they still rank well below the EMDE average in terms of laws that protect women's rights and support their economic participation. The most severe shortcomings concern women's safety (laws addressing child marriage, sexual harassment, domestic violence, and femicide), parenthood (laws concerning the provision and administration of paid maternity, paternity, and parental leave, and the treatment of pregnant workers), and childcare (laws governing the provision of childcare services for children below three years of age). However, there are important differences within the region. In Bangladesh, the South Asian country with the least protective laws for women, the shortcomings are most severe in safety; in Nepal, the country with the most protective laws in the region, shortcomings remain in relation to childcare.

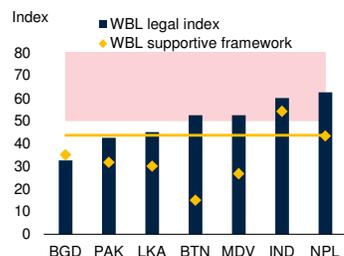
Laws and female labor force participation rates in South Asia. Figure 2.14 shows the positive relationship between female labor force participation and gender equality before the law in cross-country data for 119 countries in 2020, even after controlling for per capita incomes. But South Asia's female labor force participation was even lower than would be expected based on its legal framework. In part, this may reflect poor implementation of laws, or administrative processes or social norms that discourage the exercise of legal rights. The role of social norm is discussed below.

Implementation of laws. The legal framework index (*de jure* index) of the World Bank's Women, Business, and the Law database summarizes countries' legal provisions while the "supportive framework" index (*de facto* index) captures the administrative processes involved in exercising those legal rights. For example, consider the right of freedom of movement, in particular the entitlement to a passport. The *de jure* index assesses whether a woman's legal

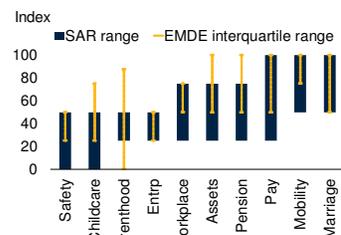
FIGURE 2.14 Legal restrictions on women’s economic participation

Several South Asian countries are in the bottom quartile of EMDEs in terms of the gender equality of their legal frameworks. More gender-equal laws are associated with higher female labor force participation. Even so, South Asian countries have much lower female labor force participation than would be predicted, based on their laws.

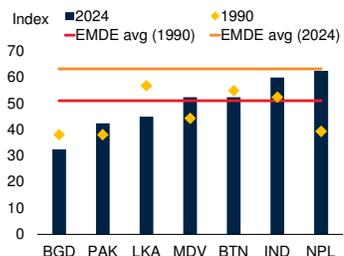
A. Legal gender equality index, 2024



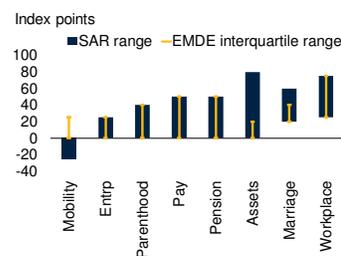
B. Legal gender equality sub-indices, 2024



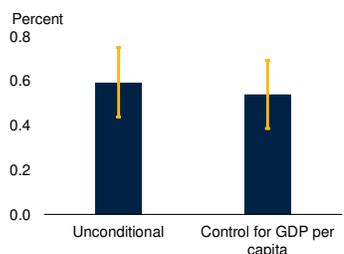
C. Legal gender equality index, 1990 and 2024



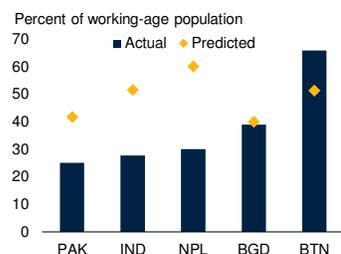
D. Changes in legal gender equality sub-indices, 1990–2023



E. Correlation between female labor force participation and legal gender equality



F. Actual and predicted female labor force participation



Sources: International Labour Organization (ILO); World Bank Women, Business, and the Law (database); World Bank; World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; Entrp. = entrepreneurship; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A. Bars show values of the Women, Business, and the Law (WBL) gender equality legal index (“de jure rights”) in 2024. Diamonds represent values for the WBL supportive framework index (“de facto rights”) in 2024. Red shaded area indicates the interquartile range for the “de jure rights” in other EMDEs. Yellow line represents the other EMDE average of the “de facto rights,” weighted using countries’ total populations in 2023.

B. Blue bars show the range of WBL subcomponent indices across South Asian countries for 2024. Yellow whiskers represent the interquartile range of other EMDEs.

C. Bars show values of the WBL gender equality legal index in 1990, and diamonds in 2024. EMDE average is weighted using working-age population.

D. Blue bars show range of the change in WBL subcomponent indices across South Asian countries from 1990 to 2023. Yellow whiskers represent the interquartile range of other EMDEs.

E. Bars show coefficients from a regression of female labor force participation (FLFP) on the WBL legal index for 119 countries in 2020, with and without controls for log GDP per capita and its square (annex table 2.8). Estimates reflect the change in FLFP from a one-unit change in the legal index. The FLFP rate is the share of the female (male) working-age population (15–64 years old) employed or looking for work, measured using International Labour Organization’s ILOStat modeled data.

F. Bars show actual female labor force participation for 2020; diamonds show the labor force participation rate predicted from the regression in E, controlling for log GDP per capita and its square.

entitlement to a passport is identical to that of a man, whereas the *de facto* index assesses whether the application process—the application forms, the office where the forms have to be presented, and other practical details, such as any requirement to have an assenting signature by the spouse—is the same for men and women. For both indexes, high values represent high gender equality. Most South Asian countries (with the exceptions of India and Nepal) rank in the lowest quartile of EMDEs ranked in terms of both protective *de jure* provisions and the gender-equality of the *de facto* framework (figure 2.14).

Social norms

Findings from the literature. Social norms may be defined as informal rules that embody beliefs about which behaviors are approved or disapproved in a specific context by a given social group. These norms and specifically those linked to gender roles—which portray women as homemakers and men as breadwinners—have been linked the non-participation of women in economic activities (Akerlof and Kranton 2000; Andreoni and Bernheim 2009 Bénabou and Tirole 2006; Bussolo et al. 2024). A large literature has traced the origin of social norms to historical and evolutionary pressures (annex 2.4). Several studies have identified long-run relationships between the historical conditions that determined gender roles, the formation of social norms, and the effects of these norms on contemporary female labor force participation (Alesina, Giuliano, and Nunn 2013; Carranza 2014). Other studies, using the so-called epidemiological approach, have shown that social norms can affect female labor force participation in modern labor markets. Focusing on immigrants in the United States, these studies have found that labor force participation rates among second-generation women are strongly correlated with female labor force participation of their parents’ country of origin (Antecol 2000; Blau, Kahn, and Papps 2011; Fernández and Fogli 2009). Increasing women’s economic empowerment by improving access to finance can liberalize gender norms and can result in more female employment outside the home (Field et al. 2021).

Personal beliefs and social expectations in South Asia. South Asia has some of the most conservative personal beliefs and social expectations among EMDEs. The World Bank-Facebook Survey on Gender Equality at Home offers individual-level data for 120 countries in 2020-21 on personal beliefs and social expectations, including five South Asian countries.

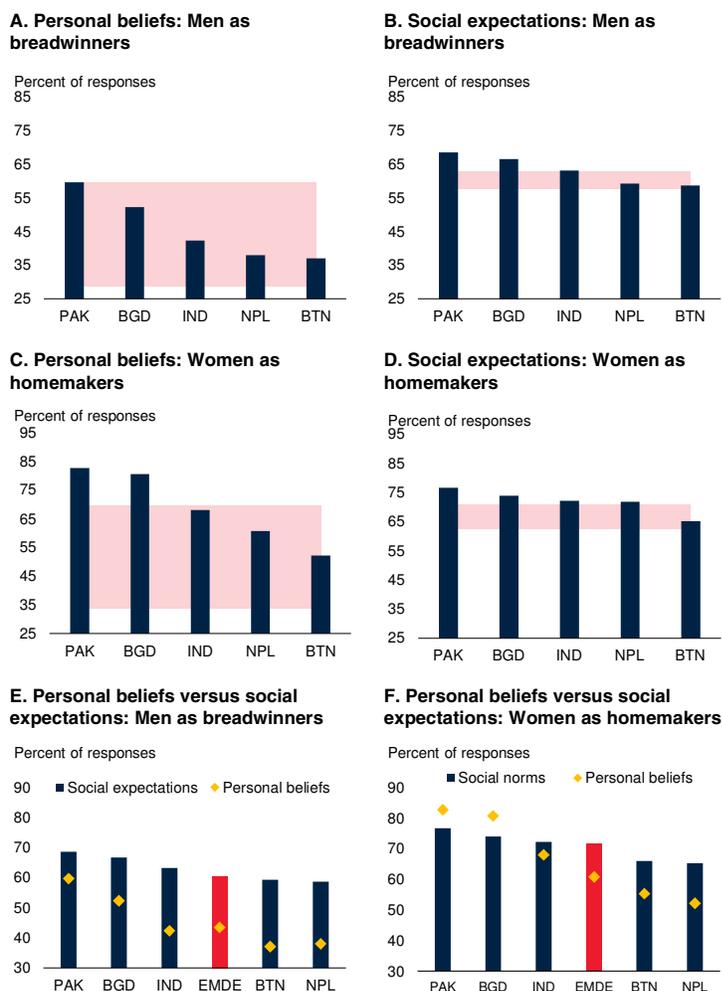
- *Conservative personal beliefs* are measured using agreement, or strong agreement, with the statement that men are responsible for household expenses (male breadwinner norm) and that women's most important role is to take care of the home and children (female homemaker norm).
- *Conservative social expectations* are measured using the answers on the perceived share of neighbors who agree with these statements.

Most South Asian countries rank above the EMDE average on these measures (figure 2.15). For social expectations of the female homemaker, all countries except Bhutan rank in the top quartile of EMDEs ranked by conservatism. As in other regions, personal beliefs tend to be less conservative than social expectations, but this gap is somewhat smaller in South Asia than elsewhere, especially for the female homemaker norm. Bangladesh and Pakistan have the most conservative social expectations, and personal beliefs; Bhutan and Nepal the least conservative.

Social norms and *de jure* laws. Social norms are shaped by, and shape, *de jure* legal rights—but also have effects independent of the law (box 2.1). Evidence on the influence of laws on female participation was discussed earlier. Extending this analysis, regressions are used to estimate the cross-country correlation between female labor force participation rates and both *de jure* legal rights and social norms, controlling for per capita GDP (annex table 2.8). The coefficient estimates suggest that female labor force participations rates were 8.3 percentage points higher in the top than in the bottom quartile of EMDEs ranked by *de jure* legal gender equality, and 3 percentage points higher in the top than in the bottom quartile of EMDEs ranked by social expectations (figure 2.16). Indeed, the impact of social norms on female labor force participation has also been documented at the household level. Novel data from Nepal confirm

FIGURE 2.15 Social norms

South Asian countries have some of the most conservative personal beliefs and social expectations among EMDEs. Gaps between personal beliefs and social norms are smaller in South Asia than in other EMDEs.



Sources: World Bank-Facebook Survey on Gender Equality at Home; World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan.

A.C. Data for 120 countries for 2020. Data on Maldives and Sri Lanka are not available. Bars show averages of the shares of the population that agree with either the male breadwinner (A) or female homemaker (C) norm. The shaded region represents the interquartile range for other EMDEs. The EMDE average is weighted by working-age population.

B.D. Data for 120 countries for 2020. Data on Maldives and Sri Lanka are not available. Bars show average responses of the share of other people in the country that the respondent thinks hold either the male breadwinner (B) or female homemaker (D) belief. The shaded region represents the interquartile range for other EMDEs. The EMDE average is weighted by the working-age population.

E.F. Social norms are the beliefs about others' attitudes from B and D. Personal beliefs are individual survey attitudes from A and C.

that both conservative social expectations and conservative personal beliefs were associated with a lower probability that women work outside the home. Social norms may also be at the root of the marriage penalty for South Asian women (box 2.2). The share of employed women, once married, even without children, falls by 12 percentage points, whereas the share of employed men after marriage rises by 13 percentage points.

BOX 2.1 The role of laws, beliefs, and social expectations in labor markets^a

Both restrictive laws and conservative social norms depress female labor force participation. In part, this may result from weak implementation of de jure rights because of more conservative personal beliefs and, particularly, social expectations.

Introduction

Laws shape not only labor market outcomes but also social norms. Several studies provide empirical evidence that laws can causally influence social norms across various contexts. Experiments conducted in multiple countries indicate that laws can influence social norms by shaping both people's beliefs about others' behavior and their views on what actions are socially appropriate (Albiston and Correll 2024; Eisner, Turner-Zwinkels, and Spini 2021; Lane, Nosenzo, and Sonderegger 2023). In many low- and middle-income countries, policies aimed at enhancing paid maternity leave have been shown to promote more egalitarian gender norms related to work and household decision-making (Chai et al. 2022). Similarly, lockdown laws during the COVID-19 pandemic drastically shifted perceptions of norms around social distancing behaviors in the United Kingdom (Galbiati et al. 2021). In countries with more cohesive social norms and higher trust in health authorities, vaccine acceptance was less sensitive to changes in lockdown laws than elsewhere (Bussolo, Sarma, and Torre 2023). The ability of laws to shift attitudes appears to depend on how deeply ingrained these attitudes are in social norms.

The converse can also be true; that is, social norms can shape laws and likely also affect their implementation. This is perhaps most evident when laws conflict with deeply entrenched norms. In parts of Pakistan, for instance, domestic violence laws that clashed with prevailing conservative gender attitudes led to an increase rather than a decrease in domestic violence (Gulesci, Leone, and Zafar 2024). In the United States, social policy laws, such as language prohibitions for immigrant children in U.S. schools after the First World War, induced backlashes that strengthened minority groups' cultural identity, the opposite of the law's intent (Fouka 2020; Wheaton 2020). In fact, the rule of law itself can serve as a social norm that connects society's formal institutions with its informal ones (Licht 2008).

^a This box was prepared by Maurizio Bussolo, Lynn Hu, and Jonah Rexer.

Questions. This raises the question of the relative role of social norms and legal protection of rights in determining labor market outcomes. This box addresses two questions:

- Do laws and social norms have an influence, independent of each other, on female labor force participation?
- Is there an interaction effect and, specifically, do social norms affect the implementation of laws?

Contributions. The box is the first attempt to quantify the relative role of social expectations, personal beliefs, and legal rights in determining female labor force participation rates across countries. The existing literature has established that each of these factors matters for labor market outcomes, but no previous studies have compared their relative impacts.

Main findings. This box offers two new findings:

- Restrictive laws and conservative social expectations independently depress female labor force participation. In contrast, conservative beliefs at the individual level that differ from broader social expectations are not associated with significantly lower female participation.
- Both conservative personal beliefs and conservative social expectations are associated with weaker *de facto* economic rights for women. In South Asia, the contribution of social expectations is stronger than that of personal beliefs.

Data and methodology

Data source. The Facebook (2020) Survey on Gender Equality at Home was conducted in collaboration with Facebook, CARE, Ladysmith, the World Bank, and UNICEF. This survey was rolled out in 2020 and 2021 through Facebook's online platform, which invited Facebook users across 208 countries, islands, and territories to participate. Results of this large-scale survey were weighted to represent the online population in each country or region (not just the Facebook user

BOX 2.1 The role of laws, beliefs, and social expectations in labor markets (continued)

population). One advantage of this survey method is its extensive reach and the ability to collect valuable information in regions where organizing household surveys is difficult due to conflict or logistical barriers. This box used the 2020 survey round, which received more than 461,000 complete responses from 126 locations around the world. The survey questions used in the analysis are listed below.

i) Female Homemaker:

- **Personal belief:** 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.”
- **Social expectation:** 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?

ii) Male Breadwinner:

- **Personal belief:** 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.”
- **Social expectation:** 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?

Definition of social expectations and personal beliefs.

For the analysis in this box, national and regional averages are calculated for personal beliefs and social expectations regarding the normative statements above. Surveyed individuals can answer questions about their personal beliefs on a five-point Likert scale, with five potential responses: strongly agree, agree, neutral, disagree, and strongly disagree. The share of respondents who agree or strongly agree with the two normative statements measures the percentage of the population that believes in the statement. Social expectations are measured by the responses to the two questions about neighbors’ views. Social expectations are calculated as the average share of neighbors that respondents believe agree with the normative statements.

Methodology: Relative role of legal rights, social expectations, personal beliefs. To establish the link

between female labor force participation and its three potential drivers—legal rights, social expectations, personal beliefs—a linear regression is estimated using cross-country data for 2020:

$$FLFP_c = \alpha + \beta_1 Socialexpectation_c + \beta_2 Personalbelief_c + \beta_3 laws_c + \beta_4 \log GDP_c + \beta_5 (\log GDP_c)^2 + u_c$$

where the dependent variable $FLFP_c$ is the female labor force participation rate for each country c measured by the modeled estimate of the International Labour Organization’s *ILOstat* database, which is the share of the female population aged 15 to 64 years who are in the labor force. The conservative $Socialexpectation_c$ is measured as the average share of neighbors that respondents believed agreed with the statement that household expenses are the responsibility of the man, even if his wife can help him. Conservative personal beliefs $Personalbelief_c$ are measured as the share of respondents that agreed, or agreed strongly, with the statement that household expenses are the responsibility of the man, even if his wife can help him. The regression controls for the U-shaped relationship between female labor force participation and GDP per capita (at 2015 prices and market exchange rates) from the World Bank’s World Development Indicators.

Methodology: Social norms and implementation of the law. A cross-country linear regression is conducted for 118 countries in 2024 to estimate the correlation between the implementation gap and the strength of conservative social expectations and conservative personal beliefs. The implementation gap is defined as 100 minus the *de facto* Supportive Framework Index of the World Bank’s Women, Business, and the Law database. The regression controls for general government effectiveness, as measured by the Government Effectiveness index from the World Bank’s Worldwide Governance Indicators database.

The role of laws, social expectations, and personal beliefs

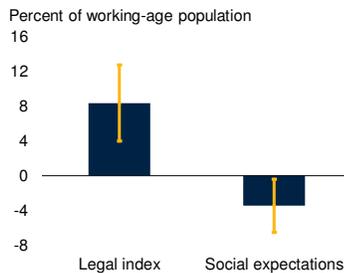
Results. A strong correlation is found between female labor force participation and laws, as well as between female labor force participation and social norms (annex table 2.8). Conservative personal beliefs, however, are not significantly correlated with female labor force participation once laws and norms are controlled for.

BOX 2.1 The role of laws, beliefs, and social expectations in labor markets (continued)

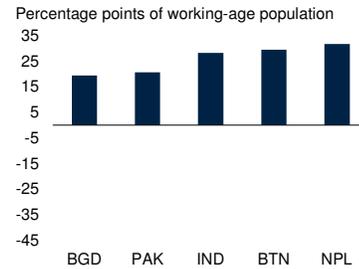
FIGURE B2.1.1 The role of laws, social expectations, and personal beliefs

In South Asia, conservative social expectations depress female labor force participation more than the lack of legal rights or conservative personal beliefs.

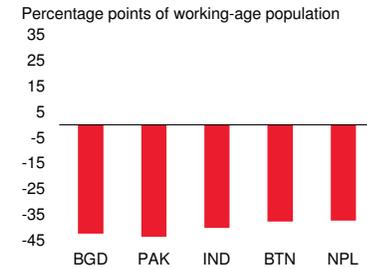
A. Female labor force participation gap by social expectations and legal rights: Bottom vs. top quartile of EMDEs



B. Contribution of legal framework to predicted female labor force participation rates



C. Contribution of social expectations to predicted female labor force participation rates



Sources: ILOstat (International Labour Organization); World Bank-Facebook Survey on Gender Equality at Home; Women, Business, and the Law (World Bank); World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; NPL = Nepal; PAK = Pakistan. "Legal index" stands for index of legal framework. "Social norms" is the average share of people who believe that their neighbors agree that men are responsible for household expenses even if women can help.

A. Chart shows the difference in regression-predicted female labor force participation rates between the top and bottom quartiles of EMDEs, based on the *de jure* legal index or by social expectations, controlling for log GDP per capita and its square. Estimates are based on data from 119 countries (91 EMDEs) in 2020, using regression results from column (3) of annex table 2.8. The female labor force participation (FLFP) rate represents the share of the female working-age population (15–64 years old) employed or looking for work, measured using ILOstat modeled data.

B. C. Chart shows contributions of legal index (B) and social expectations (C) to predicted FLFP, controlling for log GDP per capita and its square. Predicted contributions are formed by multiplying the coefficient on each variable with the level of that variable for each country. Estimates are based on regression results from column (3) of annex table 2.8, using 2020 data. The FLFP rate is the share of the female (male) working-age population (15–64 years old) employed or looking for work, measured using ILOstat modeled data.

- **Role of laws.** Applying the regression coefficients to the social norms or legal indices of the top and bottom quartile of EMDEs for each measure yields a predicted difference between the two quartiles (figure B2.1.1). Predicted female labor force participation rates are 8.4 percentage points higher in the quartile of EMDEs with the least restrictive laws than in the quartile with the most restrictive laws.
- **Role of social expectations.** Differences also emerge for social expectations: predicted female labor force participation rates are 3.5 percentage points lower in the quartile of EMDEs with the most restrictive expectations than in the quartile with the least restrictive expectations.

Country example. As an example, Bangladesh's female labor force participation rate is 39 percent. Based solely on its level of development and the U-shaped cross-country pattern that determines the relationship between development and female labor force

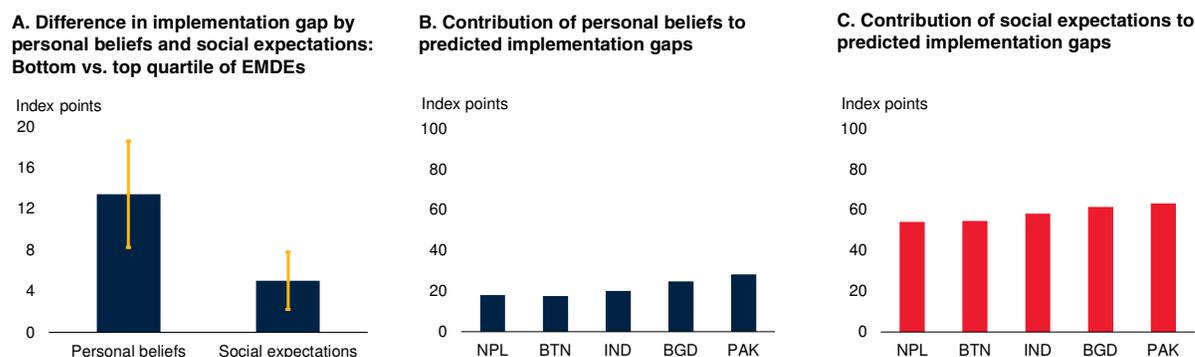
participation, Bangladesh's female labor force participation rate would be expected to be 52 percent. When social norms are accounted for, the predicted female labor force participation falls to 45 percent, and when the legal protections are also factored in, the final prediction of the female labor force participation rate is 40 percent—very close to Bangladesh's actual rate of 39 percent. For other South Asian countries, the regression leaves a somewhat larger share of female labor force participation unexplained.

Social norms and implementation of laws

Results. Both more conservative personal beliefs and more conservative social expectations are associated with weaker *de facto* legal rights, as measured by a lower index for supportive frameworks (annex table 2.9). This association holds for both the male-breadwinner and the female-homemaker beliefs and norms. Globally, personal beliefs are more powerful than social expectations in determining female labor force participation—unlike in South Asia.

BOX 2.1 The role of laws, beliefs, and social expectations in labor markets (continued)**FIGURE B2.1.2 The role of law implementation, social expectations, and personal beliefs**

In South Asia, conservative social norms dampen the implementation of laws more than conservative personal beliefs.



Sources: Women, Business, and the Law (World Bank); World Bank-Facebook Global Gender Equality Survey; World Development Indicators (database); World Governance Indicators (database); World Bank.

Note: EMDEs = emerging market and developing economies. BGD = Bangladesh; BTN = Bhutan; IND = India; NPL = Nepal; PAK = Pakistan. Charts show implementation gap, which is defined as 100 minus the de facto index of supportive framework of the Women, Business and the Law 2024 database. "Social expectations" is the average share of neighbors agreeing that men are responsible for household expenses even if women can help. "Personal beliefs" is the average share of respondents agreeing, or agreeing strongly, to the same statement.

A. Chart shows the difference in regression-predicted implementation gap (measured as index points) between the top and bottom quartiles of EMDEs by personal beliefs or by social expectations, controlling for government effectiveness, log GDP per capita, and its square. Based on regression estimates in column (2) and (4) of annex table 2.9. All data except for the implementation gap (2024 data) come from year 2020 and are available for 91 EMDEs (including SAR countries).

B. C. Chart shows contributions of personal beliefs (B) and social expectations (C) to predicted female labor force participation, controlling for government effectiveness, log GDP per capita, and its square. Predicted contributions are formed by multiplying the coefficient on each variable with the level of that variable for each country. Estimates are based on regression estimates in column (2) and (4) of annex table 2.9. All data except for the implementation gap come from year 2020.

- **Role of personal beliefs.** Predicted implementation gaps are 13.4 index points wider in the quartile of EMDEs with the most conservative personal beliefs than in the quartile with the least conservative beliefs.
- **Role of social expectations.** Similarly, predicted implementation gaps are 5 index points wider in the quartile of EMDEs with the most conservative social expectations than in the quartile with the least conservative social expectations (figure B2.1.2).
- **Relative roles in South Asia.** However, in South Asia, social expectations contribute more to implementation gaps than personal beliefs. Across five South Asian countries (Bangladesh, Bhutan, India, Nepal, and Sri Lanka), the contribution of conservative social expectations to the predicted implementation gap is two to three times higher than that of personal beliefs (figure B2.1.2).

Country example. Consider the difference in implementation between Pakistan and Colombia. Pakistan ranks among the lowest South Asian countries

in terms of both *de facto* women's rights and social expectations. It also ranks in the most conservative quartile of EMDEs in terms of social expectations and personal beliefs. In contrast, Colombia ranks in the top quartile of EMDEs in terms of *de facto* women's rights and in the quartile of EMDEs with the least conservative social expectations and personal beliefs. The regression (annex table 2.9) suggests that differences in personal beliefs and social expectations account for 43 and 59 percent, respectively, of the difference in *de facto* women's rights between Pakistan and Colombia.

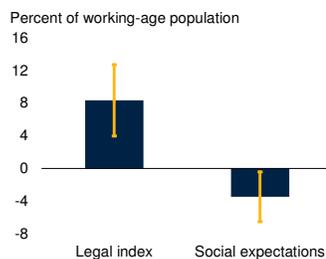
Conclusion

Conservative social norms and restrictive laws depress female labor force participation independently of each other. In addition, social norms can inhibit the laws' *de facto* impact. This suggests that efforts to pass laws protecting women's rights are most likely to succeed when supported by social norms.

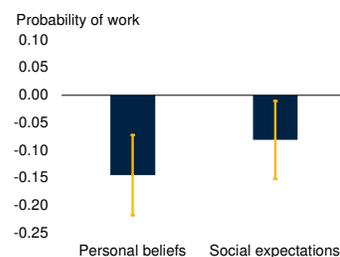
FIGURE 2.16 Legal restrictions, social norms, and female labor force participation

More conservative social expectations, in addition to more restrictive laws, depress female labor force participation.

A. Difference in female labor force participation between bottom to top quartile of EMDEs, by social expectations or de jure legal gender equality



B. Household survey, Nepal: Impact of social norms on probability of women's work



Sources: Bussolo et al. (forthcoming); International Labour Organization (ILO); World Bank Women, Business, and the Law (database); World Development Indicators (database); World Bank.

Note: EMDEs = emerging market and developing economies.

A. Bars show the difference in regression-predicted female labor force participation rates between the top and bottom quartiles of EMDEs by de jure legal index or social expectations, with 95 percent confidence intervals. Regression coefficients are from column (3) of annex table 2.8. All data are from the year 2020 and include 91 EMDEs (including SAR countries). The female labor force participation rate is the share of the female (male) working-age population (15–64 years old) employed or looking for work, measured using International Labour Organization's ILOStat modeled data.

B. Based on Bussolo et al. (forthcoming) survey on social norms. The sample consists of 1,150 individuals in Nepal. Bars show the impact of a one standard deviation increase in social expectations/beliefs around gender roles on the probability of women working, with 95 percent confidence intervals. Regressions models control for socioeconomic status, province fixed effects, and enumerator fixed effects.

Social norms and *de facto* implementation of laws. Just as social norms shape *de jure* legal rights, they also shape the *de facto* implementation of legal rights (box 2.1). A cross-country linear regression is used to estimate the correlation of the implementation gap—the deviation of the supportive framework index from its maximum—with the strength of conservative social expectations and personal beliefs. Implementation gaps are found to be significantly wider in the quartile of EMDEs with the most conservative social norms than in the quartile with the least conservative norms. The difference is particularly pronounced for social expectations and is equivalent to about one-quarter of the implementation gap in the average EMDE.

Policy implications for South Asia

The wide range of factors that have contributed to South Asia's exceptionally low female labor force participation rates suggest that a comprehensive policy packages, tailored to conditions in individual countries, would be needed to meaningfully lift participation rates. Policies in general should avoid side-effects that are harmful to female participation, like disadvantaging sectors, locales, or contractual arrangements that disproportionately attract female employees or, if such side-effects are unavoidable, seek to take offsetting action. Additionally, policies would need to remove obstacles and deterrents to women's employment. Policy changes are more likely to be effective if they are transparent, minimize labor market frictions, and are accompanied by a shift toward less conservative social norms.

Labor demand

Efficient capital markets. Strong investment growth is key to absorbing new female workers in productive employment. Reforms that improve the functioning of credit market and raise productivity will have the added benefit of improving prospects of female workers if and when constraints on their participation are relieved.

Trade openness and competitiveness. Women tend to account for a larger share of employment in export sectors and export-oriented regions. South Asia remains one of the world's least integrated regions (box 1.1). Increased trade integration could therefore bring more women into the workforce. In the short run, however, it may trigger job losses among firms that are not sufficiently competitive. Evidence suggests that such job losses from import competition may disproportionately affect women, implying tradeoffs to increased openness. To reduce disruptions caused by this process, policies can encourage the swift reallocation of worker toward more productive jobs and accelerate firms' growth (chapter 1).

BOX 2.2 The marriage penalty in South Asia^a

Marriage reduces women’s labor force participation in South Asia—a phenomenon known as the “marriage penalty.” Married men, on the other hand, enjoy a marriage premium in the labor market. Education can mitigate a woman’s marriage penalty.

Introduction

The persistence of traditional roles of women and men in society is reflected in gender inequality in labor force participation. In South Asia, marriage reduces women’s participation—a phenomenon dubbed the marriage penalty—while men enjoy a marriage premium. Recent research shows that the unequal burdens of childbearing and childrearing play an outsized role in explaining these labor market gender gaps. The child penalty refers to the negative effects parenthood has on women relative to men in the labor market. Sharp changes in the outcomes of women relative to men around the birth of the first child explain a substantial share of gender inequality in the labor market (Kleven et al. 2019). Women spend more time on unpaid care and domestic work, including childrearing. In Asia, women spend around five times more hours than men on these tasks (Van der Gaag et al. 2019). It is therefore unsurprising that childrearing continues to be a major obstacle to women’s labor force participation in South Asia.

However, even among childless women, deeply entrenched gender norms around women’s household roles may limit labor market participation (Jayachandran 2021). Specifically, women may experience a marriage penalty in labor force participation following marriage but even before childbearing. Such a penalty might arise if conservative gender norms put limits on married women’s mobility outside the house, or if women aim to signal their compliance with such norms by reducing labor force participation. Unlike the child penalty, which may be driven in part by women reallocating their efforts to valuable care work, the marriage penalty represents pure misallocation of labor by preventing women from realizing their labor market potential. However, by encouraging women to return to the labor market and by engendering more liberal social attitudes, education can serve as a mitigating factor against the marriage penalty.

Questions. Using nationally representative data from four countries in South Asia, this box examines the following questions:

- Is there a marriage penalty for women in South Asia?
- What is the role of education as a potential mediating channel?

Contributions. This box contributes to the literature on the role of gender norms in female labor force participation. In settings with very traditional gender roles, spousal disagreement over the provision of the household public good can arise (Bertrand et al. 2016; Fernandez, Fogli, and Olivetti 2002). This intra-household disagreement may be particularly evident in childrearing. Child penalties have been documented in high- and lower-income settings with magnitudes as low as zero in some East Asian countries and 64 percent in a Middle Eastern country. The magnitude of the child penalty is generally higher in places with more traditional gender roles (Kleven 2022; Kleven, Landais, and Leite-Mariante 2023; Kleven, Landais, and Søgaaard 2019). However, before childrearing, marriage might independently affect female labor force participation in settings with deeply entrenched gender norms. The marriage penalty is investigated by Kleven, Landais, and Leite-Mariante (2023) for several advanced and developing economies. This box is the first to explore marriage penalties for women in South Asia and to test whether education can mitigate the marriage penalty. The results suggest that, unlike in advanced economies, in South Asia, marriage penalties vastly outweigh child penalties in depressing female employment.

Main findings. The main findings of this box are as follows.

- Women’s employment rates drop 12 percentage points following marriage, while men’s rise 13 percentage points in South Asia.
- Women with more than secondary schooling or who married men with more than secondary schooling are less likely to be affected by the marriage penalty, suggesting that education has a role in mitigating the marriage penalty for women.

^a This box was prepared by Jonah Rexer and Margaret Triyana.

BOX 2.2 The marriage penalty in South Asia (continued)

Methodology

Data. This analysis used data from the Demographic and Health Survey (DHS) from Bangladesh, India, Maldives, and Nepal. These nationally representative surveys form a repeated cross section of women between the ages of 15 and 45 (i.e., their peak reproductive years). The DHS data include information on women's age, education, urban residence, employment status, marital status, age at marriage, and birth history. The DHS in these countries also surveys the women's husbands and other household members. The men's sample includes information on age, education, marital status, and employment status.

Estimation. Following Kleven et al. (2019), the analysis compares the labor market outcome of cohorts of women before and after marriage by creating pseudo cohorts. The procedure matches observations of married women to unmarried women with the same demographic characteristics, who serve as the pre-marriage counterfactual. A married woman is matched to a surrogate unmarried, younger woman in the same survey wave with the same education and rural or urban residence. A similar procedure is used in the post-marriage space. A married woman is matched to a surrogate older, married woman with the same demographic characteristics who married at the same age as the reference woman. The pseudo cohort's labor force participation is then estimated before and after marriage for a symmetric 10-year window around the year of marriage. Methodological details can be found in Bussolo, Rexer, and Triyana (2024). A similar estimation is conducted for men's labor force participation before and after marriage. A negative estimate is consistent with a marriage penalty and a positive estimate is consistent with a marriage premium. Because women tend to have children shortly after marriage, women's marital status can affect their labor market outcome—either through childrearing itself or as a result of gender norms even in the absence of children. To separate these mechanisms, the post-marriage matching pool is restricted to women without children as of year t after marriage.

Marital status and labor force participation

On average, post-marriage South Asian female employment rates drop by 12 percentage points, about one third of the female pre-marital employment rate—even in the absence of children. The marriage penalty ranges from not statistically significant in Nepal to 12 percentage points in India and Maldives. This marriage penalty among married women without children persists up to five years after marriage in India and Maldives (figure B2.2.1). Conversely, men in South Asia are 13 percentage points more likely to be employed after marriage, which represents about 19 percent of the 69 percent male pre-marital employment rate. This is similar to the marriage premium on earnings in the United States (Hersch and Stratton 2000). The estimated premiums for men range from 13 percentage points in India and Nepal to 17 percentage points in Bangladesh and Maldives. These findings suggest a marriage premium for men that generally diminishes five years after marriage and a marriage penalty for women that persists. When the sample also includes women with children, female employment penalties rise slightly, reflecting the additional role of the child penalty. However, the vast majority of the post-marriage employment decline can be explained by the marriage penalty alone. This echoes results from Abraham et al. (2021), who find minimal evidence of a child-employment penalty in India.

The role of education

Education interacts with other aspects of human capital and affects labor market outcomes (Heath and Jayachandran 2016). More-educated women have better labor market opportunities and perhaps greater household bargaining power, which raises the opportunity cost of the marriage penalty. At the same time, holding the wife's education constant, more-educated husbands may have more liberal social attitudes, which also mitigates the marriage penalty.

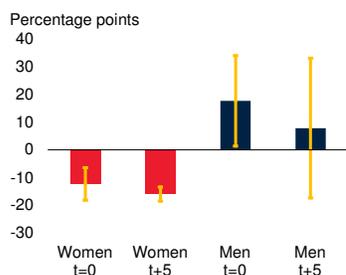
Women with more than secondary school are less affected by the marriage penalty in Bangladesh, India, and Nepal (figure B2.2.1). Similarly, a husband's higher education also mitigates a woman's marriage penalty in Bangladesh and India. A marriage market in which

BOX 2.2 The marriage penalty in South Asia (continued)

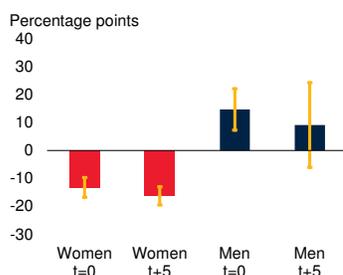
FIGURE B2.2.1. Marriage penalties and premiums

South Asian women face a marriage penalty in the labor markets, men a marriage premium. Better-educated women married to better-educated husbands experience a smaller marriage penalty in employment.

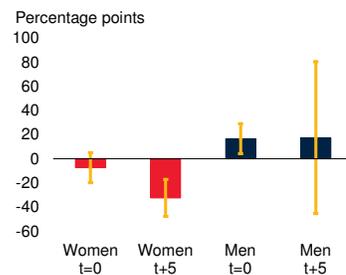
A. Difference in the share of women and men employed after marriage: Bangladesh



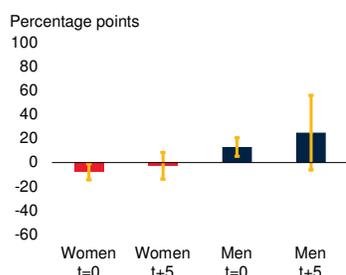
B. Difference in the share of women and men employed after marriage: India



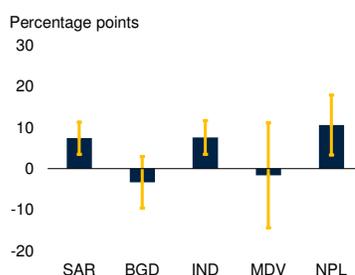
C. Difference in the share of women and men employed after marriage: Maldives



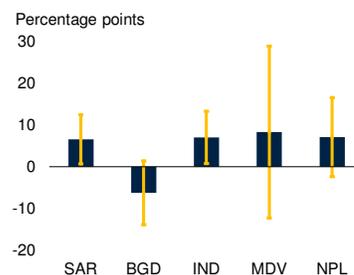
D. Difference in the share of women and men employed after marriage: Nepal



E. Difference in the share of women employed after marriage by women's education



F. Difference in the share of women employed after marriage by husbands' education



Sources: Demographic and Health Survey (DHS); World Bank.

Note: BGD = Bangladesh; IND = India; MDV = Maldives; NPL = Nepal; SAR = South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). Sample consists of women and men without children. Data on women from the following DHS are used: Bangladesh 1993, 1999, 2004, 2007, 2014, and 2017; India 1993, 1998, 2005, 2015, and 2019; Maldives 2009 and 2016; and Nepal 1996, 2001, 2006, 2011, 2016, and 2022.

A.–D. $t=0$ refers to the year of marriage; $t=5$ refers to five years after marriage. Estimates are from an event-study regression, with methodological details Bussolo, Rexer, and Triyana (2024). Whiskers show the 95 percent confidence interval.

E. Bars show the coefficients on the interaction terms between an indicator for women's higher education and an indicator for post-marriage. Whiskers show the 95 percent confidence interval.

F. Bars show the coefficients on the interaction terms between an indicator for husband's higher education and an indicator for post-marriage. Whiskers show the 95 percent confidence interval.

women with more education would marry men with more education likely plays a role in lowering the marriage penalty for women with more education (Becker 1993). Indeed, about 70 percent of women with more than secondary schooling are married to men with the same level of education. Even when controlling for husbands' education, a woman's educational attainment remains a significant mitigating factor for the marriage penalty. These results suggest the role of education for both men and women to mitigate the marriage penalty for women.

Conclusion

Studies show the importance of child penalties in gender inequality in labor market outcomes. Even without considering children, there is evidence of a marriage penalty for women South Asia. The result is consistent with gender norms in South Asia as a source of misallocation. Increased education for both men and women could mitigate the marriage penalty for women, helping them realize their labor market potential.

Urbanization. Women enjoy better wages and higher returns to education in urban areas. However, gender discrimination is still widespread among urban employers and urban labor markets can tighten the constraints imposed by conservative social norms. Hence, urbanization is more likely to raise female labor force participation if accompanied by rapid job creation and the removal of other obstacles to women's participation.

With the objective of boosting labor demand, the World Bank is working on a 'job accelerator' initiative. This is a supporting program which will focus on identifying and removing obstacles to job creation in sectors with high job-growth potential, complementing the above described economy-wide approaches.

Labor supply

Safe transport and workplaces. Poor safety in transit to and from work, particularly in urban areas, has been shown to reduce women mobility and their labor force participation across South Asia (Buchmann, Meyer, and Sullivan 2023; Field and Vyborny 2022; Kotikula, Hill, and Raza 2019). Improving public safety and reducing gender-based violence more broadly can also affect labor markets (Amaral et al. 2023; Siddique 2022). Inadequate workplace safety, including harassment and gender discrimination, can also constrain female labor supply, though data on the prevalence of workplace harassment is limited. Robust enforcement of existing labor and anti-harassment laws to protect women at work can help make workplaces more female-friendly.

Affordable childcare. In addition to marriage penalties, South Asian women face child penalties. In fact, marriage penalties themselves may reflect expected childbearing and child penalties. Expanded access to high-quality childcare could entice women to remain in the labor market throughout the family formation process. However, recent evidence on the effectiveness of childcare provision in promoting female labor force participation in South Asia is weak, suggesting multiple constraints may need to be lifted at once.

Home-based work. If such constraints as lack of safe transport and restrictive social norms have to be taken as given, at least in the short term, jobs that women can do from home may offer more feasible possibilities for participation. In one study, when Indian women were offered home-based work options, their willingness to take up employment more than doubled, in contrast to negligible take-up of high-wage job offers even within a five-minute commute of home (Jalota and Ho 2024). These results suggest that the introduction of remote-work arrangements may benefit both firms and female participation, and that policies that increase awareness of this possibility among firms may bring significant benefits.

Labor market frictions

Signaling. Policies that improve women's ability to signal their capabilities to employers may help reduce hiring discrimination, particularly when the information provided by education metrics is weak. Apprenticeships, training, certifications, and improving access to references have all been shown to be effective in relieving information asymmetries disfavoring women.

Digitization. Digital platforms can help women in job search by providing information about employment opportunities, safety, and working conditions. Digital intermediation platforms or other forms of increasing transparency in the labor market can help improve the search and matching process and boost female employment. Digital platforms can also facilitate more flexible work arrangements. However, such platforms can only play an important role in settings with high literacy and mobile phone penetration.

Laws and norms

Laws and their implementation. Implementation of gender equality legislation has been uneven across South Asia, and improving its enforcement would enhance the economic empowerment of women. For example, enforcing existing laws against street harassment could improve the safety of public spaces for women and facilitate greater mobility and access to job opportunities (Amaral

et al. 2023). Similarly, stronger implementation of existing labor laws could reduce gender discrimination in the hiring process (annex 2.3).

Social norms. Policies are likely to be more effective if accompanied by less conservative social norms. In some countries, the gap between personal beliefs and social expectations suggests that steps to correct misperceptions of social expectations can help boost female participation. This has been demonstrated in Saudi Arabia in the context of its comprehensive overhaul of women’s economic role (Bursztyrn et al. 2020). Direct interventions to improve women’s economic empowerment, such as increasing their financial inclusion, can also shift gender norms around women’s work (Field et al. 2021). Digital finance can play a particularly important role by separating women’s finances from the claims of other household members (Riley 2024).

Quotas and role models. Social norms are transmitted not only through peer groups but also via role models. The system of gender-based political quotas in India that “reserves” certain local elections for female candidates has been shown to improve gender norms and increase female employment through role model effects (Beaman et al. 2009; Deininger et al. 2022; Pande 2003). Such quotas can meaningfully shift norms and increase female labor force participation when women are poorly represented in public life.

Annex 2.1 Data

Data on labor force participation, individual demographics, education, sector of work, occupation, and wages come from the World Bank’s Global Labor Database (GLD). The GLD harmonizes periodic labor force survey microdata across a variety of indicators, countries, and periods. GLD data are compiled for Bangladesh, India, Nepal, Pakistan, and Sri Lanka. These countries form the core of the labor market analysis in this chapter. GLD data are available for these countries over the period of 1983–2022, although coverage is not uniform. Each country has, on average, one survey every three years. A full list of GLD surveys is available in annex table 2.1. For Bangladesh, 2022 data come from the World Bank’s South Asia Region Labor Database (SARLD). SARLD is a

similar but smaller harmonized Labor Force Survey database than GLD, prepared by the World Bank South Asia Poverty and Equity Data Lab. Throughout the report, when using harmonized GLD microdata, participation is defined using current weekly status and the working-age population is the 15–64 age range.

Cross-country data on labor force participation, per-capita income, governance, urbanization, labor market structure, and other comparable cross-national indicators come from the World Development Indicators (WDI) produced by the World Bank. The model-based estimates from the International Labour Organization (ILO) are used to extend the data to 2023. A global sample of 209 countries from 1990–2023 is used in all cross-country analysis. These ILO modeled estimates of country-level labor force participation rates are used where appropriate throughout this report to facilitate standardized comparisons across countries and over time, as well as to allow for a common time period of study. ILO estimates use current weekly status to measure labor force participation, and either 15+ or 15–64 age ranges, as indicated in figure notes. ILO modeled estimates may differ, in some cases substantially, from national estimates, which often use varying definitions and methodologies, some of which even change within countries over time (annex table A2.1.1).

Trade data on product-specific imports and exports for all South Asian countries come from the United Nations Comtrade. The annual data spans the period 1996–2021, with gaps.

Data on the legal framework come from the Women, Business, and the Law (WBL) initiative at the World Bank. Composite indices on gender equality in the legal framework, as well as de facto implementation of gender-equal laws, are available for 190 countries from 1971–2024.

Data on social norms come from several sources. The 2020 World Bank-Facebook Survey on Gender Equality at Home provides a cross-section of country-level survey data on attitudes across a variety of gender-related questions. These data are available for 120 countries, including all of the South Asian countries, and is representative of urban-rural and gender cells.

Facebook data were collected from surveys of platform users and weighted to be representative of the online population. However, individuals without internet access are not represented. Microdata on social norms in Nepal come from Bussolo et al. (2024). Additional information on gender attitudes and norms is also taken from the World Values Survey (WVS) and the Demographic and Health Surveys (DHS) from the U.S. Agency for International Development.

Data on marriage and employment come from the DHS for India, Maldives, Bangladesh, and Nepal. The dataset spans the period 1993–2022. On average, each country has one survey every five years.

Annex 2.2 Assessing the effect on GDP of raising female labor force participation

Two main approaches are used to estimate the effect on GDP of an increase in female labor force participation (for a summary see annex table A2.2.1). The first involves using a production function embedded in a growth model and simulating the impact of the entry of additional women into the labor market. Variants of this approach consider whether physical capital adjusts, the disaggregation of the economy to include different sectors and different skills, and how the technology combines different factors. A final variant of this first approach uses the potential growth approach and is described in detail in Celik, Kose, and Ohnsorge (2023).

The second approach mimics an occupational choice model similar to the Roy model and relies on the recent experience of developing countries that have experienced increases in female participation to predict what may happen if South Asia follows a similar path.

Baseline GEGI model

The first set of models—the Gender Employment Gap Index (GEGI) approach and its variants—is based on a macro growth model described in detail in Pennings (2022) and Fiuratti et al. (2024). This growth model is summarized by an

aggregate production function that transforms labor and capital into output and mechanisms that account for the accumulation of both factors. In the long-run steady state of the model, the capital to labor ratio remains constant and it can be shown that:

$$\frac{y^*}{y} - 1 \times 100 \text{ percent} = \frac{L_m - L_f}{L} \times 100 \text{ percent}$$

where y^* is the GDP level obtained with equal participation of men and women and y is GDP with currently unequal rates of participation. The percentage increase in per capita GDP is the percentage difference between male and female participation ($L_m - L_f$). This version of the model calculates an increase of about 46 percent of per-capita GDP in the case of South Asia. This is a long-run estimate, that is, the GDP increase is obtained thanks to rising female labor force participation that is accompanied by an increase in the capital stock that keeps the capital-to-labor ratio unchanged.

This baseline version does not differentiate between sectors or skill levels, and capital stocks are allowed to adjust. These assumptions are changed in three variants of the model (annex table A2.2.2).

GEGI model with fixed capital

The fixed-capital GEGI model assumes that capital cannot adjust, either because not enough time passes or because of other restrictions on factors and financial markets. In this case, the fixed capital assumption reduces the impact of the higher female participation rate to 26 percent.

GEGI model with productivity differences in jobs

A second variant, developed in Fiuratti et al. (2024), accounts for employment composition effects by including two segments in the economy: one with more productive jobs and one with less productive jobs. Because women in EMDEs tend to be predominantly employed in subsistence agriculture, small-scale retail, or more generally in household microenterprises, and in the baseline

² See, for example, Hanmer et al. (2014).

scenario, the new entrants are assumed to be allocated to these in the same proportion as for existing female participants.² However, assuming that new entrants are allocated to professions in the same proportion as men increases the output gain to 51 percent.

GEGI model with skill differences among workers

A final variant of the GEGI is one in which labor is differentiated into skilled and unskilled types, and capital and skilled labor are complements.³ This setup takes account of the likelihood that new female entrants would be relatively unskilled, which reduces the estimated increase in GDP.⁴

Structural occupational choice model, as in Hsieh et al. (2019)

Two well-known examples of structural occupational choice models used to estimate the impact of higher female labor force participation on GDP are described in Hsieh et al. (2019), who focus on the United States, and Cuberes and Teignier (2016), who employ a global model.⁵

In these models, the premise is that women and men have similar distributions of talents, and that any barriers to the full deployment of these talents are detrimental to efficiency since they create misallocations that are reflected in gender gaps in employment rates across sectors and occupations.

³ This set up has been used by a large body of the literature that studies the evolution of labor markets. Well known references are Acemoglu and Autor (2011) and the Goldin and Katz (2010) book on the race between technology and education. Both focus on explaining the evolution of employment and skill wage premiums in the United States and globally.

⁴ In more detail, when there are capital-skill complementarities, if closing gender employment gaps does not lead to an increase in the share of skilled workers in the economy, then the effect on output per person would be less strong than a change in the total number of workers that leaves the skill composition unaltered. This is because the capital per worker ration (K/L) decreases. In the long run, capital is determined by savings, which are a fixed share of GDP (the Solow-Swan assumption). If closing the gender gap increases proportionally more low-skilled than high-skilled employment, then the average skills level in the economy falls: Y increases by less than L . As K is proportional to Y under the Solow-Swan assumption ($K=sY/\delta$), then K increases less than L , and so K/L falls. Also, because capital and skills are complements, lower skills levels make capital relatively less productive.

⁵ Although not focused on gender disparities, an example of a structural model applied to the case of India is presented by Cassan, Keniston, and Kleineberg (2021).

Barriers include: (i) limits to accessing education or training; (ii) constraints on credit or access to physical capital, including land; and (iii) discrimination or (social norms internalized) preferences. All of these can limit not only participation, but also mobility across sectors and jobs, and result in efficiency costs. The economy misallocates resources by not employing (or educating) women who are, on the margin, productive, and preventing individuals from following their comparative advantage.⁶

Structural model, as in World Bank (2022a)

To implement the approach just described, World Bank (2022a) and Eberhard-Ruiz and Michel-Gutierrez (2022) estimate the relationship of sector-specific value-added per worker as a function of employment in the sector, the ratio of wage workers in the sector, and other control variables. The coefficients obtained from this regression are then used to simulate impacts on value-added (GDP) when female employment is equalized with male employment across different sectors. The regression specification in Eberhard-Ruiz and Michel-Gutierrez (2022), for country i , sector s , and year t , is:

$$\begin{aligned} \log(\text{prod}_{ist}) &= \gamma_i + \alpha_1 \log(\text{emp}_{ist}) + \beta_1 \text{wshare}_{ist} \\ &+ \sum_{k=2}^8 \alpha_k \log(\text{emp}_{ist}) \times (s = k) \\ &+ \sum_{k=2}^8 \beta_k \text{wshare}_{ist} \times (s = k) + \varepsilon_{ist} \end{aligned}$$

Where prod is value-added per worker, emp is sectoral employment levels, and wshare is the share of waged jobs in the sector. To simulate an increase in female employment, the α coefficients are multiplied by the sector-specific increases in

⁶ Note also that while these structural models could be used to make predictions about what would be the ex-ante impact of increased female labor force participation, they are normally used to estimate ex-post the contribution of reducing barriers to female labor force participation on GDP growth. Hsieh et al. (2019), estimate that the reduced sectoral segregation against women and African American employment during the past 50 years explains between 20 and 40 percent of economic growth in the United States during the same period. For South Asia, Cuberes and Teignier (2016) estimate a 25 percent income loss from gender gaps, with almost 40 percent of it the result of occupational gaps in entrepreneurship between men and women.

female employment under a given scenario, and the predicted gains are then added up across sectors. To simulate a change in the share of wages jobs, the β coefficients are multiplied by the change in waged jobs. Sector-specific changes in output arising from bringing female employment to parity with men for several South Asian countries are in annex table A2.2.4. The smallest contributions come from agriculture, where female and male employment rates are closer to parity, while the largest come from manufacturing, where the gender gap in employment is widest. For example, in India, total employment in agriculture rises by 73 percent if female participation is brought to parity with men. In manufacturing, employment rises by over 217 percent to achieve parity. In services, a nearly sevenfold increase is required to achieve parity.

Caveats: General equilibrium effects and welfare

None of the methodologies discussed above account for general equilibrium effects because all models assume that the closing of the gender employment gap is costless, and then subsequently estimate its effect on GDP. However, any shock that catalyzes such a large increase in female labor force participation is likely to yield general equilibrium effects on male labor force participation, wages, prices, and structural change.

These general equilibrium effects depend on several factors, including the nature and source of the shock, the prevailing economic conditions, and the subsequent policy responses:

- If the surge in female participation stems from enhanced educational access or improved labor demand, it could potentially inspire a parallel uptick in male labor force engagement, particularly in an expanding economy.
- If the rise in female participation results from cultural shifts or policy changes favoring women without commensurate benefits for men, it might precipitate a decrease in male labor force involvement, especially if perceived competition for jobs intensifies.

Wages may adjust in response to the altered labor supply dynamics:

- An influx of female workers could exert downward pressure on wages for both genders if demand growth fails to match the expansion of the labor pool.
- However, if the increased female participation enhances productivity or fills critical skill gaps, it may contribute to higher wages for both men and women over time.

Price levels could also undergo adjustments, reflecting changes in consumption patterns, production costs, and market dynamics.

Furthermore, this chapter does not estimate the impact on welfare. Services such as child and elderly care and other household tasks are mostly provided by women and, especially in developing countries, are not marketed activities and therefore not included in the calculations of labor participation or GDP estimates. However, welfare is influenced by the provision of both marketed and un-marketed services. An interesting alternative methodological approach that explicitly considers this issue can be found in Ilkkaracan (2024), and Onaran and Oyvatt (2023). These papers do not assume that women who do not participate are idle but, rather, that they are dedicated to care giving in the “home” sector. Therefore, they suggest the need for investment in care services and that this should be modeled as an additional sector in the economy.

ANNEX 2.3 Discrimination in labor demand

Firms in South Asia often state an explicit preference for male over female workers in their hiring. A randomized control trial in Pakistan suggests that firms would require a 15 percent wage subsidy to hire an additional female worker. Offering subsidy increases female hires by 11 percentage points.

Note: This annex was prepared by Maurizio Bussolo, Jean Nahrae Lee, and Jonah Rexer.

Introduction

Discriminatory hiring preferences may reduce demand for female employees and limit female labor participation. Surveys in India (Chowdhury et al. 2018) and Pakistan (Gentile et al. 2023) show that firms have a high rate of stated preference for male workers over female workers. For example, Chowdhury et al. (2018) found that firms participating in an online jobs portal, such as Indeed.com, commonly state a preference for men over women in job advertisements. Similarly, a door-to-door census of firms in a Pakistani city as reported by Vyborny et al. (forthcoming) showed that nearly all surveyed firms strongly preferred male hires.

This gender preference may be driven by social norms or the perceived need to provide women-specific amenities, such as separate toilets, prayer rooms, childcare, transport, flexible work hours, or maternity leave. In Pakistan, many managers say that they would require a subsidy to hire a woman over a man, despite the market wage differential that already makes it cheaper to hire a woman (Bussolo et al. 2023). Similarly, a survey of firms in several Indian cities found that many employers believe men should be prioritized over women when jobs are scarce, consider men better employees, and view some jobs as more suitable for men than women (Das et al. 2019).

One way to overcome demand-side gender discrimination is through gender-targeted wage subsidies. In addition to direct effects on hiring, exposing potentially reluctant employers to female colleagues through wage subsidies may shift employer beliefs, leading to more progressive attitudes and greater future hiring of women. Drawing on evidence from a novel randomized control trial in Pakistan, this box addresses the following questions:

- Do employers discriminate against female hires?
- What is the impact of temporary wage subsidies on female hiring?
- Do different types of employers respond differently to subsidies?

Contributions. Most research on norms focuses on supply-side constraints, as summarized in this chapter and Box 2.1. However, the impact of biased norms on the demand-side is less understood. While gender-neutral wage subsidies have been well-studied across advanced economies (Katz 1996), very few studies have considered the role of wage subsidies in overcoming bias and incentivizing female hiring, particularly in emerging market and developing economies. Groh et al. (2016) study individual wage subsidies for Jordanian women, but this study is the first to test firm-level subsidies' effectiveness in reducing gender discrimination in hiring. Also, this is the first use of an incentivized mechanism to elicit employer preferences on female hiring in developing countries.

Main findings. This box documents the following findings:

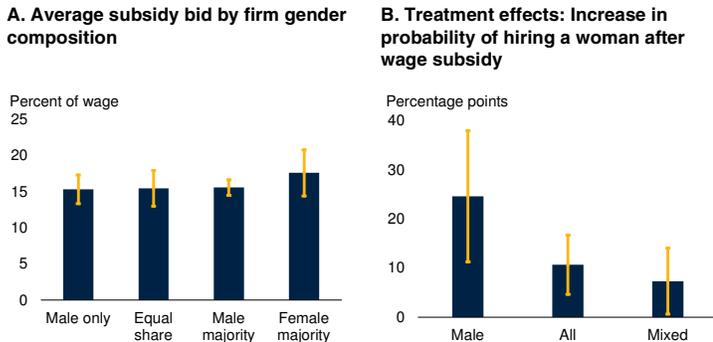
- Employer discrimination in hiring is pervasive. On average, a 15 percent wage subsidy is required to encourage employers to select a female hire over an equally qualified male hire.
- Discrimination is consistent across all types of employers, regardless of the composition of the existing work force.
- Wage subsidies significantly increase female hiring, increasing it by 11 percentage points on average, with even greater effects in male-only firms.

Design of the randomized control trial

To study the extent of hiring discrimination and the impact of wage subsidies, Bussolo et al. (2024) conduct a randomized control trial with 1,227 firms in urban Pakistan. In collaboration with the online jobs portal Rozee.pk, researchers randomly selected firms that had posted job advertisements for technical and professional roles. Firms were then randomized into two groups: a treated group, which received a wage subsidy offer for hiring a woman, and a control group, which did not. A baseline phone survey was conducted for all firms to measure gender attitudes, employment composition, and details about the posted

FIGURE A2.3.1 Wage subsidies to firms in Pakistan

In an experiment in Pakistan, all types of firms indicated a preference for male hires, requiring on average a 15 percent wage subsidy to hire a woman. Receipt of the subsidy significantly increased female hiring, particularly for male-only firms.



Sources: Bussolo et al. (forthcoming); World Bank.

Note: A. Bars show the average subsidy bid in the Becker-DeGroot-Marschak preference elicitation of firms with different gender compositions, with 9 percent confidence intervals. "Male majority" indicates more than 60 percent male employees. "Equal share" indicates between 40 and 60 percent female employees. "Female majority" indicates more than 60 percent female employees.

B. Bars show the coefficients from a linear probability model estimating the likelihood of hiring a woman post-subsidy, based on interaction terms between a treatment indicator and firm composition indicators. Treatment indicator equals one if the firm was randomized to receive a subsidy offer. "Mixed" indicates a positive share of female employees. Whiskers show 95 percent confidence intervals.

position. All firms were asked to self-report how large a six-month subsidy, as a share of the wage, would be required to hire a qualified female candidate.

Before the intervention, the preferences of treated firms (those randomly assigned to receive the wage subsidy offer) were elicited using an incentive compatible Becker-DeGroot-Marschak mechanism. Firms were asked about their desired subsidy, but also informed that if their requested amount was higher than a random subsidy draw, they would not be paid any share of the hired female employee's salary. Firms that bid below the randomly generated value were then offered a six-month subsidy to hire a female worker for the posted position at the randomly generated value. A follow-up survey was conducted with all firms about one month later to determine whether the position had been filled by a man or a woman, along with details about the hiring process.

Effects of the subsidy are estimated with a standard intent-to-treat linear probability model regression for the full sample of firms i of the form:

$$y_i = \alpha + \beta \text{treat}_i + \varepsilon_i$$

Where y_i is a binary variable indicating that the position was filled by a woman, and treat_i is the randomly assigned treatment status. For heterogeneity analysis, this regression is estimated on four mutually exclusive subgroups: (i) firms with a majority of women in their workforce; (ii) firms with an approximate gender balance in their workforce composition; (iii) firms with a majority of men in their workforce; and (iv) firms that were all male at baseline.

Extent of hiring discrimination and impact of subsidy

Firms exhibited strong preferences against hiring women. In the initial survey, firms self-reported needing a 26.4 percent subsidy to hire a woman. However, when preferences were incentivized, the average firms' bid for only a 15 percent subsidy to fill the position with a woman (figure A2.3.1). This bid did not vary significantly based on the firm's initial gender composition. Across all types of firms, a substantial subsidy was necessary to employ a woman, suggesting demand-side discrimination even among firms with a majority of female employees.

The subsidy offer significantly increased female hiring (figure A2.3.1). On average, treated firms (that were offered a subsidy) were 10.7 percentage points more likely to fill the advertised position with a woman. Among male-only firms, the subsidy increased female hiring by 24 percentage points. Effects were significantly smaller for firms with a mixed workforce composition (7.6 percentage points) and non-significant for female-only firms. No significant differences were found across industries or firm locations.

Conclusion

Although hiring managers in Pakistan exhibit substantial discrimination against female job candidates, incentivized measures result in somewhat less gender bias than stated preferences. In the short run, wage subsidies work to reduce gender discrimination and increase the rate of female hiring. Future analysis could focus on whether hiring women shifts the attitudes of managers and workers in the treated firms, and whether temporary subsidies can lead to durable changes in gender bias in hiring.

Annex 2.4. Social norms: Review of the literature and measurement

Social norms have emerged as an important explanation for gender gaps in economic participation where standard economic models fall short. Properly defining and measuring social norms remains a challenge that constrains empirical work. Attention must be paid to the critical distinction between personal beliefs and social expectations.

Impact of social norms on labor market outcomes

The collective bargaining model has often been used to explain time allocation decisions: women have historically tended to specialize in home-making roles and men in breadwinning ones (see Becker 1973; Gronau 1973a; 1973b; Chiappori 1988, 1992). In this model, the relative *productivities* of the two spouses in market activities and household tasks, as well as their preferences, determine the specialization of men and women in either working outside the home or family care. Following on this approach, studies have attributed gender gaps in labor market participation to differences in relative productivities and preferences between men and women, with these being driven by variables such as education, marriages and fertility, and the availability of childcare (Albanesi and Olivetti 2016, Benhabib et al. 2011). However, a growing literature suggests that even when these determinants are accounted for, a large share of the gender gap in labor force participation remains unexplained (Bertrand 2020, Bussolo et al. 2024, Giuliano 2020, Jayachandran 2021).

To explain this persistent gap, new approaches explicitly account for the influence of social norms on women's economic activities (Akerlof and Kranton 2000; Andreoni and Bernheim 2009; Bénabou and Tirole 2006). A main advantage of these approaches is that they allow for more comprehensive models of human behavior and explain empirical observations when neoclassical models fail. Bussolo et al. (forthcoming) present a simple extension to the household collective

bargaining model by adding to the utility function an “identity concern”—the notion that “men should not do women's work in the home and should earn more than their wives” (Akerlof and Kranton 2000).

Social norms have three transmission mechanisms: vertical, horizontal, and oblique. Vertical transmission of social norms occurs within the family across generations, from parents to children. Focusing on immigrants in the United States, Antecol (2000), Blau, Kahn, and Papps (2011), and Fernández and Fogli (2009) have found that labor force participation rates among second-generation women are strongly correlated with female labor force participation in their parents' country of origin.

The second mechanism is horizontal transmission among peers, typically a group including extended family, friends, co-workers, neighbors, and members of the community who provide the social context within which individuals learn what is acceptable or unacceptable behavior (Bicchieri 2016). For a global perspective, Bursztyn et al. (2023) collect data similar to the World Bank-Facebook survey mentioned in annex 2.1 on personal beliefs and social expectations regarding women's participation in the labor market. The authors find that married men who support women working outside the home tend to underestimate the similar support that other men may have. Evidence from an experiment in Saudi Arabia shows that an intervention to correct this misperception led to increased female labor force participation (Bursztyn, González, and Yanagizawa-Drott 2020).

The final transmission channel is oblique, which involves the influence of role models—such as religious or other community leaders and teachers—in spreading social norms (Beaman et al. 2009). This discussion is useful because it can suggest different policy interventions: education for vertical transmission, correction of misperceptions or “debiasing” (as in Bursztyn et al. 2020) for horizontal transmission, and, for the oblique transmission, role model interventions such as “edutainment,” that is, entertainment with an educational element.

Measurement of social norms

Even if theory has embedded social norms as a factor influencing female labor force participation, empirical applications are less common. The difficulty in the accurately defining and measuring social norms remains the primary obstacle to more widespread empirical applications. However, social norms are often thought of as “informal rules that embody beliefs about which behaviors are approved or disapproved of in a specific context by a given social group” (Bicchieri 2005, 2016; Cislighi and Heise 2019; Nosenzo and Görge 2020). Bicchieri (2012) applies this approach in examining the decision of a woman to work outside the house for pay by organizing beliefs—or alternatively, expectations or preferences—along two dimensions: social and normative. As illustrated in the table below, the columns distinguish the social dimension, and the rows distinguish the normative dimension.

In annex table A2.4.1, beliefs influencing the decision of a woman about working for pay outside the home are either *personal beliefs*—those

held by the woman herself—or *social expectations*—those held by people in her reference group, such as neighbors. These beliefs can also be *factual*—based on observations of how things usually are—or *normative*—based on expectations of how things should be. Personal *normative* beliefs drive behavior through internal motivation, while social expectations, shaped by perceptions of others' beliefs, influence behavior differently from personal attitudes (Cislighi and Heise 2018; Mackie et al. 2015).

Measuring social norms accurately and not through proxies, such as personal attitudes, is critical. In fact, in most countries in the world, social expectations tend to be more conservative than personal beliefs (Bursztyn et al. 2023; Bussolo et al. 2024). In other words, most people think that they are living in a society where views are less permissive than their own. Consequently, using personal attitudes risks underestimating the role of non-economic factor in explaining the gap in female participation.

ANNEX TABLE 2.1 Labor Force Survey (LFS) data overview

Country	Waves
Bangladesh	2005, 2010, 2013, 2015, 2016, 2022
India	1983, 1987, 1993, 1999, 2004, 2005, 2007, 2009, 2011, 2017, 2018, 2019, 2020, 2021, 2022
Nepal	1998, 2008, 2018
Pakistan	1992, 1999, 2001, 2003, 2005, 2007, 2008, 2009, 2010, 2012, 2013, 2014, 2017, 2018, 2020
Sri Lanka	1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2006, 2007, 2008, 2011, 2012, 2013, 2014, 2015, 2019, 2020, 2021

Note: All LFS data come from the World Bank Global Labor Database (GLD) except for Bangladesh LFS 2022 data, which come from the World Bank South Asia Region Labor Database (SARLD).

ANNEX TABLE 2.2. Employment in services and relative female labor force participation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Employment share in services	-1.2334*** (0.3140)	-1.4392*** (0.3585)	-1.1079*** (0.3355)	-1.5474*** (0.4202)	-1.2582*** (0.3638)	-1.1137*** (0.3549)	-1.5227*** (0.4407)	-1.7888*** (0.4385)
Log GDP per capita		0.1480*** (0.0517)	0.1451** (0.0576)	0.1816*** (0.0604)	0.0493 (0.1016)	-0.6411** (0.2987)	-0.4042* (0.2051)	-0.9070 (0.6641)
Observations	617	617	617	617	617	617	617	617
R-squared	0.1074	0.1309	0.4288	0.7863	0.3665	0.5059	0.8573	0.8649
Country FE	No	No	Yes	No	No	Yes	No	Yes
State FE	No	No	No	Yes	No	No	Yes	Yes
Year FE	No	No	No	No	Yes	Yes	Yes	Yes

Source: World Bank, Global Labor Database (GLD).

Note: FE = fixed effects. Standard errors in parentheses, clustered at the state level. Sample is all state-year observations in the GLD. Outcome variable is the log of state-level female labor force participation divided by male labor force participation. *** p<0.01, ** p<0.05, * p<0.1.

ANNEX TABLE 2.3. Gender wage gap across sectors

(Percent)

	All	Services	Industry	Agriculture
SAR	58.42 (0.14)	64.41 (0.28)	52.39 (0.27)	61.08 (0.22)
BGD	89.57 (0.45)	88.65 (0.74)	90.98 (0.63)	88.63 (1.03)
IND	57.26 (0.16)	62.69 (0.32)	50.24 (0.31)	61.41 (0.23)
LKA	71.01 (0.32)	70.49 (0.48)	51.07 (0.62)	52.82 (0.82)
NPL	65.60 (0.85)	69.31 (1.43)	66.66 (1.93)	82.43 (1.77)
PAK	54.05 (0.27)	60.42 (0.43)	43.03 (0.48)	60.87 (0.55)

Source: World Bank Global Labor Database (GLD).

Note: BGD = Bangladesh; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan; SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka).

Standard errors in parentheses, clustered at the household level. Sample is all wage-earning individuals across all Global Labor Database survey rounds in annex table 2.1. Gender wage gaps are expressed as female wages as a percentage of male wages. These estimates are taken from coefficients of regressions for each sector of log wages on interactions between male and sector indicators, controlling for education and survey year fixed effects.

ANNEX TABLE 2.4 Urban population share and relative female labor force participation

	(1)	(2)	(3)	(4)	(5)
Panel A: Administrative measurement					
Urban population share	-0.531** (0.203)	-0.512** (0.206)	-0.443* (0.248)	-0.350 (0.221)	-0.378 (0.241)
Log GDP per capita		0.049 (0.069)	0.091 (0.107)	-0.017 (0.044)	-1.377*** (0.231)
Year FE	No	No	Yes	No	Yes
Country FE	No	No	No	Yes	Yes
Observations	713	713	713	713	713
R-squared	0.050	0.052	0.189	0.411	0.478
Panel B: Spatial measurement					
Urban population share	-0.420** (0.206)	-0.441** (0.202)	-0.482** (0.197)	-0.518*** (0.171)	-0.513*** (0.174)
Log GDP per capita		0.129 (0.113)	0.034 (0.110)	1.394*** (0.255)	0.546 (0.457)
Year FE	No	No	Yes	No	Yes
Country FE	No	No	No	Yes	Yes
Observations	261	261	261	261	261
R-squared	0.048	0.058	0.167	0.374	0.426

Source: Global Labor Database (GLD), Nelson et al. (2019); World Bank.

Note: FE = fixed effects. Standard errors in parentheses, clustered at the state level. Sample in Panel A is all state-year observations in the GLD. Sample in Panel B is all state-year observations from 2015 onwards. Outcome variable is the log of state-level female labor force participation divided by male labor force participation. *** p<0.01, ** p<0.05, * p<0.1.

ANNEX TABLE 2.5 Wage premium by gender in cities

Outcome variable Sample	Log (wages)					
	SAR		BGD		IND	
	(1)	(2)	(3)	(4)	(5)	(6)
Urban	0.398*** (0.005)	0.276*** (0.005)	0.073*** (0.009)	0.067*** (0.009)	0.413*** (0.006)	0.274*** (0.006)
Urban X Male	-0.036*** (0.005)	0.046*** (0.005)	0.096*** (0.010)	0.087*** (0.010)	-0.016** (0.006)	0.074*** (0.007)
Services		0.326*** (0.006)		0.072*** (0.009)		0.347*** (0.007)
Services X Male		-0.136*** (0.006)		0.026* (0.010)		-0.137*** (0.007)
Female urban premium	0.489	0.318	0.075	0.070	0.512	0.316
Male urban premium	0.437	0.381	0.184	0.167	0.488	0.417
Observations	2257876	2257876	124061	124061	1361254	1361254
R-squared	0.692	0.698	0.547	0.550	0.719	0.725
	LKA		NPL		PAK	
Urban	0.297*** (0.010)	0.271*** (0.010)	0.211*** (0.025)	0.196*** (0.026)	0.217*** (0.010)	0.132*** (0.011)
Urban X Male	-0.063*** (0.011)	-0.065*** (0.011)	-0.093*** (0.026)	-0.076** (0.027)	-0.113*** (0.010)	-0.025* (0.011)
Services		0.345*** (0.009)		0.059* (0.027)		0.242*** (0.011)
Services X Male		0.010 (0.009)		-0.059* (0.028)		-0.209*** (0.011)
Female urban premium	0.345	0.311	0.234	0.217	0.243	0.141
Male urban premium	0.263	0.228	0.125	0.128	0.110	0.112
Observations	368705	368705	23084	23084	380772	380772
R-squared	0.470	0.475	0.727	0.727	0.588	0.590
Survey year FE	Yes	Yes	Yes	Yes	Yes	Yes
Education controls	Yes	Yes	Yes	Yes	Yes	Yes

Source: World Bank Global Labor Database (GLD).

Note: BGD = Bangladesh; FE = fixed effects; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan; SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). Standard errors in parentheses, clustered at the household level. Sample is all wage-earning individuals across all Global Labor Database survey rounds in annex table 2.1. Urban wage premium for women is calculated as $\exp(\text{urban}) - 1$; urban wage premium for men is $\exp(\text{urban} + \text{urban} \times \text{male}) - 1$. Wage premiums are estimated relative to rural areas, the omitted group. All models control for survey year effects and years of education, and use harmonized survey weights. *** p<0.01, ** p<0.05, * p<0.1.

ANNEX TABLE 2.6 Composition of employment, by employment arrangement

(Percent)

			Paid	Unpaid	Self-employed
BGD	Male	Rural	40	3	33
		Urban	45	3	24
	Female	Rural	6	7	38
		Urban	14	2	6
IND	Male	Rural	33	9	33
		Urban	46	4	20
	Female	Rural	11	15	11
		Urban	15	3	6
LKA	Male	Rural	43	2	27
		Urban	46	1	19
	Female	Rural	20	6	8
		Urban	23	2	6
NPL	Male	Rural	30	3	10
		Urban	34	3	11
	Female	Rural	7	6	6
		Urban	12	7	7
PAK	Male	Rural	35	10	36
		Urban	43	5	25
	Female	Rural	6	19	6
		Urban	6	2	2

Source: World Bank Global Labor Database (GLD).

Note: BGD = Bangladesh; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan Sample is all working age (15–64) individuals across all GLD survey rounds in annex table 2.1. All quantities measured as a percent of the working age population.

ANNEX TABLE 2.7 South Asia: Trade exposure and relative female labor force participation

	(1)	(2)
Log export exposure	0.225** (0.095)	0.235** (0.108)
Log import exposure	-0.220** (0.102)	-0.218* (0.129)
Year FE	Yes	Yes
Country FE	No	Yes
Year-by-Country FE	No	Yes
State FE	Yes	Yes
Observations	407	407
R-squared	0.881	0.884

Sources: World Bank Global Labor Database (GLD); UN Comtrade.

Note: FE = fixed effects. Standard errors in parentheses, clustered at the state level. Sample is all state-year observations in the GLD for which trade data are available at the national level. Outcome variable is the log of state-level female labor force participation divided by male labor force participation. *** p<0.01, ** p<0.05, * p<0.1.

ANNEX TABLE 2.8 Regression of female labor force participation on social expectations (breadwinner) and laws

	(1)	(2)	(3)
WBL Legal Index	0.540*** (0.0781)		0.393*** (0.105)
Social expectations		-1.351*** (0.222)	-0.634** (0.286)
Per capita GDP (log)	-43.46*** (12.62)	-32.33** (13.73)	-37.36*** (13.16)
Per capita GDP (log squared)	2.552*** (0.707)	1.787** (0.775)	2.115*** (0.756)
Observations	119	119	119
R-squared	0.453	0.399	0.481

Sources: International Labour Organization; World Bank - Facebook (2020) Survey on Gender Equality at Home; Women, Business, and Law (database); World Development Indicators (database).

Note: Robust standard errors reported in parentheses. Outcome variable is female labor force participation as a share of the female working age population. "Social expectations" is the average response to the question: "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?" Legal index is (de jure) Legal Index from the World Bank's Women, Business, and the Law database. Sample includes 119 countries, data are from 2020. *** p<0.01, ** p<0.05, * p<0.1.

ANNEX TABLE 2.9 Regression of legal implementation gap on personal beliefs and social expectations

	Male breadwinner norm		Female homemaker norm			Male breadwinner norm		Female homemaker norm	
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)
Personal beliefs	0.535*** (0.1)	0.475*** (0.093)	0.480*** (0.094)	0.442*** (0.089)	Social expect.	1.062*** (0.274)	0.922*** (0.262)	1.097*** (0.311)	0.942*** (0.302)
Government effectiveness		-0.325*** (0.076)		-0.350*** (0.075)	Government effectiveness		-0.340*** (0.078)		-0.345*** (0.084)
Per capita GDP (log)	-5.444*** (1.313)	-0.605 (1.724)	-5.063*** (1.401)	0.287 (1.765)	Per capita GDP	-5.745*** (1.417)	-0.689 (1.826)	-5.274*** (1.647)	-0.239 (2.005)
Observations	118	118	118	118	Observations	118	118	118	118
R-squared	0.539	0.6	0.537	0.608	R-squared	0.499	0.565	0.487	0.555

Sources: International Labour Organization; World Bank - Facebook (2020) Survey on Gender Equality at Home; Women, Business, and Law (database); World Development Indicators (database).

Note: Robust standard errors reported in parentheses. Dependent variable is the 100 minus the de facto Supportive Frameworks Index. Personal beliefs and social expectations are defined in Box 2.1. Personal beliefs are individual survey attitudes and social expectations are the shares of other people in the country that the respondent thinks hold either the male breadwinner or female homemaker belief. *** p<0.01, ** p<0.05, * p<0.1.

ANNEX TABLE A2.1.1 Female labor force participation rates: Internationally comparable statistics versus national statistics, latest available data

	ILO modeled estimate		National statistics		Harmonized estimate	
	2022	2023	Estimate	Year	Estimate	Year
Bangladesh	37.0	37.0	42.8	2022	42.8	2022
Bhutan	64.9	64.5	56.8	2023	53.7	2022
India	28.0	32.7	37.0**	2022–23	31.4	2022–23
Maldives	42.0	42.6	48.4	2022	45.7	2019–20
Nepal	28.4	28.7	26.3	2017–18	27.8	2017–18
Pakistan	24.4	24.5	21.4*	2020–21	24.8	2020–21
Sri Lanka	32.1	32.1	31.3	2023	32.0	2022

Source: International Labour Organization (ILO); national statistical offices; World Bank.

Note: Labor force participation rate is the proportion of the population ages 15 and older that is economically active. *Pakistan's national FLFP rate is the participation rate of working age population of 10 years and above. **India's FLFP rate uses the "usual status" definition. The estimate using currently weekly status with a seven-day recall period is 31.6 percent. National FLFP rates come from the following sources: Bangladesh: Bangladesh Bureau of Statistics, Labour Force Survey 2022 report (page xxiii); Bhutan: National Statistics Bureau, 2023 Quarterly Labour Force Survey report (page 7); India: Ministry of Statistics and Programme Implementation, Periodic Labour Force Survey July 2022–June 2023 Annual Report (page vi); Maldives: Maldives Bureau of Statistics, Improving Labor Market Dynamics - An Analysis from Census 2022 report; Nepal: Report on the Central Bureau of Statistics, Nepal Labour Force Survey 2017/18 report (page 13); Pakistan: Pakistan Bureau of Statistics, Pakistan Labour Force Survey 2020–21 report (page viii); and Sri Lanka: Department of Census and Statistics, Sri Lanka Labour Force Statistics - Quarterly Bulletin, First Quarter 2024 (page 1). Harmonized estimates, provided courtesy of SAR-POV, use current weekly status and come from harmonized labor force survey microdata, with the exception Maldives, which uses the Maldives Household Income and Expenditure Survey.

ANNEX TABLE A2.2.1 Theoretical background of models

Model	Source	Detail
Gender Employment Gap Index (GEGI)	Pennings (2022); derived from Loayza and Pennings (2022)	Production function embedded in growth model (3 versions: Long Run, Short Run, with differentiated employment)
GEGI with complementary Capital and Skilled labor	Fiuratti, Pennings, and Torres Coronado (2024); derived from Loayza and Pennings (2022)	Production function considers complementarities between skilled labor and capital
Structural Model	Eberhard-Ruiz and Michel-Gutierrez (2022)	Inspired by Hsieh et al (2019), uses a reduced-form estimation of average labor productivity
Potential Growth	Kose and Ohnsorge (2022)	Production Function that estimates potential growth over time

ANNEX TABLE A2.2.2 Key assumptions for model calculations

Method	Assumptions
Gender Employment Gap Index (Basic)	Capital/output ratio is constant in the long run (no constraint on savings). All other factors—productivity, human capital, population, etc.—remain equal across both scenarios (with and without gender parity).
Skill-complementarity Production Function	Skilled labor and capital are considered complements, so increasing output requires more skilled workers and more capital. However, this combination (Sk+Kap) substitutes for unskilled labor.
Structural Model	Labor productivity of men and women is equal across sectors. Male participation does not decrease in response to higher female entry into the workforce.
Potential Growth	Elasticity of substitution between labor and capital is equal to one. Future trends of population (working age population), health and education outcomes, productivity, investment, etc., are derived from reduced form panel regressions.

ANNEX TABLE A2.2.3 Initial conditions for modelling the output impact of closing the gender gap in employment

(Percent)

Model	Metrics	AFG	BGD	BTN	IND	MDV	NPL	PAK	LKA
Production Function: Baseline GEGI	Employment rate - female	22	36	52	29	51	26	23	33
	Employment rate - male	75	81	74	76	79	53	79	74
	Index	55	38	17	45	22	34	55	38
	Female “other employment” rate	22	26	38	23	17	17	18	16
	Male “other employment” rate	51	49	37	56	19	19	43	35
Production Function: Productivity-adjusted GEGI	Index (other employment)	40	31	-1	42	6	6	41	37
	Female “better employment” rate	0.1	10	14	6	34	9	5	17
	Male “better employment” rate	24	32	37	20	60	34	36	39
	Index (better employment)	99	52	45	54	28	58	76	39
Production Function: Fixed Capital GEGI	Labor share of GDP	46	42	47	60	46	44	50	40
Production Function: Skill adjusted GEGI	Skilled share - female	2	3	8	11	10	4	7	5
	Skilled share - male	8	7	13	14	11	8	8	3
Structural Model	Average female employment share across industries (unweighted)		25		22		42	15	37

Source: World Bank.

Note: AFG = Afghanistan; BGD = Bangladesh; BTN = Bhutan; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Table shows male-female differences in relevant employment statistics by country, depending on model. Modeling scenarios equalize these statistics by bringing female levels to parity with male levels. Employment rates by gender are calculated as the number of employed females (or males) divided by the total number of working-age females (or males). “Other employment” and “better employment” rates are defined as in (Pennings 2022). Specifically, “better employment” includes females employees (non-agricultural) and female employers as a share of working-age females (and analogously for males), while “other employment” represents the residual category. The GEGI index is calculated as (male employment rate – female employment rate) / (male employment rate + female employment rate). The same formula applies to the indexes of “better” and “other” employment.

ANNEX TABLE A2.2.4 Sectoral output increase resulting from closing the gender gap in employment

(Percent)

Sector	India	Bangladesh	Pakistan	Nepal	Sri Lanka
Agriculture	2.36	0.63	2.05	-1.00	1.57
Manufacturing	8.97	20.56	10.30	14.13	20.02
Services	12.09	8.12	8.42	8.51	5.93
Total	23.42	29.31	20.75	21.64	27.52

Sources: International Labour Organization, ILO National Accounts; code by Eberhard-Ruiz and Michel-Gutierrez (2022).

Note: Based on the static structural model, holding the share of waged jobs fixed.

ANNEX TABLE A2.4.1 Normative and social components of beliefs

	Personal beliefs (1 st Order Beliefs)	Social expectations (2 nd Order Beliefs)
Factual Beliefs		
Definition	Beliefs about reality (excluding beliefs about people's behavior and thought)	Beliefs about what people (in a reference group) do
Example	A woman's main role is that of the homemaker and that of a man is of the breadwinner	All the women in my neighborhood are homemakers and the men are breadwinners
Normative Beliefs		
Definition	Beliefs about what one should do	Beliefs about what other people (in a reference group) think one should do
Example	A woman's main role should be that of the homemaker, and that of a man should be of the breadwinner	People in my neighborhood think that women should be homemakers and men should be breadwinners.

Source: Adapted from Bicchieri (2012).

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Note: The South Asia Development Update was called South Asia Economic Focus through Spring 2023.

South Asia's growth is on track to exceed earlier expectations, in a broad-based upturn, and the region is expected to remain the fastest-growing among emerging market and developing economies. Several risks could upend this generally promising outlook, including extreme weather events, social unrest, and policy missteps, such as reform delays.

South Asian countries have considerable untapped potential that could help them further boost productivity growth and employment and adapt to climate change. In particular, with about two-thirds of the region's working-age women out of the labor force, raising female employment rates to those of men could increase per capita income by as much as one-half. Also, most South Asian countries rank among the EMDEs least open to global trade and investment. Greater openness could boost women's employment, spur the growth of firms, and allow the region to take better advantage of the reshaping of global supply chains and trade.

