



Economic and Social Survey of Asia and the Pacific 2025

Understanding the macroeconomic implications of climate change

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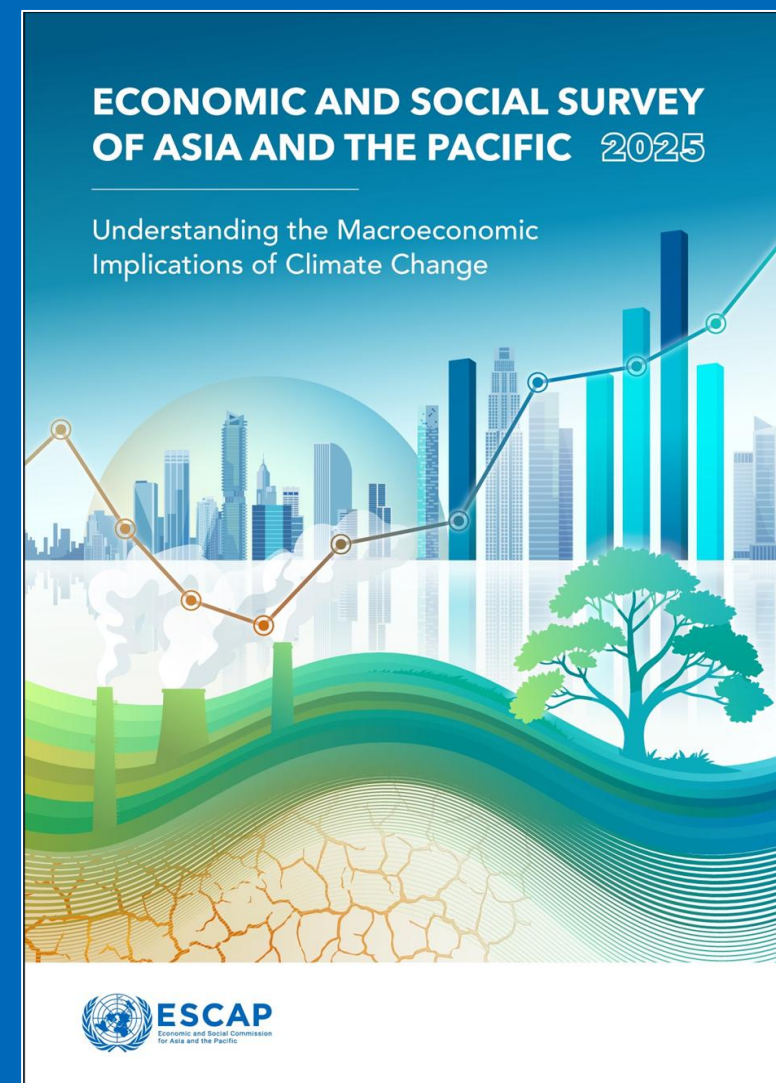
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- Despite relatively steady economic outlook, **rising global trade tensions and economic uncertainty** pose major headwinds for Asia-Pacific economies.
- The region needs to **revive productivity growth** for sustained economic development, while proactive government support may be needed for **sectoral economic upgrading**.
- A **deeper understanding** of the **complex macroeconomic-climate nexus** is needed by the fiscal and monetary authorities to manage climate-induced economic risks and foster climate action.
- Many Asia-Pacific countries **are less ready** to cope with the macroeconomic implications of climate change and low-carbon transition.
- **Embedding climate aspects into macroeconomic policies is essential** and requires fundamental shifts in policy thinking and frameworks.

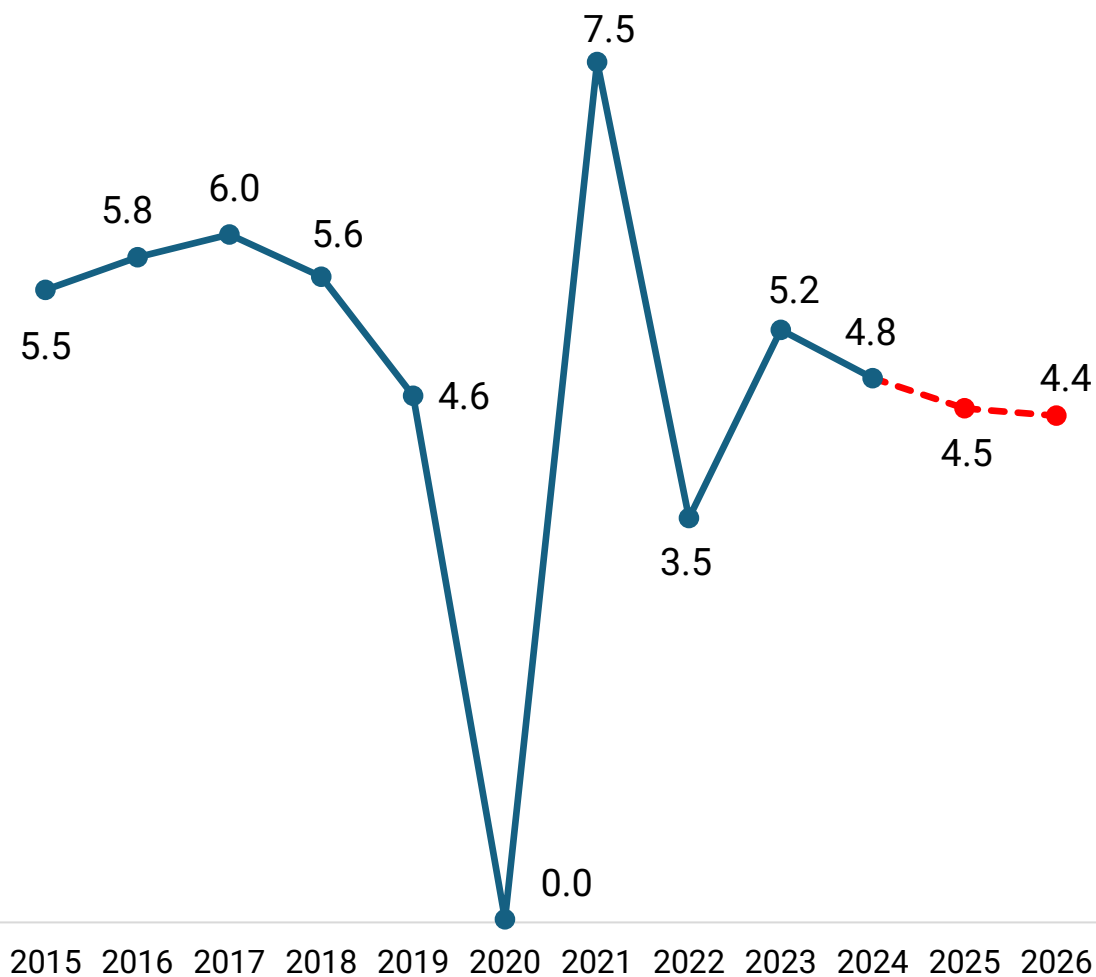


Near-term economic prospects:
largely steady but highly uncertain

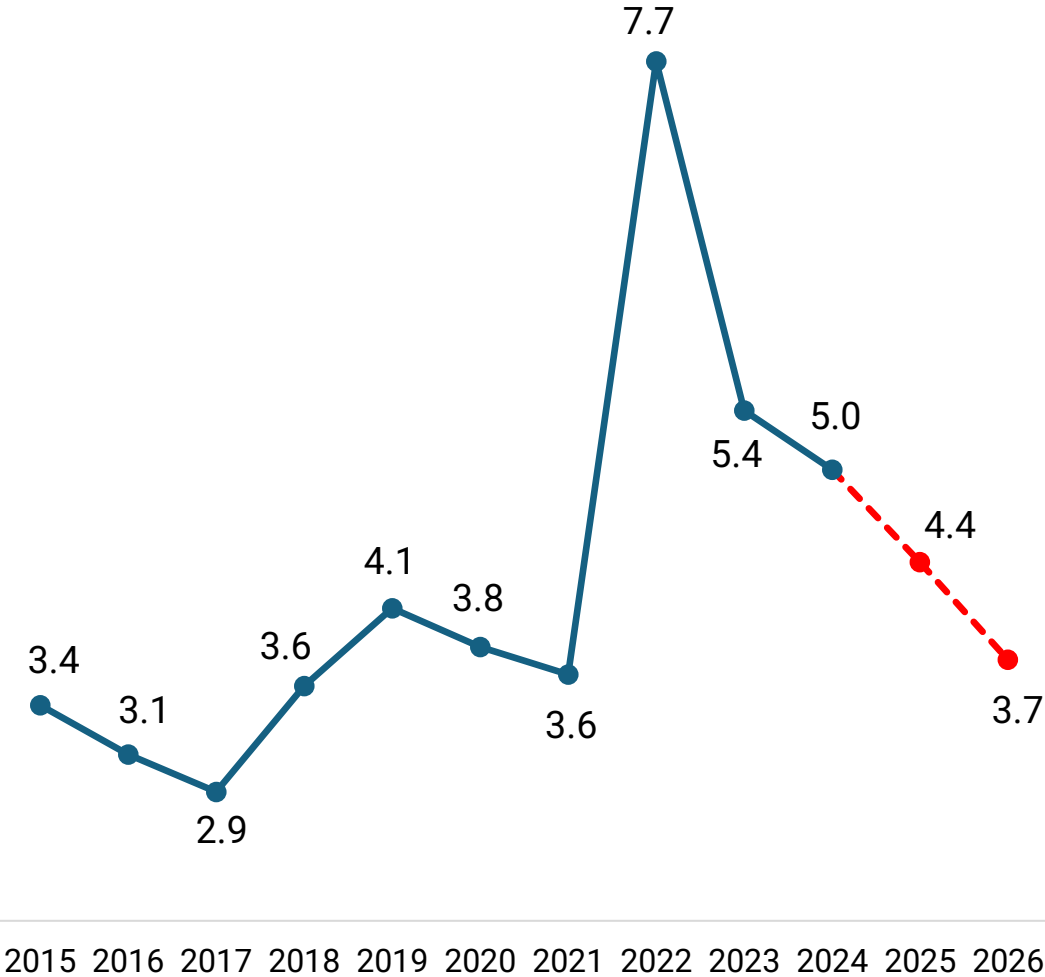


Largely resilient economic performance is expected in Asia-Pacific, despite rising uncertainties

Real GDP growth (%)



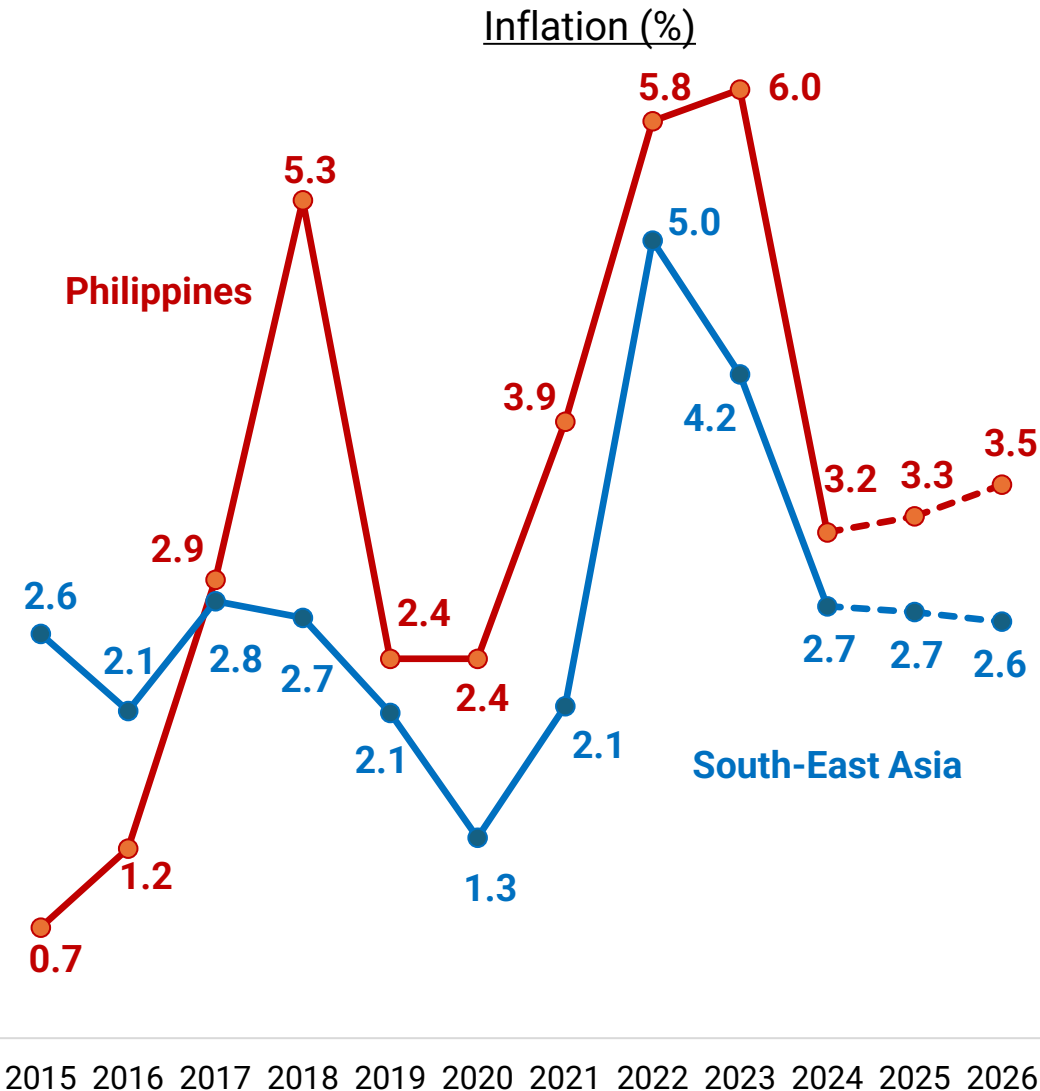
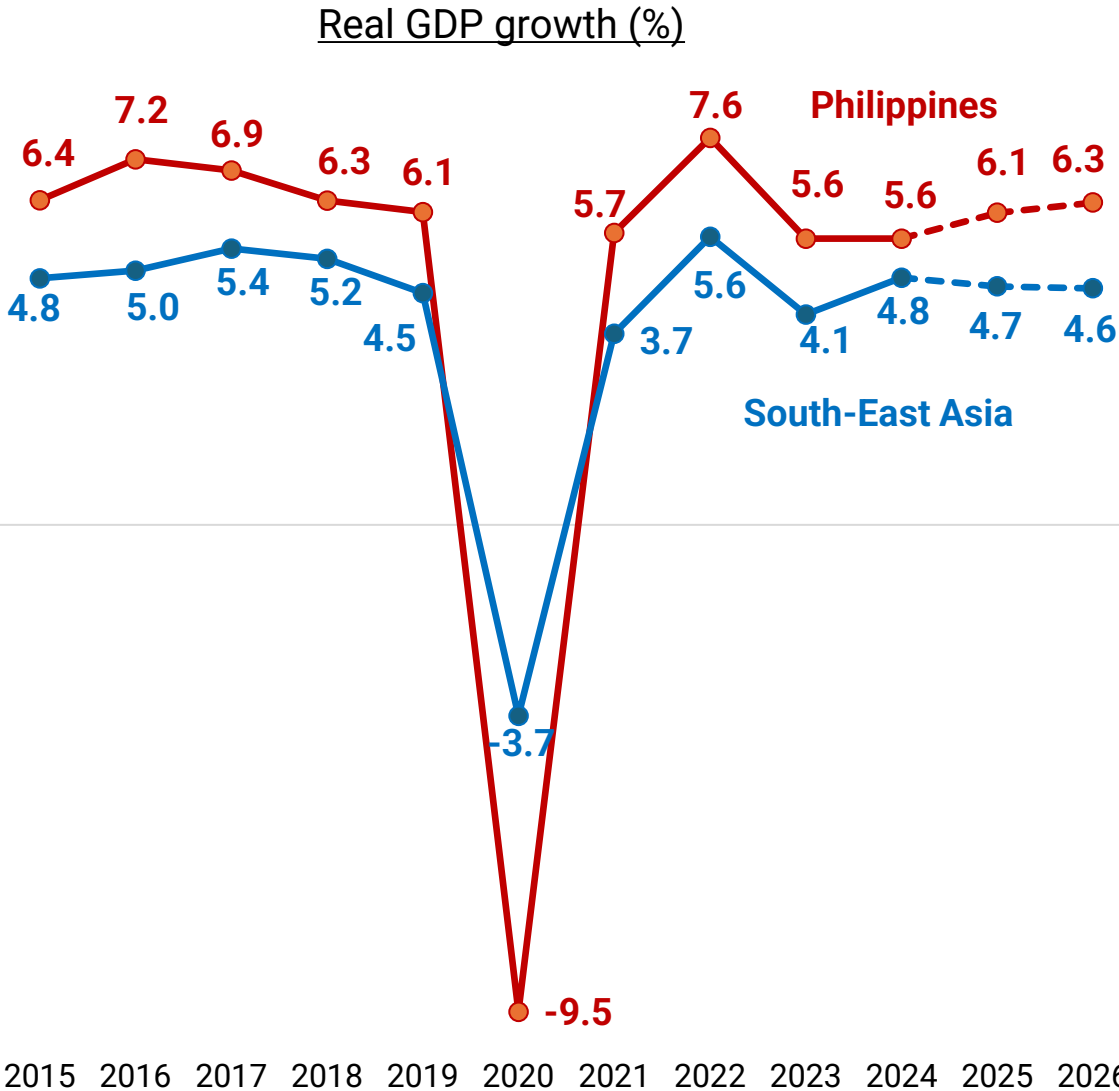
Inflation (%)



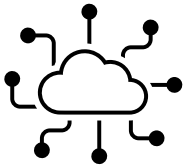
Source: ESCAP.



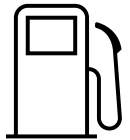
Public spending, infrastructure investment and remittances sustained economic growth in the Philippines



Source: ESCAP.



Robust capital investments in high-tech, digital and green sectors



Strong stimulus measures by China to support its economy, with likely positive spillovers for regional peers

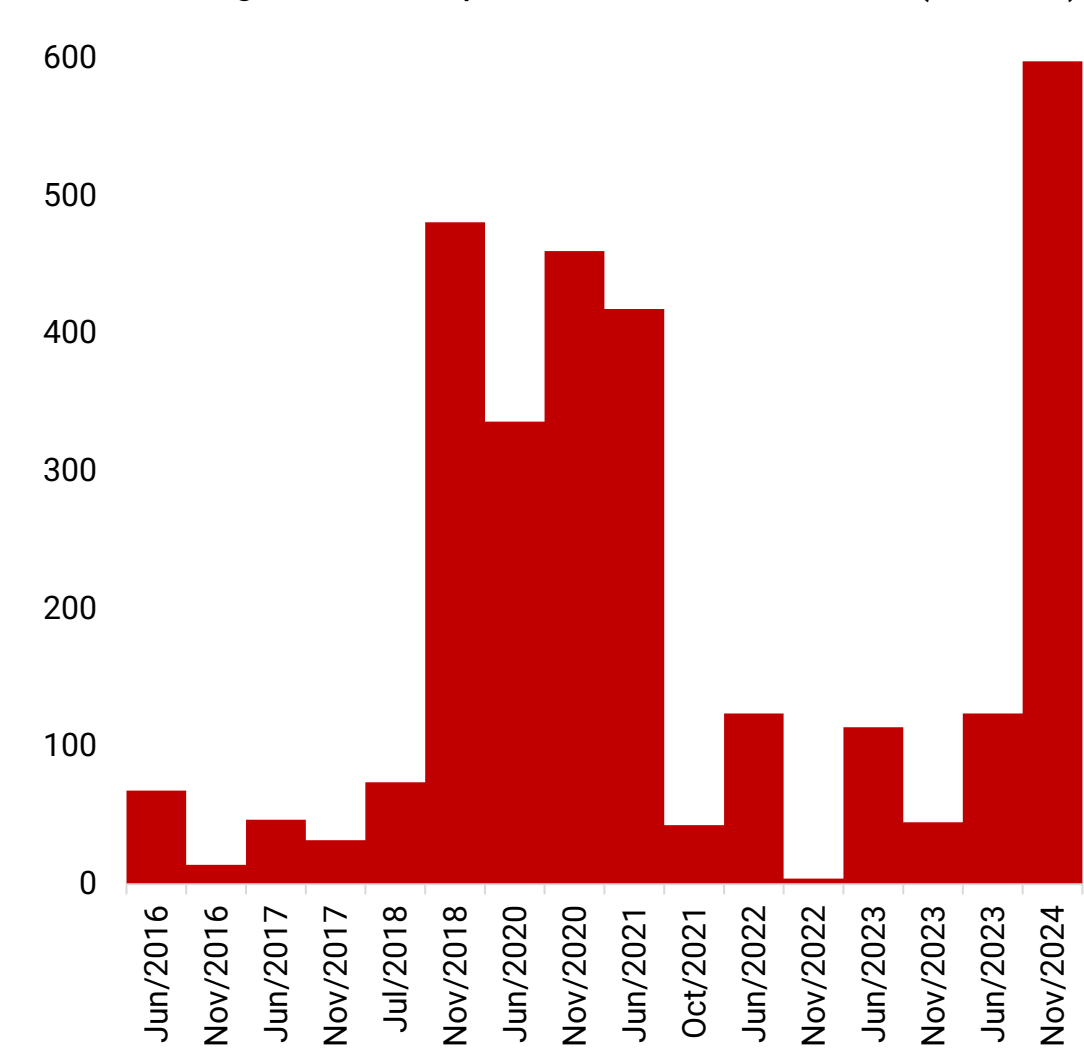


Intraregional foreign direct investment inflows may increase in response to global trade and geopolitical tensions



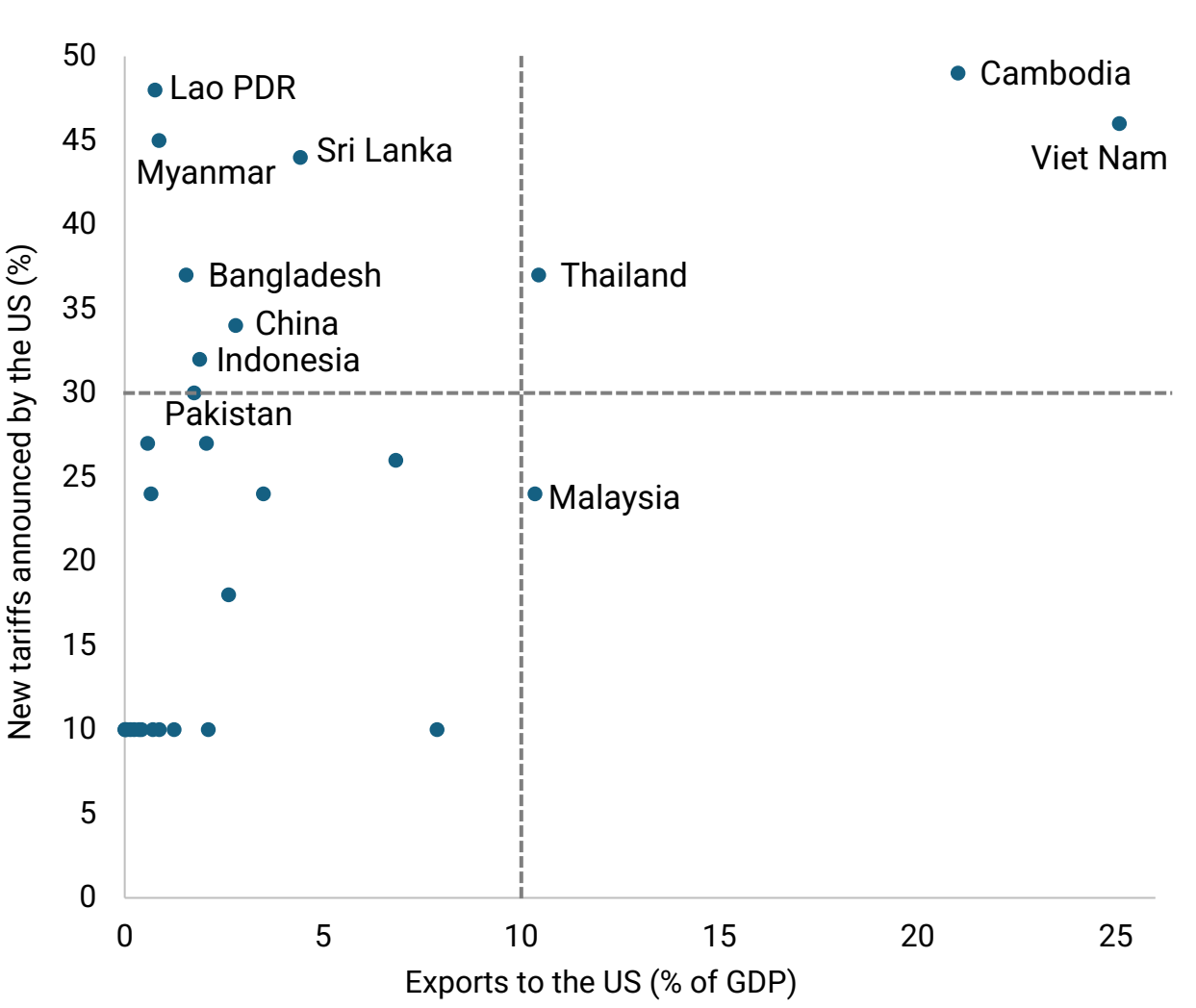
Major headwind: rising global trade protectionism

Trade coverage of new import restrictive measures (billion \$)



Source: ESCAP, based on WTO Trade Monitoring Database.

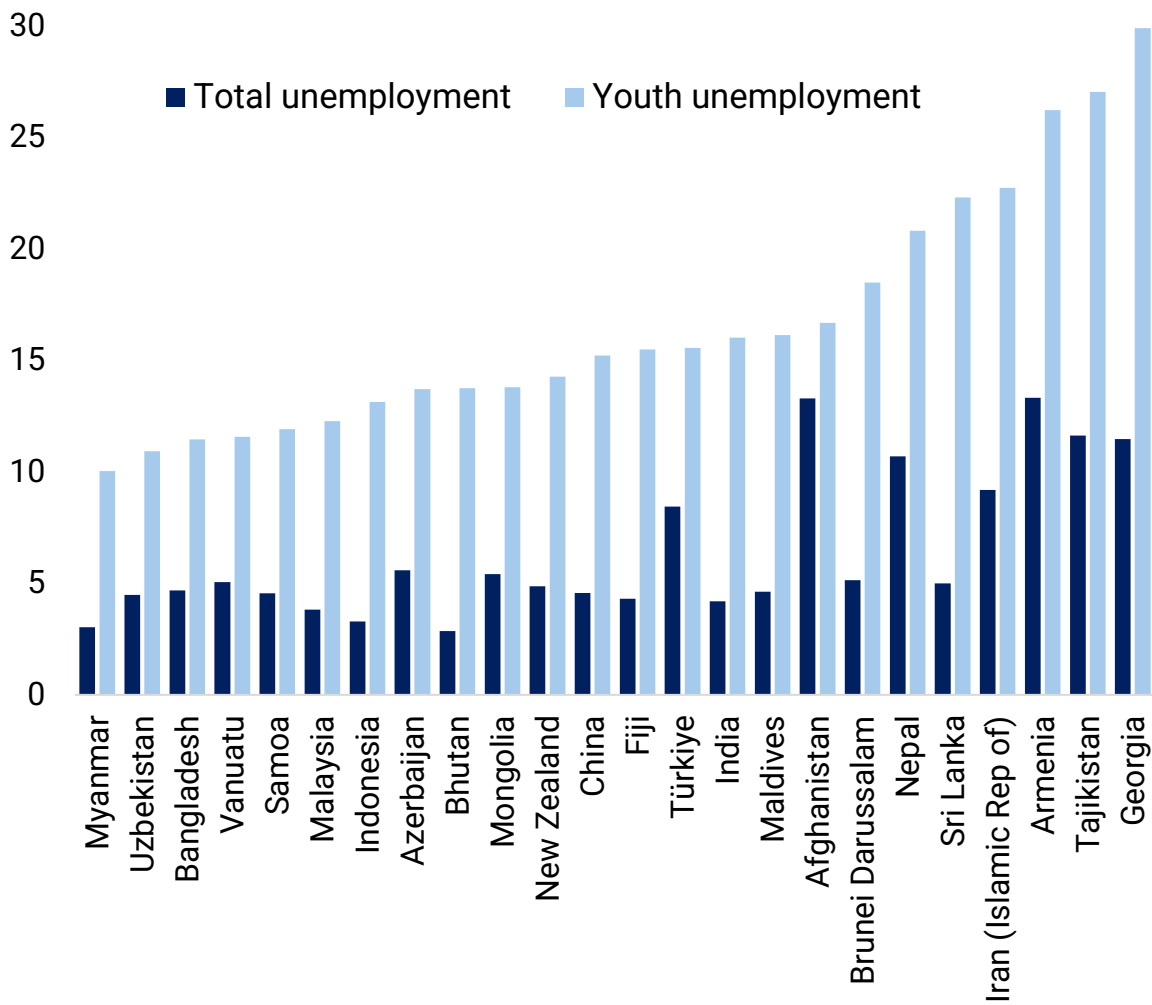
Newly announced US tariffs (%) versus exports to the US (% of GDP)



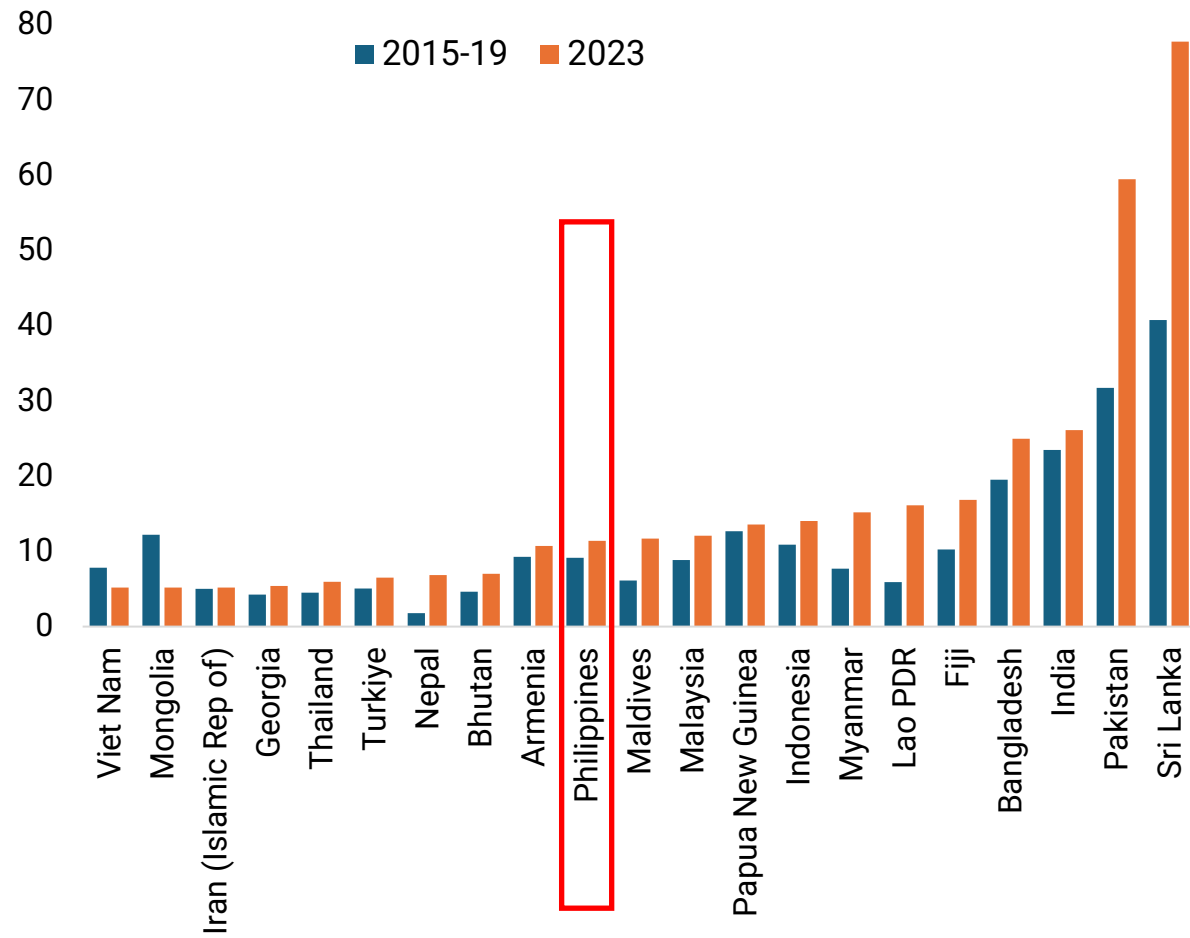
Source: ESCAP, based on CEIC, and White House's Executive Order on Regulating Imports with a Reciprocal Tariff (2 April 2025).

Main challenges: high youth unemployment and increasingly limited fiscal space

Total versus youth unemployment (%), 2024



Interest payments on public debt (% in public revenue)



Source: ESCAP, based on ILOSTAT.

Source: ESCAP, based on UNCTAD Debt Dashboard, IMF Public Finances in Modern History database, and IMF Fiscal Monitor October 2024.



Adopt prudent monetary and fiscal policies

- Remain vigilant regarding renewed increase in inflation
- Boost fiscal space for countercyclical measures, including through productive use of borrowed funds



Safeguard regional value chains

- Support industries affected by trade protectionism in a timely and flexible manner
- Strengthen inclusive regional economic cooperation, for both efficiency and resilience



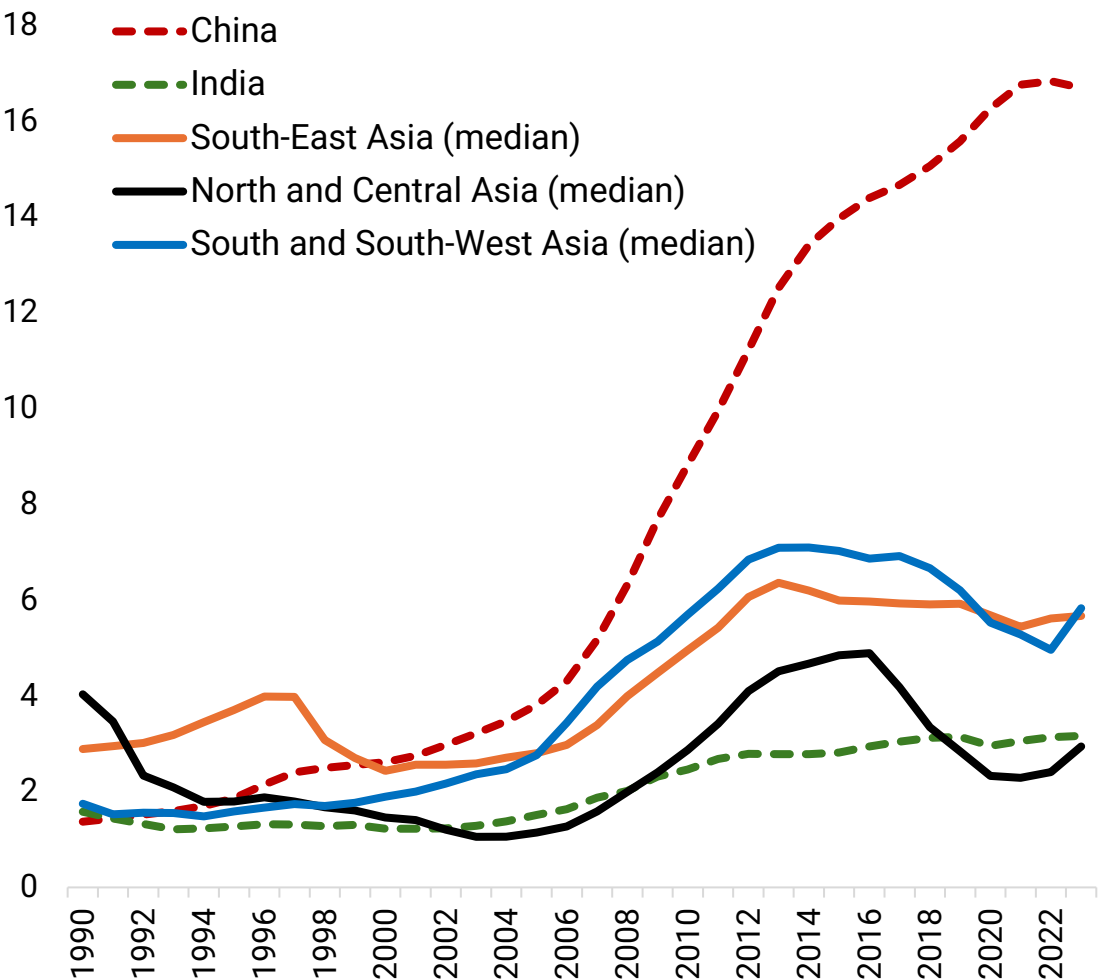
Going beyond near-term economic growth:

escaping the middle-income trap



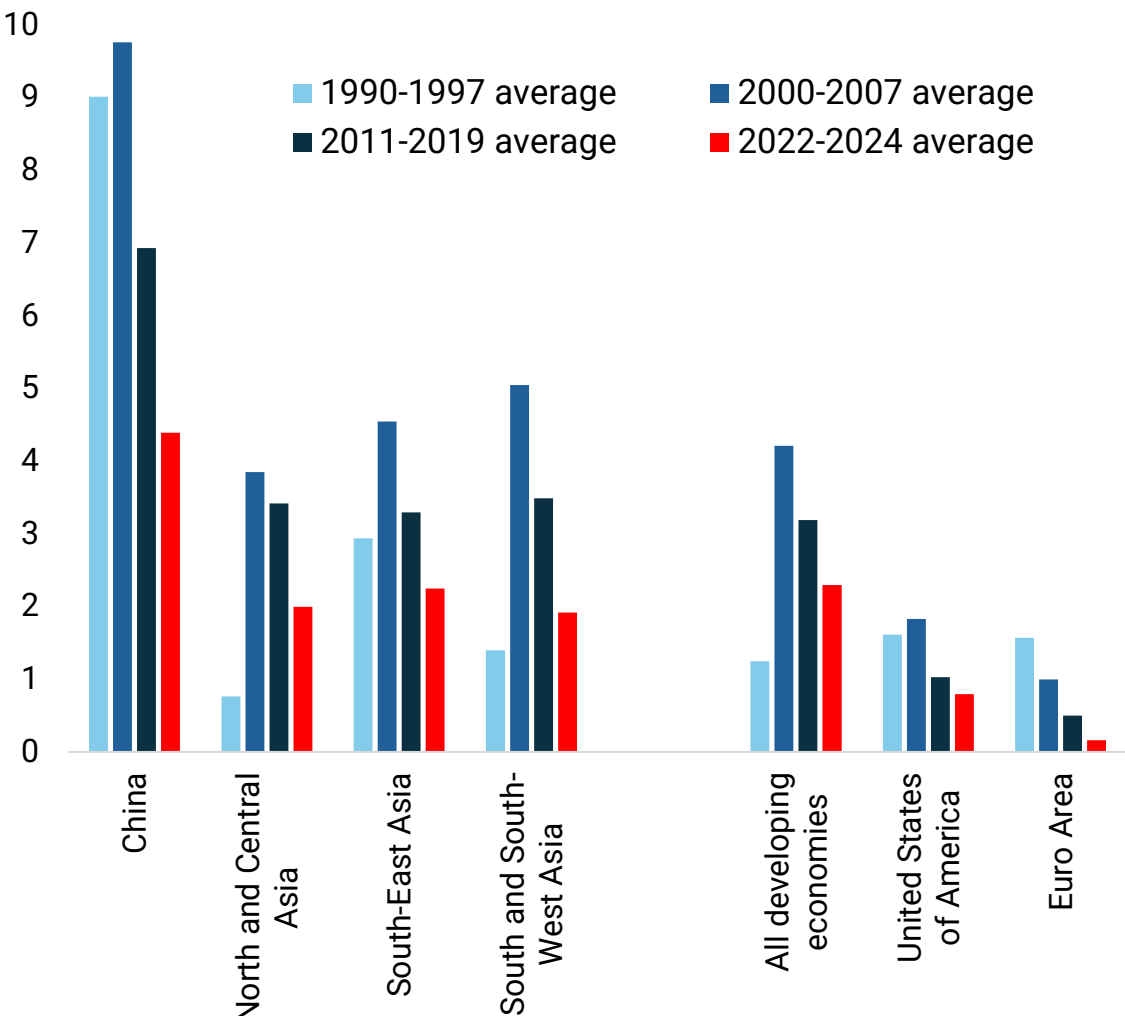
Slower income convergence and labour productivity growth

Gross national income (GNI) per capita (% of GNI in the US)



Source: ESCAP, based on World Development Indicators database.

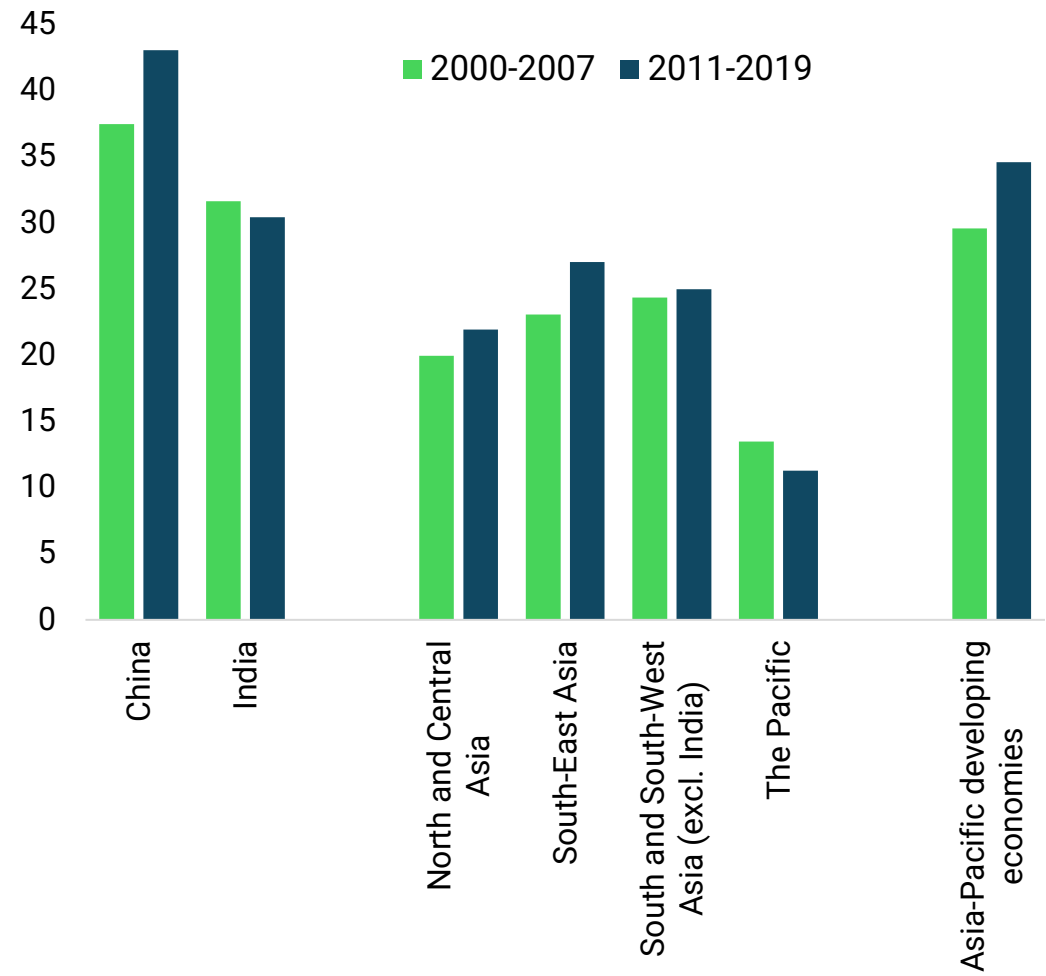
Annual labour productivity growth (%)



Source: ESCAP, based on The Conference Board Total Economy Database.

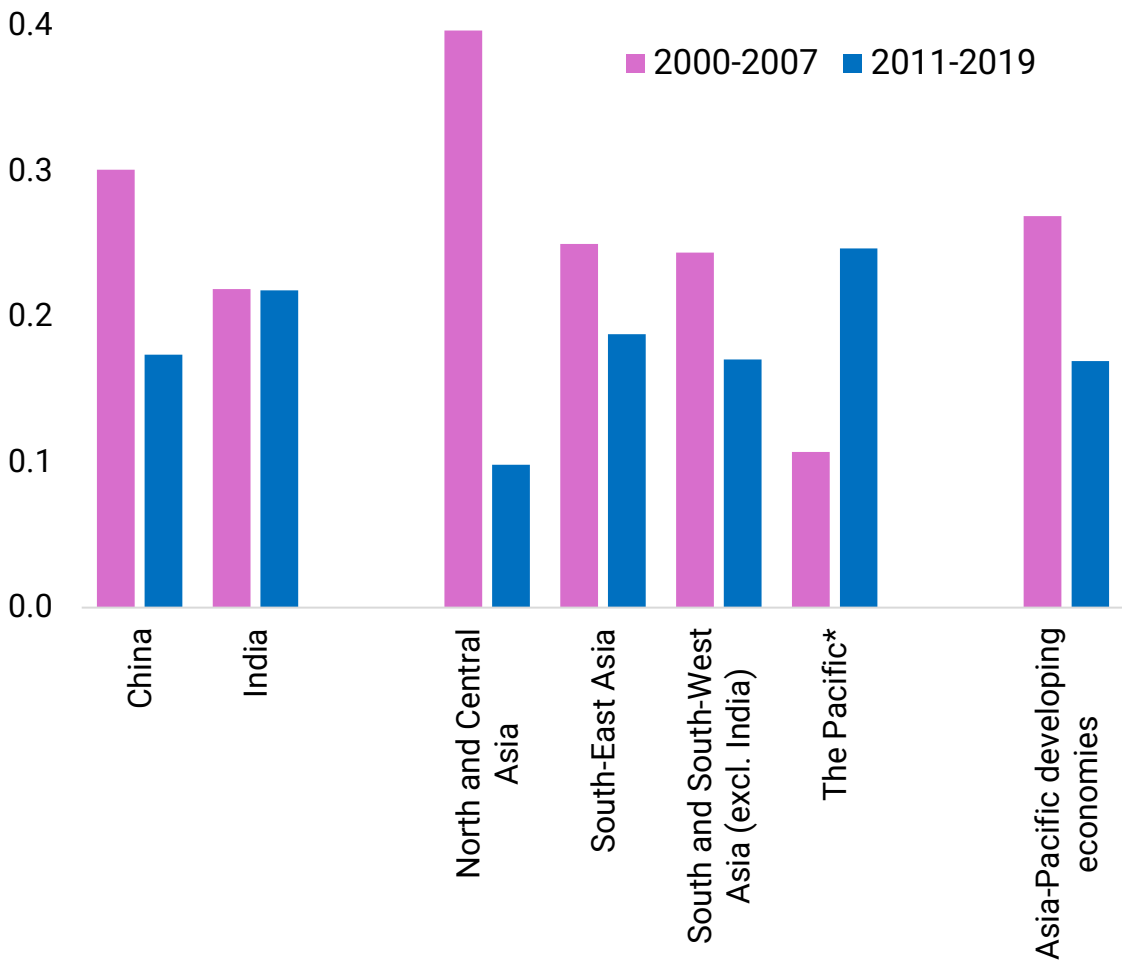
Declining contribution of capital investment to economic growth

Gross fixed capital formation (GFCF) (% of GDP)



Source: ESCAP, based on World Development Indicators database.

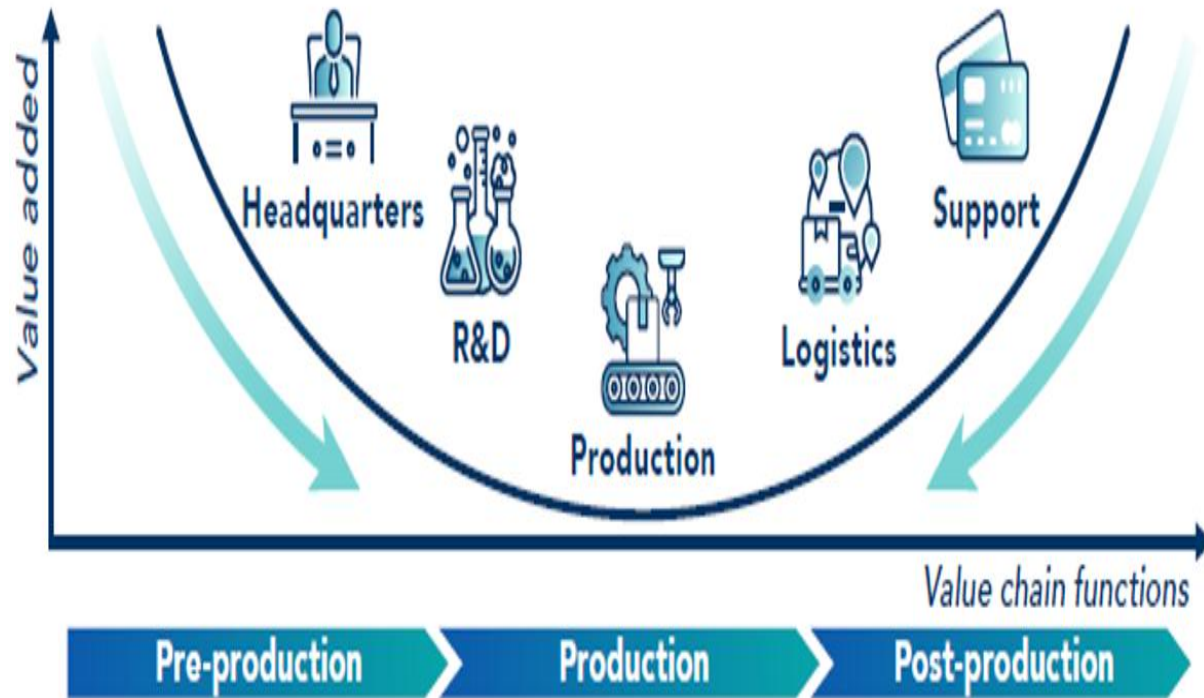
Economic growth sustained by GFCF equivalent to 1% of GDP (%)



Source: ESCAP, based on World Development Indicators database.

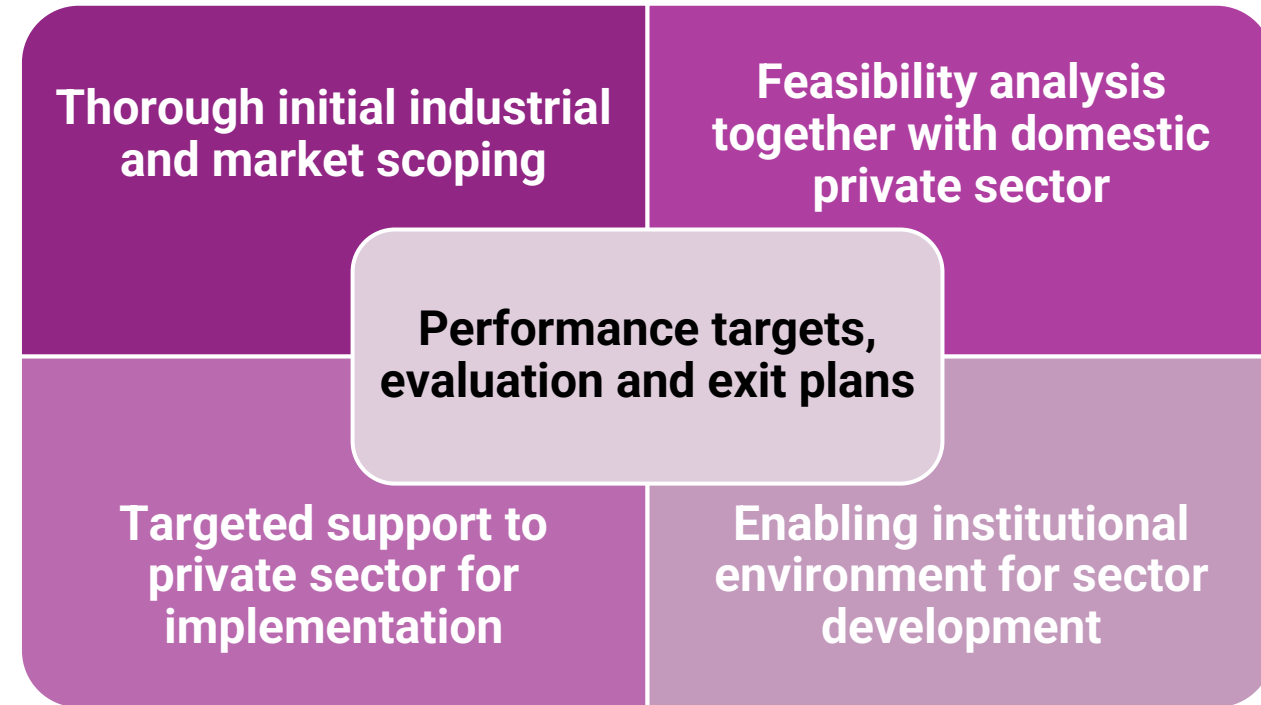
Policy action 1: sectoral economic upgrading through “developmental state” approach

An illustration of the ‘smile curve’



Source: ESCAP, based on Mudambi (2008).

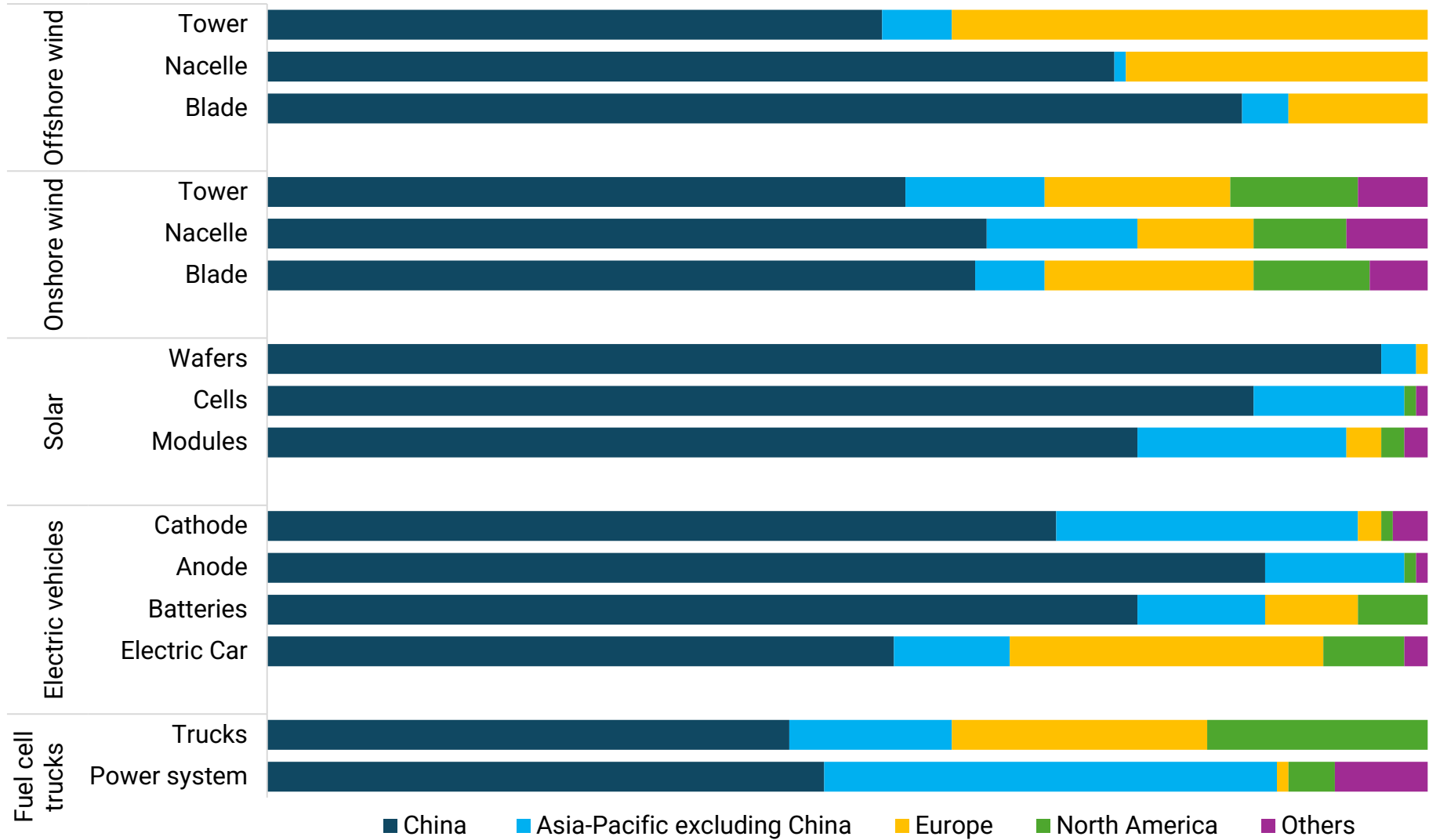
Five elements of successful “developmental state”



Source: ESCAP.

Policy action 2: embrace regional green value chains as a new engine of growth ...

Share in global green manufacturing sectors (%)



... by leveraging

- Unparalleled regional manufacturing value chains
- Domestic technological innovations
- Endowments of critical minerals

Source: ESCAP, based on Oğuz (2023) and IEA (2023).



The macroeconomic-climate change nexus:

complex and evolving

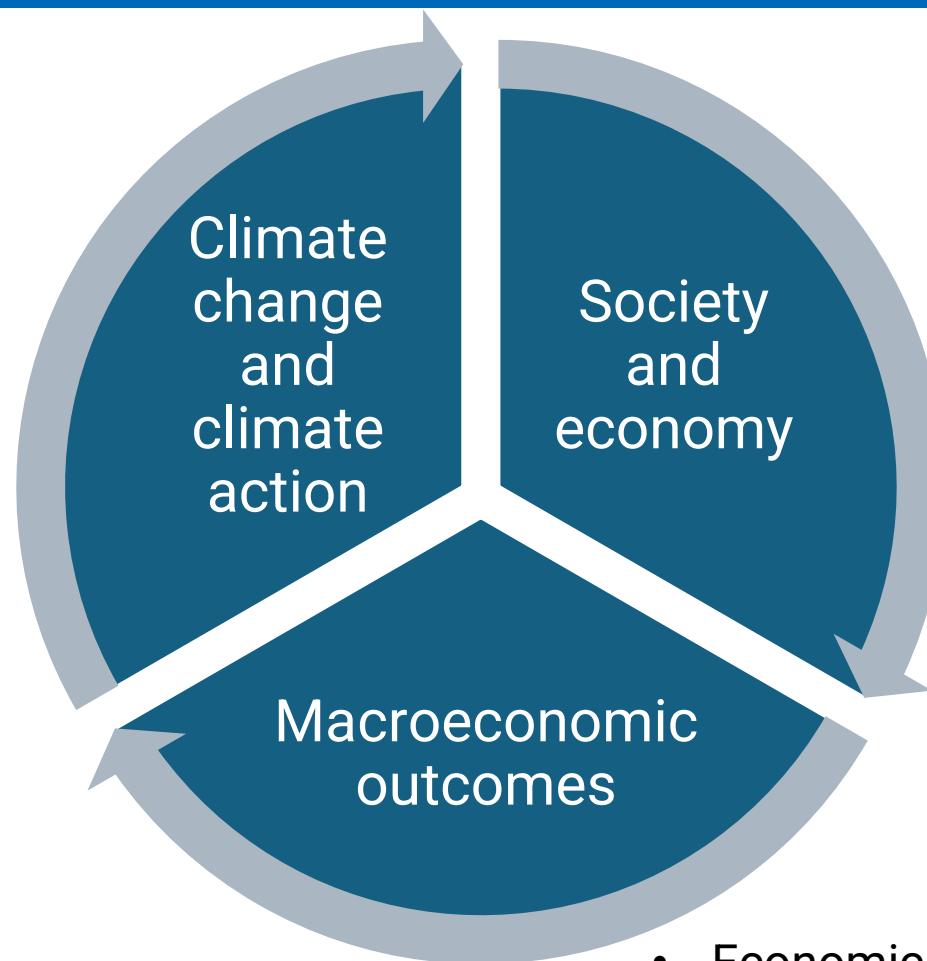


Climate change – *physical impacts*

- Sudden weather shocks
- Slow onset events

Climate action – *green transition impacts*

- Green investment
- Carbon pricing
- Green regulations



Society

- Health conditions
- Education
- Migration
- Conflict

Economy

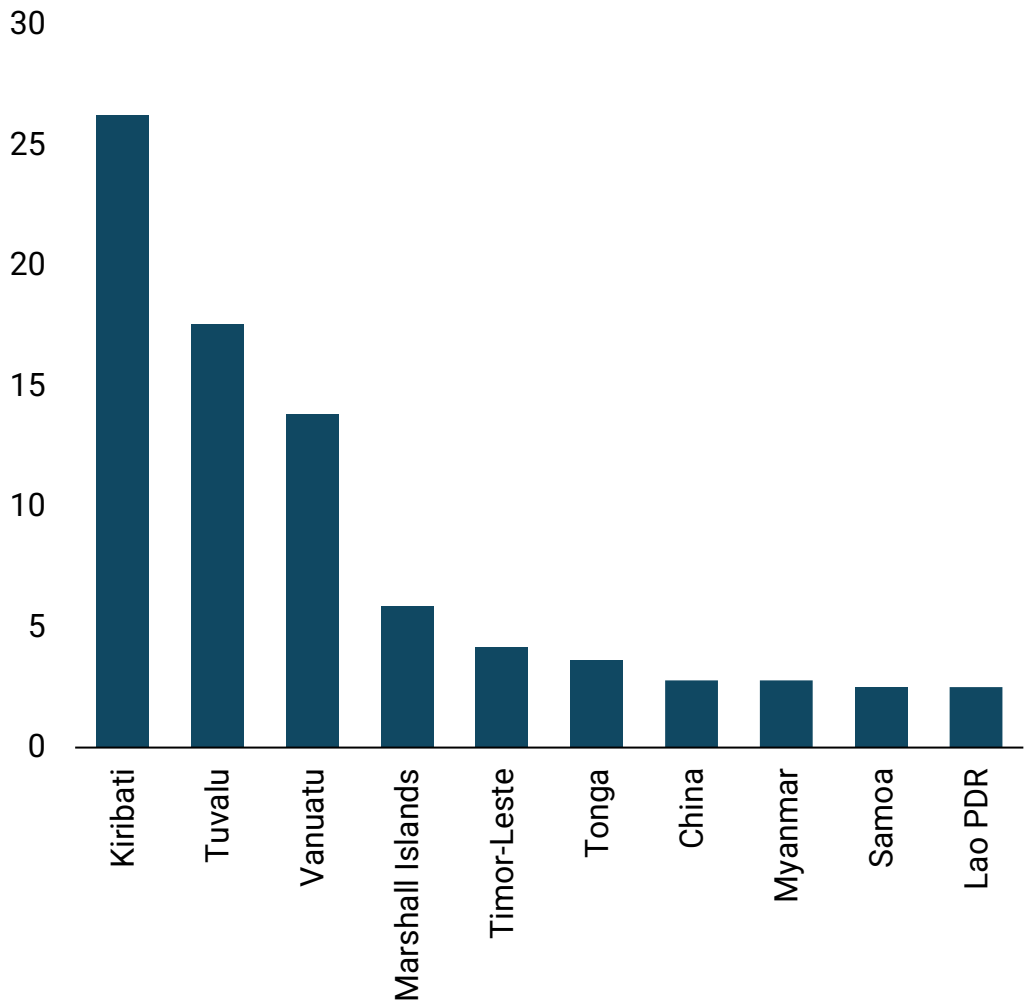
- Agriculture
- Energy
- Infrastructure
- Tourism
- Coastal economy

- Economic growth
- Employment
- Inflation
- Public debt
- Financial stability



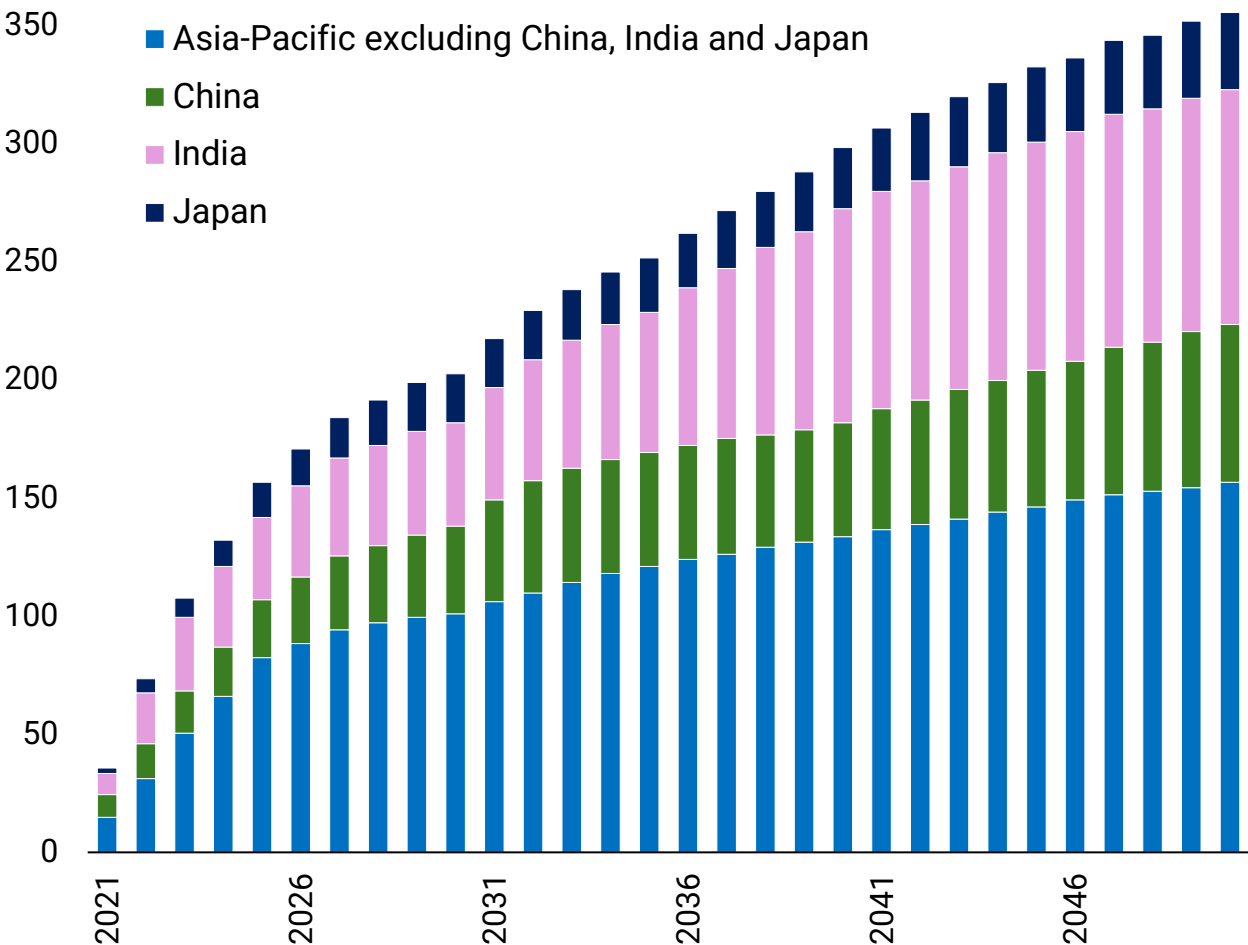
Significant macroeconomic implications as Asia-Pacific faces more climate shocks and boosts climate action

Estimated annual climate adaptation costs (% of GDP)



Source: Dabla-Norris and others (2021).

Estimated stranded asset value (\$ billion), 2021-2050



Source: Piontek and others (2021).

Yet, many macroeconomic impacts of climate change and climate action remain unclear

Risks and uncertainties

?

Future trajectories of climate change

?

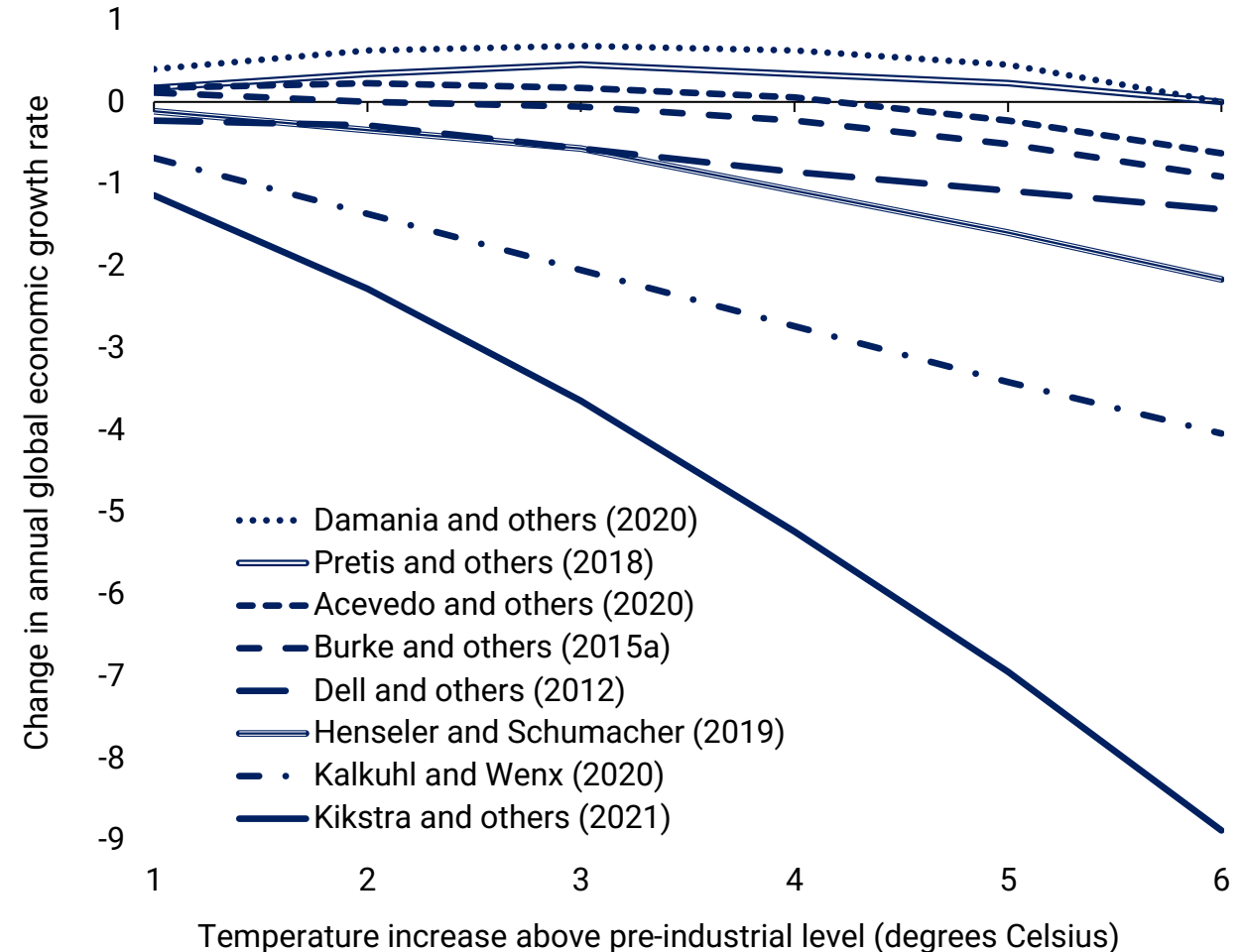
Selection, timeframe and intensity of green policies

?

Intended versus actual impacts of policy action

Source: ESCAP.

Highly uncertain impacts of global warming on GDP

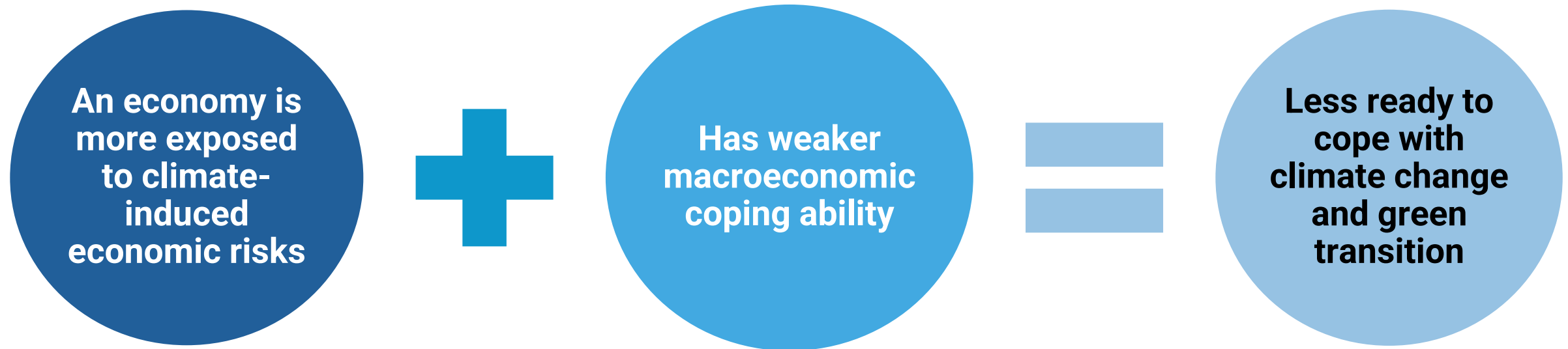


Source: ESCAP, based on Tol (2024).

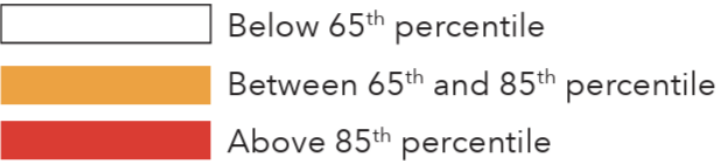
Are Asia-Pacific economies ready to cope with the macroeconomic implications of climate change and transition?



A new macroeconomic-climate readiness assessment for Asia-Pacific



11 countries in Asia-Pacific are considered more exposed



	Average annual loss as percentage of GDP	Agricultural value added at risk as percentage of GDP	Carbon intensity	Inflationary impact due to climate change
Afghanistan	Between 65 th and 85 th percentile	Above 85 th percentile	Below 65 th percentile	Above 85 th percentile
Cambodia	Above 85 th percentile	Above 85 th percentile	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile
Islamic Republic of Iran	Below 65 th percentile	Between 65 th and 85 th percentile	Above 85 th percentile	Between 65 th and 85 th percentile
Kazakhstan	Below 65 th percentile	Below 65 th percentile	Above 85 th percentile	Between 65 th and 85 th percentile
Lao People's Democratic Republic	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile
Mongolia	Below 65 th percentile	Below 65 th percentile	Above 85 th percentile	Above 85 th percentile
Myanmar	Above 85 th percentile	Above 85 th percentile	Below 65 th percentile	Below 65 th percentile
Nepal	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile	Below 65 th percentile	Between 65 th and 85 th percentile
Tajikistan	Below 65 th percentile	Above 85 th percentile	Below 65 th percentile	Above 85 th percentile
Uzbekistan	Below 65 th percentile	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile	Above 85 th percentile
Viet Nam	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile	Between 65 th and 85 th percentile	Below 65 th percentile

Source: ESCAP.





Fiscal resources

Tax revenue-to-average
annual losses (AAL) ratio

Climate finance
mobilization-to-AAL ratio

Sovereign debt ratings



Monetary and financial preparedness

Strength of banking
sector

Use of green financial
policymaking

Ability to meet inflation
targets

Financial development
level



Institutional strength

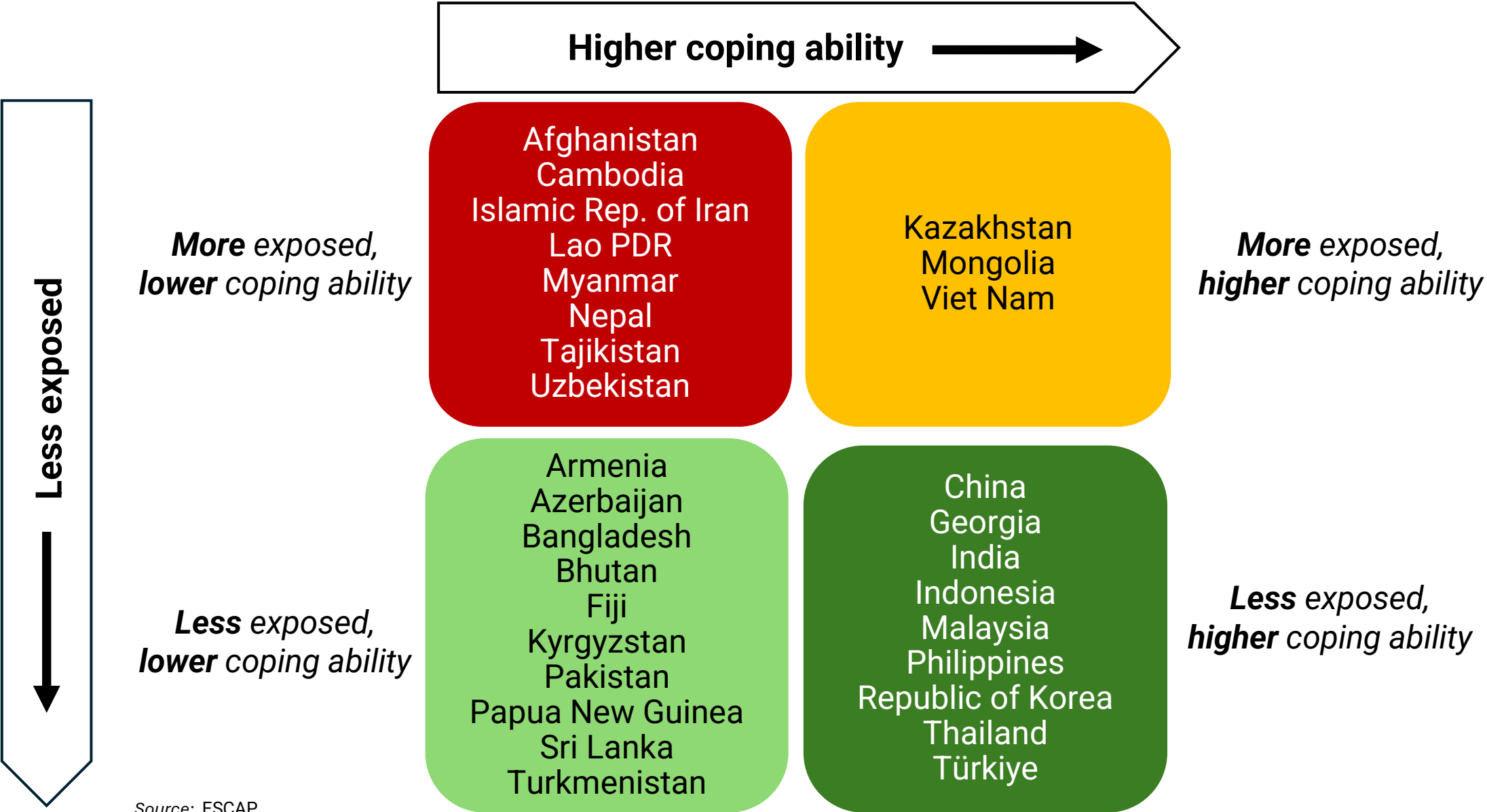
Government
effectiveness

Public finance
transparency

Policy-based fiscal
strategies



Most more-exposed countries also have lower coping ability

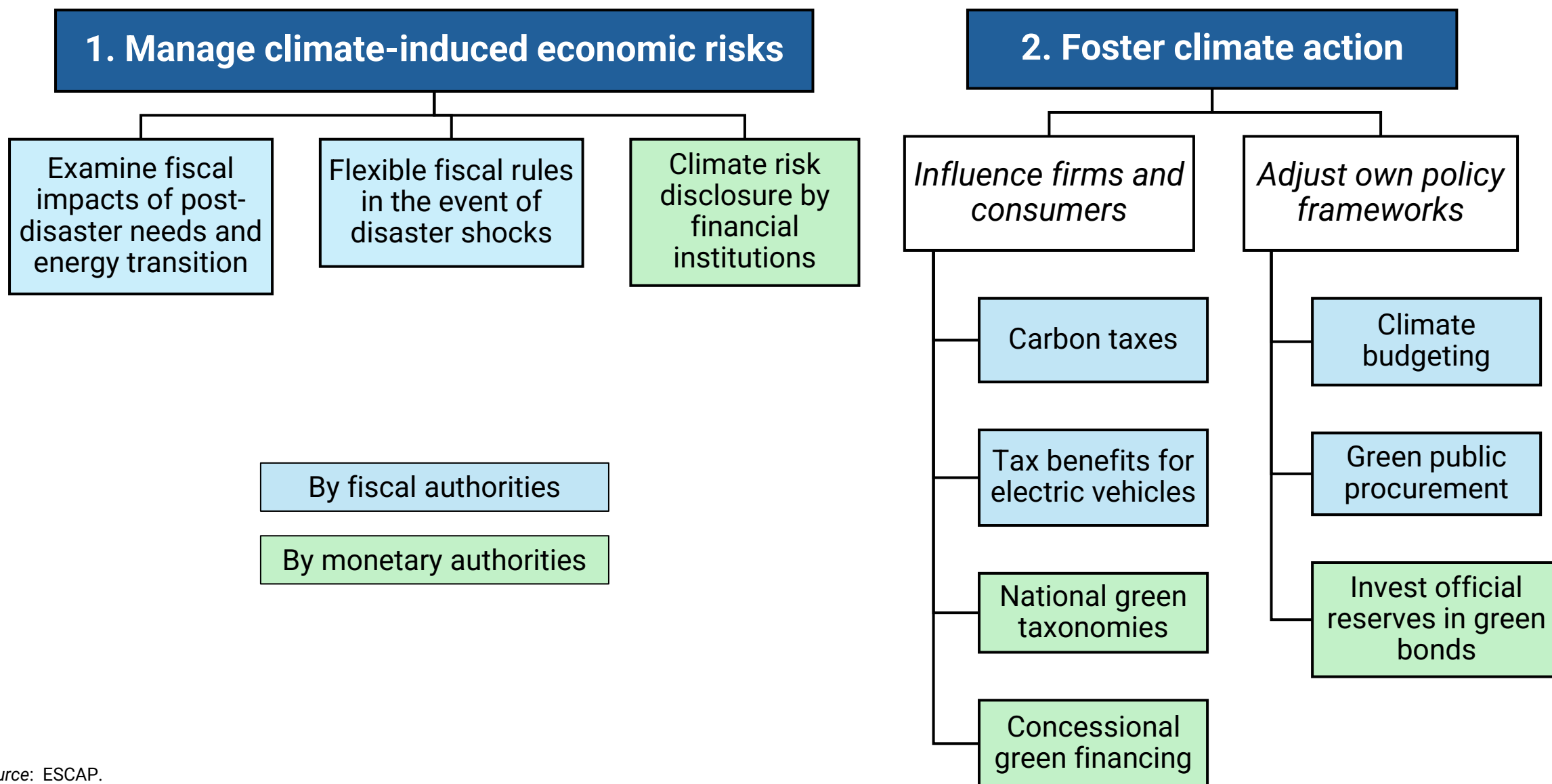


Going forward:

macroeconomic policymaking amid climate change



Some climate-aligned macroeconomic policies and practices are already in place in Asia-Pacific



While further embedding climate aspects into macroeconomic policies, policymakers should also ...



Balance environmental sustainability with socio-economic development

- Mitigate **unintended social impacts** of carbon pricing schemes
- **Public investment allocation**, e.g. balancing more cost-competitive fossil-fuel based energy with less cost-competitive renewable energy in some countries



Navigate macroeconomic-climate uncertainties

- **Identify risks and uncertainties** of climate change and climate action
- Adopt **innovative decision-making strategies**, e.g. strategic foresight for more impactful and robust policy action



- **Rising global trade tensions and economic uncertainty** can raise inflation, keep borrowing costs higher for longer and disrupt economic development, with varying impacts across Asia-Pacific countries.
- Governments need to proactively upgrade economic sectors and capitalize on green value chains to **escape the “middle-income trap”**.
- Many Asia-Pacific economies **lack the coping ability** to address the macroeconomic implications of climate change
- **More climate-aligned fiscal, monetary and financial policies** will help the region better cope with climate change and green transition. This requires **major shifts** in policy tools and frameworks.
- **Inclusive regional economic cooperation** is indispensable for the region’s economic resilience and helps balance the interests of developed and developing countries.





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