



**ASIA AND PACIFIC
DEPARTMENT**

Understanding Industrial Policy in Asia-Pacific

77th IMF-JICA Conference

Navigating for a better future in Emerging and Frontier Asia under
Uncertainty: Economic and Fiscal Policy Challenges and Prospects

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**Prepared by the Analytical Working Group on Industrial Policy, APD, IMF.*



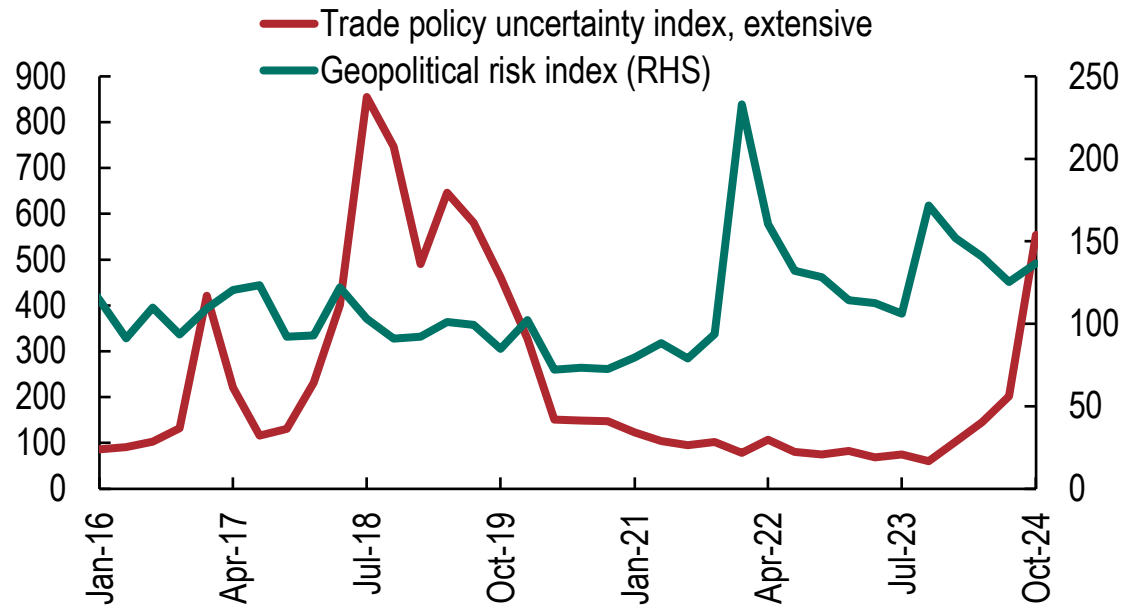
Asia-Pacific is confronting complex challenges...

In the near term, Asia-Pacific (AP) must confront rising uncertainty and geo-economic fragmentation pressures...

As median incomes rise over the medium term, manufacturing could decline, raising concerns for growth and jobs given the sector's historic contribution to both. Climate, ageing, and technological change pose additional challenges.

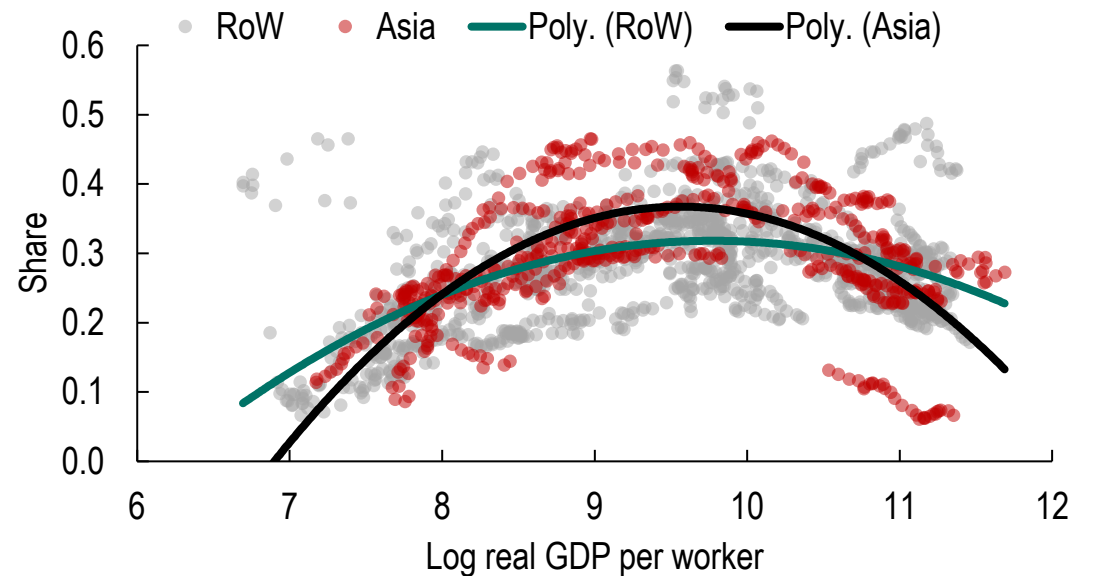
Trade Policy Uncertainty and Geopolitical Risk

(Index, 2013-15=100)



Sources: Caldara et al. (2020); Caldara and Iacoviello (2022).
Note: Trade Policy Uncertainty, extensive index is seasonally adjusted.

Industry: Share in Value Added (real) versus Income



Sources: GGDC/UNU-WIDER Economic Transformation Database; and IMF staff calculations.

Note: RoW denotes rest of the world. Poly refers to a second-order polynomial fit.

Industrial Policy is rising... globally and in Asia-Pacific

How is IP evolving in the region?

- IP is not new in AP
- EMs have driven IP deployment overall (growing over time) since 2009
- Recent expansion also includes a marked increase in AEs

How is IP designed in practice in AP?

- The toolkit is relatively inward-looking, and becoming gradually more so
- Largely targets industry/manufacturing
- Broadly, targeting strategy does not appear sharply focused
- Evidence of reactive dynamics (Tit-for-Tat)

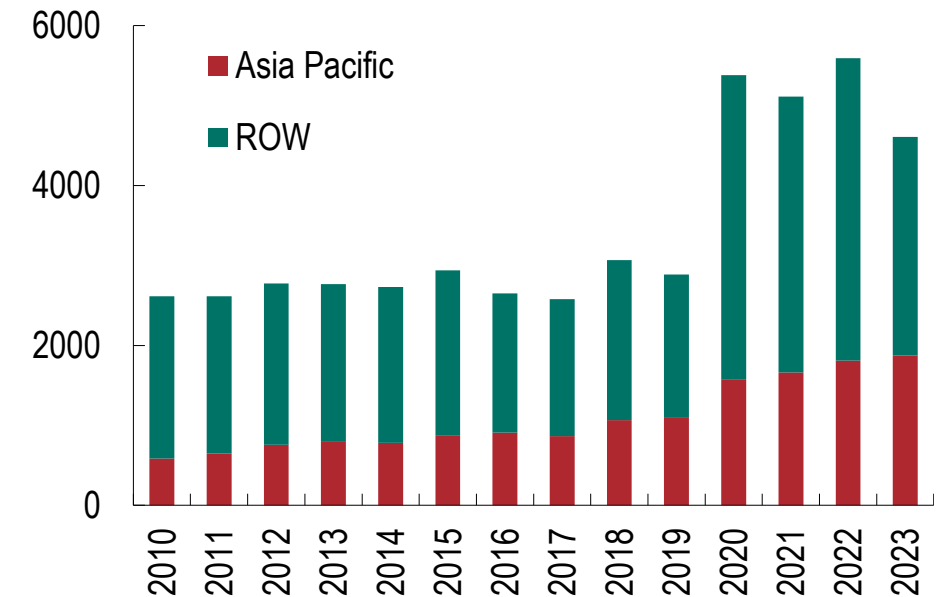
Is IP effective?

- Evidence not systematic
- Preliminary signs of effective IP in specific cases and circumstances
- But implemented IP often does not meet such cases/circumstances...
- Most importantly: potentially significant costs from implementing IP *not considered*

Policy recommendations?

- Large scale, rapid deployment, with tradeoffs (from targeting and costs from IP)
- Current findings provide only a partial view → Cost-Benefit analysis needed
- While IP may be justified in some cases, need to ask which policies have demonstrated to be most effective to sustainably lift growth

IP Interventions: Asia Pacific vs ROW



Source: Global Trade Alert (GTA) and staff calculations.

Note: Reflects the number of sectoral/vertical policies implemented as per their inception date. Does not include subnational level jurisdictions. Data for South Korea have not yet been included; these are being reviewed and will be included in a later version.

How is IP Evolving in Asia-Pacific?

Defining and Measuring IP

“IP refers to targeted government interventions aimed at supporting specific domestic firms, industries, or narrowly defined economic activities to achieve certain national (economic or non-economic) objectives.

(IMF, 2024)

Novel IP Dataset

Sector-specific policy announcements

- Text-mined the Global Trade Alert (GTA)
- Individual policy announcements of policies affecting trade relationships → Count data, dated as per implementation date
- Covering 2009-2024
- Country sample: 195 jurisdictions worldwide; 31 in Asia-Pacific
- Large range of sectors and policy tools
- Similarities with other GTA-based databases: Juhász et al, and the New Industrial Policy Observatory (NIPO)
- CAVEAT: Count/number of measures does not fully capture economic impact of the measures.

Other Data

Complementary datasets

- OECD’s Inter-Country Input-Output tables
- Product Complexity Index (Hausmann-Hidalgo) (1995-2021)
- BACI Trade database (1995-2022)

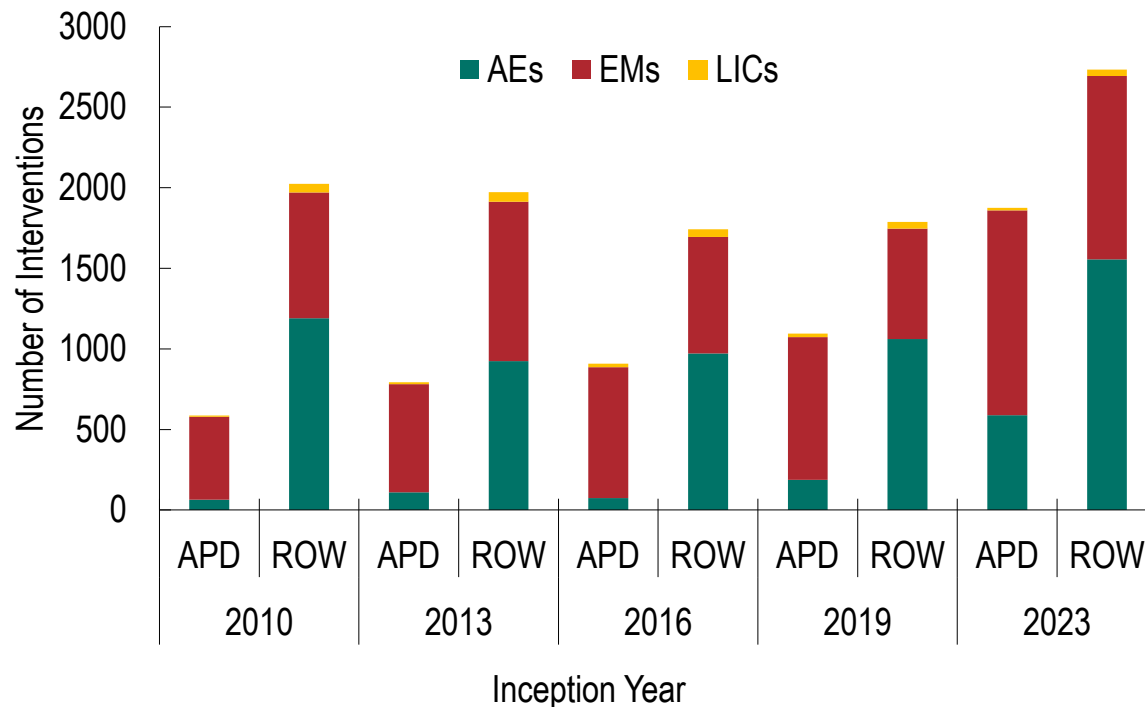
A fast and large-scale IP deployment is taking place...

Fact 1

Like the ROW, AP has seen an increase of IP implemented by AEs in the last five years; EMs in AP have long relied on IP, but deployment has also expanded recently.

IP Interventions by Income

APD vs ROW

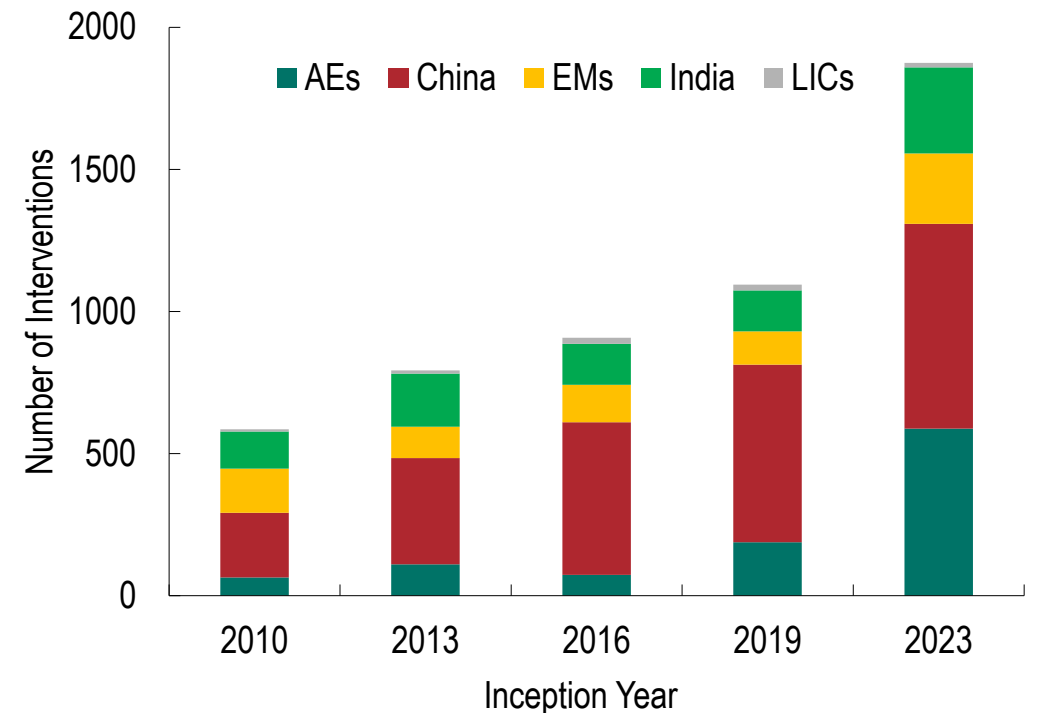


Sources: GTA; IMF Staff Calculations

Fact 2

IP deployment in AP Ems has been led by China, with the recent increase broad-based...

IP Interventions in APD



Sources: GTA; IMF Staff Calculations

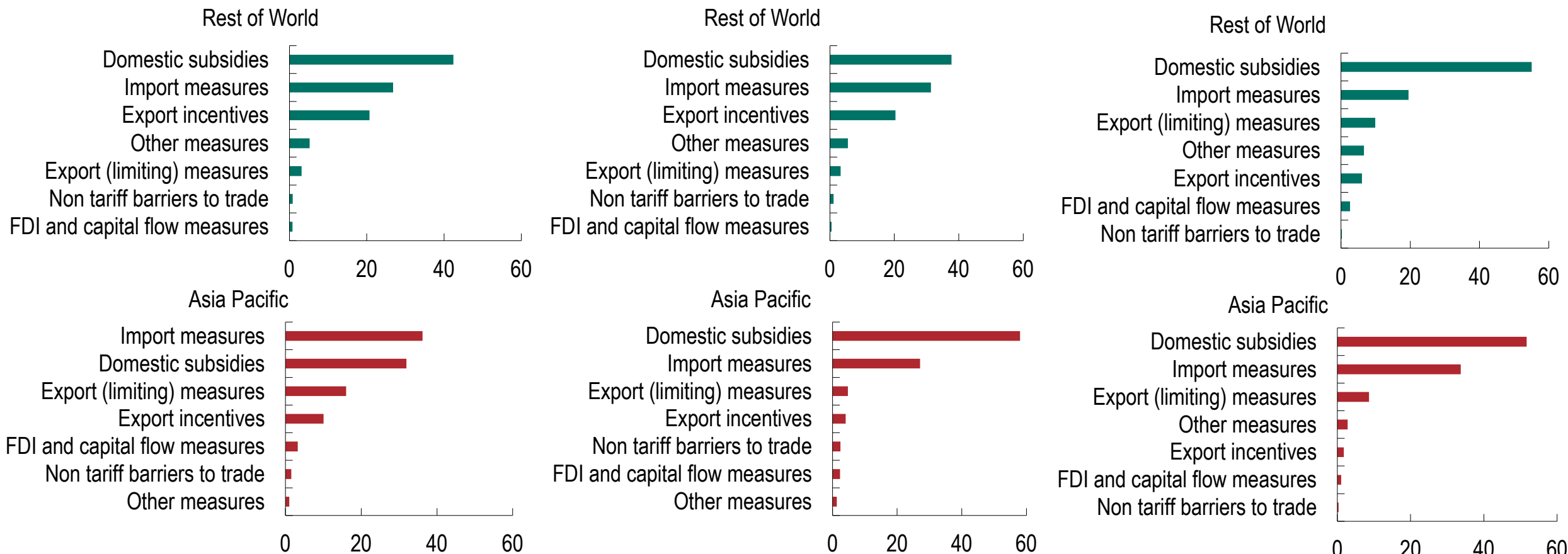
The toolkit appears inward-oriented both in AP and the ROW...

Fact 3

In both AP and the ROW, the use of domestic subsidies dominate, followed by import restrictions. AP has generally relied on export-limiting measures, and the ROW is using them more recently. Overall, tools deployed globally appear to have an inward-bias.

IP Tools in 2010, 2016 and 2023

(Percent of all measures by region)

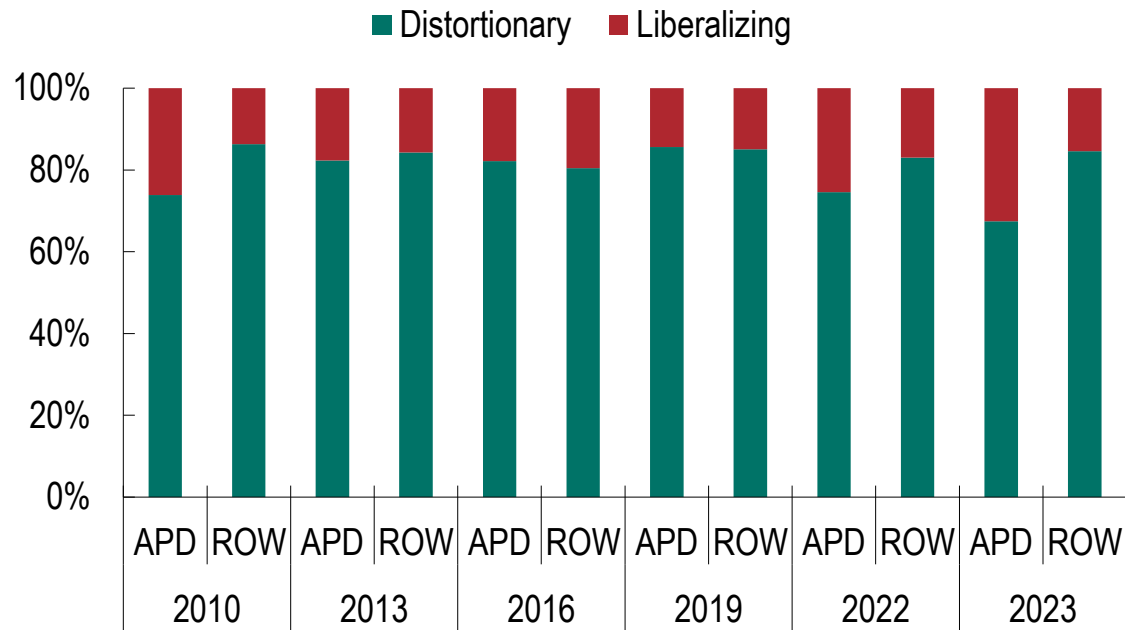


Most measures are distortionary to trade, and aggregate metrics confirm inward-looking tendencies

Fact 4

Most IP interventions in AP are distortionary to trade, though somewhat less than in the ROW

Distortionary Interventions-Asia-Pacific vs ROW

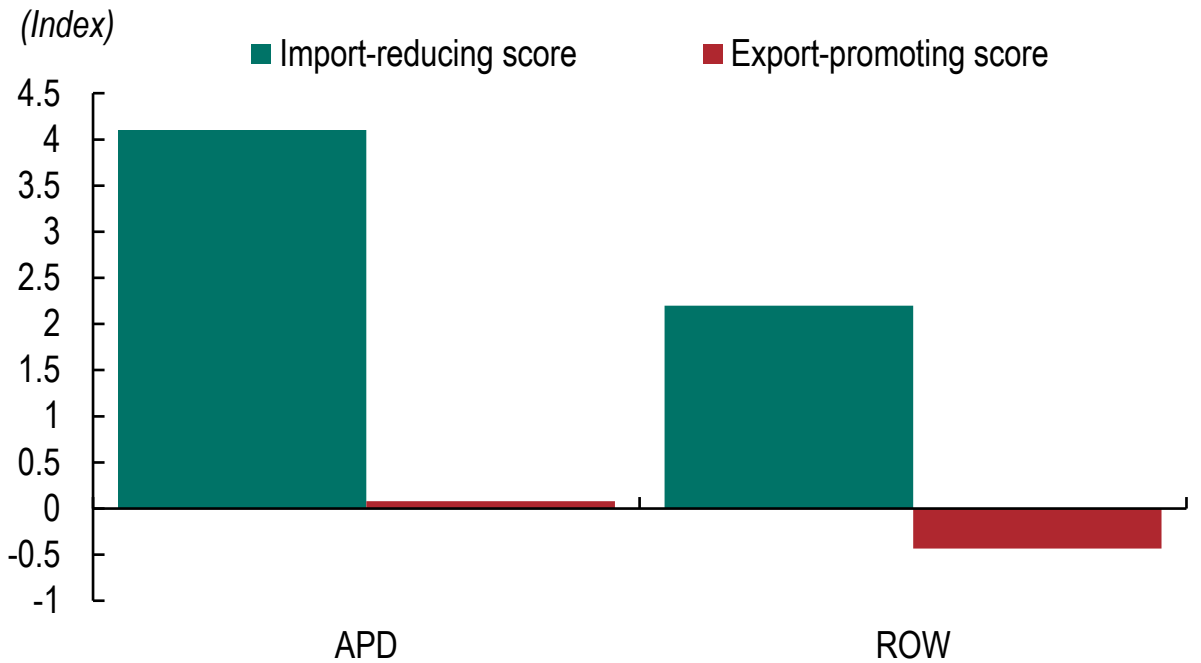


Sources: GTA; IMF Staff Calculations

Fact 5

Scores to gauge orientation confirm that recent IP in AP has an import-protection bias, with low export-promoting tendencies

Export- and Import-orientation Scores, 2022



Sources: GTA; BACI; IMF staff calculations

Note: For exports (imports), positive (negative) index scores indicate promoting (reducing) policy orientation. Country-level scores: obtained by averaging product level scores, weighted by trade shares. Region-level score: GDP-weighted averaging country-level scores.

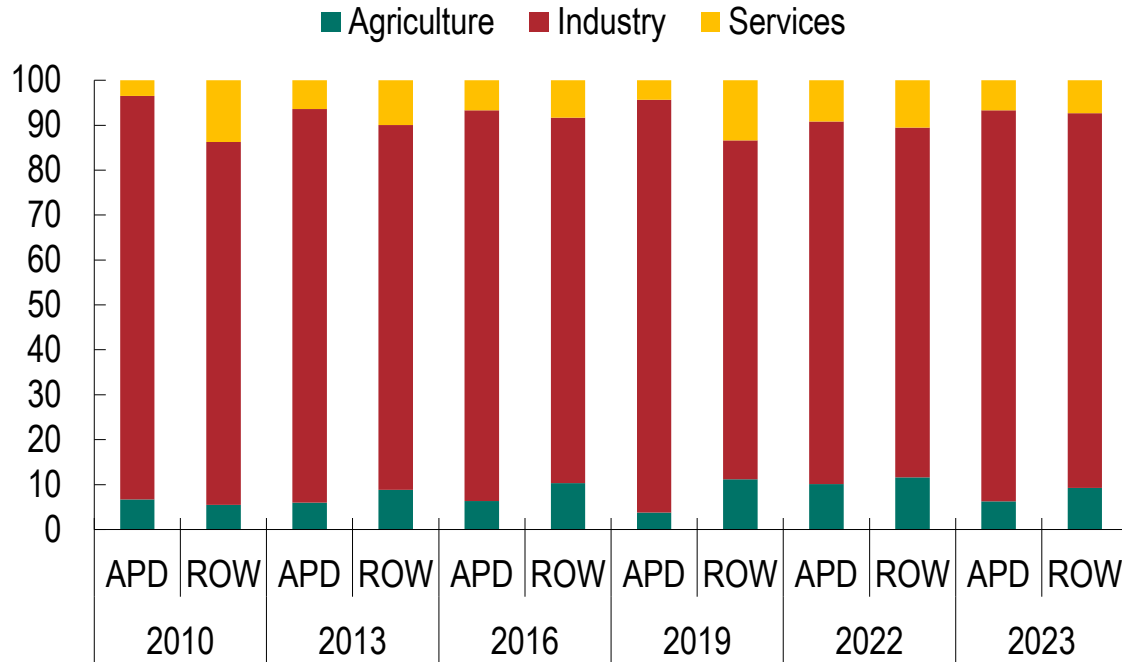
How is IP designed in practice?

AP targets industry somewhat more heavily than the ROW

Fact 6

The industrial sector accounts for the lion's share of interventions globally, with AP targeting it more persistently.

Intervention Shares by Aggregate Sectors

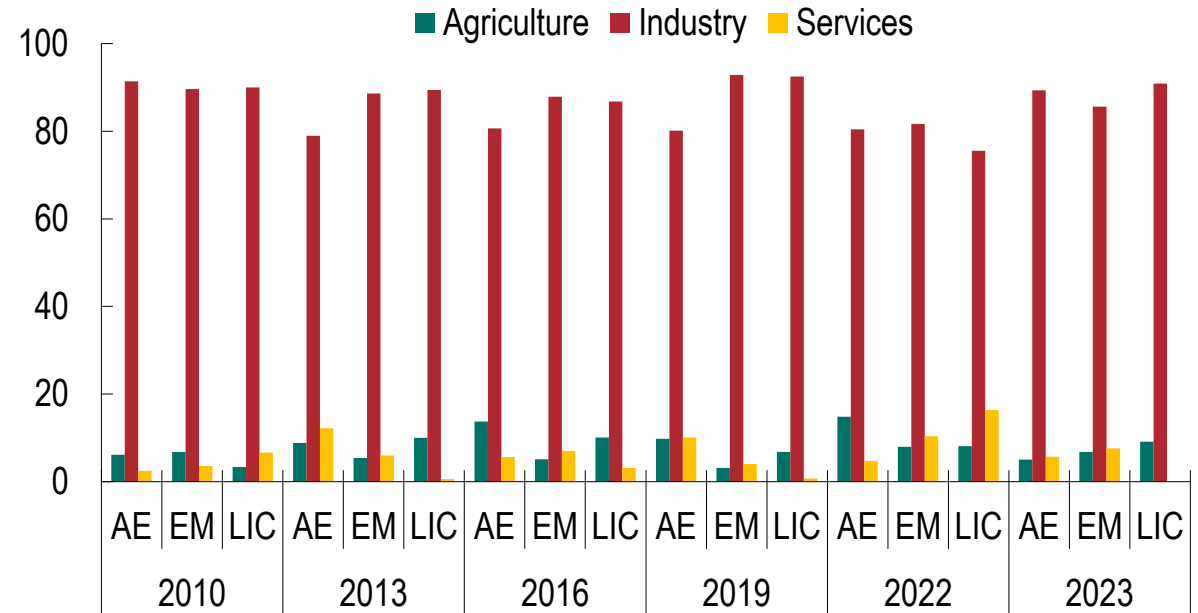


Sources: GTA; IMF Staff Calculations

Fact 7

All country groups by income level focus mostly on industry.

Intervention Shares by Aggregate Sectors and Income - APD



Sources: GTA; IMF Staff Calculations

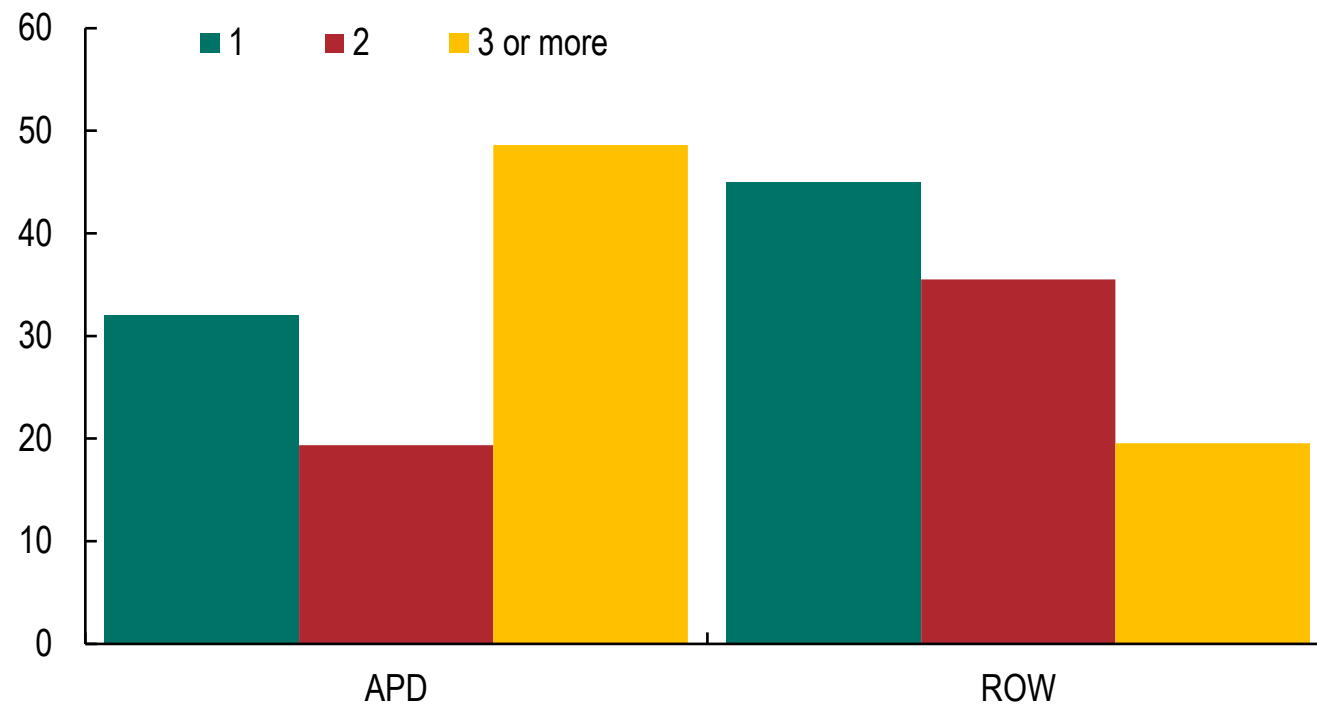
AP countries tend to layer IP over products...

Fact 8

AP economies implement multi-layered strategies, with various types of interventions implemented at once over single products

Distribution: Number of Active Policy Types Over Products

(percent; of products with active policies in region, 2022)



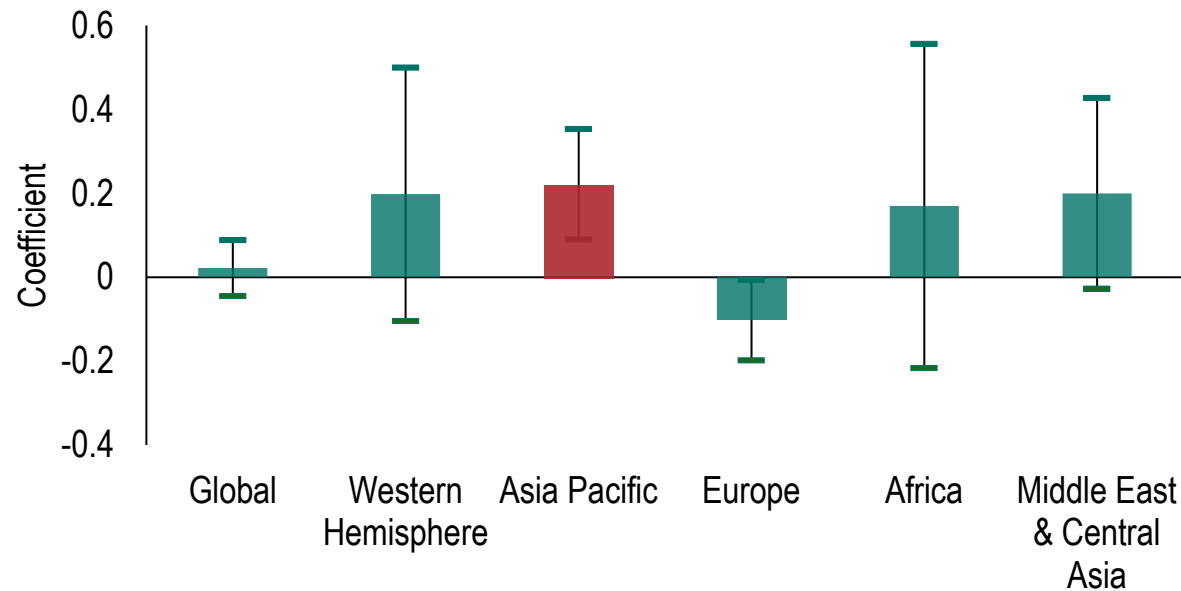
Sources: GTA; IMF Staff Calculations

IP in AP seems to look for cascading effects and enhanced product sophistication

Fact 9

In contrast to the ROW, AP seems to significantly target sectors with greater network “centrality”—i.e., applying IP to sectors with more backward and forward connections in the domestic input-output production networks.

Sector Centrality, Globally and By Region



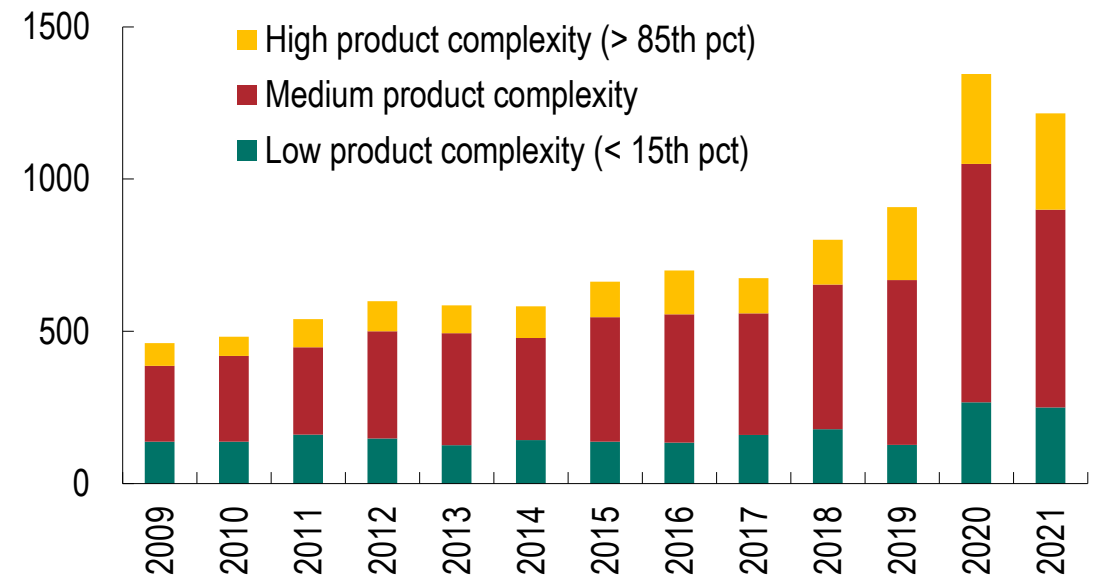
Source: Author’s calculations. See Georgieva, Vanya (2025).

Note: Estimated coefficients from panel logistic regressions of IP deployment by product against network centrality. Vertical lines show confidence intervals at 95 percent confidence.

Fact 10

IP in AP mostly targets “medium complexity” products; AEs and EMs are increasingly targeting more complex products.

Interventions Targeting at Different Product Complexities - Asia-Pacific



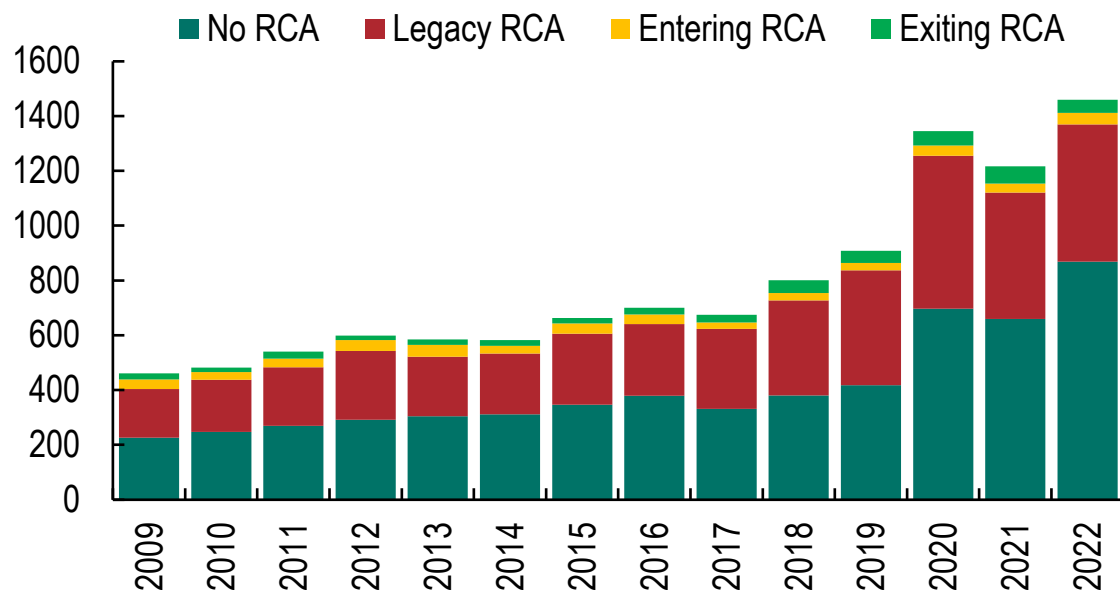
Sources: GTA, BACI, The Growth Lab at Harvard University, IMF staff calculations.

Most IP in AP targets uncompetitive products... less so in EMs

Fact 11

Most IP measures in Asia-Pacific target uncompetitive products—with revealed comparative advantage (RCA) less than one—or products having demonstrated (legacy) degree of competitiveness...

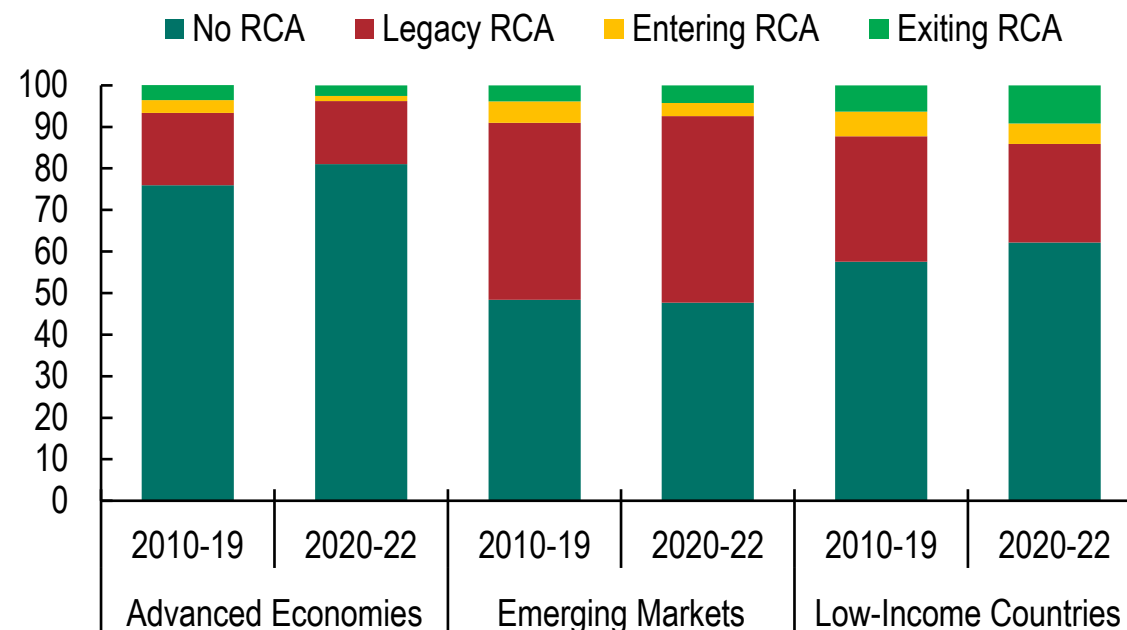
Interventions Targeting at Different RCA Categories, Asia-Pacific
(Number of Interventions)



Fact 12

EMs target uncompetitive products relatively less, focusing on legacy competitive products relatively more than others.

Share of Interventions Targeting at Different RCA Categories
(In percent)



Note: Products with legacy RCA are those that were competitive (RCA ≥ 1) in the most recent ten years (t-10 to t-1); products with entering RCA are those that were competitive in the most recent five years (t-5 to t-1) but not in the five-year period prior to the most recent five years (t-10 to t-6). Products with exiting RCA are those that were competitive in the five-year period prior to the most recent five years (t-10 to t-6) but not in the most recent five years (t-5 to t-1). Products with no RCA are those that were not competitive in both periods.

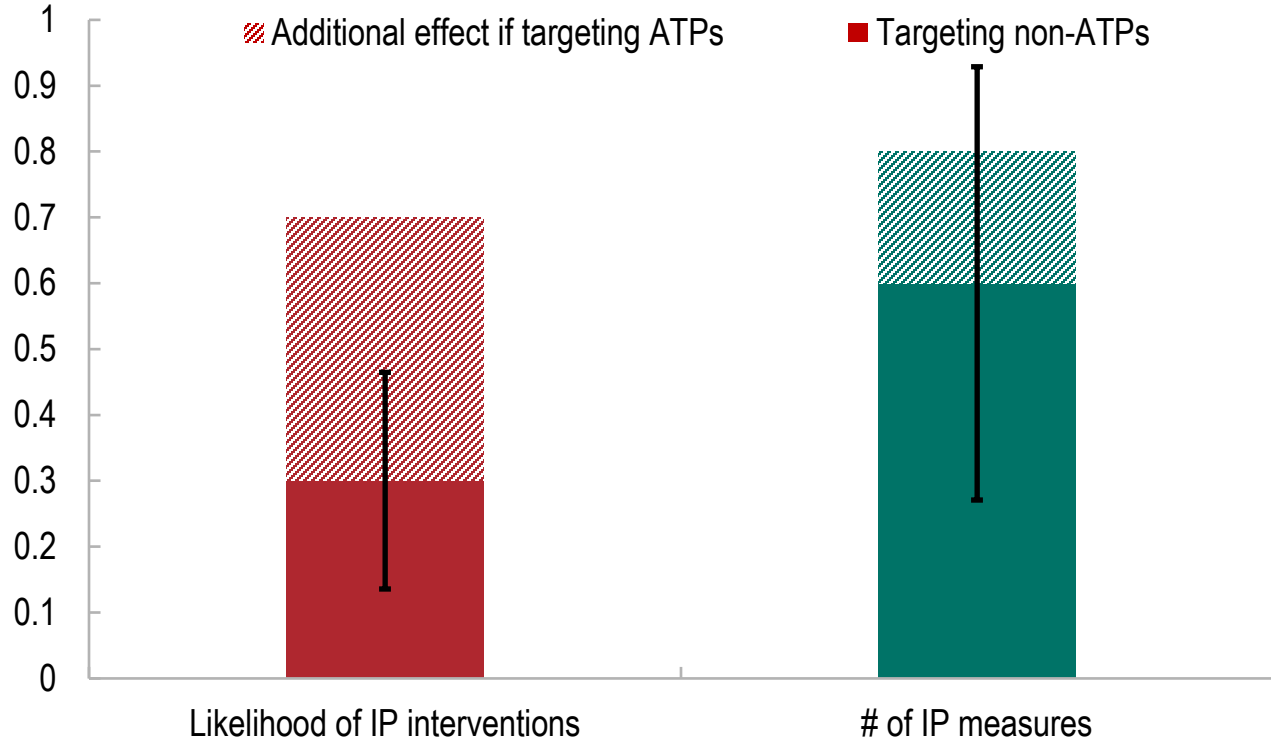
Source: BACI database, GTA database, and IMF staff calculations.

IP may also be reactive and/or trigger spillovers, especially in some highly-coveted/strategic products

Fact 13

IP interventions are positively correlated with the number of IP measures implemented in other countries in the previous year. Moreover, this reaction is stronger in advanced technology products (ATPs).

Correlation with IP Interventions in Other Countries



Notes: Chart shows the correlations between the likelihood of IP interventions (or the number of IP measures) with the number of IP measures in other countries in the previous year, estimated from a regression controlling for RCA of a country-product and country-product fixed effects. Error bars show the 90 percent confidence intervals. Sources: Evenett et al., 2023 NIPO database, and IMF staff calculations.

Does IP have a systematic impact?

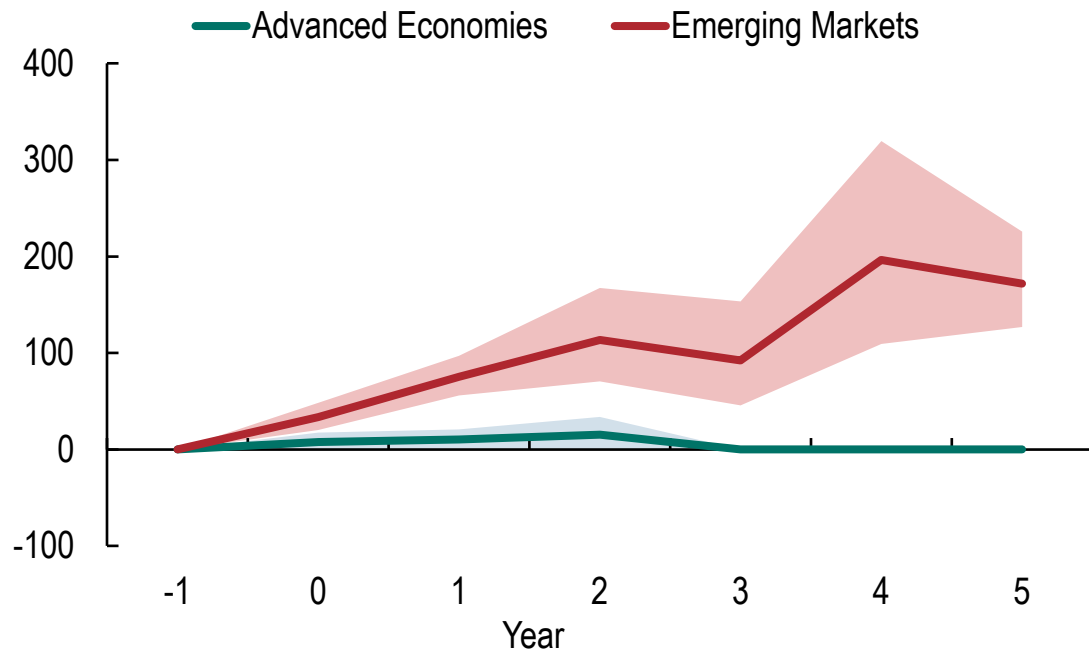
Some tools (export incentives and domestic subsidies) are linked to higher exports, but only for some country groups

Fact 14

Export incentives are associated with stronger exports of targeted products in AP countries in EMs, but not AEs.

Protective Export Incentives

(In percent)

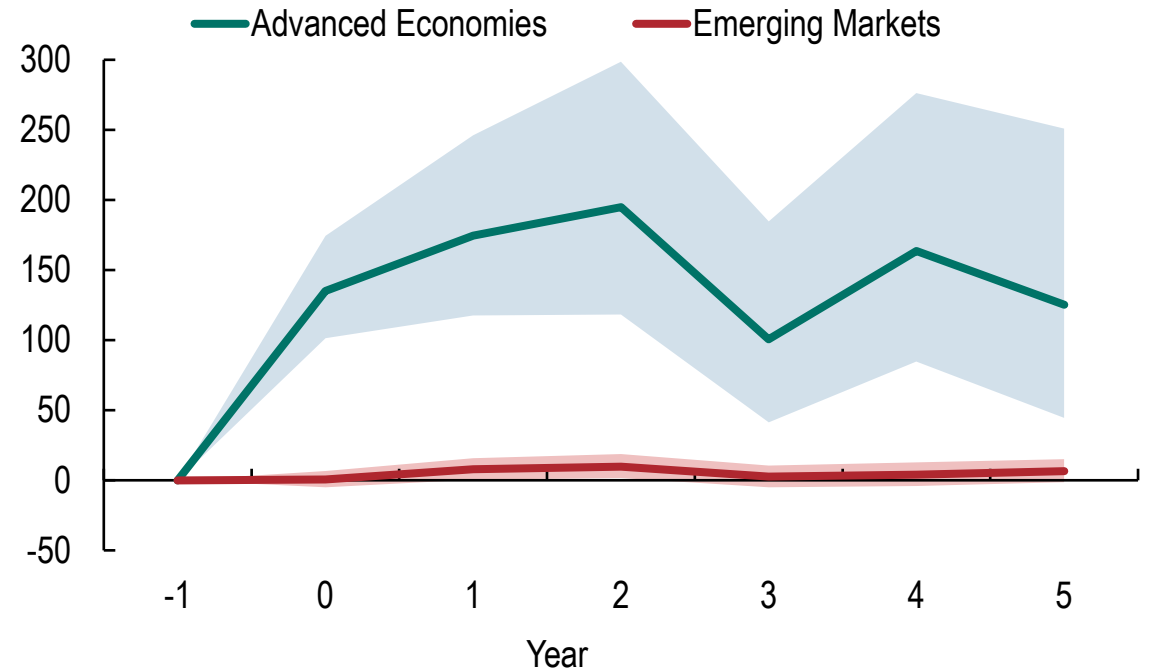


Fact 15

While domestic subsidies are associated with positive impacts on exports in AEs (but no significant impacts in EMs); the effects are high in the near term and decline over time.

Protective Domestic Subsidies

(In percent)



Notes: Each chart shows the estimations from a difference-in-difference local projection model regressing exports value on the presence of each type of IP tool at the country-product level, with controls including the presence of other IP tools, lagged exports (in log term), country-product fixed effect, country-year fixed effect, and product-year fixed effect and the effect assuming to stabilize in two years. Shaded areas show the 90 percent confidence intervals.

Sources: BACI database, GTA database, and IMF staff calculations.

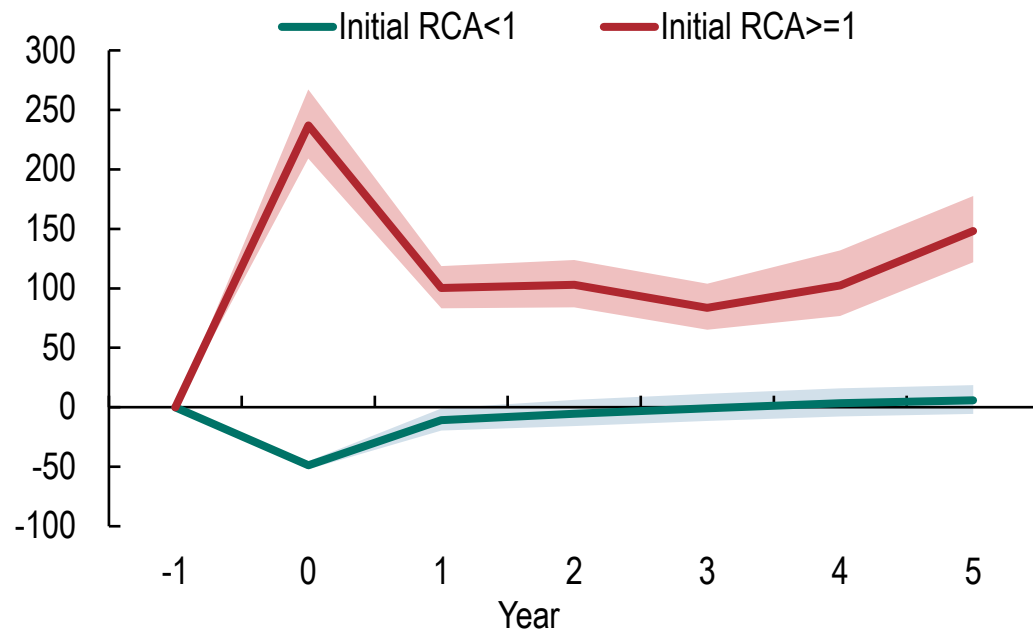
IP may raise revealed comparative advantage (RCA) in AP... but only in specific cases

Fact 16

IP may increase RCA in AP, but only for products that are already competitive...

All Protective Interventions, All Income Groups

(In percent)

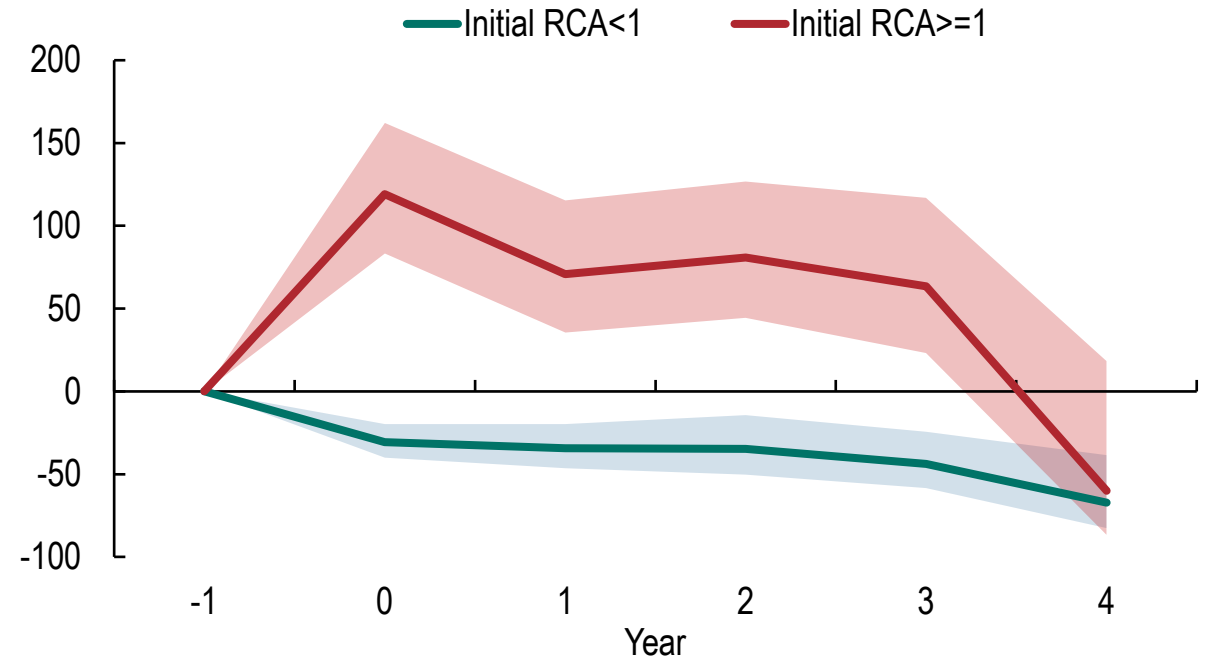


Fact 17

For AEs, domestic subsidies appear to enhance RCA in productive sectors quickly... but the impact is short-lived, and the fast improvement may be due to the subsidized production costs, rather than to higher structural productivity...

Protective Domestic Subsidies, Advanced Economies

(In percent)



Notes: Each chart shows the estimations from a difference-in-difference local projection model regressing RCA (in log term) on the presence of each type of IP tool at the country-product level, with controls including the presence of other IP tools, lagged RCA (in log term), country-product fixed effect, country-year fixed effect, and product-year fixed effect and the effect assuming to stabilize in two years. Shaded areas show the 90 percent confidence intervals.

Sources: BACI database, GTA database, and IMF staff calculations.

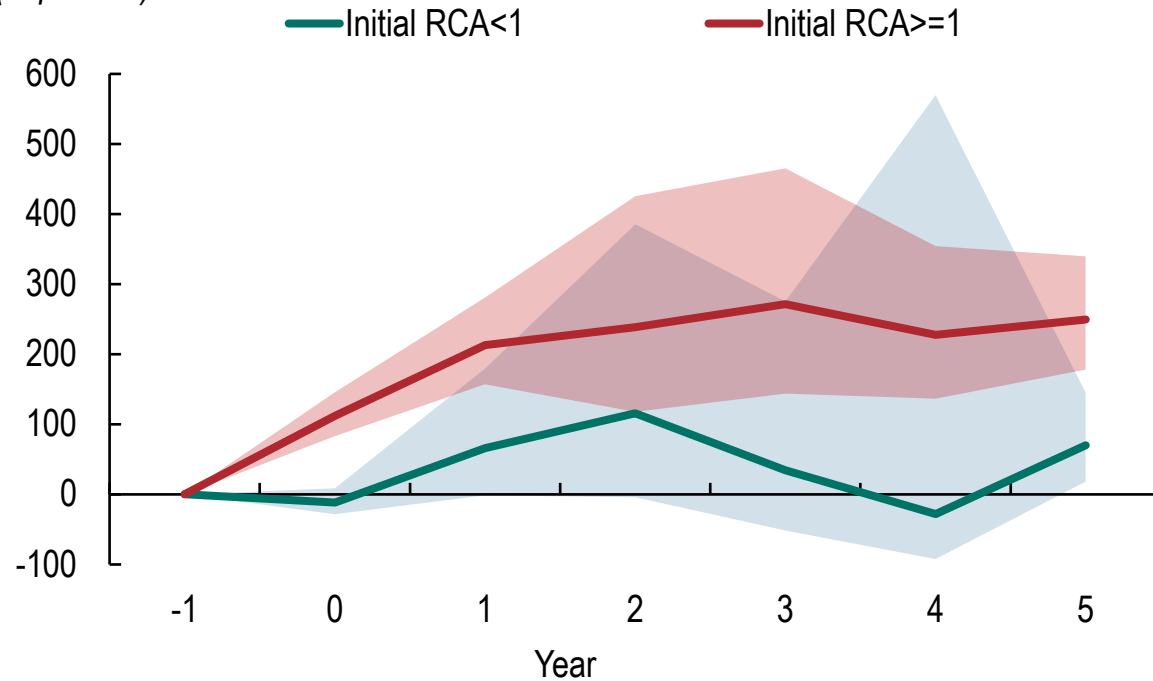
In AP EMs, competitive products appear to benefit from some IP tools, but effect can be temporary

Fact 18

Export incentives seem to be linked to improving RCA in EMs, but only for products that are already competitive; the effect is relatively fast to be structural...

Protective Export Incentives, Emerging Markets

(In percent)

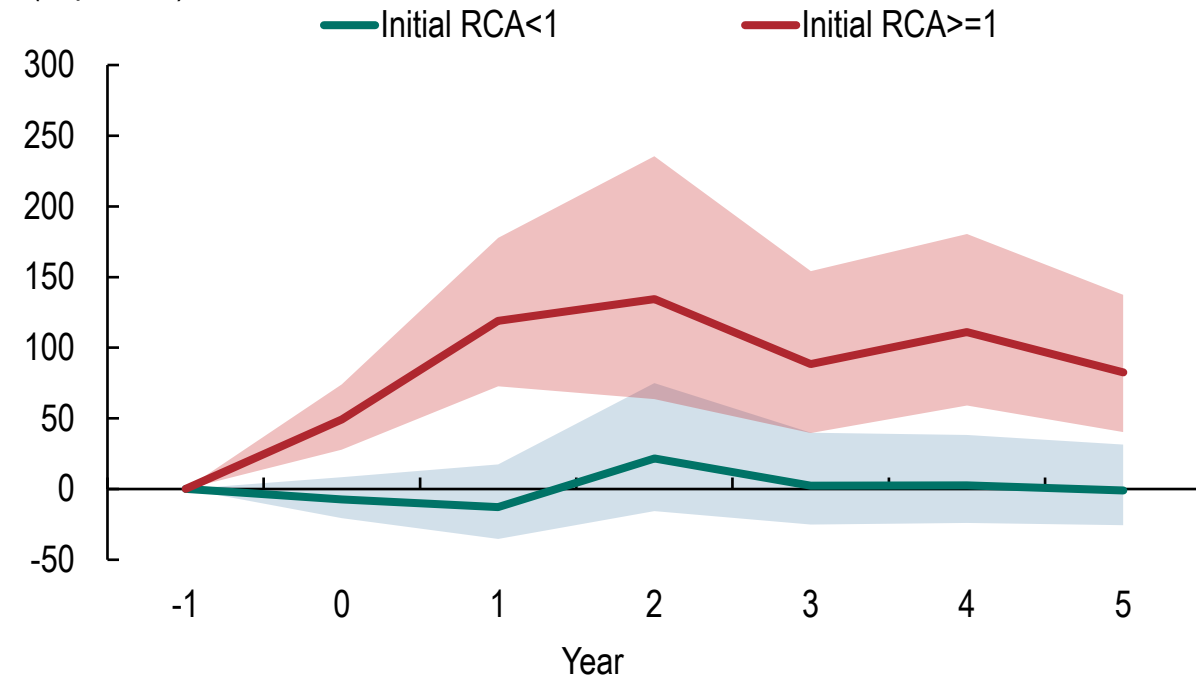


Fact 19

Domestic subsidies deployed by EMs also seem to improve RCA for products that are already competitive, with decaying impact over time...

Protective Domestic Subsidies, Emerging Markets

(In percent)



Notes: Each chart shows the estimations from a difference-in-difference local projection model regressing RCA (in log term) on the presence of each type of IP tool at the country-product level, with controls including the presence of other IP tools, lagged RCA (in log term), country-product fixed effect, country-year fixed effect, and product-year fixed effect and the effect assuming to stabilize in two years. Shaded areas show the 90 percent confidence intervals.

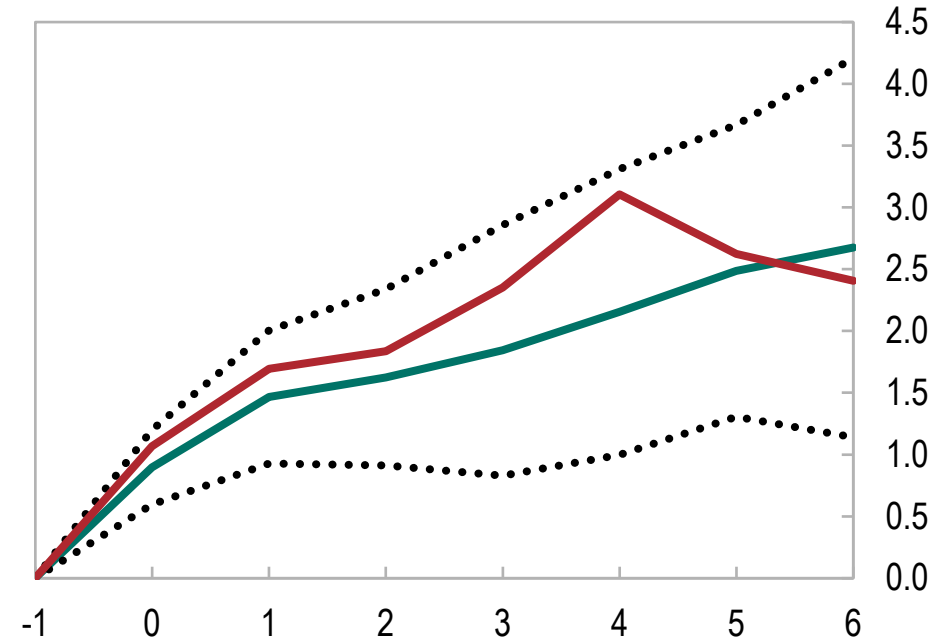
Sources: BACI database, GTA database, and IMF staff calculations.

Alternatively... gains from structural reforms are clear...

- Structural reform implementation has well-demonstrated yields on growth.
- Packaging horizontal reforms yields better output outcomes than implementing a sequenced gradual approach, but implementation of a major economic reform is still beneficial.
- A major reform package** can (on average) raise output levels by 1.5 to 2 percent after two years, and up to 3 percent after four years in EMs.
- Some studies suggest that some structural reforms may be complementary to IP.
- ** Package including external sector regulation, governance, business regulation, and human development reforms.

Source: 2024 Article IV Staff Report, Indonesia (Selected Issues Papers).

EMs: Effects of Packaged Reforms on Real Output
(In percent)



Sources: IMF staff estimates.

Note: $t=0$ is the year of the shock. The grey line shows the effect on real output of one major economic reform in the years after the shock, with black dotted lines showing 90 percent confidence intervals. Red line shows effects of deploying a full reform package, conditional on implementing all four reforms simultaneously (significant at the 10 percent level)

Considerations for Policymaking in AP

A large-scale, complex IP deployment in AP

- Multiple tools, often layered on products (opacity)
- Multiple sectors, multi-directional targeting strategies
- Increasingly inward-oriented
- At least some reactive in nature (Tit-for-Tat)
- Unclear if sustained by fundamental economic rationale (i.e., addressing market failures)

With mixed effects

- For metrics considered (exports, RCA), gains only for some countries/products/tools
- Temporary effects; and on products which are already competitive
- Unclear that improvement is structural (and not due mostly to a subsidized price)
- Much IP going to products with no RCA → unlikely to be effective
- Other costs need to be kept in mind: fiscal costs, unintended consequences (economic distortions, capture, spillovers and spillbacks)

Fuller view of Costs and Benefits needed

- There is a case for a more thoughtful, parsimonious deployment, to improve IP design and avoid opacities and risks, based on cost-benefit analysis
- Difficult to observe economic rationale... IP must be carefully designed to address market-failures
- Implementation of horizontal structural reforms should not be abandoned... since large, permanent growth gains are robustly identified in economic analysis



Thank you

Additional Slides

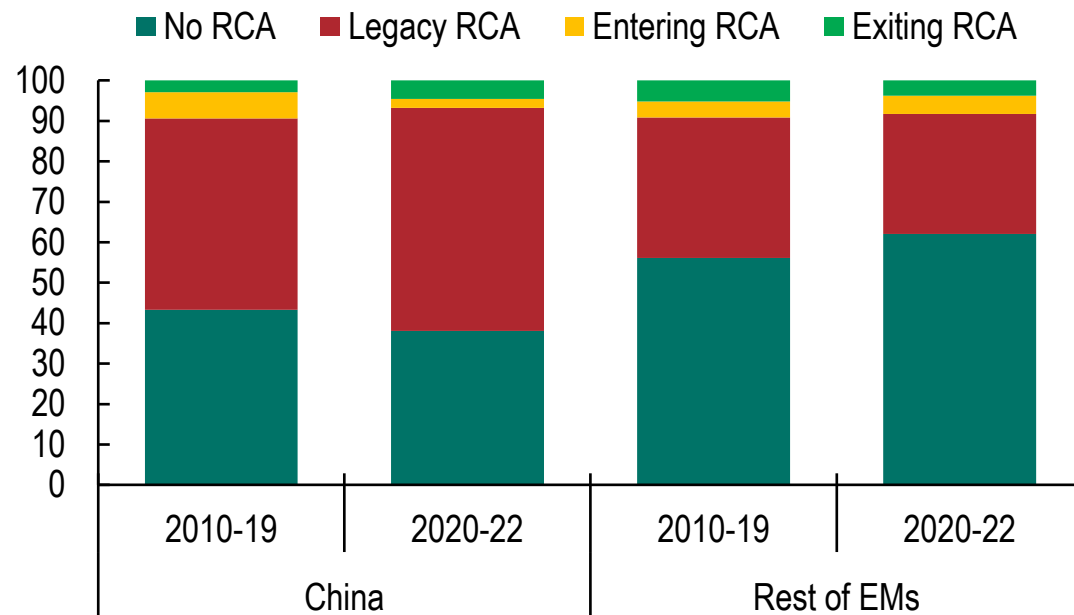
China targets more legacy competitive sectors than other EMs, and over time

Among EMs, China targets more legacy competitive sectors, as well as India to some degree

Over time, China has targeted less products that just gained competitiveness (those entering RCA), but more products with legacy competitiveness

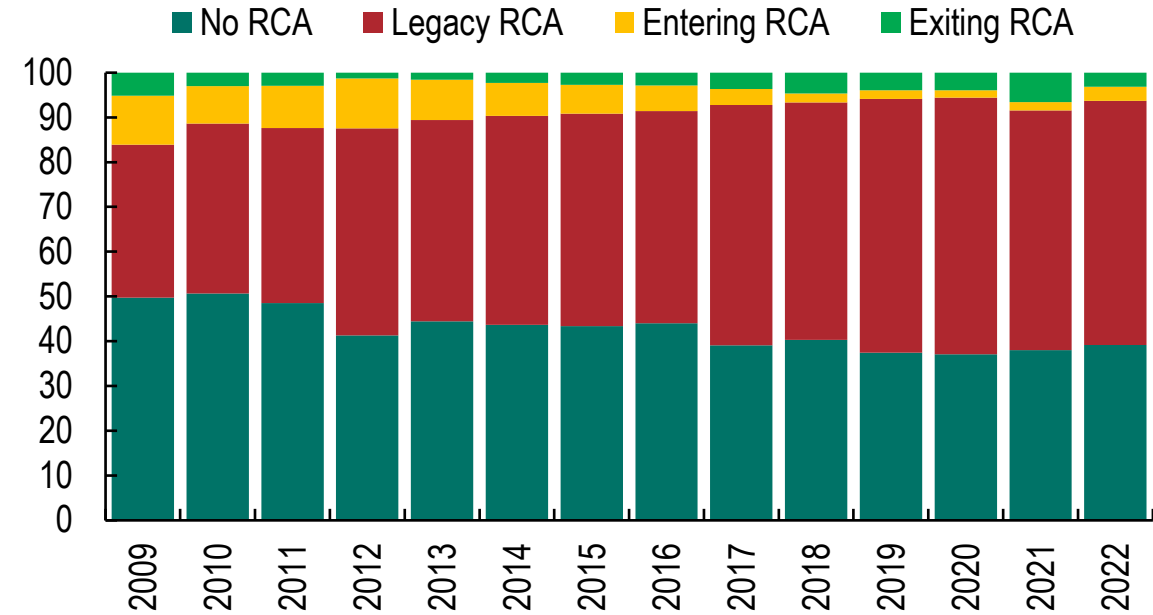
Share of Interventions Targeting at Different RCA Categories

(In percent)



Share of Interventions Targeting at Different RCA Categories, China

(In percent)



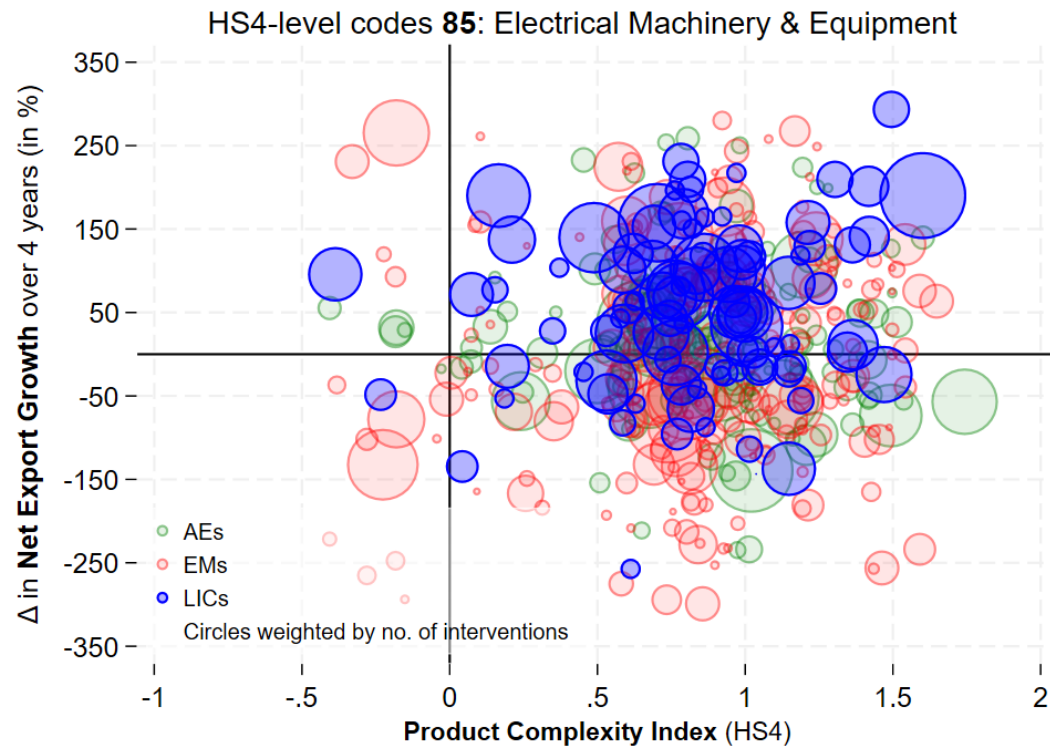
Note: Products with legacy RCA are those that were competitive (RCA ≥ 1) in the most recent ten years (t-10 to t-1); products with entering RCA are those that were competitive in the most recent five years (t-5 to t-1) but not in the five-year period prior to the most recent five years (t-10 to t-6). Products with exiting RCA are those that were competitive in the five-year period prior to the most recent five years (t-10 to t-6) but not in the most recent five years (t-5 to t-1). Products with no RCA are those that were not competitive in both periods.

Source: BACI database, GTA database, and IMF staff calculations.

IP may be linked to increasing exports of complex products, particularly in low-income countries

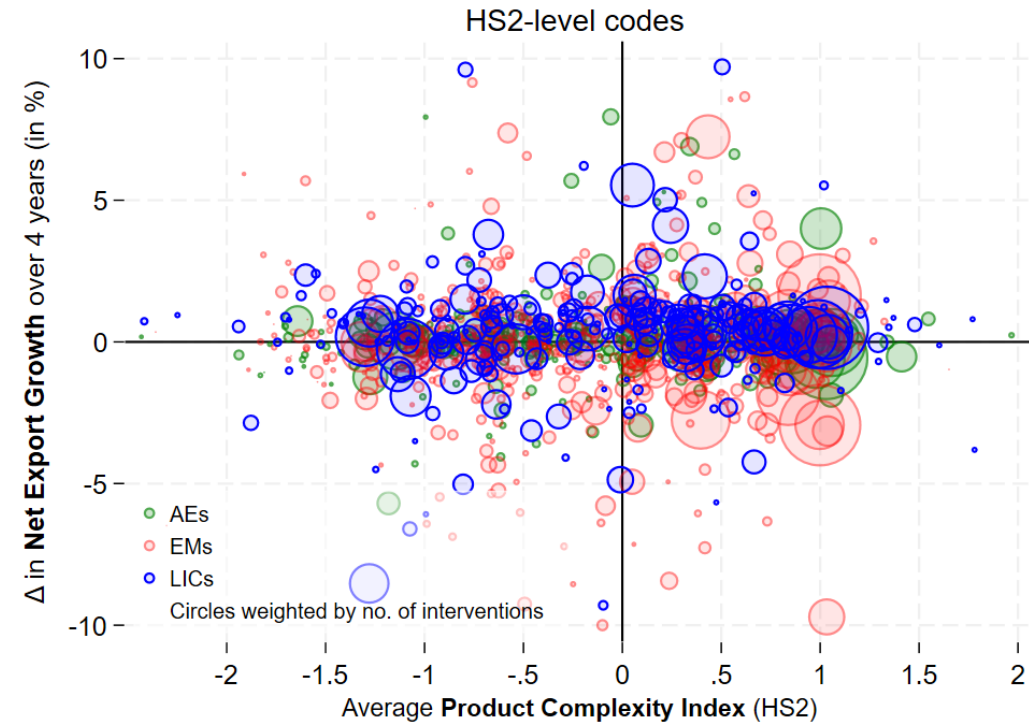
Fact 14

IP may be positively correlated with increasing net export growth of higher complexity products, particularly in LICs (e.g., electrical machinery and equipment)...



Fact 15

But the effects are granular, and not broadly observable



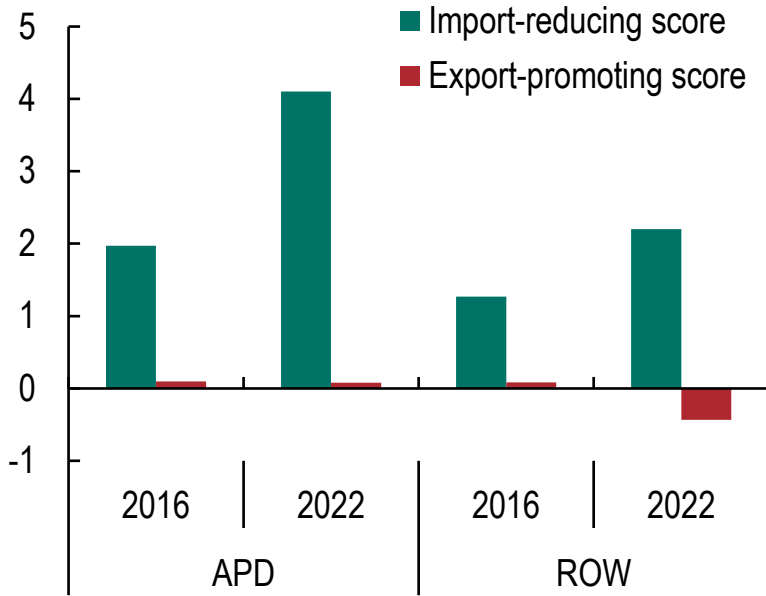
Note: Net export growth is defined cumulatively over the 4 years up until the first year of IP intervention in an HS4 (HS2) product category and the four years following the first IP intervention. Circles are weighted by the number of interventions on a HS4 (HS2) level product category in the first four years since the first intervention. Hausmann Product Complexity Scores are averaged over the 4-year pre- and post-intervention periods.

Sources: GTA, BACI, The Growth Lab at Harvard University, IMF staff calculations

X- and M-orientation scores have worsened since 2016; distribution over products is largely neutral for exports, reducing for imports

Policy stances have become more import-reducing since 2016, while remaining constant for exports

Change in Export- and Import-orientation (index)



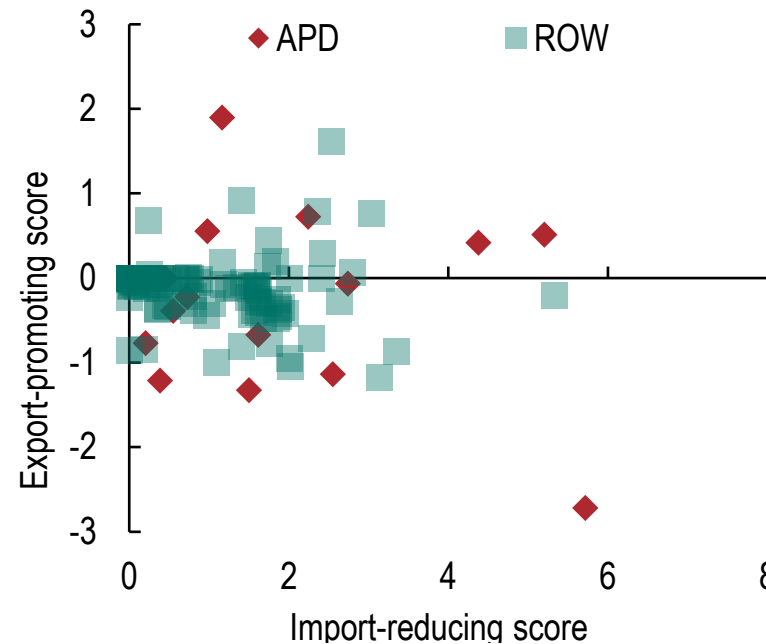
Sources: GTA; BACI; IMF staff calculations

Note: For exports (imports), positive (negative) index scores indicate promoting (reducing) policy orientation.

Country-level scores: obtained by averaging product level scores, weighted by trade shares. Region-level score: GDP-weighted averaging country-level scores.

At country-level, import-reducing lean is clear though intensity varies; export-orientation is heterogeneous and intensity low

Country export-and import-orientation (index)

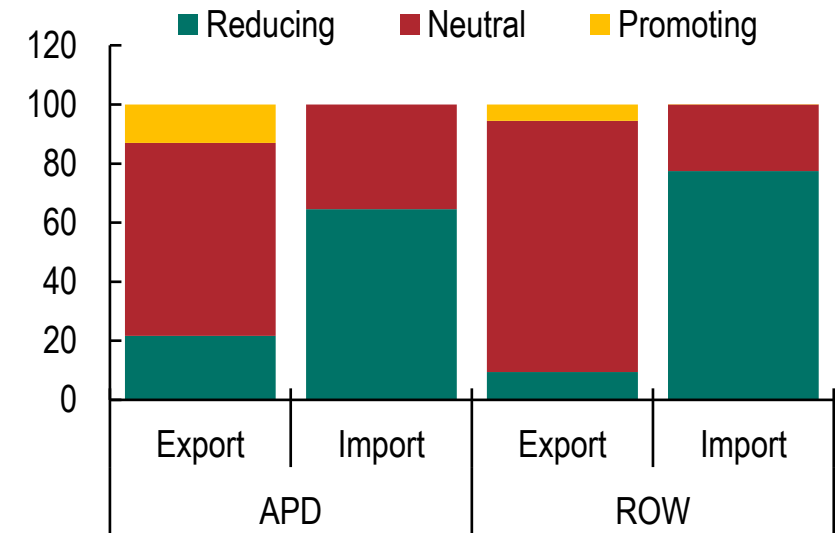


Sources: GTA; BACI; IMF staff calculations

Note: For exports (imports), positive (negative) index (reducing) policy orientation. Country-level scores: obtained by averaging product level scores indicate promoting I scores, weighted by trade shares.

Over the product space, broadly neutral stances for exports, clearly reducing for imports

Policy stance types across products (percent; of active policy types across HS6-digit products)



Sources: GTA; BACI; IMF staff calculations

Note: For exports (imports), positive (negative) index scores indicate promoting (reducing) policy orientation. Exports: scores normalized between [-1, 1], then classified as reducing if in [-1, 1/3], neutral if in [-1/3, 1/3], and promoting if in (1/3, 1]. Similarly for imports.