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Golden Vision 2045: Reaping the Gains from Trade

Ashique Habib

SIP/2026/007

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on December 16, 2025. This paper is also published separately as IMF Country Report No. 26/011.

2026
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IMF Selected Issues Paper
Asia and Pacific Department

Golden Vision 2045: Reaping the Gains from Trade: Indonesia

Prepared by Ashique Habib

Authorized for distribution by Maria Gonzalez
February 2026

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ABSTRACT: Indonesia has been pursuing a broad push towards greater trade openness with regional and global partners, seeking to leverage external demand to reach high-income status by 2045. This welcome and timely effort comes amid ongoing trade policy shocks. Our analysis suggests that deeper trade integration, focusing on reducing non-tariff barriers, along with complementary structural reforms, can generate significant GDP gains for Indonesia. These gains can come from unilateral actions on reducing non-tariff barriers affecting imports, which would be amplified by increasing market access in the context of trade agreements with major partners. Alongside trade policy, structural reforms in other areas—such as human capital and logistics—can further enhance trade integration. These reforms can reduce trade costs on their own, while also complement trade policy by helping Indonesia to broaden comparative advantage across sectors. Such an ambitious trade liberalization and structural reform program could make Indonesia 'open for business' amid shifting global supply chains; the resulting GVC-integration, supported by FDI, could drive gains beyond this paper's estimates.

RECOMMENDED CITATION: Habib, Ashique. Golden Vision 2045: Reaping the Gains from Trade. IMF selected Issues Paper (SIP/26/006). Washington, D.C.: International Monetary Fund.

JEL Classification Numbers:	F10, F12, F13, F15
Keywords:	International Trade, Indonesia, Non-tariff Measures, Trade Integration
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SELECTED ISSUES PAPERS

Golden Vision 2045: Reaping the Gains from Trade

Indonesia

Prepared by Ashique Habib[1]

[1] "The author would like to thank Chikako Baba, Rupa Duttagupta, Rahul Giri, Maria Gonzalez, Michael Green, Emmanuel Kitsios, Sun Young Park, Akshat Singh, and Robert Zymek. Special thanks to Shutong Niu and Patricia Tanseco for editorial assistance.

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INDONESIA

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December 16, 2025

Approved By
Asia and Pacific Department

Prepared by Ashique Habib, with research support from Shutong Niu (APD).

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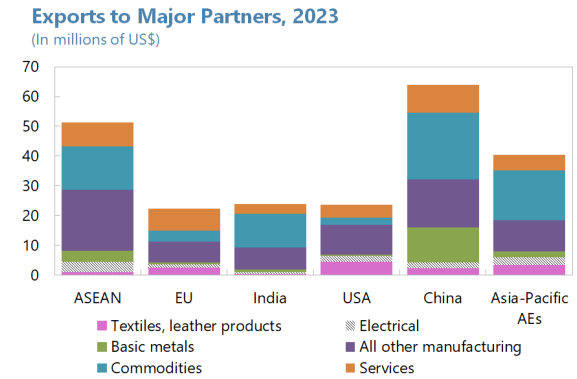
GOLDEN VISION 2045: REAPING THE GAINS FROM TRADE[1]

Indonesia has been pursuing a broad push towards greater trade openness with regional and global partners, seeking to leverage external demand to reach high-income status by 2045. This welcome and timely effort comes amid ongoing trade policy shocks. Our analysis suggests that deeper trade integration, focusing on reducing non-tariff barriers, along with complementary structural reforms, can generate significant GDP gains for Indonesia. These gains can come from unilateral actions on reducing non-tariff barriers affecting imports, which would be amplified by increasing market access in the context of trade agreements with major partners. Alongside trade policy, structural reforms in other areas—such as human capital and logistics—can further enhance trade integration. These reforms can reduce trade costs on their own, while also complement trade policy by helping Indonesia to broaden comparative advantage across sectors. Such an ambitious trade liberalization and structural reform program could make Indonesia 'open for business' amid shifting global supply chains; the resulting GVC-integration, supported by FDI, could drive gains beyond this paper's estimates.

1. Indonesia has been pursuing deeper trade integration with regional and global partners. This push has delivered important achievements, such as new trade agreements with the EU and Canada. The effort is urgent to support Indonesia's Golden Vision to reach high-income status by 2045, as economies that have made such a transition successfully—such as the Asian Miracle success stories—have relied on trade as an important growth driver. However, in recent years the contribution of net exports to Indonesia's growth has been limited. Recent IMF analysis suggests Indonesia has not been able to gain yet from ongoing supply chain reconfigurations (IMF, 2025). While Indonesia's export baskets and trading partners show diversification (Figure 1), amid trade policy shocks, deeper trade integration with a broad set of partners is seen as an important response to foster resilience (IMF 2025; Rotunno and Ruta, 2025).

Figure 1. Indonesia: Exports to Major Partners



Sources: ADB-MRIO; and IMF staff calculations.
Note: Asia-Pacific AEs: Australia, Japan, Korea, New Zealand.

1. This paper assesses the potential gains from deeper trade integration for Indonesia. First, it examines the landscape of policies and structural factors which may be holding back trade—

[1] This chapter was prepared by Ashique Habib. It benefited from discussions with and inputs from Chikako Baba, Rupa Duttagupta, Rahul Giri, Maria Gonzalez, Michael Green, Emmanuel Kitsios, Sun Young Park, Akshat Singh, and Robert Zymek. Special thanks to Shutong Niu and Patricia Tanseco for editorial assistance.

drawing on the substantial literature investigating such barriers in the country as well as from cross-country lessons, including from ongoing IMF research. Second, it uses general equilibrium model-based simulations to investigate deeper integration with key regional and extra-regional partners, with a focus on deepening trade agreements to reduce non-tariff barriers (NTBs). Third, it considers the complementary role of structural policies, both in reducing trade costs directly and in broadening comparative advantages.

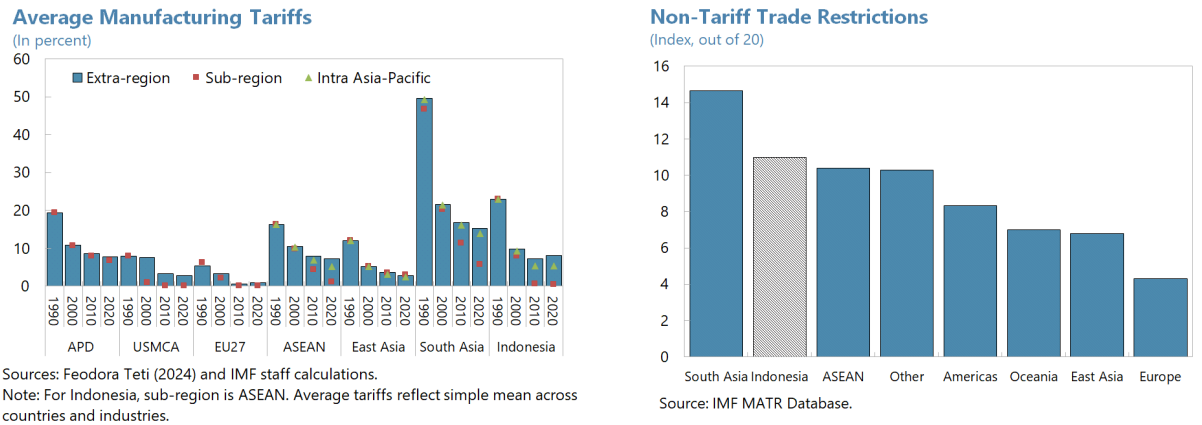
A. Key Policies and Structural Factors Affecting Trade

2. Tariffs have declined over time, as part of a global trend. As shown in Figure 2, left panel, Indonesia's average tariffs on manufactured goods have steadily declined across a range of trading partners, including vis-à-vis ASEAN (i.e., Indonesia's sub-region), Asia-Pacific, and the rest of the world (extra-region). At the same time, tariffs imposed on Indonesian manufacturing exports have also declined over the same period. There remains some scope for further reductions—which Indonesia's recent trade agreements and ongoing negotiations are pursuing.

3. In contrast to tariffs, non-tariff barriers (NTBs) remain relatively elevated; existing research point to their potentially distortionary effects. Based on an IMF index of restrictions, the use of NTBs in Indonesia is higher than in most regional and extra-regional peers (Figure 2, right). Recent collaborative work between the World Bank and the Indonesian government to document the landscape of NTBs across products provides a unique database amongst countries (World Bank, 2023). Researchers have exploited this dataset to assess the impact of NTBs on key economic outcomes, with the results comporting with broader international lessons.[2] The impact on trade could be substantial, as implied by relatively high ad-valorem tariff equivalence for some measures (World Bank, 2023). The latter could also have distortionary effects on firms, including their likelihood of exporting. Further, NTBs may reduce participation in global value chains, and firms' ability to import inputs and adjust such imports flexibly in response to shocks (Cali and others, 2022). World Bank simulations—based on a computable general equilibrium model—point to significant gains from removing four major NTBs (pre-shipment inspections, port of entry restrictions, import approvals, and national certification requirements); reducing these measures could raise GDP by 5 percent, while boosting investment and trade (World Bank, 2023).

[2] While these analyses focus on important economic impacts, a systematic cost-benefit assessment of the performance of NTMs at meeting their objectives is not available.

Figure 2. Indonesia: Tariffs and Non-Tariff Restrictions



Sources: Feodora Teti (2024) and IMF staff calculations.
Note: For Indonesia, sub-region is ASEAN. Average tariffs reflect simple mean across countries and industries.

Source: IMF MATR Database.

4. Relatively shallow trade agreements with major partners also contribute to heightened non-tariff barriers to trade. Many of Indonesia's established trade agreements are anchored to ASEAN. Along with the ASEAN FTA and RCEP, a series of ASEAN+ agreements (e.g., ASEAN + Korea, ASEAN + India) provide some degree of integration with major economies. Broadly, trade agreements could boost trade through tariff reductions as well as lower NTBs through legally enforceable provisions in areas relevant to trade. For example, provisions restricting technical barriers to trade, opening up access to procurement, or enabling foreign investment could boost trade independent of the tariff level.

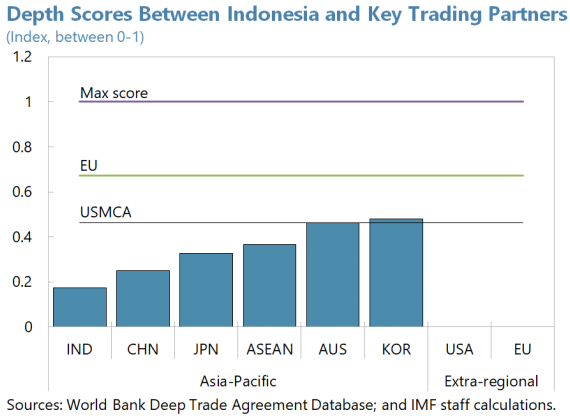
- **Depth scores with major partners reveal large variation in the coverage of such NTB-reducing provisions**. Country-pair level depth scores are constructed based on the share of 52 areas—14 within the WTO mandate and 38 beyond WTO—which are covered by legally enforceable provisions in any trade treaties including the two countries.[3] As illustrated in Figure 3 (left panel) for Indonesia, there is wide variation in depth across major trading partners. While there is some integration with key partners, in general Indonesia's scores are below those prevailing in more integrated regions such as the EU and North America.

- **Broad inclusion of legally enforceable provisions in various areas can play a significant role in promoting trade, independent of tariff levels**. Empirical analysis by Dhingra and others (2023) find higher inclusion of such provisions can significantly boost trade, as they lower non-tariff barriers. Figure 3 (right panel) presents their long-term estimates separately for goods and services trade. The implied magnitudes are large: as an illustrative example, the implied reduction in NTBs from the treaties between ASEAN members is estimated to boost average bilateral exports by 15.5 percent for goods and 17.3 percent for services.[4]

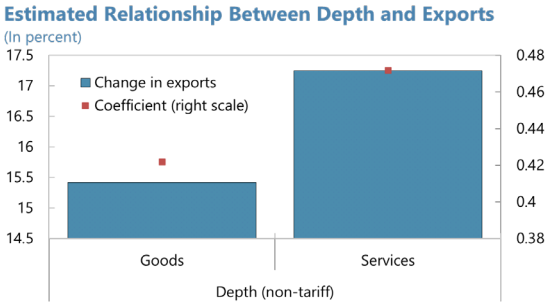
[3] See IMF (2025) for technical details.

[4] The higher gains for services from deep trade agreements has also been documented elsewhere, for example Laget and others (2020). This could reflect higher intangibles intensity of high-value services, as intangibles may be sensitive to the presence of certain types of provisions (e.g., enhanced protection of intellectual protection).

Figure 3. Indonesia: Depth Measures with Key Partners and Empirical Relationship with Trade



Sources: World Bank Deep Trade Agreement Database; and IMF staff calculations.



Sources: Dhingra and others (2024); WB Deep Trade Agreement Database; and IMF staff calculations.
Note: Coefficients based on gravity model estimation by Dhingra and others (2024). For depth score, see IMF (2025). Change in exports presents estimated gain from 0 depth to the intra-ASEAN depth.

5. Beyond trade policy, productivity-enhancing structural reforms could enable trade. Key areas for structural reform (see 2024 Article IV staff report) could also support trade integration—particularly investments in human capital and logistics. While Indonesia has made progress in these dimensions towards the EM median, there is scope for further improvement to the frontier of current EM levels (Figure 4, left panel). At the same time, a comparison with OECD economies—useful benchmarks in the context of Indonesia's pursuit of membership and high-income ambitions—reveal even more scope for improvement.

6. Forthcoming IMF staff analysis shows that investing in human capital and logistics could yield substantial reductions in trade costs and support exports. As shown in Figure 4 (right panel), the implied export gains could be substantial.[5] Conceptually, one channel of transmission from investments in human capital (or logistics) to exports is by raising aggregate productivity, and thus boosting output and exports; the underlying regressions control for GDP, which should absorb this general effect. The presented estimates reflect an additional impact on goods or services exports, which could be interpreted as capturing reforms that lower effective trade costs. Furthermore, these effects are independent of the trade policy channels discussed above. In that context:

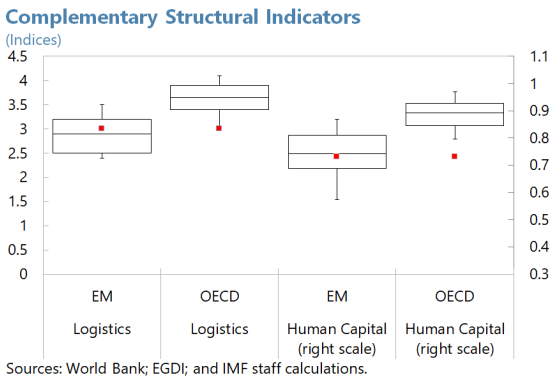
- **Logistics appear to particularly benefit goods exports**, reflecting the importance of efficient physical infrastructure and customs processes for moving goods. As an illustrative example, an increase in the logistics score from the 25th percentile to 75th percentile for EMs is associated with a 13 percent increase in the export of goods.

- **Human capital investments particularly benefit services exports**, which could reflect the reliance of tradeable modern services such as ICT and finance on employees with advanced

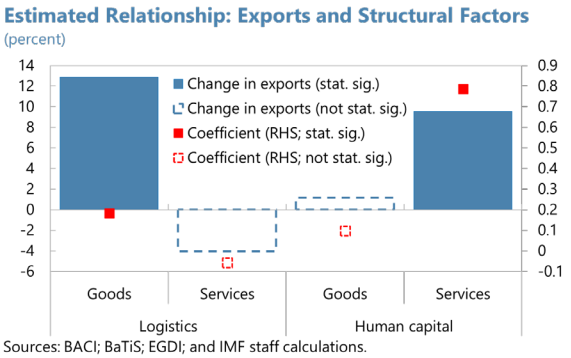
[5] Chen and others (forthcoming), "ASEAN Integration in a Shifting Global Landscape".

communication, analytical, and technical skills. Raising human capital from the 25th- to the 75th percentile raises services exports by about 9 percent.

Figure 4. Indonesia: Logistics and Human Capital, and Relationship to Trade Costs



Sources: World Bank; EGDI; and IMF staff calculations.
Note: Logistics index between 0-5; Human capital index between 0-1. Box plots show interquartile range, while whiskers show 10th and 90th percentiles.



Sources: BACI; BaTiS; EGDI; and IMF staff calculations.
Note: Estimates based on gravity model. Solid: statistically significant at 1 percent; dashed: not significant at 10 percent. Change in exports: calculation reflects implied impact of moving from 25th to 75th percentile of EMs.

7. These findings point to reducing NTBs to trade as well as structural reforms as important priorities for trade integration. While reducing tariffs can also yield benefits (e.g., see Rotunno and Ruta, 2025), reducing elevated NTBs may deliver particularly large gains.[6] Complementing World Bank analysis discussed above on the gains from removing specific measures, Indonesia's relatively shallow and patchy trade agreements suggest deepening such agreements could yield gains through broader NTB reductions. Structural reforms can also play two roles: first, they can reduce trade costs independent of trade policy (as discussed above); second, they can also compliment trade liberalization by enhancing comparative advantages. We turn to model-based simulations to investigate these possibilities.

B. Model and Scenario Description

8. A quantitative trade model (QTM) is used to assess the implications of deeper trade integration. The state-of-the-art multi-country, multi-sector trade model, based on Cuñat and Zymek (2024), is suitable to evaluate the medium- to long-term shifts from trade policy changes and persistent shocks. The model is calibrated using 2015-2019 data to avoid transitory pandemic-induced disruptions. The rich production structure captures the role of intermediate inputs in production, with the input-output structure calibrated using OECD data, spanning 40 sectors (both goods and services) and 69 economies. For a detailed exposition of the model and calibration strategy, see IMF (2025) and Wingender and others (2024). Key features are:

- **Agents in each economy allocate income between savings and consumption, and supply labor inelastically**. They face a constant probability of death, with the agents dying in each period replaced by an equal number to keep the population constant. Agents save in

[6] The size of gains from NTB reduction, in turn, depends on several factors, including: the size of the NTB reduction vis-à-vis major trading partners, the size of the economy, and intermediates use intensity. See IMF (2025) for further discussion, as well as section E below.

country-specific physical capital and a tradeable one-period bond, the market for which is cleared by a common international interest rate. The rate of time preference varies between economies. The combination of this feature, alongside the demographic assumption above, ensures a unique steady-state with a non-degenerate distribution of international assets and trade balances.

- **Firms produce using labor, capital, and intermediate inputs**. In each country-sector, competitive firms produce country-specific varieties using capital, labor, and intermediate inputs using a Cobb-Douglas technology. Inputs markets are also competitive with factors moving freely across sectors (but not countries). Labor shares and sectoral intermediate input shares are country-specific. Sector-specific bundles are created by combining domestic- and imported-varieties. These bundles are then used for consumption, investment, and intermediate inputs.

- **Country-specific varieties are traded internationally, with sector-specific elasticities of substitution taken from the literature**. Trade is subject to country-pair and sector-specific iceberg costs (i.e., the exporter must ship $\kappa \geq 1$ units of the good for 1 unit to arrive at the importing country). These iceberg costs conceptually include—but is not limited to—policy-based non-tariff barriers to trade and structural factors that could raise trade costs.

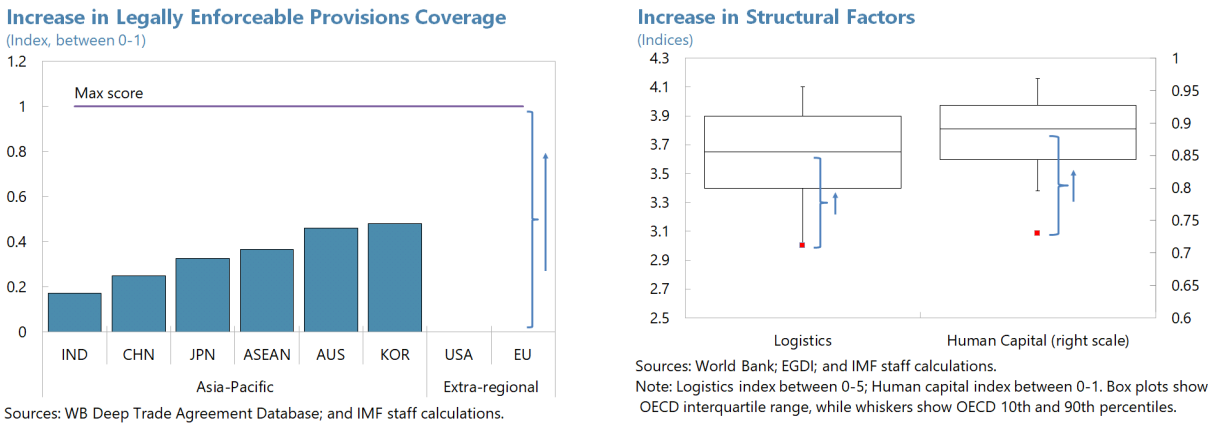
- **Counterfactual analysis compares across steady-states**. The model is amenable to the "exact hat" algebra approach, extended by Cuñat and Zymek (2024) from the standard static setting to a comparison of steady-states in dynamic settings. Therefore, the model result presents the *change* in the level and shares of variables of interest in response to a permanent shock or policy change, measured relative to a no-shock baseline, and once endogenous variables (e.g., capital) has approached the new steady-state.

9. The model is used to simulate reform scenarios, with a focal case of ambitious opening up with major trading partners and efforts to enhance logistics and human capital. In particular, this scenario envisages the following:

- **Bilateral deepening of key partnerships***:* Indonesia pursues deeper trading relationships through the mutual reduction of non-tariff barriers to trade with ASEAN, the EU, Asia-Pacific advanced economies (Australia, Japan, Korea, New Zealand), the United States, China, and India. These are conceptualized as ambitious, deep trade agreements with comprehensive, legally enforceable coverage of WTO+ and WTO-X provisions, and implemented through a counterfactual increase in the bilateral depth scores with the above economies to the conceptual maximum (Figure 5, left panel).

- **Boosting human capital and logistics**: Indonesia undertakes investments and reforms to raise human capital and logistics to respective medians for OECD economies (Figure 5, right panel). Alternatively, the shock could also be interpreted as approximating an increase to the 95th percentile of EMs. This component focuses on the trade cost reducing aspect of such investments.

Figure 5. Indonesia: Illustration of Shocks in Ambitious Reform Scenario



Sources: WB Deep Trade Agreement Database; and IMF staff calculations.

Sources: World Bank; EGDI; and IMF staff calculations.
Note: Logistics index between 0-5; Human capital index between 0-1. Box plots show OECD interquartile range, while whiskers show OECD 10th and 90th percentiles.

10. The reforms are mapped into the model as reductions in iceberg costs. The iceberg costs (described in ¶9) encapsulate both policy-induced (e.g., non-tariff barriers) and non-policy driven (e.g., transportation and communication inefficiencies) factors that raise the cost of trade. Therefore, following the literature, both sets of shocks are mapped as a reduction in iceberg costs. Specifically,

- **Reductions in Indonesia's non-tariff barriers through deep trade agreements**. This side of trade integration reduces the cost for Indonesians to import from trading partners, and is therefore captured by a reduction in the sector-specific bilateral iceberg costs faced by the exporting firms in partner countries when selling to Indonesian firms. The assumed change in depth as shown in Figure 5 (left panel) between partner country m and Indonesia ($\Delta_{m,IDN}^{Depth}$) is transformed into a change in iceberg costs facing exporters in sector s, country m shipping to Indonesia ($\hat{\kappa}_{m\to IDN,s}$) using the equation below. The transformation seeks to find a cost-equivalent that would be consistent with empirical estimates of the relationship between changes of depth and exports (i.e., $\tilde{\alpha}^{S}{}_{Depth}$; estimated coefficients as presented in Figure 3, (right panel)), and accounting for sector-specific elasticities of substitution ($\theta_{s,S}$). Note that goods and services sector-specific elasticities are applied.

$$\hat{\kappa}_{m\to IDN,s} = exp\left\{-\frac{1}{\theta_{s,S}}\left(\tilde{\alpha}^{S}{}_{Depth} \times \Delta_{m,IDN}^{Depth}\right)\right\}, S \in \{Goods, Services\}$$

- **Reduction in export costs faced by Indonesian firms**. As the counterpart to the above, when partner countries give Indonesia market access by lowering their trade barriers, iceberg costs faced by Indonesian firms decline. Analogous to the discussion above, the calibration of this reduction is captured by the first term in the equation below. The second and third terms capture the trade cost reducing effects of better human capital and logistics respectively. This mapping to trade costs (as opposed to the model's TFP parameters) is appropriate, since as discussed in ¶7, we are isolating the differential impact these reforms have on the export of goods and services, beyond their impact through raising aggregate productivity. Note that

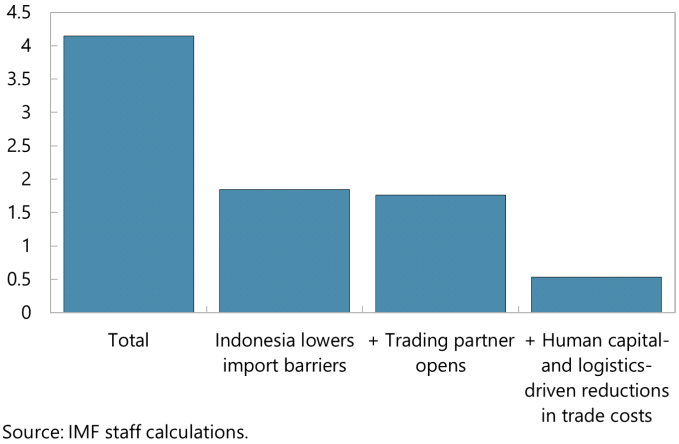
improvements in these structural dimensions reduce iceberg costs vis-à-vis all trading partners, and not just those with which Indonesia deepens trade agreements.

$$\hat{\kappa}_{IDN\to n,s} = exp\left\{-\frac{1}{\theta_{s,S}}\left(\tilde{\alpha}^{S}{}_{Depth} \times \Delta_{m,IDN}^{Depth} + \tilde{\alpha}^{S}{}_{HC} \times \Delta_{IDN}^{HC} + \tilde{\alpha}^{S}{}_{Logistics} \times \Delta_{IDN}^{Logistics}\right)\right\}, S \in \{Goods, Services\}$$

C. Main Results

11. The ambitious trade integration and reform scenario boosts real GDP levels by 4.1 percent in the medium- to long-term relative to baseline. These gains stem from several channels (Figure 6). First, lower non-tariff barriers by Indonesia allows Indonesian firms to source cheaper intermediate inputs through imports, enhancing their productivity and output (which serves both domestic and external markets). Along with cheaper access to final goods, this triggers reallocation of activity towards sectors in which Indonesia is relatively more productive—i.e., its comparative advantages. A decomposition of the total real GDP gains points to this lowering of Indonesia's barriers as the biggest source of gains. In addition, access to external markets boosts demand for Indonesian output, and further triggers a reallocation towards Indonesia's comparative advantages. The reduction in trade costs through improved human capital and logistics supports exports and further boosts output. Cumulatively, these productivity-enhancing reallocations raise the return to capital and therefore boost investment. While not explicitly decomposed here, the gains to GDP reflect an increase in the steady-state capital stock.

Figure 6. Indonesia: Real GDP Gains



Source: IMF staff calculations.

12. A unilateral reduction in Indonesia's non-tariff barriers, even if not accompanied by the trading partner giving market access, can benefit many sectors. Figure 7 presents the percent change in real value added across the 40 sectors, in a scenario where Indonesia unilaterally reduces its non-tariff barriers without any reciprocal reduction by trading partners. Alongside the 40 granular sectors, five sector groups are constructed to support a broader analysis of sectors important to recent trends in global goods and services trade. In particular, goods sectors are

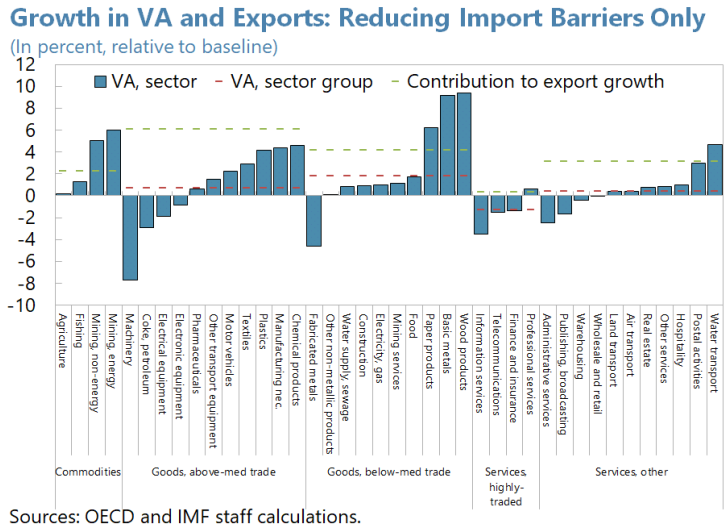
divided into commodities, highly-traded goods (a proxy for more GVC-linked sectors), and other goods (the remainder); services sectors are divided into modern services and other services.[7]

- **The overall impact on sectoral value-added reflects three channels**: (i) access to cheaper intermediate inputs for production, (ii) reallocation of domestic demand towards more easily accessible foreign products, and (iii) spillovers from shifting demand from other sectors.

- **The interplay of these channels drive sectoral differences in gains**. For many key sectors, including commodities, textiles, motor vehicles, and several sectors downstream of Indonesia's commodities (e.g., food, wood products), access to cheaper intermediate inputs, along with the other above channels leads to net overall gains. These shifts are important enough to generate an overall increase in real GDP, despite some net losses in sectors from which activity reallocates away. All goods sector groups gain in value added. The GVC-linked highly-traded goods sector makes the biggest contribution to the overall increase in exports; these gains come despite assuming no increase in foreign market access, and underlines the importance of access to intermediate inputs.

- **Various services sectors also benefit**. The gains stem from a combination of direct rise in exports in some cases, while others benefit from facilitating goods exports and demand spillovers as other sectors grow.

Figure 7. Indonesia: Impact of Unilateral Trade Opening on Sectoral Real Value Added

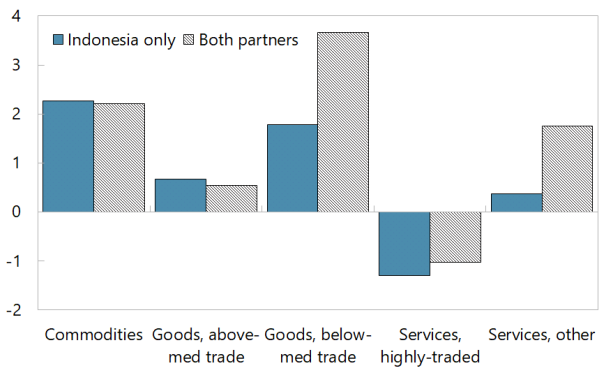


Sources: OECD and IMF staff calculations.

[7] Besides commodities, which are an important category for Indonesia, the remaining goods sectors are separated into two buckets based on their global characteristics: in particular, goods sectors which export an above-median share of their global value added are classified as "highly-traded". Many of the sectors identified through this classification (e.g., pharmaceuticals, motor vehicles, electronic equipment) tend to be associated with GVC-trade and with producing more technologically complex products. The classification of modern services (e.g., finance, IT, business services) is based on recent IMF analysis on structural transformation in Asia (IMF, 2024b), which notes the rising role of these relatively productive sectors in trade with a potential role in future structural transformation.

13. Full, bilateral reduction in trade barriers boosts GDP through further reallocation. Beyond the channels at play when Indonesia lowers its barriers, gaining market access triggers further reallocation. With foreign market access, Indonesian firms are incentivized to further specialize where they have a comparative advantage at meeting both domestic and foreign demand vis-à-vis firms in the partner economies (Figure 8). While many of the sectors which gain in the unilateral opening scenario discussed above continue to do so, there is a net reallocation of resources towards goods sectors where Indonesia's current comparative advantages appear to lie—including electronic equipment, textiles, and manufacturing sectors downstream of its commodities. Services sectors gain, including through demand spillover from growing sectors. With a fixed labor pool as assumed in the model, the reallocation dampens gains from more GVC-linked sectors.

Figure 8. Indonesia: Impact of Trade Agreements on Sectoral Real Value Added



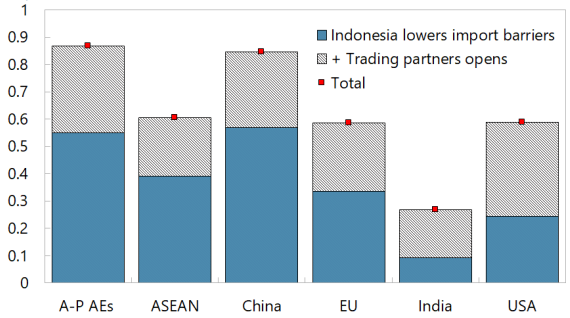
Source: IMF staff calculations.

14. Turning to specific trading partners, a decomposition of gains points to substantial returns from opening to each, as well as shedding light on the channels of sectoral reallocation absent other reforms. Figure 9, left panel, presents the gains from opening only to some economies (individual countries, or groups such as the EU or Asia-Pacific Advanced Economies). It further decomposes the gains between those stemming from Indonesia lowering its own barriers and those stemming from gaining market access from the trading partner. The large gains from Asia-Pacific partners point to the benefits of regional integration, with complementarities at play. Integrating with many of the regional partners generates benefits largely through the lowering of Indonesia's own non-tariff barriers; in part, this reflects these economy's strong footprints in regional GVC networks (e.g., China, ASEAN) and therefore their role as potential suppliers of intermediate inputs. For other economies (US, India), gaining market access plays the more important role. The sectoral gains vary by trading partner (Figure 9, right panel), reflecting differences in comparative advantages. For example, opening to the US and EU generates gains for all types of goods sector groups, reflecting Indonesia's advantages such as a relatively competitive labor pool. At the same time, modern services do not gain from opening to these partners (which are currently more competitive). Turning to major Asia-Pacific economies which tend to specialize in GVC-linked manufacturing, the gains for Indonesia are strongest outside this sector group (e.g., commodities, other goods).

Figure 9. Indonesia: Gains by Trading Partner

Real GDP Gain from Deep Integration, by Partner

(In percent, relative to baseline)



Growth in Sectoral VA, by Partner

(In percent, relative to baseline sectoral real VA)

	ASEAN	A-P AEs	China	EU	India	USA
Commodities	0.67	0.87	0.66	0.41	0.14	0.04
Goods, above-med trade	-0.30	-0.45	-0.86	0.50	-0.52	1.35
Goods, below-med trade	0.51	0.85	0.87	0.58	0.51	0.54
Services, highly-traded	0.11	0.25	0.10	-0.37	-0.15	-0.81
Services, other	0.25	0.33	0.55	0.20	0.18	0.29

Source: IMF staff calculations.
Note: Each scenario envisages comprehensive, bilateral reduction in non-tariff barriers with a major trading partner.

15. It is important to note that complementary reforms, as well as important factors not captured in the model, could amplify and broaden the gains. The simulations considered point to significant gains from trade liberalization, driven by access to cheaper intermediate inputs and productivity-enhancing reallocation that better exploits the country's comparative advantages. The benefits would accrue to many of the sectors which are the focus of current policies, including labor-intensive sectors such as textiles as well as sectors linked to Indonesia's commodities. At the same time, Indonesia's objectives of pursuing high-income status and providing higher paying jobs to expand its middle class could be supported by developing and broadening its comparative advantages in new sectors. The next sections turn to the role of trade liberalization in supporting these goals. Illustrative scenarios highlight two points: First, the benefits of exploiting complementarities between trade liberalization and other structural reforms. Second, factors which are abstracted from the model—in particular, trade-induced modernization and integration of production processes could significantly amplify gains.

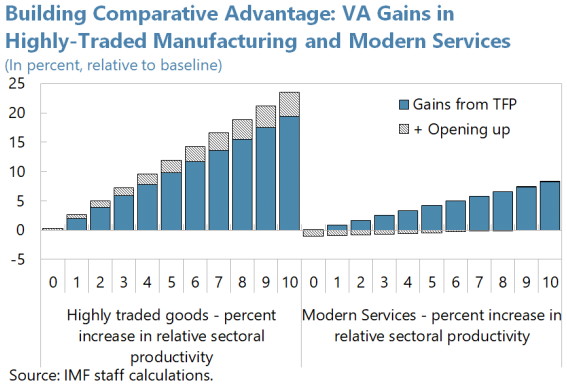
D. Exploiting Complementarities between Trade Integration and Other Structural Reforms

16. Promoting structural transformation through productivity-enhancing reforms will be important to reach high-income status. As discussed in the 2024 Article IV staff report (IMF 2024a), structural reforms are essential to boost growth and achieve the Golden Vision of high-income status by 2045. Key reform priorities include improvements in logistics, investment and business climate, governance, digitalization, financial sector development, and building human capital. These horizontal reforms would generate gains across many sectors. They can also broaden and deepen the gains from trade liberalization by building new comparative advantages, e.g., in GVC-linked goods sectors and modern services. While a deep dive identifying the specific priorities of individual sectors is beyond the scope of this chapter, GVC-linked manufacturing and modern services may particularly stand to benefit from key reforms. For example, many GVC-linked manufacturing sectors are particularly sensitive to supply chain delays, in need of external financing, and reliant on skilled human capital—therefore, they may gain in relative terms from improved logistics, deeper financial markets, and higher human capital. Similarly, many modern services

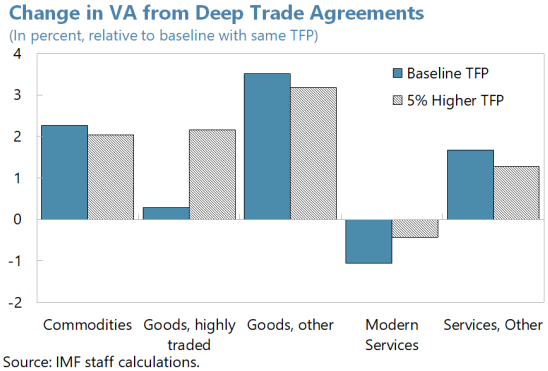
sectors are reliant on skilled workers and the internet—therefore, these sectors may also particularly benefit from investing in building digital infrastructure as well as expanding the pool of highly-educated workers.

17. Illustrative scenarios highlight how complementarities with structural reforms can broaden comparative advantages. Figure 10, left panel, demonstrates the interaction between productivity-enhancing structural reforms that raise relative productivity in specific sectors and trade liberalization. Structural reforms are assumed to raise relative sectoral TFP, with the considered gains varying between 1 and 10 percent. This variation could be interpreted as reform efforts of different levels of ambition. The blue bars show the significant *direct* gains to sectoral value-added from these reforms. The gray bars show the *additional* gains from trade liberalization; the key insight is that the trade liberalization gains are being amplified by the TFP-boosting structural reforms. In the case of highly-traded goods, a small gain in the scenario with baseline sectoral TFP rises to about 4 percent when sectoral TFP rises by 10 percent; in the case of modern services, a small negative impact on value added closes when sectoral TFP rises by 10 percent. The mechanism at play is as follows: with higher sectoral TFP, Indonesian firms in these sectors are more productive and gain comparative advantage vis-à-vis foreign firms. Trade liberalization allows them to exploit this higher productivity by serving foreign markets, which in turn drives the larger gains. Figure 10, right panel, presents the gains for these sectors in the broader context: other sectors also continue to gain from trade liberalization at similar magnitudes, despite labor reallocation towards the relatively more productive highly-traded goods and modern services sectors. Thus, structural reforms, by building new comparative advantages, could complement trade policies and broaden the gains from reducing trade barriers.

Figure 10. Indonesia: Complementarities with Structural Reforms



Source: IMF staff calculations.
Note: Scenario considers gains in value-added in the above sector groups, when ambitious trade libralization is paired with reforms raising sectoral productivity.



Source: IMF staff calculations.
Note: Gain in VA is measured relative to scenario with the same TFP; 5% higher TFP scenario: assumes 5% higher TFP in highly-traded goods and modern services.

E. Trade-Induced Investments and Production Changes can Amplify Gains

18. While the estimated gains are large, additional factors not included in the model are likely to amplify gains from trade liberalization. For example, while the model features endogenous investment, it does not distinguish the potential productivity-enhancing properties of FDI, even though FDI is likely to be attracted to a more open and trade-integrated Indonesia (e.g.,

see Osnago and others, 2017). As documented by Ahn and others (2024), greenfield FDI can generate positive spillovers in EM recipients, particularly to firms in sectors upstream of the incoming FDI and when the FDI originates from AEs. These results point to the important productivity boost from FDI-driven knowledge transfers to the domestic economy. As found in IMF (2023), gains in the recipient country are likely to particularly arise in case of "vertical" FDI—i.e., FDI intended to use the recipient economy as a production base to supply global markets. With trade reforms making Indonesia more attractive for GVC-related investments, the resulting productivity gains would add to this paper's estimates—particularly so in GVC-linked sectors.

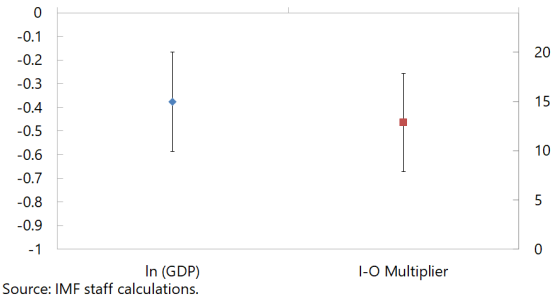
19. Relatedly, an ambitious trade liberalization effort could support a shift in production processes, further amplifying gains. While the simulations highlight the benefits of being able to *shift sourcing* of intermediate inputs to cheaper foreign sources, it abstracts from a potential *intensification* of intermediates use. Specifically, the share of intermediates used in production is calibrated at the country-sector level using input-output data, and is held fixed across simulations. This is an appropriate and disciplined approach to scenario analysis of medium-term shocks. At the same time, and as discussed in recent IMF analysis on the gains from trade integration (IMF, 2025), variation in intermediates use intensity is an important factor in explaining why some economies gain more from trade integration than others.[8] The underlying intuition is that, with higher intensities, the benefits of cheaper intermediates inputs at an upstream stage not only generate gains at that stage, but also bring spillovers for each downstream stage. The ambitious reform scenarios envisaged in this chapter trigger a shift of Indonesian productions towards more disintegrated, cross-border processes as domestic firms shift towards more complex products requiring more intermediates, while incoming foreign firms draw on their global supply chains.

20. Without speculating how much the intermediates usage might increase, back-of-the-envelope model simulations suggest potential for significant amplification of GDP gains. The extent of the intermediates' intensification is difficult to predict—especially amid a shifting global trade landscape. Motivated by the above discussion which suggests the gains are likely to be positive, we ask the following question: *"How much higher would Indonesia's real GDP gains be (relative to the simulations presented in this chapter), if it implemented the same reform policies, but had a more GVC-integrated production structure?"*. We address this question by (i) using model-generated data to obtain the conditional correlation between the intermediates use intensity (captured by a country-level statistic henceforth referred to as the IO-multiplier) and GDP gains controlling for economy size, and (ii) moving Indonesia's IO multiplier to different levels, based on the distribution of key peer groups. As shown in figure 11 (left), a higher level of initial integration is associated with greater real GDP gains from opening up. Figure 11 (right) considers several alternative levels of intermediate input-use intensity. While these estimates should be taken as indicative, the results point to significant potential amplification: for example, if Indonesia had the median ASEAN-level of intermediate inputs usage (roughly about the level of Thailand), the GDP gains from trade integration would be about *40 percent higher*.

[8] In addition, gains are larger for smaller economies and for economies with initially higher barriers.

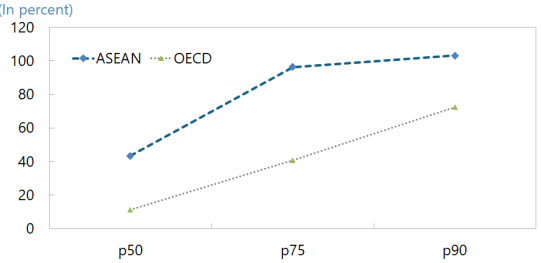
Figure 11. Indonesia: Potential Gains from Intermediates Use Intensification

Correlation of GDP Gains with Initial Size, IO Multiplier
(In percent)



Source: IMF staff calculations.
Note: Conditional correlations estimated using model generated dataset, consisting of scenarios in which economy (one at a time) reduces their iceberg costs for imports by 5 percent.

Potential Amplification to GDP Gains from GVC Integration
(In percent)



Source: IMF staff calculations.
Note: These "what-if" scenarios report potential amplification to Indonesia's real GDP gains from unilaterally reducing barriers, if it had a reliance on intermediate usage (i.e., GVC linkages) at various percentiles of peer groups. The numbers should be read as multiplying the baseline estimates (i.e., gains in real GDP would be 1.4 times higher if Indonesia's IO-multiplier was at the ASEAN median).

F. Conclusion

21. This paper finds significant potential gains from trade integration for Indonesia, particularly from reducing non-tariff barriers. The gains from ambitious integration with trading partners could yield a significant boost to GDP levels, helping Indonesia reach its high-income ambitions. With the largest portion of the estimated gains arising from the reduction of Indonesia's own barriers, there is scope for unilateral action even as it pursues deeper trade integration with major partners. Such reforms could enhance Indonesia's ability to take advantage of shifting global trade patterns, and diversify against trade shocks. Other structural reforms—such as investments in logistics and human capital, are critical. Beyond their direct, cross-sectoral benefits, they can also support greater trade integration. First, such reforms could reduce trade costs and support exports, independent of trade integration policies. Second, they can also complement trade integration policies, by supporting the development of comparative advantages across sectors and therefore amplifying the gains from trade liberalization. Even as Indonesia pursues trade liberalization and structural reforms, it will be important to ensure appropriate supportive measures are in place to help workers transition to new opportunities, thus helping to ensure that the gains from trade are fully realized and broadly shared.

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