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SELECTED ISSUES

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December 16, 2025

Approved By
Asia and Pacific Department

Prepared by Ashique Habib, Raju Huidrom (both APD), Philippe Wingender and Tsendsuren Batsuuri (both RES) with research support from Agnes Isnawangsih and Shutong Niu (both APD).

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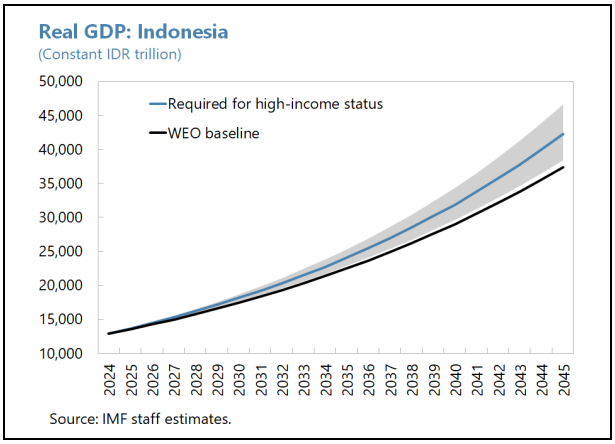
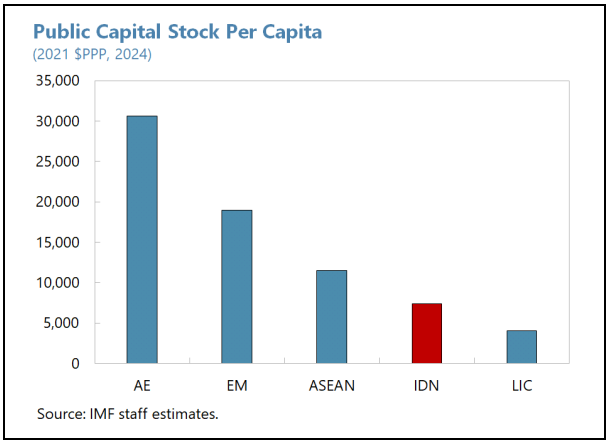
GOLDEN VISION 2045: MAKING THE MOST OUT OF PUBLIC INVESTMENT[1]

Aside from horizontal structural reforms, raising public investment should be a key pillar of Indonesia's pursuit of its Vision 2045. However, this must be complemented by policies aimed at enhancing the efficiency of public investment, thereby maximizing its impact. Mobilizing additional revenues will create the fiscal space needed to scale up the public investment while maintaining compliance with Indonesia's longstanding fiscal rules.

A. Introduction

1. Indonesia has set an ambitious target of achieving high-income status by 2045. Currently classified as an upper-middle income country, reaching this goal—Golden Vision 2045—would require a sustained high rate of real growth—estimated around 5½ -6½ percent annually over the next two decades (Annex I.A). As highlighted in previous IMF work, achieving this target would require broad-based structural reforms (IMF 2024).



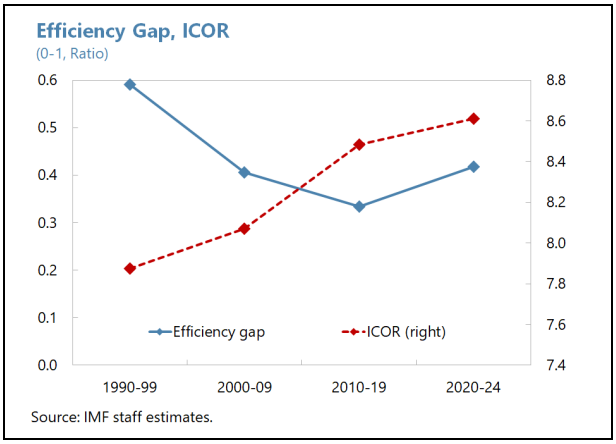


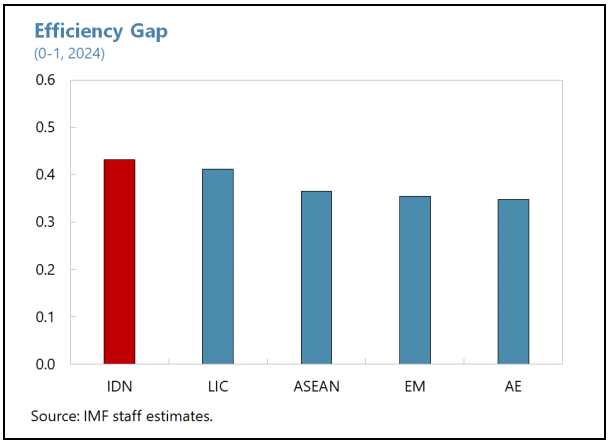
2. Boosting public investment—efficiently and prudently—is crucial for the growth agenda. This would help close current gaps in physical—and human—capital needed to bolster growth. Indonesia's public stock of capital per-capita is only a quarter of that of the advanced economies. Enhancing the efficiency of public investment is also important. Indonesia's efficiency gap—the difference between actual public spending outcomes and the best achievable outcomes with the same resources (IMF 2025)—remains large in international comparison.[2] After a steady decline beginning in the 1990s, the efficiency gap edged up in recent years, indicating a

[1] This chapter was prepared by Raju Huidrom (APD), Philippe Wingender and Tsendsuren Batsuuri (both RES). We thank Agnes Isnawangsih and Shutong Niu for research support and Patricia Tanseco (all APD) for editorial assistance.

[2] The efficiency gaps show distances to the spending efficiency frontier, where the frontier is estimated using a stochastic frontier analysis (details are in Online Annex 1.2 of IMF 2025). Efficiency gaps range from 0 (fully efficient) to 1 (fully inefficient).

deterioration in spending efficiency. This recent trend is also mirrored by a rise in the Incremental Capital Output Ratio (ICOR), implying that a larger investment is required for the same unit increase in output. Finally, fiscal prudence is a key pillar of this agenda with plans for boosting investment accommodated within Indonesia's longstanding fiscal rules (Indonesia's Staff Report 2025).





3. This paper presents a quantitative assessment of the impact of public investment on activity—the multiplier—and the role of spending efficiency therein. The public investment multiplier is the change in real output for a unit increase in real public investment.[3] We use two complementary approaches to assess the size of the public investment multiplier for Indonesia.

- *Empirical model.* Using a cross-country panel, we estimate the impact of public investment shocks on real output in the short run, deploying a local projections model. The model includes the efficiency gaps and also public capital stock per capita as (joint) interacting variables. Interacting with efficiency gaps allows us to derive conditional estimates of the multiplier that depends on efficiency gaps. The model includes interactions with public capital stock (per capita) because economic theory suggests that a lower stock of public capital should imply larger returns from public investment. Using the panel estimate, we then infer the size of public investment multiplier for Indonesia based on its levels of efficiency gap and public capital stock per capita.

- *Structural model.* To assess the size of the public investment multiplier over the medium-to-long term, we use the IMF's GIMF (Global Integrated Monetary and Fiscal Model) model—a dynamic structural model with a rich production structure (Section B). The model also features a fiscal sector with various financing options, which we exploit to assess how public investment can be scaled up while complying with Indonesia's fiscal rules, in particular the 3 percent of GDP fiscal deficit cap.

4. The main findings are as follows. First, cross-country evidence suggests the size of the public investment multiplier tends to be larger when the efficiency gap is smaller—i.e., when public

[3] More generally, the multiplier, for a given horizon over time, is defined as the discounted cumulative change in real output divided by the cumulative discounted increase in real public investment (see Huidrom and others 2020).

spending is more efficient—and when the initial public capital stock per capita is lower. Second, based on the level of efficiency gap and initial public capital stock per capita for Indonesia, the implied short-term multiplier for Indonesia is quite modest, around 0.5. Third, the model-based analyses using GIMF suggest that the supply-side effects of public investment would strengthen over time, contributing to a larger multiplier, reaching around 2 in the long term. Moreover, the long-term multiplier would be even larger (at around 2.6), if the efficiency of public spending is enhanced. Finally, the model's simulations suggest that a sustained increase in public investment, implemented efficiently and supported by revenue mobilization, would bring Indonesia closer to its Golden Vision of reaching high-income status by 2045.

B. Methodology

Empirical Model

5. The empirical approach follows a two-step process. First, we identify public investment shocks as unexplained residuals in a public investment equation (Abiad, Debuque-Gonzales, and Sy 2018). This approach isolates shocks to public investment that can plausibly be deemed exogenous to macroeconomic conditions. Second, we trace the impact of these identified shocks on real output, using a local projections framework (Jordà 2005).

6. Identification of public investment shocks. Following a flexible accelerator framework, we regress, in a panel setting, public investment as percent of GDP ($Pinv$) on a set of independent variables as follows:

$$Pinv_{i,t} = \alpha_i + \gamma_t + \beta X_{i,t} + \varepsilon_{i,t}$$

where $X_{i,t}$ denotes the set of independent variables: lags of public investment, GDP growth, and public debt. We also control for country and time fixed effects. We estimate the model covering a global sample of countries during the period 1981-2024. We then take public investment shocks as the estimated residuals from this equation. Details of the database are described in Annex I.B.

7. Local projections model. In a second step, we regress real GDP on the identified public investment shocks, again in a panel setting, controlling for country and time fixed effects. The estimated regression is as follows:

$$y_{i,t+h} - y_{i,t-1} = \alpha_i^h + \gamma_t^h + \beta^h Shock_{i,t} + \delta^h Shock_{i,t} * Pcap_{i,t} + \varphi^h Shock_{i,t} * Gap_{i,t} + \varepsilon_{i,t+h}$$

where $y_{i,t+h}$ denotes real GDP level in logs at time $t + h$ for country i, and $Shock$ denotes the public investment shocks as derived above. The novelty is to include efficiency gap (Gap) and public capital stock per capita ($Pcap$) as (joint) interaction terms in the local projections. For comparability and ease of inference, we normalize both efficiency gaps and public capital stock per capita to lie between 0 and 100. In this specification, the marginal impact of a public investment shock depends on both the efficiency gap and public capital stock per capita. To assess the role of efficiency gap in determining the output response, we evaluate the marginal impact for different percentiles of the efficiency gap while public capital stock per capita, without loss of generality, at Indonesia's level.

We use a similar scheme to assess the role of public capital stock per capita. We use the same estimation sample as before (global sample of countries during 1981-2024) which allows us to exploit heterogeneities—both temporal and cross-sectional—in efficiency gaps and public capital stock per capita, which is key to estimate the conditional multipliers.

GIMF Model

8. Model structure. The GIMF is a micro founded and forward-looking dynamic general equilibrium (DSGE) model designed for policy analysis across multiple regions. It incorporates overlapping generations (OLG) and liquidity-constrained households to break Ricardian equivalence, and features various tax and spending instruments. The production side features price-setting firms and unions in monopolistic competition and sectoral differentiation between non-tradables, tradables, and a Global Value Chain (GVC) sector, which introduces roundabout production and amplifies trade linkages.[4] Monetary policy operates via inflation-forecast-based rules, interacting with nominal rigidities like sticky prices and wages. In this paper, we use GIMF with six regions. In addition to Indonesia, remaining countries and regions include the United States, Euro Area, China, the Rest of Asia, and remaining all other countries. National accounts, and bilateral trade flows are calibrated using the GLORIA multi-region input-output (MRIO) database for 2023 (Lenzen and others 2017) and the fiscal data is calibrated using 2023 Government Finance Statistics (GFS).

9. Key calibration. The calibration of the structural parameters of the model follows previous studies; a detailed overview of the GIMF model and its calibration conventions are in Kumhof and others (2010) and Anderson and others (2013). In this paper, the central parameter of interest is the elasticity of output with respect to public capital (α_{KG}), which is set at 0.14 for all countries in line with the meta-analysis by Bom and Ligthart (2014). Once this elasticity is calibrated, the GIMF model endogenously determines medium- to long-term fiscal multipliers through its dynamic interaction of investment, capital accumulation, and output. In the model, investment efficiency—the amount of productive capital created per unit of investment—is embodied in α_{KG}, which governs how public investment translates into output via the public capital stock. To simulate higher efficiency, we raise α_{KG} by 30 percent (from 0.14 to 0.18), which reflects a permanent improvement in efficiency. A higher α_{KG} raises output by converting more investment into productive capital, with the effects unfolding gradually as the capital stock accumulates.[5] Consequently, the impact of improved investment efficiency is most pronounced in the long run, operating primarily through supply-side channels in the production function.

10. Transmission mechanism of public investment. The impact of higher public investment in GIMF operates through a set of channels that link government spending, the accumulation of productive public capital, private sector behavior, and long-run macroeconomic adjustment. A

[4] Recent applications of GIMF that include a GVC sector can be found in Wingender and others (2024) and Carton and Muir (forthcoming).

[5] In the GIMF model, higher investment efficiency can be represented either by increasing the elasticity of output with respect to public capital or by raising the share of investment converted into productive capital. Since both approaches yield similar long-run effects when efficiency gains are permanent, we adopt the first for simplicity.

central feature of the model is that government investment augments the stock of public infrastructure, which in turn raises the productivity of private firms. This supply-side mechanism differentiates public investment from public consumption and underpins the persistent medium- and long-run gains in output in the model simulations. Public investment also has important short-run demand effects. In the near term, it boosts demand: people get jobs, firms get contracts, and overall activity picks up.

11. Simulation set up. The simulation involves the following under both baseline efficiency and enhanced efficiency scenarios:

- *Public investment scale-up scenario.* Public investment progressively increases from 0.25 to 1 percentage points of GDP over the next twenty years.

- *Financing.* Initially, the higher public investment is fully deficit-financed. Over time, however, the labor income tax is gradually increased to reduce the reliance on deficit financing. This reform sequencing allows for less drag on the economy initially from a higher tax burden. The choice of using labor income tax, among the financing schemes, to mobilize revenue is illustrative.

- *Monetary policy.* While long-run supply side effects are key to understanding the simulation results, short-run demand dynamics also play a key role. Higher public investment, by increasing aggregate demand, raises inflation which results in an endogenous monetary policy rate tightening in the model. We introduce exogenous negative shocks to the policy rate such that overall monetary policy rate remains slightly expansionary or broadly neutral over the projection period (Annex I.C).[6]

- *Labor market.* Higher public investment endogenously raises labor demand in the model. It can also be expected to raise labor supply over time reflecting positive externalities from improved infrastructure and other public facilities—which is not fully modeled. We, therefore, introduce an exogenous labor supply increase of 0.5 percent. Together, this implies a reasonable contribution of labor to output gains in the model simulation.

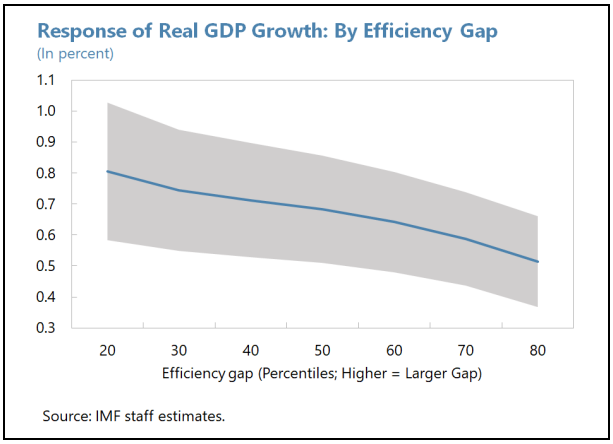
C. Results

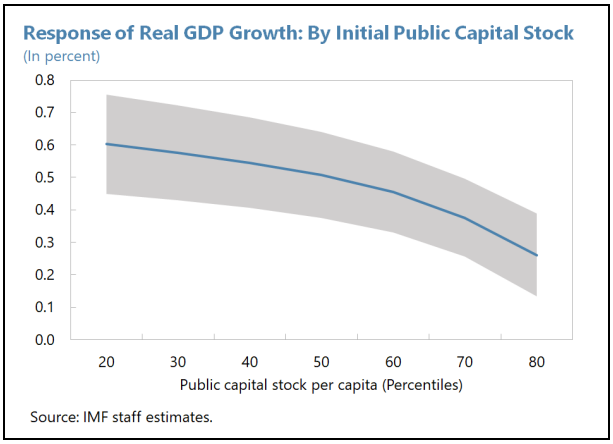
Empirical Model

12. Public investment tends to have a larger impact on output when the efficiency gap and the initial public capital stock per capita are smaller. The figures below show the response of real output on impact due to a 1 percentage point increase in public investment for different levels of efficiency gaps and public capital stock per capita. The output response on impact of the shock is larger—and also statistically significant (at the 90th percentile)—when the efficiency gap is smaller. The estimates would imply a short-term multiplier of about 0.8 when the efficiency gap is at the

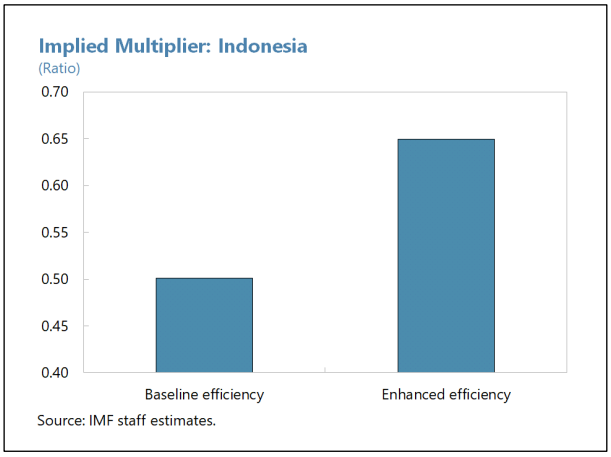
[6] Indonesia's monetary policy is determined by the joint use of multiple instruments, including the policy rate, open market operations, macroprudential policy tools, and FXI. An elaborate discussion of these instruments is beyond the scope of this paper.

20th percentile of the sample, falling to about 0.5 at the 80th percentile. These results are consistent with the findings in the literature (Abiad, Furceri, and Topalova 2016; Baum and others 2020). The dependency of the multiplier on the initial public capital stock per capita—larger multiplier for a lower stock—is also consistent with economic theory and empirical evidence (IMF 2020).



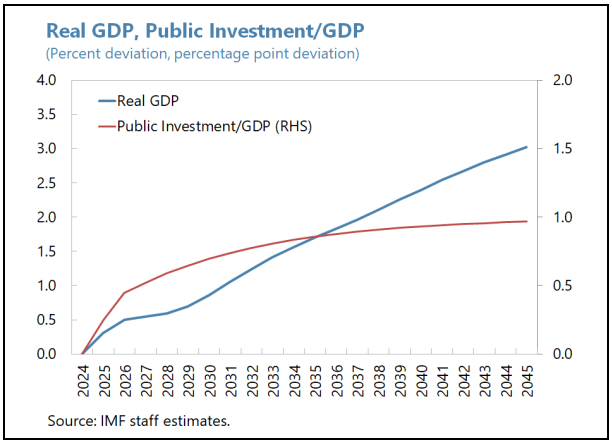


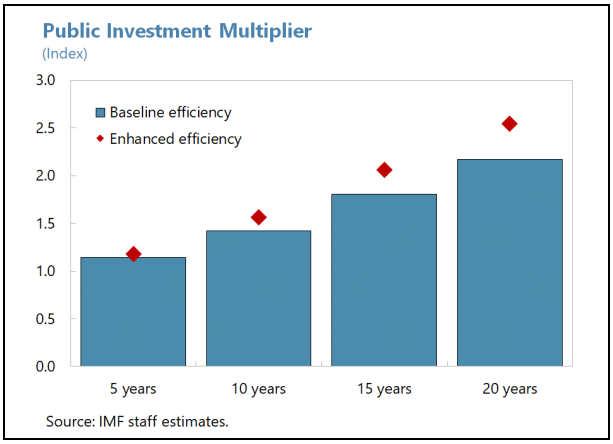
13. Based on its level of Indonesia's efficiency gap and public capital stock per capita, the estimated short-term multiplier for Indonesia is quite modest. To infer the multiplier for Indonesia from the panel estimate, we evaluate the marginal effects in the local projections model based on Indonesia's efficiency gap and capital stock per capita in 2024. We obtain an estimated short-term multiplier of 0.5, which is quite modest. Counterfactual analysis suggests that the multiplier could be larger, close to 0.7, if Indonesia's efficiency gap were narrowed to similar levels as in advanced economies. Thus, improving spending efficiency—reducing the efficiency gap—would deliver a greater bang for the buck.



GIMF Model

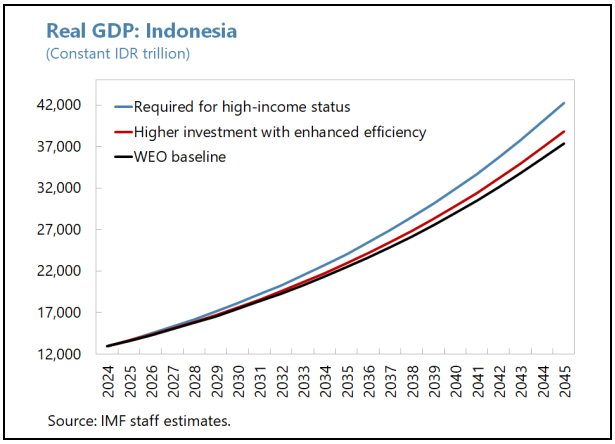
14. Effects of higher public investment would strengthen over time through its supply side effect. To complement the short-run empirical analysis of the previous section, we rely on our fully structural model to trace out the impact of higher investment on GDP over the medium to long run. In response to the public investment scale-up, under baseline efficiency, real GDP would increase by about 0.7 percent relative to the baseline in the medium term (5 years), increasing to about 3 percent in the long term (20 years). This translates into a multiplier of about 1.2 in the medium term, rising to about 2 in the long term as the supply-side effects of public investment strengthen. Our results are broadly in line with other studies that find large multipliers from public investment in the medium to long terms (Adarov, Clements, and Jalles 2024; IMF 2020).

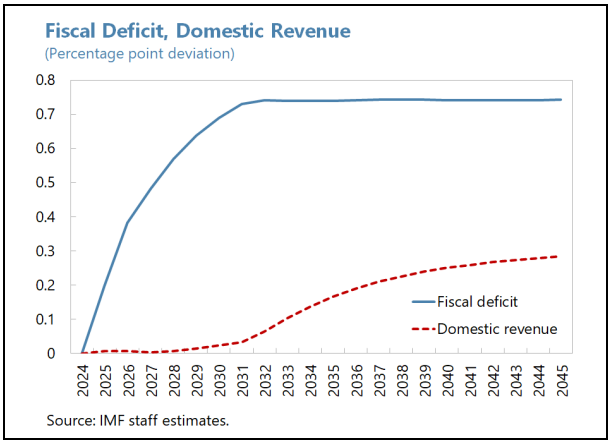




15. The multiplier would be larger with enhanced efficiency. With higher investment efficiency, the long-run multiplier rises substantially, reaching around 2.6 in the long run. In GIMF, this difference arises because efficiency determines how much of each unit of public investment is converted into productive public capital. When efficiency is higher, the same fiscal spending produces a larger increase in the public-capital stock, accelerating the accumulation of effective public capital at unchanged fiscal cost. This stronger capital build-up generates greater crowding-in of private investment, faster gains in potential output, and larger increases in real wages and consumption relative to the baseline scenario. Consequently, the supply-side mechanisms that underpin medium- and long-term multipliers become markedly stronger under enhanced efficiency.

16. Higher public investment—implemented efficiently—would make a meaningful contribution to lifting Indonesia toward high-income status. Our simulations suggest that the boost in public investment under enhanced efficiency would raise Indonesia's real GDP sizably, closing about one-third of the long-run income gap relative to the high-income benchmark. At the same time, the results underscore that the distance to the target is large, and that public investment—more broadly, fiscal policy—cannot be the sole instrument to bridge it. Achieving full convergence would require broad-based structural reforms centered on sustained productivity improvement, human capital development, and strengthening the business environment (IMF 2024).





17. With revenue mobilization, public investment scale-up can be achieved while remaining compliant with the 3-percent of GDP deficit cap. In our simulations, revenue measures gradually yield around 0.3 percentage point of GDP. These shifts—taken together—would keep the overall fiscal deficit within the 3-percent ceiling (compared with a starting point of 2.3 percent of GDP in 2024).[7] While illustrative, this underscores the broader point that the deficit cap can comfortably accommodate a boost in well-targeted priority spending, if supported by enhanced domestic revenue mobilization.

D. Conclusions and Policy Issues

18. Scaling up public investment should be a key pillar of Indonesia's pursuit of its Golden Vision, but this should be complemented by efforts to enhance its efficiency. Enhancing efficiency will require strengthening public investment management (PIM) practices throughout government levels, boosting project selection through rigorous project appraisal considering positive spillovers, while securing agile gatekeeping safeguards to minimize risks while avoiding bottlenecks. Implementing multi-year budgeting frameworks can effectively connect strategic spending plans with annual budgets. While the analyses in this paper focus on (on-budget) public investment, the quantitative findings and call for enhancing efficiency broadly apply to investments by Danantara (Indonesia's newly created sovereign wealth fund). There is also a role for broad-based structural reforms and private investment as Indonesia pursues its Golden Vision.

[7] Boosting public investment should also be accompanied by broad-based structural reforms (¶15). The latter would deliver additional growth and revenue dividends. Thus, in a holistic reform package, the impact on fiscal deficit would be smaller than the one illustrated in the current simulation.

Annex I. Technical Details

A. Real Growth Required for High-Income Status

1. The calculations underpinning the required growth are as follows. The high-income status threshold is defined in terms of the nominal GNI per-capita. To project the threshold in 2045, we take the threshold set for 2026 by the World Bank Group, and apply a nominal annual growth of 2.3 percent, based on historical trends of the threshold. We assume an average annual population growth of about 0.5 percent (broadly in line with UN projections) and inflation of 2.5 percent (mid-point of Indonesia's inflation target range). These result in a required annual real GDP growth of 5.3 percent over the next two decades. A higher required growth of 6.3 percent would come from assumptions of a combination of higher high-income threshold growth, lower headline inflation, and higher population growth. For the WEO baseline, the long-term projection assumes the WEO annual real growth at end of the medium term.

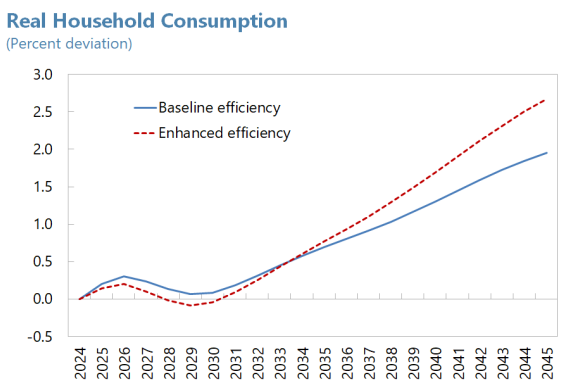
B. Database

2. The database is compiled from multiple sources. Public investment and efficiency gap are taken from the Fiscal Monitor October 2025 database (IMF 2025). Public capital stock per capita is based on the IMF's Investment and Capital Stock Dataset (ICSD 2021), which is extended using public investment flow data, adjusting for depreciation. For Indonesia, the database and the analyses in the paper take public capital investment (above-the-line) from the fiscal accounts as public investment. Data for the rest of the macroeconomic variables are sourced from IMF (2020), which are extended to 2024 using the IMF's WEO database. For the ICOR calculation, the change in capital stock is proxied by the investment flow which abstracts away from depreciation.

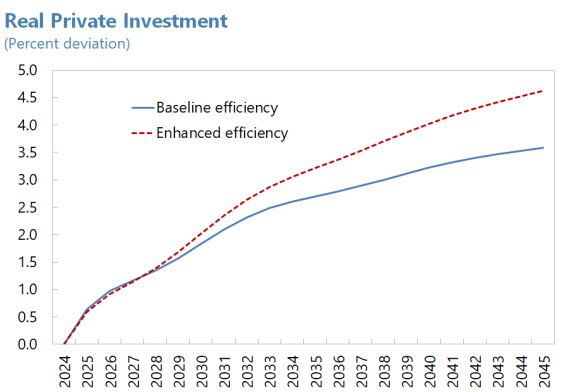
C. GIMF Extra Results

3. We present the dynamics of key macro variables in response to the scale-up in public investment. The results are presented for both the baseline and enhanced efficiency versions.

Annex I. Figure 1. Indonesia: GIMF Model Simulations



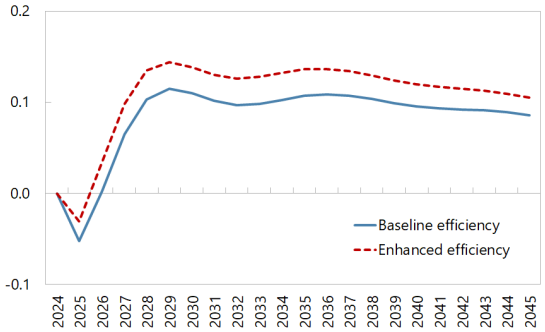
Source: IMF staff estimates.



Source: IMF staff estimates.

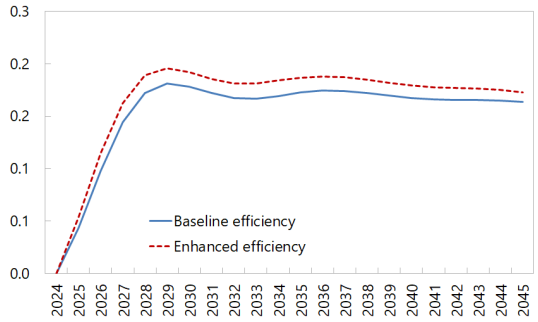
Annex I. Figure 1. Indonesia: GIMF Model Simulations (Concluded)

Policy Rate
(Percentage point deviation)



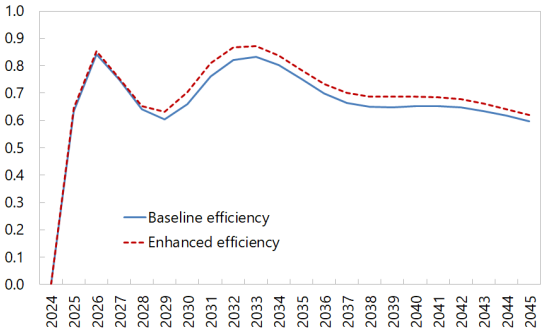
Source: IMF staff estimates.

Headline Inflation
(Percentage point deviation)



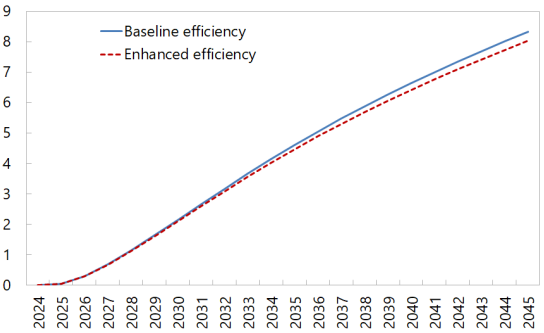
Source: IMF staff estimates.

Aggregate Labor
(Percent deviation)



Source: IMF staff estimates.

Government Debt / GDP
(Percentage point deviation)



Source: IMF staff estimates.

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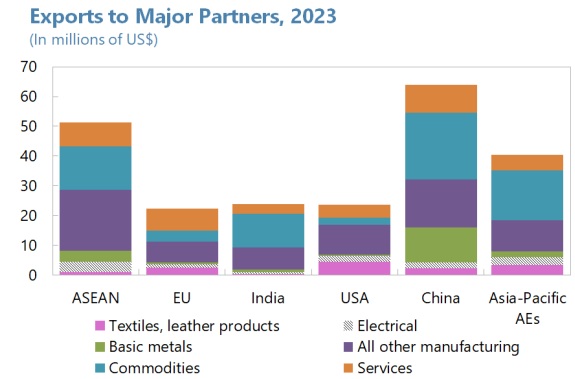
GOLDEN VISION 2045: REAPING THE GAINS FROM TRADE[1]

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.

2. 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—

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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.

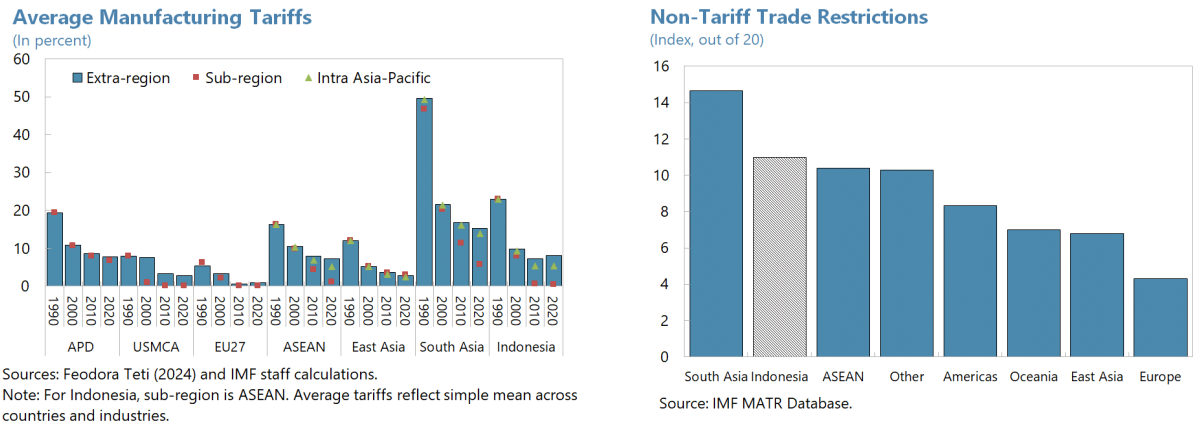
A. Key Policies and Structural Factors Affecting Trade

3. 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.

4. 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.

5. 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.

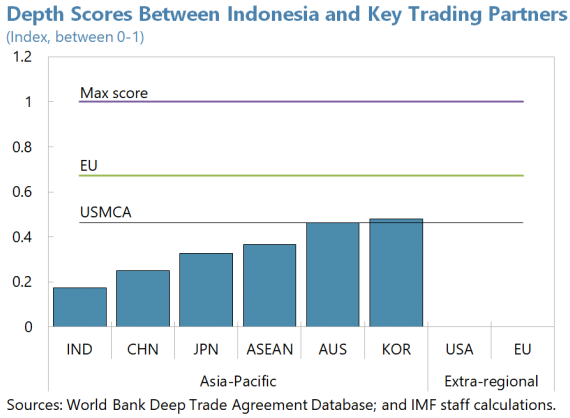
- **Depth scores with major partners reveal large variation in the coverage of such NTB-reducing provisions**. Country-pair level depth scores are constructed based on the share of 52 areas—14 within the WTO mandate and 38 beyond WTO—which are covered by legally enforceable provisions in any trade treaties 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]

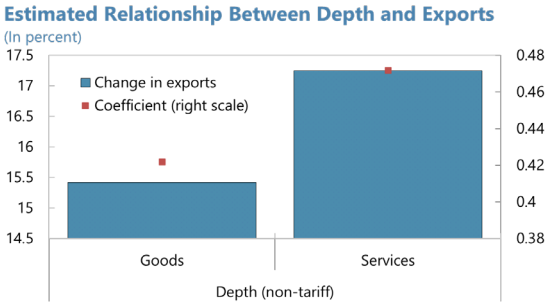
[3] See IMF (2025) for technical details.

[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.

6. 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.

7. 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:

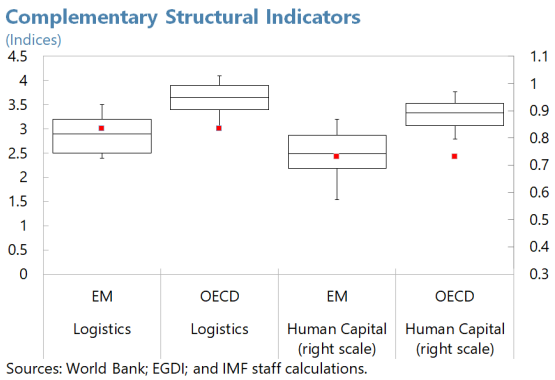
- **Logistics appear to particularly benefit goods exports**, reflecting the importance of efficient physical infrastructure and customs processes for moving goods. As an illustrative example, an increase in the logistics score from the 25th percentile to 75th percentile for EMs is associated with a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

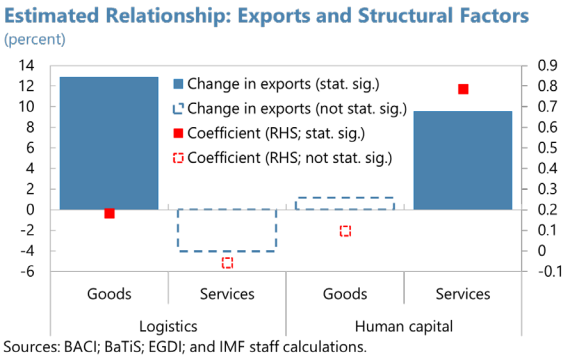
[5] Chen and others (forthcoming), "ASEAN Integration in a Shifting Global Landscape".

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.

8. 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

9. 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.

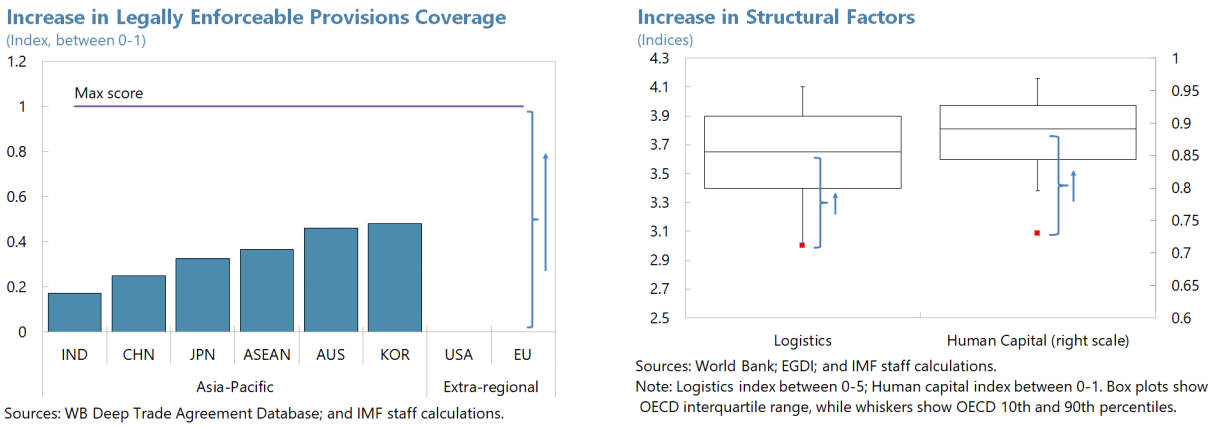
- **Counterfactual analysis compares across steady-states**. The model is amenable to the "exact hat" algebra approach, extended by Cuñat and Zymek (2024) from the standard static setting to a comparison of steady-states in dynamic settings. Therefore, the model result presents the *change* in the level 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.

10. 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.

11. 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

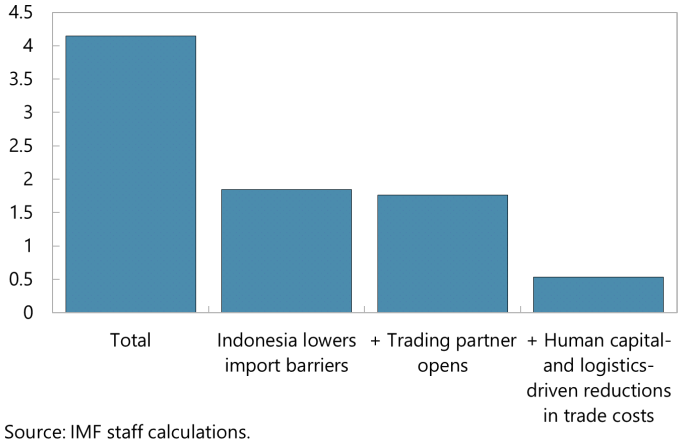
improvements in these structural dimensions reduce iceberg costs vis-à-vis all trading partners, and not just those with which Indonesia deepens trade agreements.

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

C. Main Results

12. 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.

13. 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

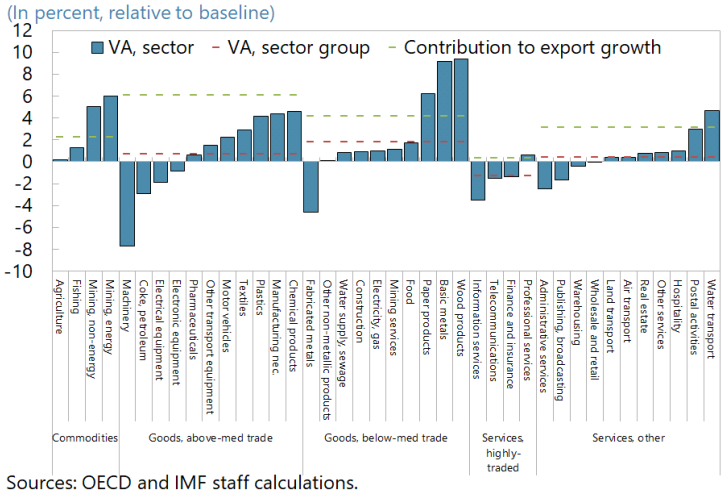
divided into commodities, highly-traded goods (a proxy for more GVC-linked sectors), and other goods (the remainder); services sectors are divided into modern services and other services.[7]

- **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 drives 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 underline 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

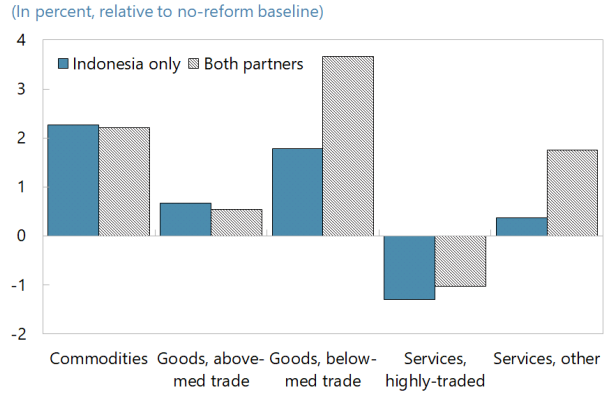


Sources: OECD and IMF staff calculations.

[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.

14. 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



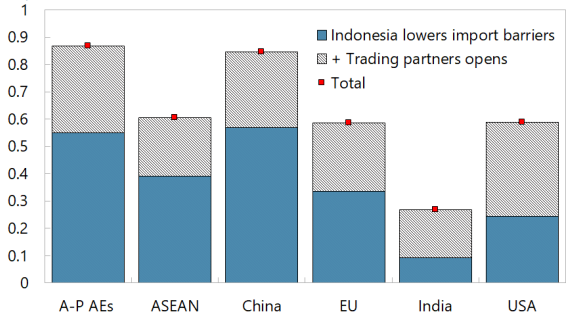
Source: IMF staff calculations.

15. 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.

16. 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.

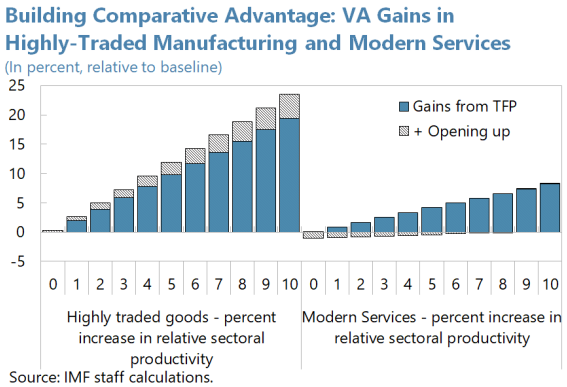
D. Exploiting Complementarities between Trade Integration and Other Structural Reforms

17. 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

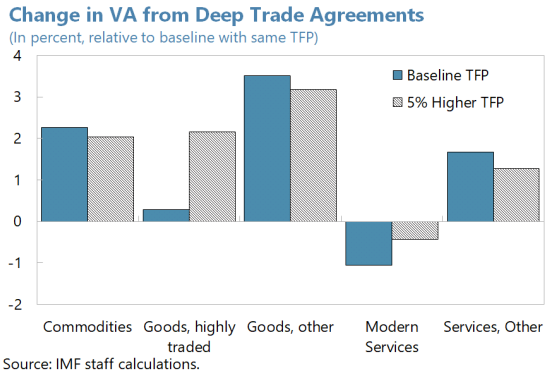
sectors are reliant on skilled workers and the internet—therefore, these sectors may also particularly benefit from investing in building digital infrastructure as well as expanding the pool of highly-educated workers.

18. 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

19. 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.

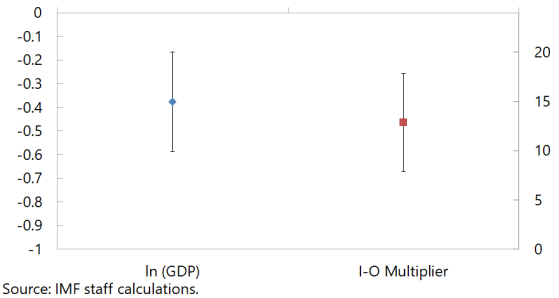
20. Relatedly, an ambitious trade liberalization effort could support a shift in production processes, further amplifying gains. While the simulations highlight the benefits of being able to *shift sourcing* of intermediate inputs to cheaper foreign sources, it abstracts from a potential *intensification* 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.

21. 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.

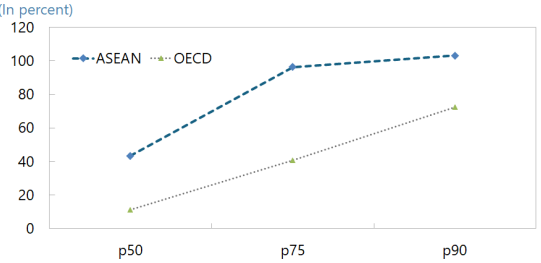
Figure 11. Indonesia: Potential Gains from Intermediates Use Intensification

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

22. 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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