The Office of the Chief Economist of the South Asia Region

April 2024

South Asia Development Update

Jobs for Resilience

Franziska Ohnsorge
Chief Economist, South Asia

WORLD BANK GROUP

Four Questions

1. What is the growth outlook for South Asia?
2. How do households and firms adapt to climate risks?
3. What is holding back job creation in South Asia?
4. What are the policy implications?

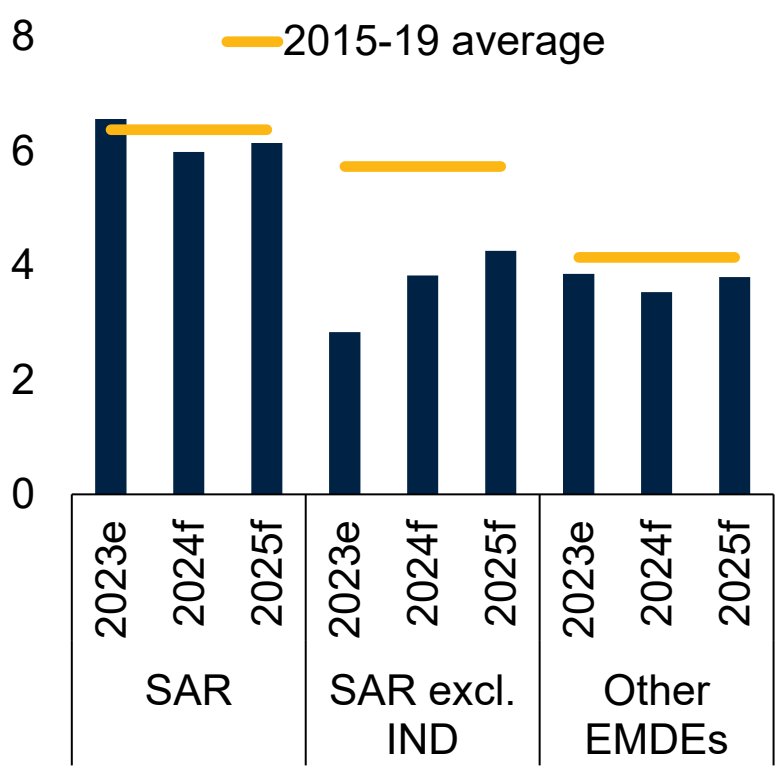
Four Questions

1 **What is the growth outlook for South Asia?** *Better than in other EMDEs, mostly due to strength in India, and more reliant on public sector than in other EMDEs. Risks remain to the downside, including due to climate shocks.*

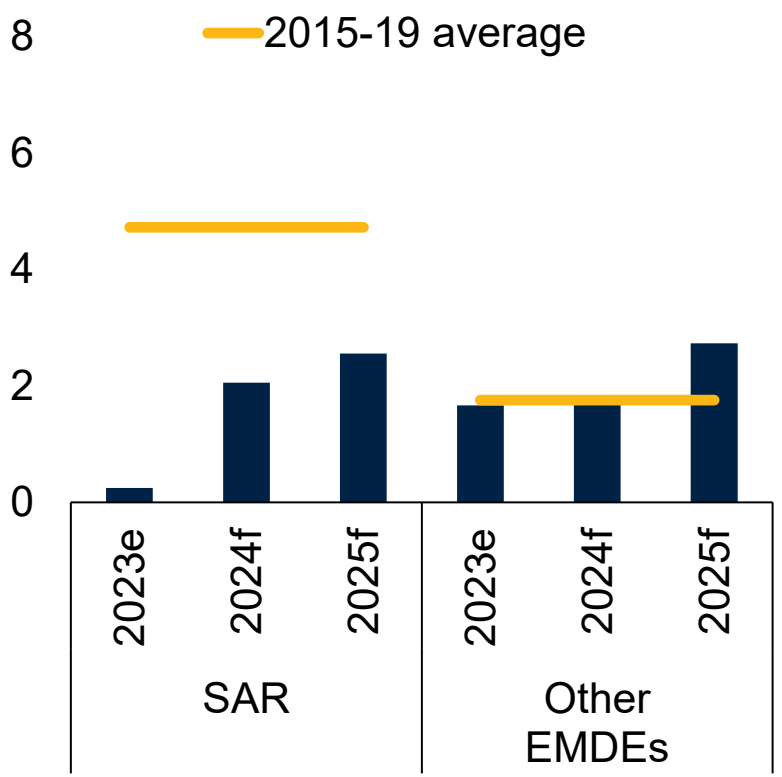
Growth Prospects

Above-Average Growth, But Mainly in India and Reliant on Public Sector

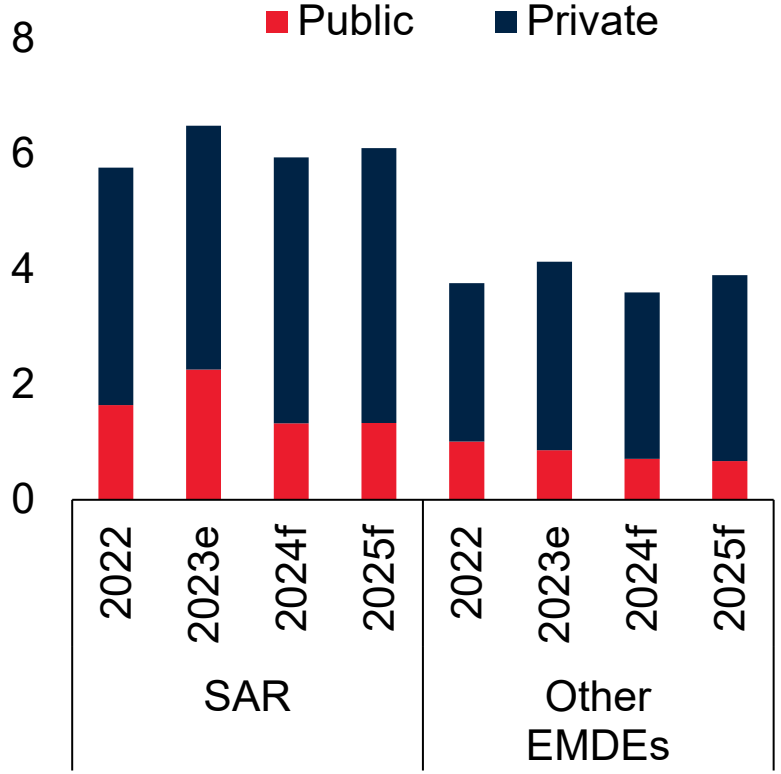
Growth
(Percent)



Growth in financially stressed EMDEs
(Percent)



Contributions to growth
(Percentage points)



Sources: MPO (database); World Bank.

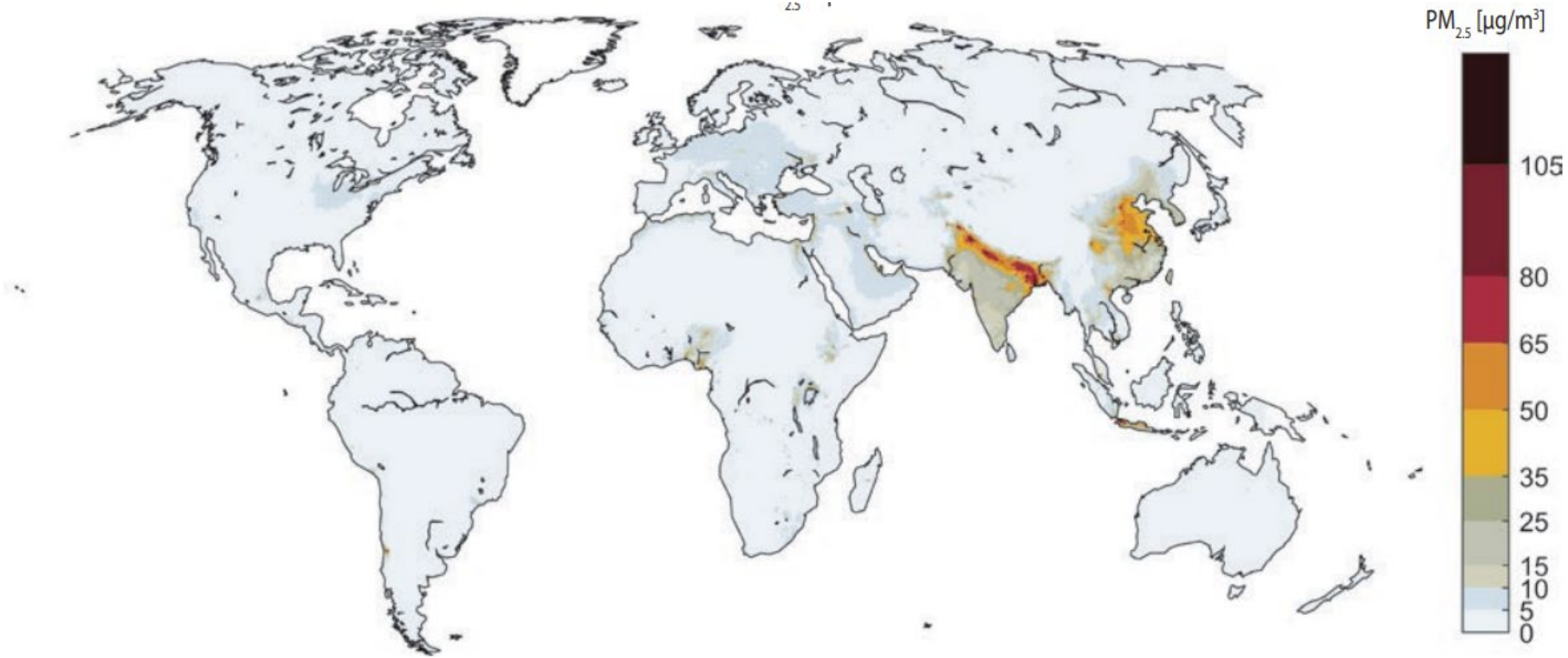
Note: Left panel: The regional aggregate is weighted by using annual real U.S. dollar GDP (at average 2010-19 prices and market exchange rates). Center panel: Financially stressed EMDEs include 58 countries that are rated by Moody's rating agency C or are considered in debt default or at high risk or debt default according to the IMF-World Bank Low-Income Country Debt Sustainability as of November 2023. Countries included in South Asia are Maldives, Pakistan, and Sri Lanka. Right panel: Assumes that half of India's forecasted discrepancy in FY2023/24 is due to public sector. SAR does not include Maldives and Sri Lanka due to lack of data for private and public investment.

Air Quality

South Asia is Home to Nine of the World's Ten Most Polluted Cities

Origin of Fine Particular Matter exposure, 2018

(Contribution to PM2.5 in μg/m³)



Sources: World Bank and International Institute for Applied Systems Analysis 2018 data; Striving for Clean Air (World Bank 2022).

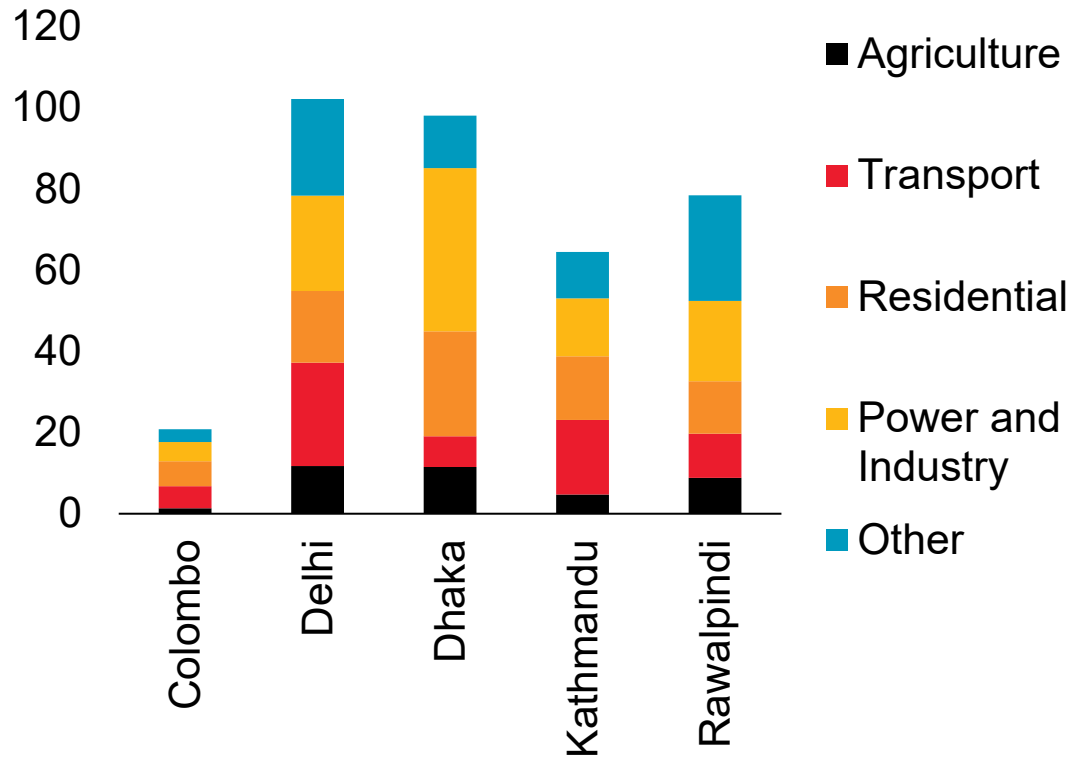
Note: Fine particulate concentrations (PM2.5) are in micrograms per cubic meter (μg/m3).

Sources of Pollution

Sizable Contribution from Industry and Power Sector

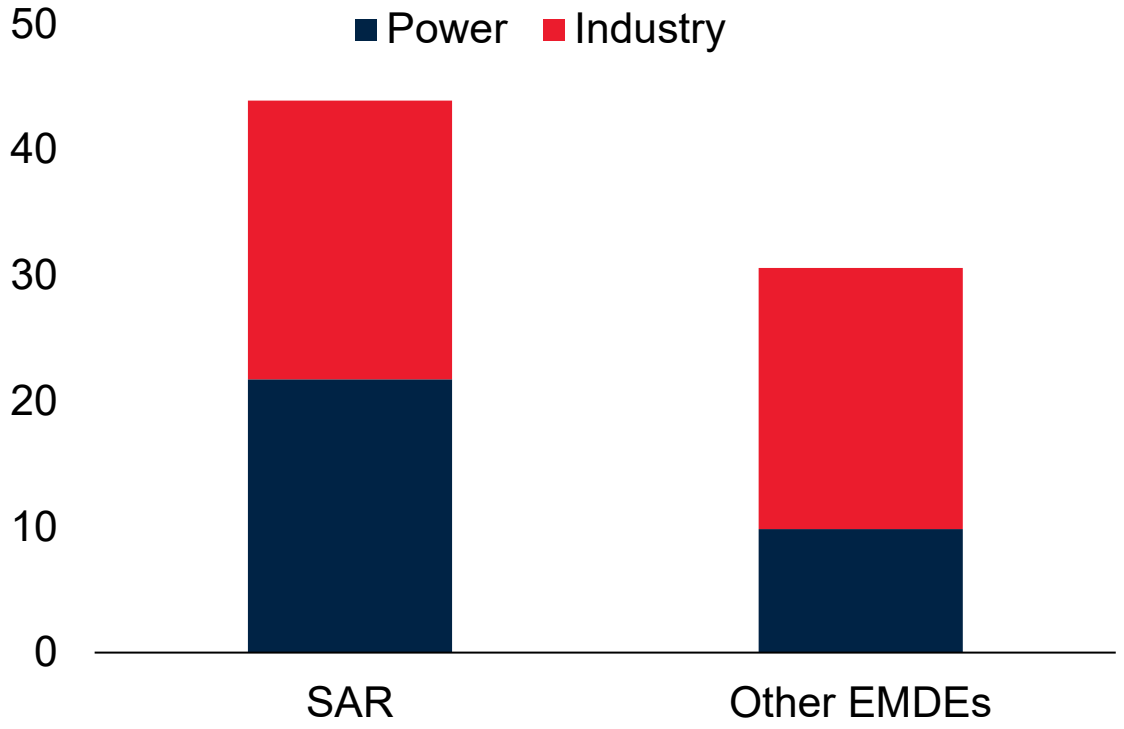
Origin of Fine Particular Matter exposure, 2018

(Contribution to PM2.5 in μg/m³)



Contribution of power and industry to PM2.5 emissions, 2018

(Percent of PM2.5 emissions)



Source: Calculations using GAINS model developed by the International Institute for Applied Systems Analysis.

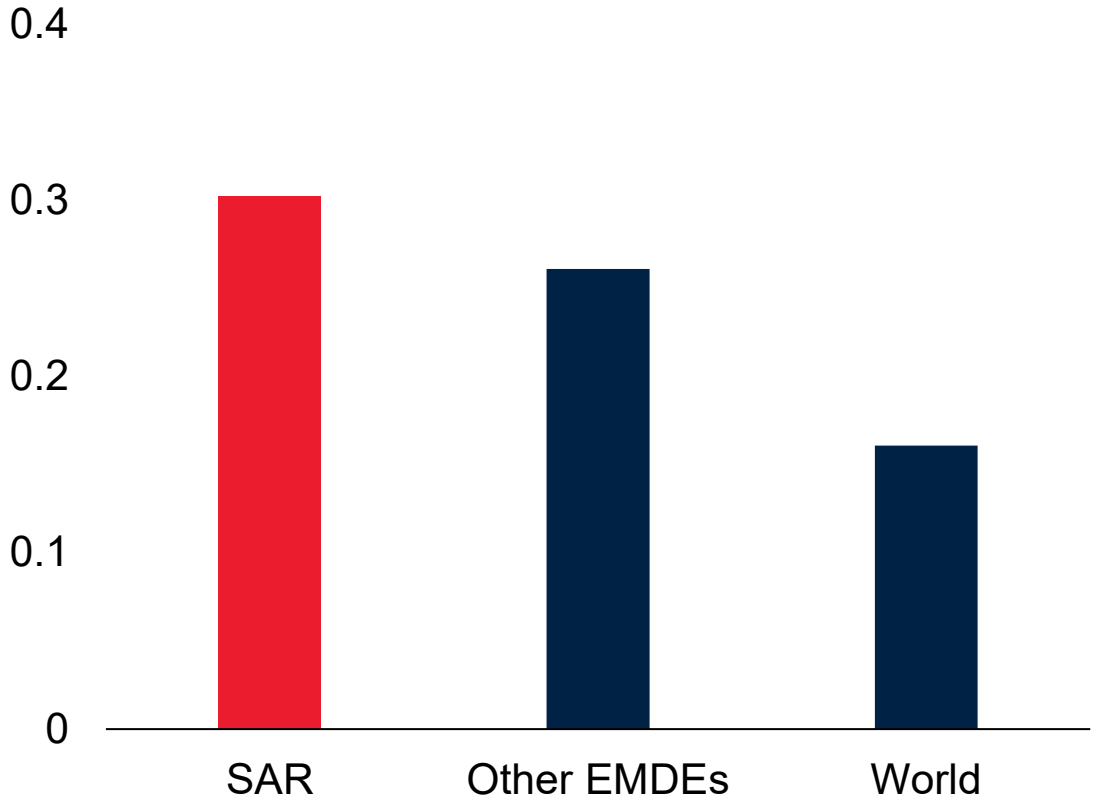
Note: PM2.5 (μg/m³) = fine particulate matter measured in micrograms per cubic meter. Left Panel: "Agriculture" includes manure and fertilizers as well as agricultural burning. "Industry" includes small industry (including brick kilns) as well as power plants and large industry. "Other" includes municipal waste, soil dust, and other sources. Right Panel: "Power" includes industries with "Main Activity Electricity and Heat Production", "Industry" includes "Manufacturing Industries and Construction", "Glass Production", and "Other Process Uses of Carbonates". Share in total PM2.5 emissions in South Asia ("SAR") and other EMDEs. Latest data for 2018.

Energy Intensity in South Asia

Twice the Global Average; Firms Lag in Advanced-Technology Adoption

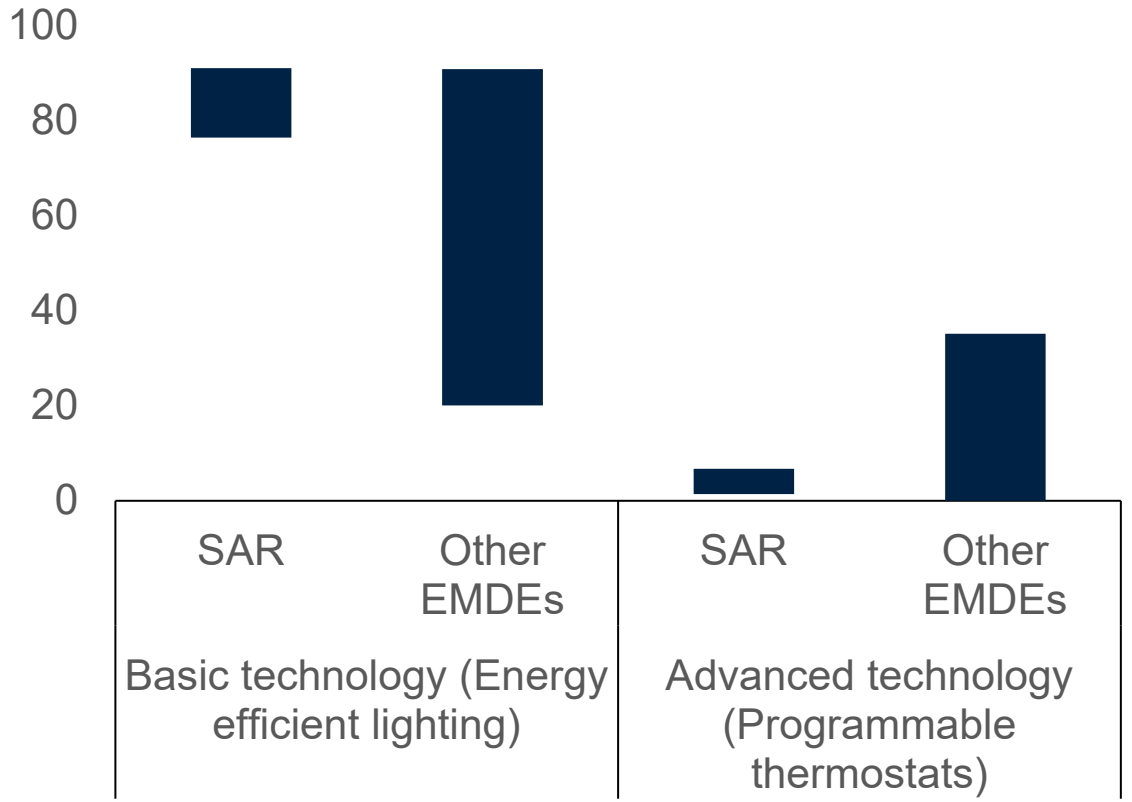
Energy intensity of output, 2020

(Toe per thousand U.S. dollars)



Share of firms adopting energy-efficient technologies

(Percent)



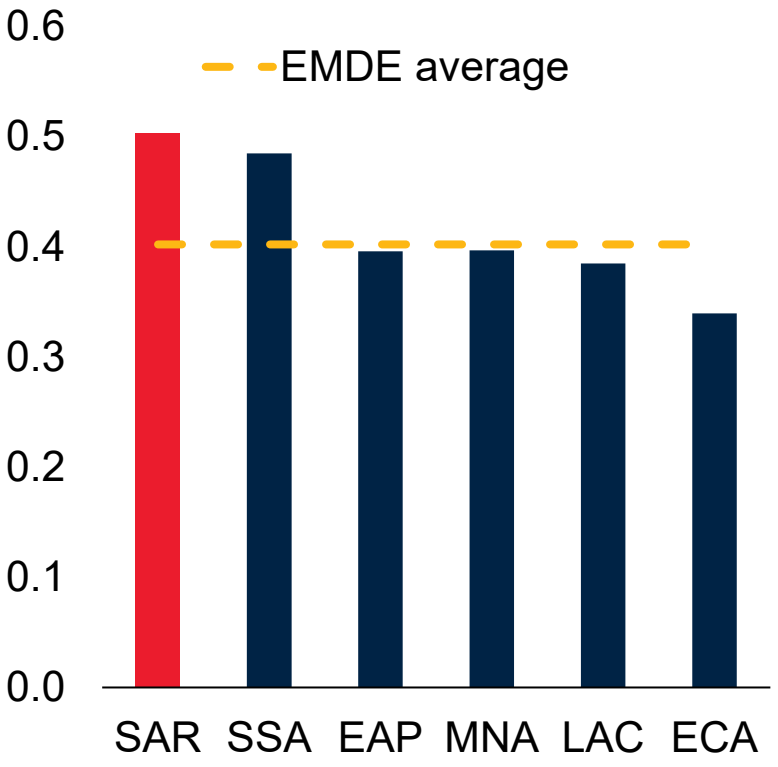
Sources: WDI, European Commission; OECD Green Growth database; World Bank Enterprise Surveys; October 2023 South Asia Development Update.

Left Panel: Energy intensity is defined as energy consumption (in tons of oil equivalent, toe) relative to nominal GDP (in thousands of U.S. dollars) in 2020. Right Panel: Includes World Bank's Firm Adoption of Technology (FAT) Surveys of 10,090 firms in seven EMDEs (Brazil, Bangladesh, Cambodia, Chile, Ethiopia, India, and Georgia). Depicts the range of country-level averages of percent of firms adopting technologies in SAR and other EMDEs..

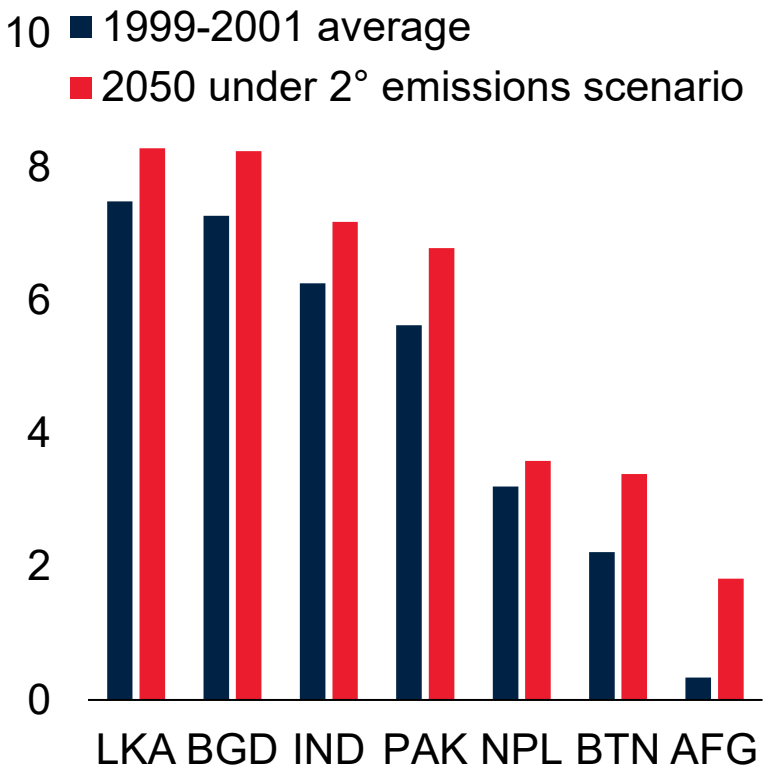
Risks to the Outlook

Climate Shocks

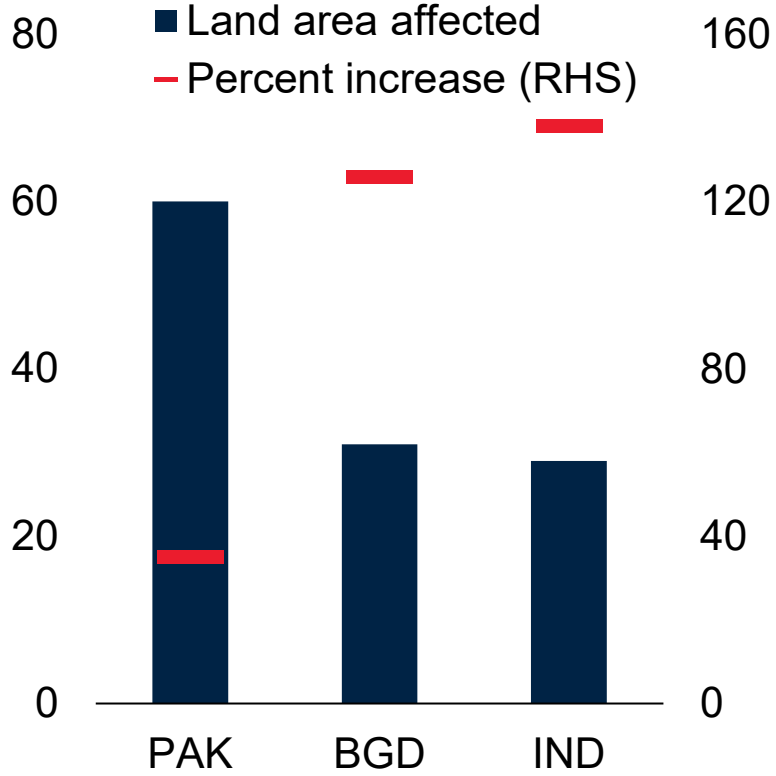
Vulnerability index
(Index)



Number of hours when it is too hot to work outside
(Hours per day)



Land area affected by extreme drought
(Percent)



Sources: Notre Dame Vulnerability Index; WDI (database); Lancet countdown on health and climate change data sheet (2023) available at www.lancetcountdown.org; World Bank.
Left panel: Bars show the population-weighted climate vulnerability index of Notre Dame University. Center panel: 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, 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. Projections for 2050 for 2°C scenarios. Right panel: Total land area affected by extreme drought at least once per year, on average, in 2013-2022.
Horizontal lines show percent increase of at least one month of extreme drought per year from 1951- 1960 to 2013-2022.

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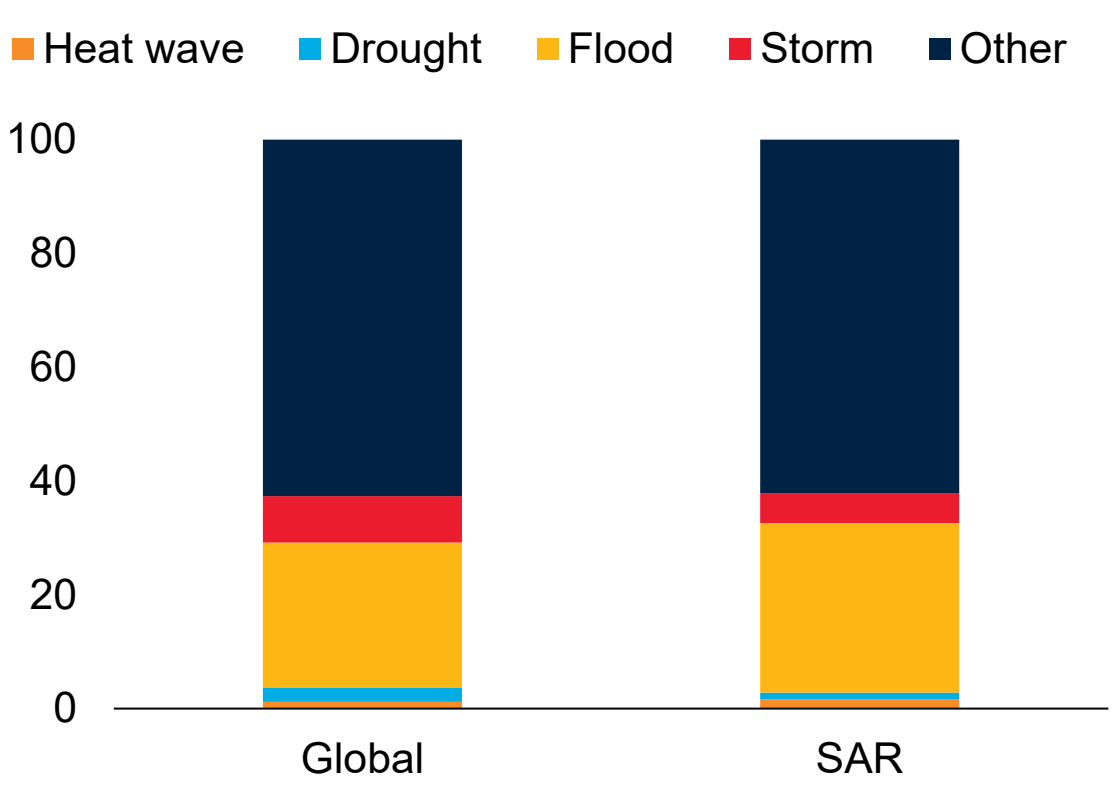
2. **How do households and firms adapt to climate risks?** *Households have less effective climate adaptation strategies than firms, in part because of limited employment options in non-agriculture.*

Impact of Climate Change

Poorer Households Often More Exposed, Usually More Hurt

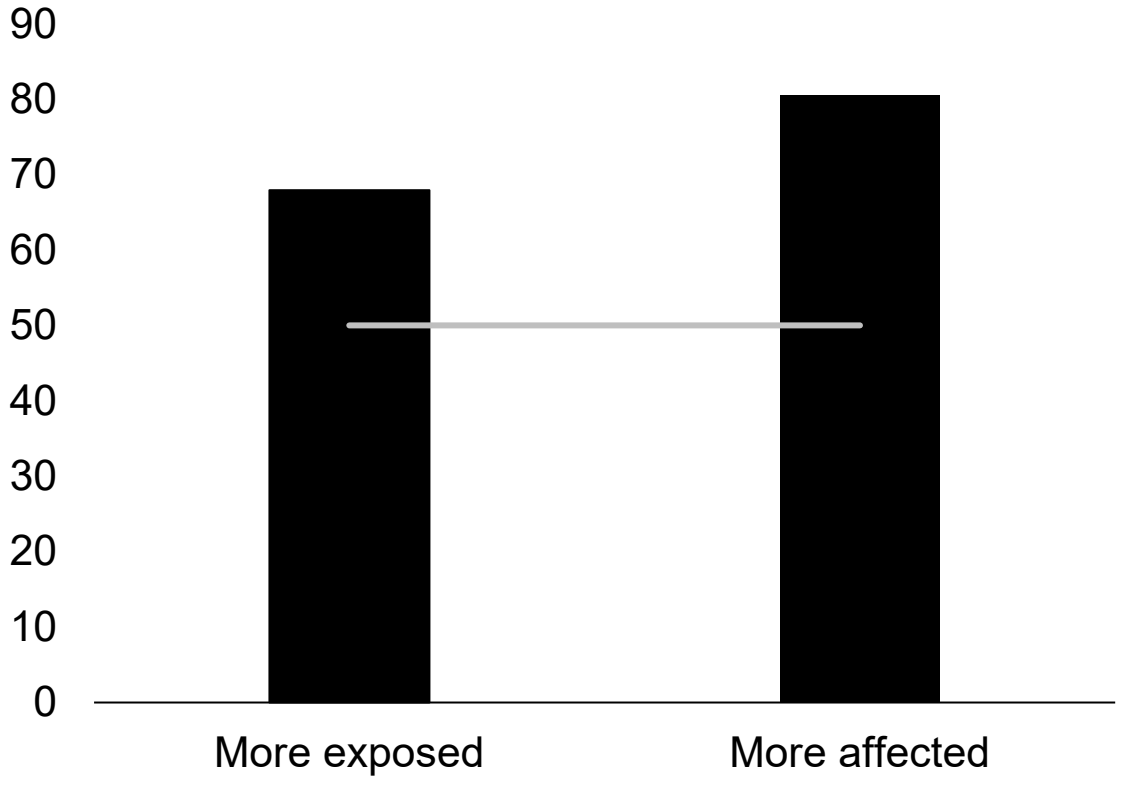
Distribution of natural disasters

(Percent of disasters)



Studies that report greater exposure of, or greater impact on, the poor

(Percent of studies)



Sources: EM-DAT (database); World Bank.

Note: CCDR = Country Climate and Development Report. Only CCDRs estimate the impact of extreme heat. Grey lines indicate 50 percent

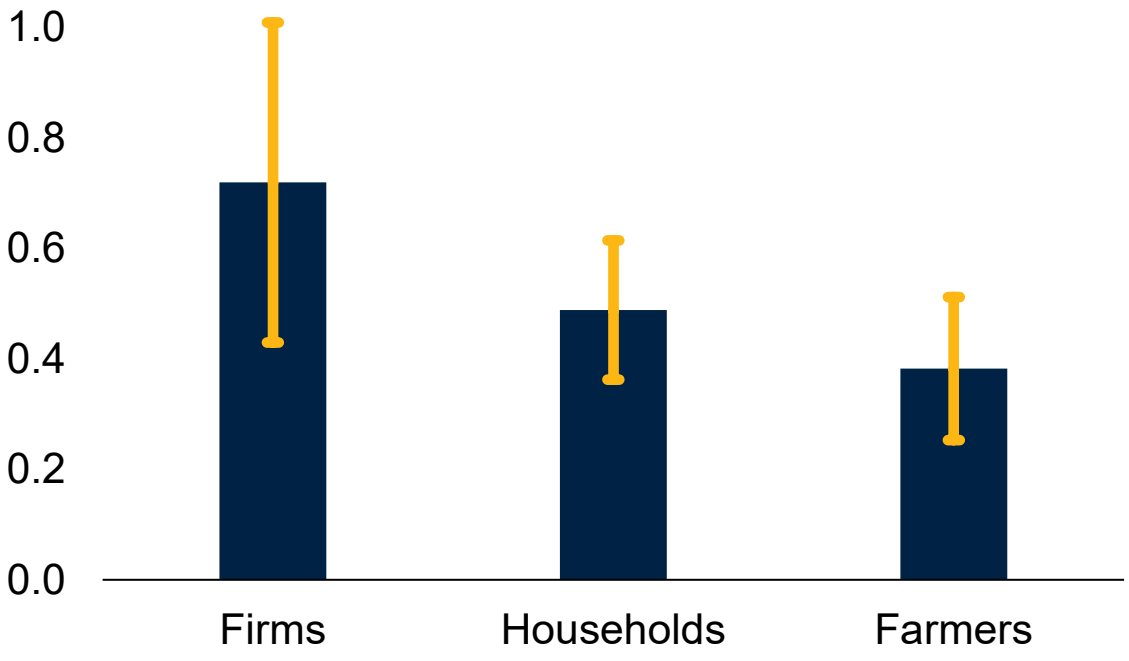
Left panel: "Other" includes earthquakes and landslides as well as unspecified natural disasters or climate shocks. Right panel: Sample for exposure of poor covers 33 studies, of which 22 are CCDRs. Sample for impact on poor covers 61 studies, of

Adaptation to Climate Change

Firms Have More Effective Strategies Than Households

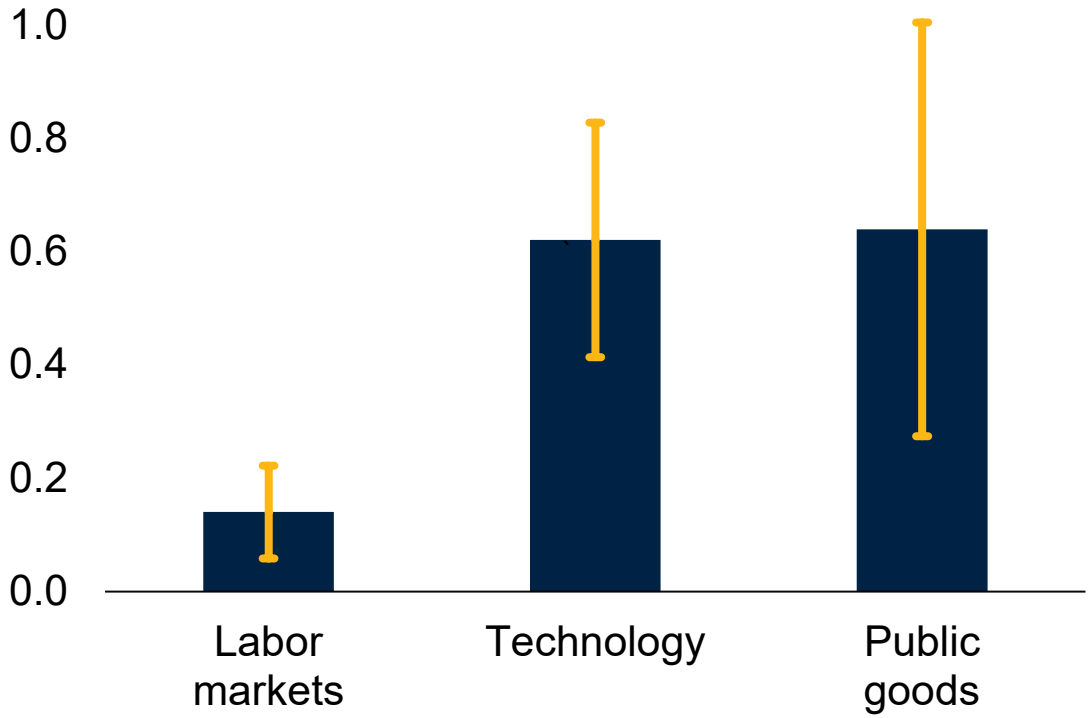
Adaptation ratio, by agent

(Ratio)



Adaptation ratio, by strategy

(Ratio)



Sources: Notre Dame University; Rexer and Sharma (2024); April 2024 *South Asia Development Update;* World Bank.

Notes: Adaption ratio is the share of the damage from a climate shock that is offset by adaptation. The yellow lines represent 95 percent confidence intervals. The total sample consists of 118 estimates from 52 papers included in the meta-analysis of adaptation in Rexer and Sharma (2024).

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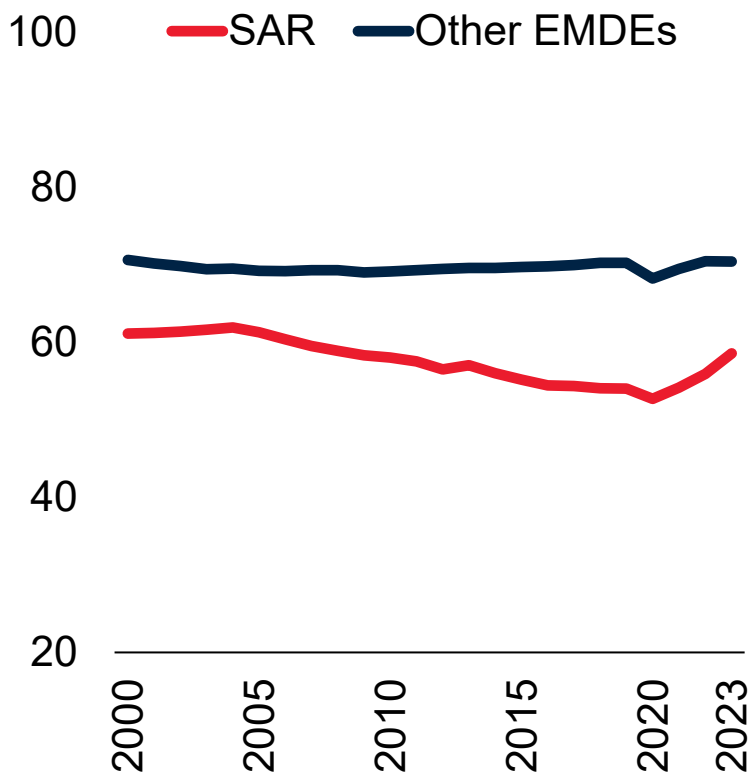
3. **Why is job creation weak in South Asia?** *South Asia's nonagricultural sector and women are converging towards significantly below-average employment ratios, including due to obstacles to firm growth.*

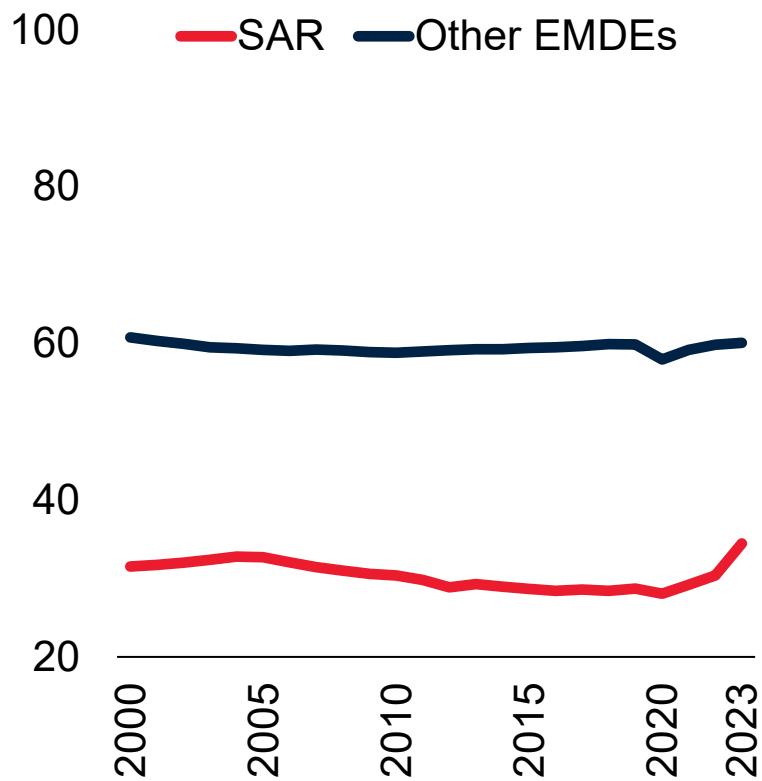
Employment Ratios

Employment Ratios Falling for Men, Low for Women

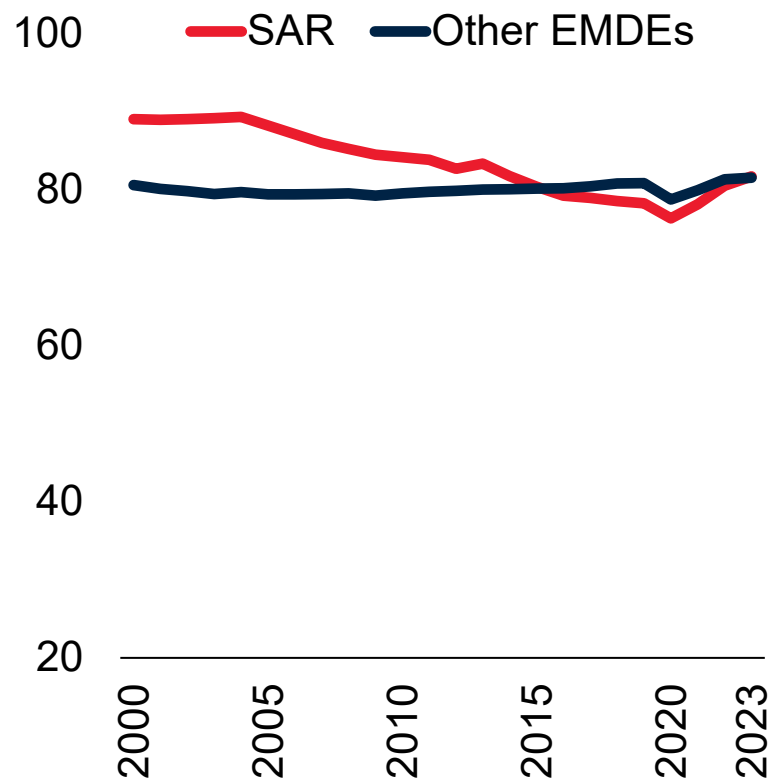
Employment ratio
(Percent of working-age population)



Women: Employment ratio
(Percent of female working-age population)



Men: Employment ratio
(Percent of male working-age population)

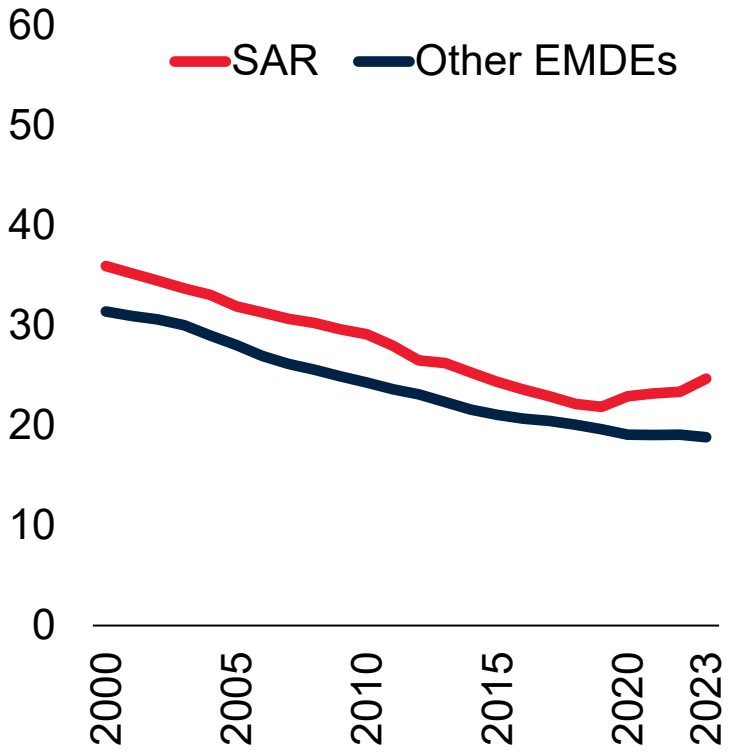


Sources: International Labor Organization; WDI (database); World Bank.
Note: Working-age population refers to persons aged 15 to 64. Employment ratios are defined as employment in percent of the working-age population. Working-age population weighted averages for country groups. Sample includes 128 EMDEs.

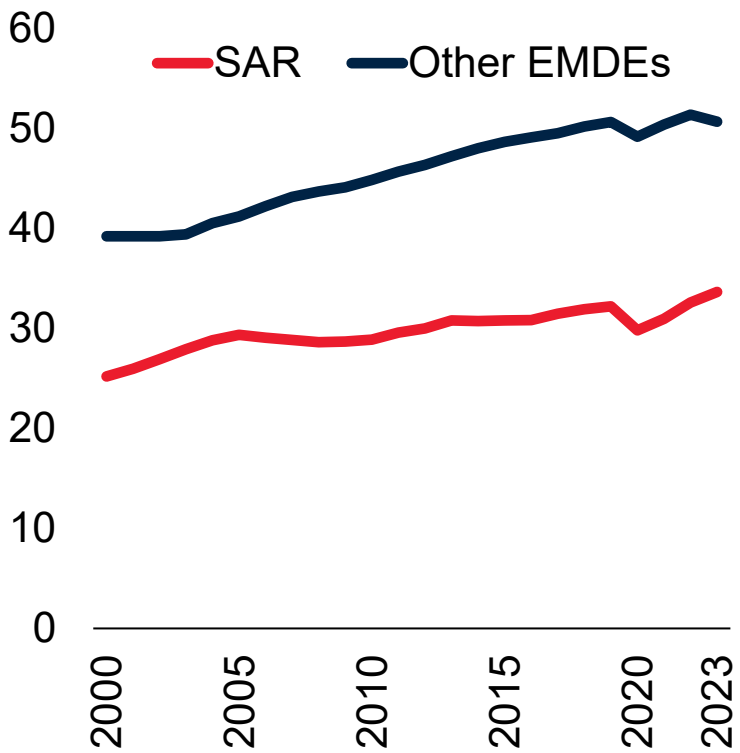
Employment Ratios

Falling in Agriculture Like Elsewhere; Lower and Rising More Slowly in Non-Agriculture

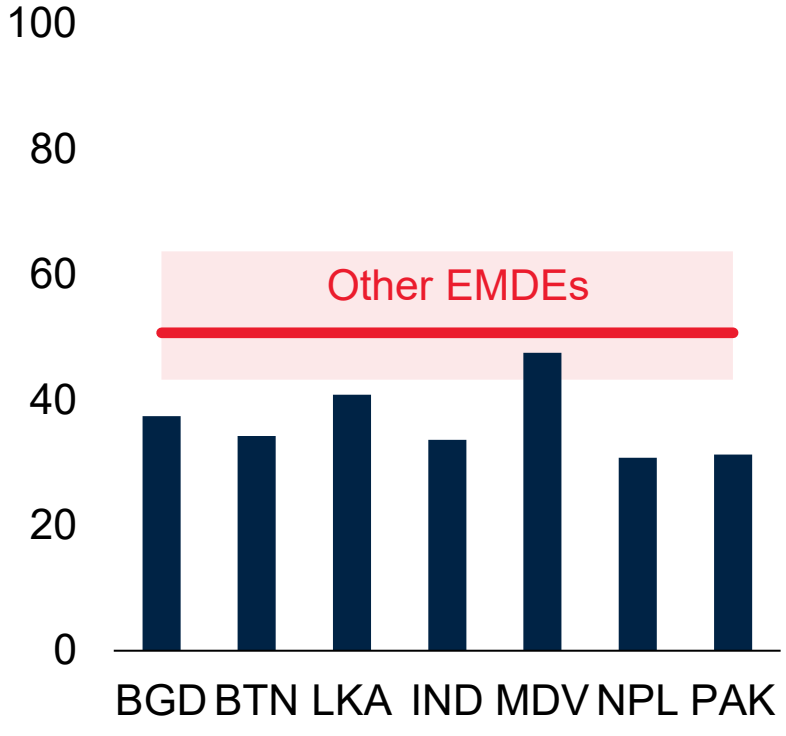
Agriculture: Employment ratio
(Percent of working-age population)



Non-agriculture: Employment ratio
(Percent of working-age population)



Non-agriculture: Employment ratio, 2022
(Percent of working-age population)



Sources: International Labor Organization; Penn World Tables (database): April 2024 *South Asia Development Update*; WDI (database); World Bank.

Note: Employment ratios are defined as employment in percent of the working-age population. Working-age population-weighted averages for country groups. Sample includes 128 EMDEs. Latest available data for sectoral employment in a large sample of countries is for 2023; missing 2023 data is assumed to be constant at 2022 level. Right panel: Red-shaded area is interquartile range among non-South Asian EMDEs.

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4. **What are the policy implications?** *Vibrant, competitive firms are key to unlocking job creation, private investment, and private climate adaptation. The energy transition can be a growth opportunity.*

Raising Long-Run Employment Ratios

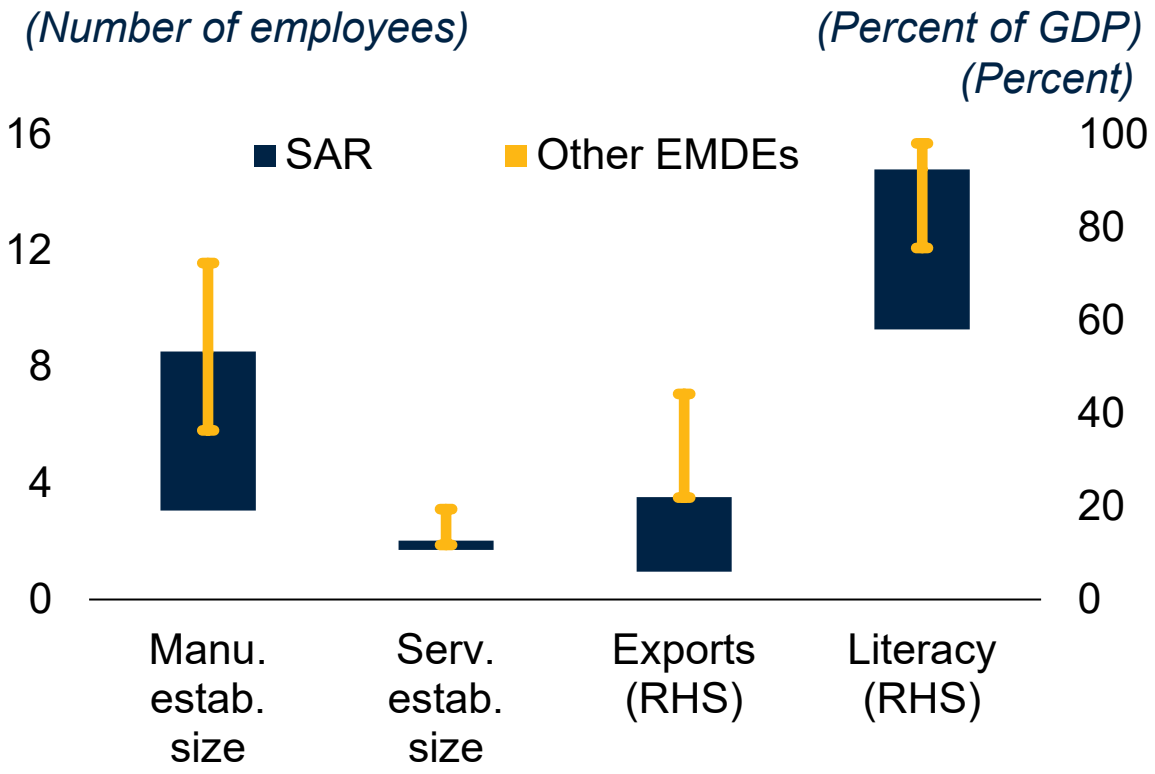
Range of Policies Needed

- Correlates of higher **aggregate** long-run employment ratios
  - Less onerous tax regime,
  - Less policy uncertainty.
- Correlates of higher **non-agricultural** employment
  - Larger firm sizes*,
  - Greater trade openness*,
  - Better education*,
  - Better access to land,
  - More flexible labor and product market policies,
  - Fewer restrictions on women's entrepreneurship.
- Additional correlates of higher **women's** employment
  - Legal protection of women's rights*.

Raising Long-Run Employment Ratios

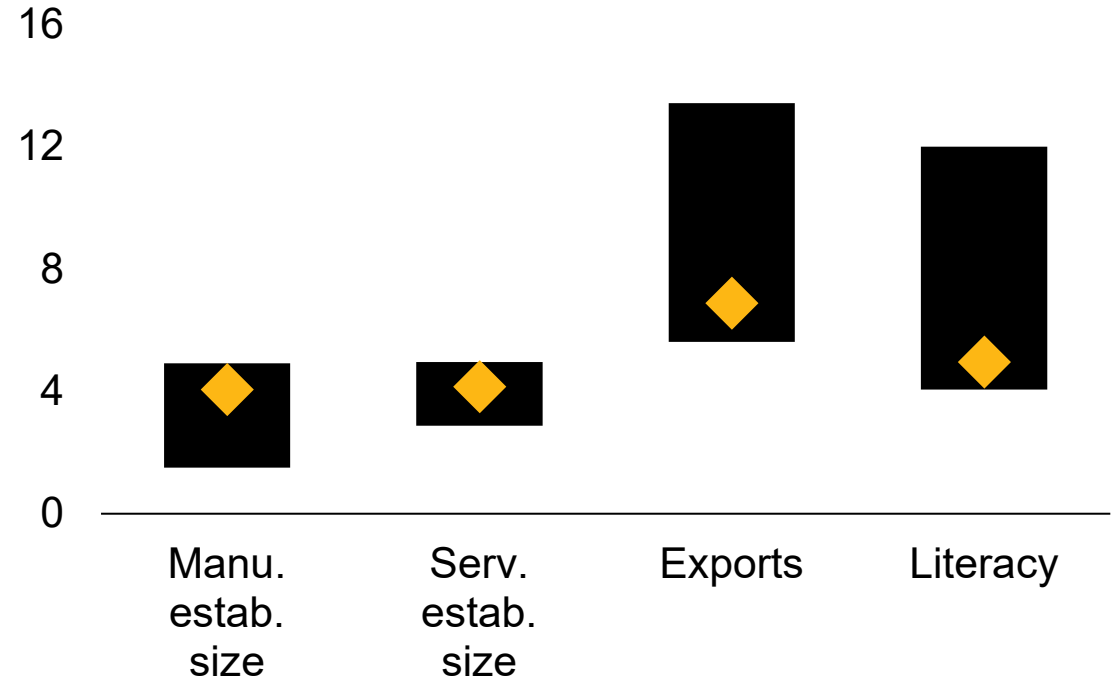
Increase Firm Size, Trade Openness, Education

Selected features of South Asian economies, latest



Difference in non-agricultural employment ratio if SAR had matched median of other EMDEs

(Percentage points of working-age population)



Sources: Bento and Restuccia (2021); Fraser Institute Economic Freedom of the World (database); GGDC/UNU-WIDER Economic Transformation Database; International Labour Organization; Penn World Tables (database); WDI (database); World Bank; World Bank Enterprise Surveys (database).

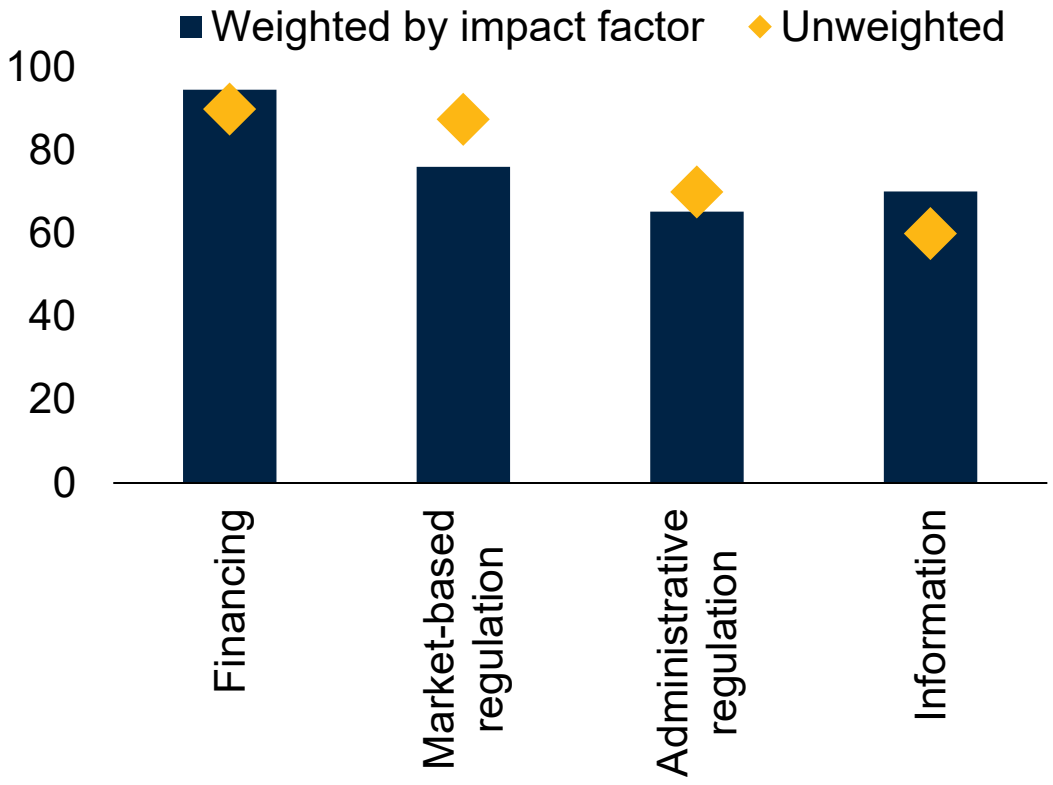
Left panel: SAR = range for Bangladesh, India, Nepal, Pakistan, and Sri Lanka exports and literacy; Bangladesh, India, Nepal, and Sri Lanka for manufacturing establishment size; and Bangladesh, India, and Sri Lanka for services establishment size. Other EMDEs = interquartile range for a sample of 96 non-SAR EMDEs. Right panel: Chart is based on the regression results of annex tables A2.5.1-A2.5.3. Bars show the range of differences in the predicted deviations from EMDE-average long-run employment ratios in non-agriculture in South Asian countries, if they had the same establishment size, exports, or literacy as median of other EMDEs. Diamonds show the employment-weighted average of the predicted deviations. Sample includes South Asian countries with variable values below the median of other EMDEs and excludes Nepal and Sri Lanka for manufacturing establishment size; India, Nepal, and Sri Lanka for product market flexibility; and Sri Lanka for literacy.

Encourage Firm Technology Adoption

Getting Incentives Right

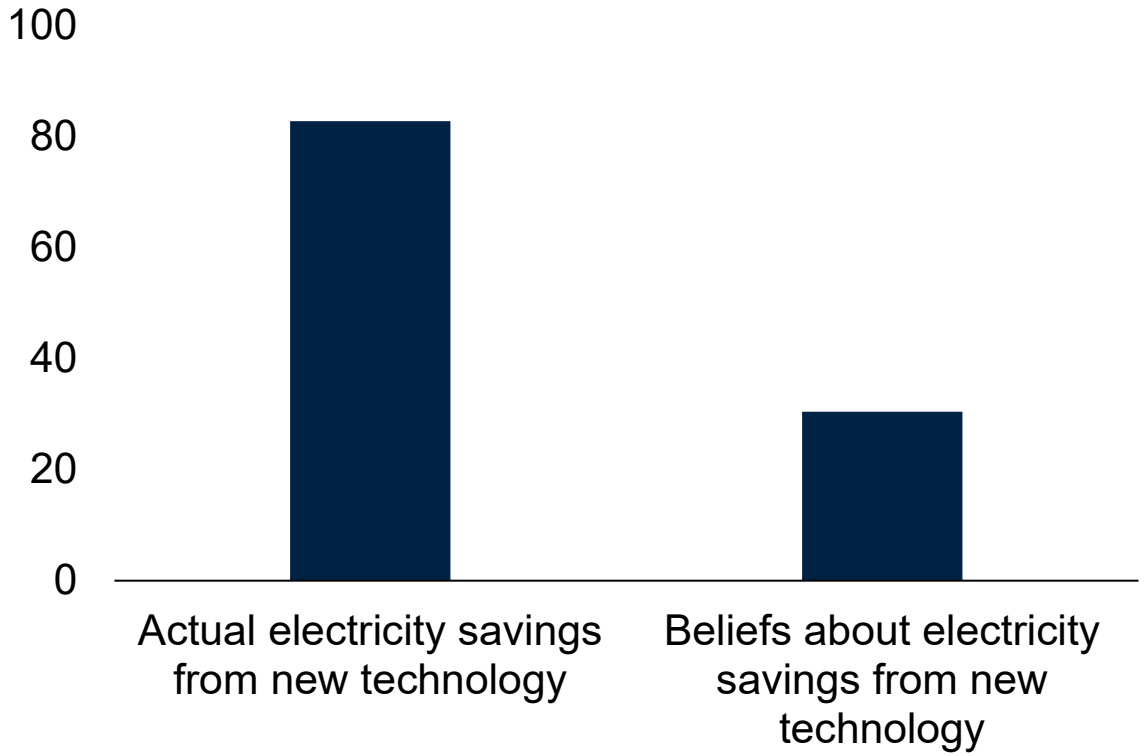
Studies reporting successful green technology intervention

(Percent of studies)



Actual versus perceived savings from a new energy-efficient technology

(Percent)



Sources: Chaurey et al. 2023; World Bank October 2023 South Asia Development Update; data available here.

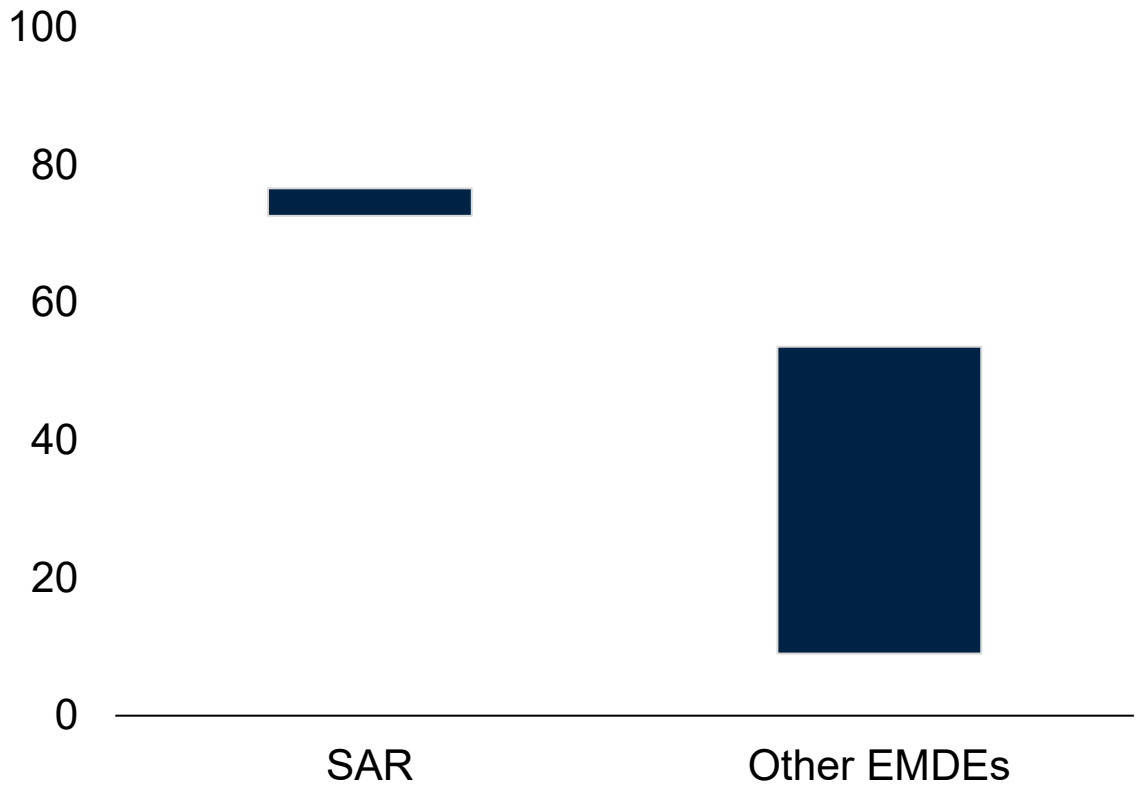
Left Panel: Based on results from a review of 45 academic and policy studies on the impact of specific policy interventions (regulation, information/behavioral, and finance) on either firm technology adoption or firms' energy efficiency. Impact weighting according to the RePEc ranking of the journal of working paper series in which the study was published. Right Panel: The left bar depicts the estimated percentage reduction in electricity consumption per day from switching a clutch motor (old technology) with a servo motor (new technology) in a sewing machine, based on readings from electricity meters installed in 124 firms. The right bar depicts the percentage reduction in electricity consumption implied by firms' mean beliefs about

Encourage Firm Technology Adoption

Provision of Reliable Power Grid

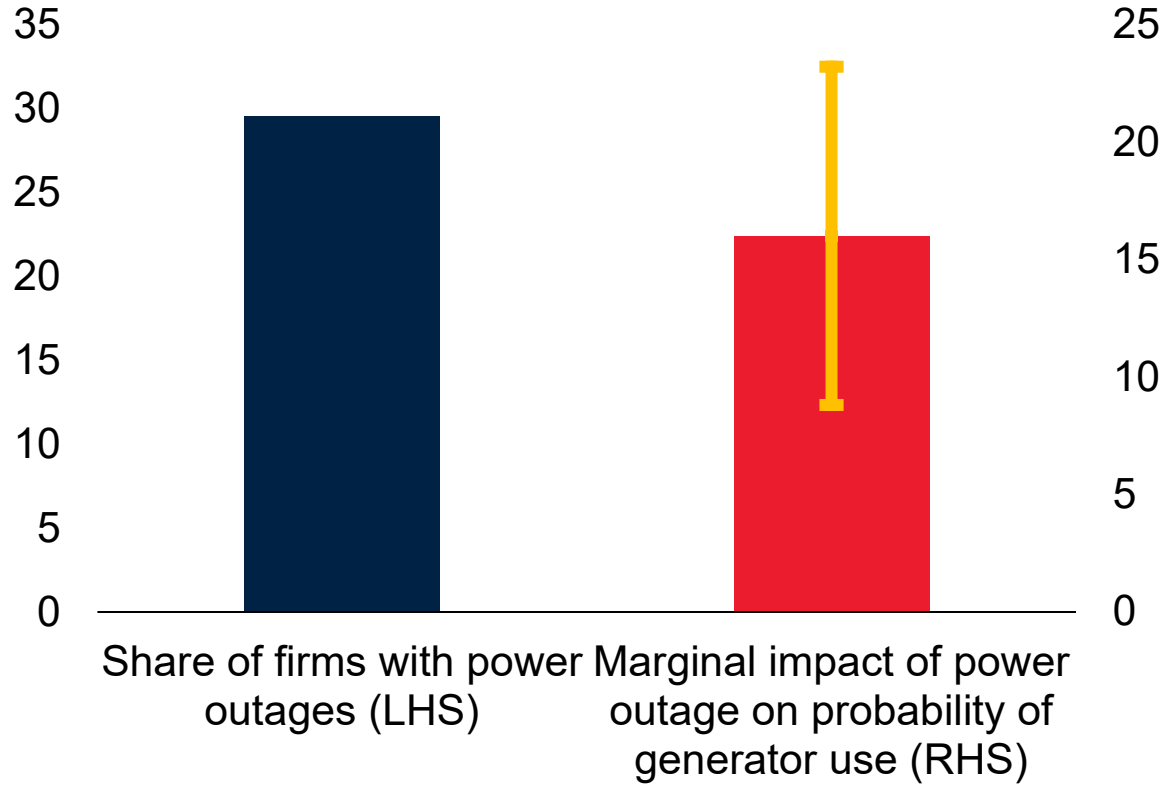
Establishments using generators

(Percent of firms)



Impact of power outages on generator use in India

(Percent of firms) *(Percentage points)*



Source: World Bank Firm Level Adoption of Technology Surveys; World Bank October 2023 South Asia Development Update; data available here.

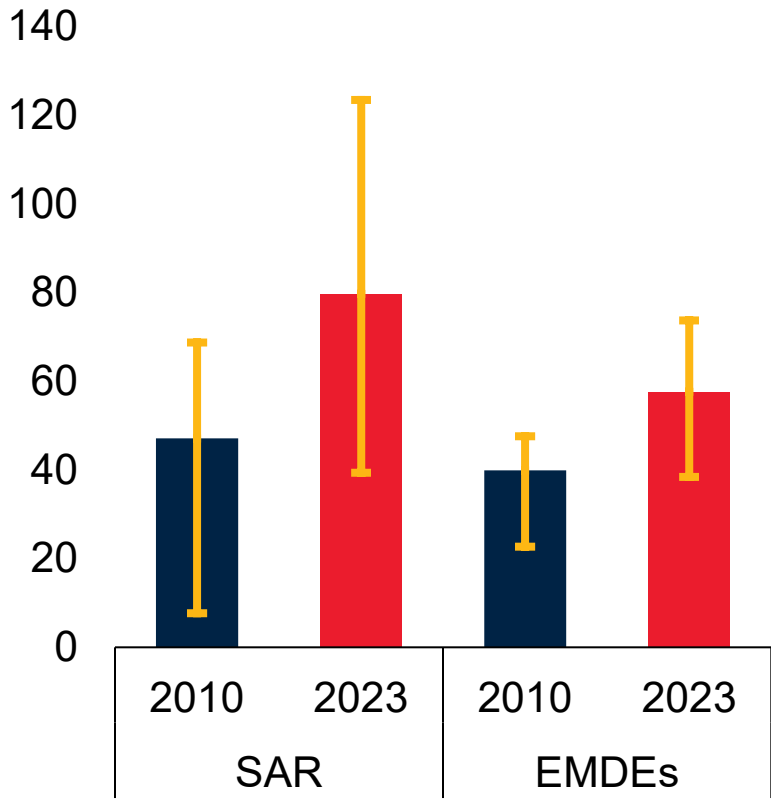
Includes World Bank's Firm Adoption of Technology (FAT) Surveys of 10,090 firms in seven EMDEs (Brazil, Bangladesh, Cambodia, Chile, Ethiopia, India, and Georgia). Depicts the range of country-level averages of percent of firms adopting technologies in SAR and other EMDEs.

Fiscal Policy for Resilience

Improve Fiscal Positions, Raise Revenues

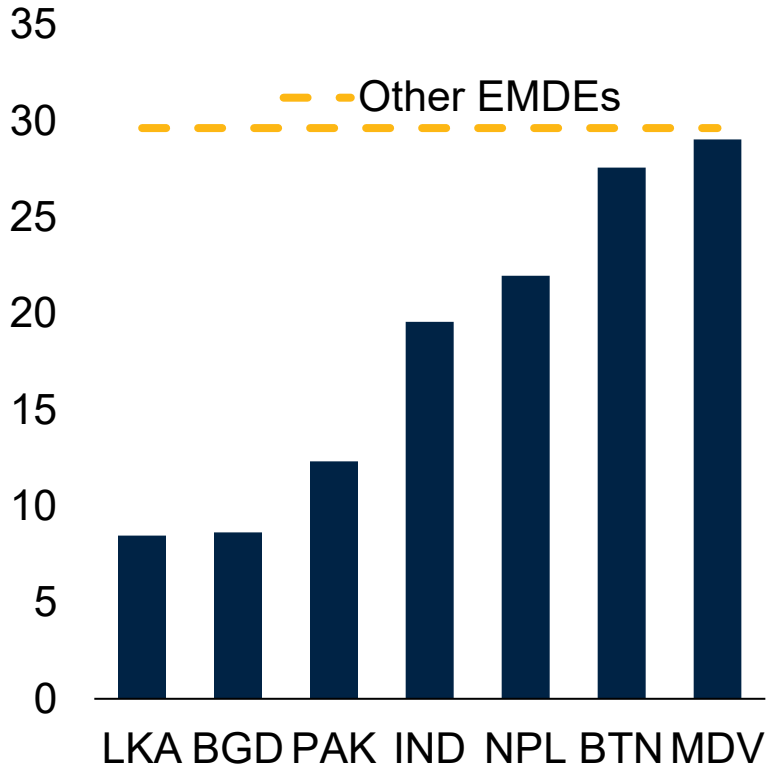
Government debt

(Percent of GDP)



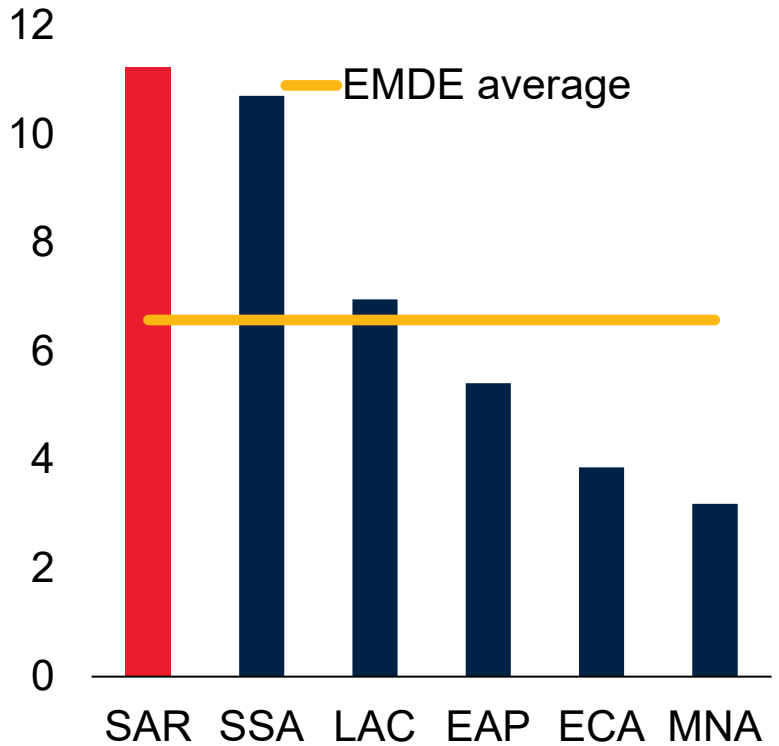
Government revenues, 2020-23 average

(Percent of GDP)



Revenues from trade taxes, latest available data

(Percent of revenues)



Sources: MPO (database); WEO (database); World Bank.

Left panel: Bars show unweighted averages. Yellow whiskers indicate minimum-maximum range for seven South Asian economies, and interquartile range for EMDEs. Center Panel: EMDE average computed using GDP (at average 2010-19 prices and market exchange rate) as weights. Bars show 2020-23 averages of government revenue except for Sri Lanka, which shows 2020-22 average. Right panel: Sample includes 93 countries, including 21 countries in EAP, 18 in ECA, 25 in LAC, 14 in MNA, 8 in SAR and 41 in SSA. Regional aggregate is median. Last observed year is 2017 for Afghanistan; 2021 for Bangladesh, Maldives and Nepal; 2020 for Bhutan; 2018 for India; 2022 for Sri Lanka. "Trade taxes" include both customs tariffs and other trade-related taxes, including taxes on exports, on profits of export or import monopolies, on exchange profits, exchange taxes, and other taxes on international trade and transactions, based on IMF financial statistics definitions.

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THANK YOU!

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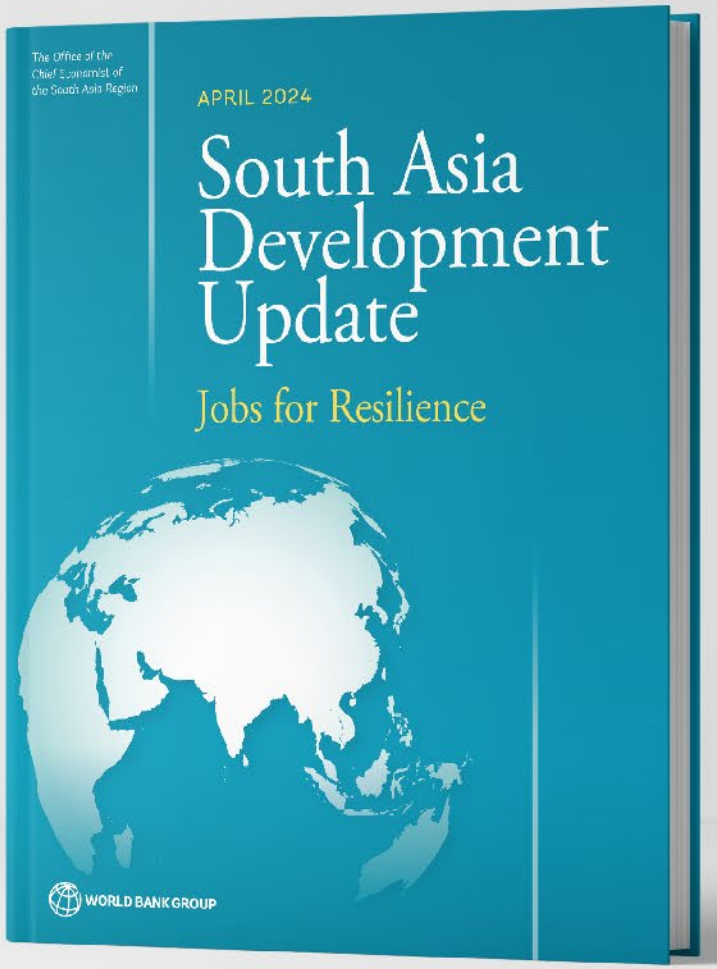

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