The Impact of the CPTPP on International Trade in ASEAN Countries

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Abstract

Background and Objectives: The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is widely regarded as one of the most ambitious "high standard" trade agreements currently in force, combining deep tariff liberalization with wide-ranging provisions related to services, investment, regulatory coherence, and emerging areas such as the digital economy. For the Association of Southeast Asian Nations (ASEAN), the CPTPP presents both opportunities and challenges because ASEAN economies are highly trade dependent, deeply embedded in regional value chains, and already connected through multiple overlapping free trade agreements—most notably the Regional Comprehensive Economic Partnership (RCEP). While four ASEAN members (Brunei Darussalam, Malaysia, Singapore, and Viet Nam) are already CPTPP parties, several large ASEAN economies remain outside the agreement. This uneven participation raises a key policy question: will CPTPP-related gains remain concentrated among existing ASEAN participants, or could broader ASEAN accession generate more inclusive benefits at the regional level? Moreover, expanded CPTPP membership—particularly the potential accession of major economies such as China—may reshape patterns of comparative advantage and alter the balance between trade creation and trade diversion for ASEAN economies. Against this background, the study aims to assess how different CPTPP membership configurations may affect ASEAN economies' trade performance and macroeconomic outcomes. Specifically, it evaluates the distribution of impacts across ASEAN members and non-members under alternative accession scenarios, with attention to changes in trade flows, income (GDP), terms of trade, and welfare.

Methodology: The study employs a computable general equilibrium (CGE) approach using the Global Trade Analysis Project (GTAP) framework and database to simulate the economy-wide impacts of CPTPP-related trade liberalization. The GTAP model is well suited to this task because it captures interlinkages among production sectors and countries through a consistent global input–output structure, allowing the analysis to trace how trade policy shocks affect production, consumption, trade patterns, factor allocation, and welfare. The simulation design considers four scenarios: (1) the current

CPTPP configuration (including the United Kingdom's accession) as the baseline liberalization setting; (2) an expanded CPTPP that adds applicants (China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine); (3) scenario (2) plus Thailand's accession; and (4) a hypothetical full ASEAN accession in which all ASEAN-10 members join the CPTPP. To provide an upper-bound benchmark for long-run effects, the simulations assume full tariff elimination among participants and incorporate only those non-tariff measure (NTM) reductions that are quantifiable within the GTAP database constraints. Countries/regions and sectors in the GTAP database are aggregated into analytically relevant groupings for ASEAN members and partner blocs, and into a smaller set of production sectors to facilitate interpretation of macro and sectoral channels.

Key Findings: The simulation results indicate that ASEAN economies already participating in the CPTPP tend to experience gains in GDP and welfare under the current membership configuration, whereas most non-member ASEAN economies face adverse effects, consistent with trade diversion away from non-members. When additional economies apply to join the CPTPP—particularly large and diversified producers—impacts become more heterogeneous across ASEAN. The entry of a major economy such as China is associated with more adverse outcomes for several ASEAN countries, reflecting intensified competition and shifts in comparative advantage within the enlarged bloc. When Thailand is included as a CPTPP member, macroeconomic outcomes improve markedly for Thailand relative to non-membership, and broader ASEAN participation tends to mitigate some adverse effects faced by non-members. Under the hypothetical scenario of full ASEAN accession, several ASEAN economies show stronger improvements in macro indicators such as GDP, welfare, and terms of trade, suggesting that wider ASEAN participation can reduce intra-regional exclusion costs and support regional trade performance. However, the magnitude of gains does not increase proportionally as more ASEAN members join. Instead, benefits may diminish for early joiners in some cases, implying that the expansion of membership can redistribute gains within ASEAN and reduce the relative advantage of early participants. Sectoral results further indicate that ASEAN economies' gains are closely tied to the ability to strengthen comparative advantage in specific industries and to position effectively within regional production networks.

Policy Implications: The findings suggest that, on balance, CPTPP participation is preferable for ASEAN economies, particularly for those currently outside the agreement, because exclusion may entail measurable opportunity costs through trade diversion and reduced welfare. At the same time, the results highlight that ASEAN-wide gains depend on strategic adaptation. To maximize benefits, ASEAN members should identify sectors with the strongest potential for comparative advantage and reinforce competitiveness through industrial upgrading, productivity enhancement, and value-chain development. Given the evidence that membership expansion can dilute relative advantages, policy coordination at the ASEAN level is also important: strengthening regional production networks, harmonizing standards, and improving

trade facilitation can help ASEAN economies share gains more broadly and sustain competitiveness within a larger CPTPP environment. Finally, because CGE results reflect modeled long-run comparative-static adjustments and only partial NTM coverage, complementary work that examines sensitive sectors, realistic tariff phase-in schedules, and dynamic channels (e.g., investment and technology diffusion) would further strengthen policy guidance.

Keywords: CPTPP; ASEAN; International Trade; GTAP

JEL Classification Codes: C68; F13; F14; F15; O53

1. Introduction

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is one of the world's most ambitious and high-standard trade agreements. Signed in 2018 by 11 economies—Australia, Canada, Chile, Japan, Mexico, New Zealand, and Peru, including four ASEAN members (Brunei Darussalam Malaysia, Singapore, and Viet Nam)—it expanded in 2024, with the United Kingdom's accession. By 2024, the CPTPP accounted for US$14.52 trillion in GDP (about 15 percent of global GDP), a market of 592.24 million people, and merchandise trade worth US$8.33 trillion (18.20 percent of global trade) (United Nation, 2025; United Nations Conference on Trade and Development [UNCTAD], 2025). It is the second-largest economic integration arrangement involving Asian countries after the Regional Comprehensive Economic Partnership (RCEP), which comprises all ten ASEAN members. The CPTPP promotes deep market access through trade liberalization, regulatory reform, and economic integration across the Asia-Pacific, the Americas, and Europe.

Once fully implemented, the CPTPP will eliminate 98 percent of tariff lines among members. Intra-regional trade among the original 11 economies increased approximately 20 percent from US$911.27 billion in 2018 to US$1,094.27 billion in 2023, with strong gains in Malaysia, Australia, and Canada (United Nations, 2025). Beyond tariff reduction, the CPTPP promotes broader trade-related reforms in regulatory coherence, competitiveness and business facilitation, SMEs support, development cooperation, government procurement, and emerging issues related to the digital economy and green technologies (US-ASEAN Business Council, 2021). Its appeal is reflected in accession interest from China, Taiwan, Ecuador, Costa Rica, Uruguay, Ukraine, and Indonesia.

The Association of Southeast Asian Nations (ASEAN), established in 1967, aims to promotes regional economic, social, and cultural development. By 2024, ASEAN comprises of ten members: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam. ASEAN has progressively deepened economic integration through ASEAN Free Trade Area (AFTA) 1992 (ASEAN Secretariat [ASEAN], 2002), the ASEAN Economic Community (AEC) 2015 (ASEAN, 2015a), and AEC 2025 (ASEAN, 2015b). These

integration efforts have made ASEAN a major foreign direct investment (FDI) destination, while outward FDI supports market expansion and long-term growth among member states (Sermcheep, 2017).

Externally, ASEAN has built an extensive free trade agreement (FTA) network with Australia, New Zealand, China, India, Japan, Korea, and Hong Kong and participates in the RCEP, the world's largest FTA, which strengthens ASEAN centrality, expanding market access, and integrating Asian supply chains (Shimizu, 2021; Wu, 2019). Four ASEAN members, Brunei Darussalam, Malaysia, Singapore, and Viet Nam, that joined the CPTPP have seen significant trade expansion, including a 20 percent rise in intra-CPTPP trade and a 22 percent increase in exports to CPTPP markets (United Nations, 2025). This signals the agreement's positive impact on member trade.

CPTPP membership provides access to a market of about 600 million people, accounting for roughly 15 percent of global GDP. Although this is smaller than RCEP's market of over than 2.3 billion people and 31 percent of global GDP, the CPTPP spans three major regions—the Asia-Pacific, the Americas, and Europe—creating valuable opportunities for ASEAN economies. Canada provides a gateway to North America, the UK opens access to Europe, and members such as Chile, Mexico, and Peru connect ASEAN to new markets in the Americas. The CPTPP also supports supply-chain resilience through broader diversification. Moreover, its high-standard rules—including labor standards, environmental protection, and government procurement, encourage ASEAN members to upgrade domestic regulations and strengthen competitiveness, enhancing their readiness for deeper global economic integration (Kasikorn Research Center, 2021).

However, with only four ASEAN members—Brunei Darussalam, Malaysia, Singapore, and Viet Nam—participating, major economies such as Indonesia, Thailand, and the Philippines remain outside the agreement, limiting its overall regional benefits (Han-koo, 2023). As more ASEAN members express interest in joining, it becomes increasingly important to assess potential benefits under different membership scenarios. This raises a central question: will the advantages of CPTPP membership continue to be concentrated among the existing ASEAN participants, or could full ASEAN accession generate broader and more inclusive regional benefits?

To address this question, this study evaluates the CPTPP's impact on ASEAN trade across four scenarios: (1) the current CPTPP-12 membership as the baseline; (2) expansion to include China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine; (3) the addition of Thailand; and (4) full ASEAN-10 accession. By analyzing effects on trade, income, and welfare, the study provides evidence on whether the CPTPP can enhance ASEAN's economic resilience and global competitiveness, offering policy recommendations for sustaining ASEAN's future growth and development.

The remainder of the paper is organized as follows. Section 2 reviews the related literature. Section 3 presents the methodology and describes the data. Section 4 reports

the empirical results. Section 5 concludes the paper, and Section 6 discusses policy implications.

2. Literature Review

2.1 Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is a high-standard free trade agreement among 11 Asia-Pacific and American economies. It evolved from the original Trans-Pacific Partnership (TPP) after the United States withdrew in 2017. In 2024, the United Kingdom became the first new member to accede since the agreement's entry into force in 2018, bringing CPTPP membership to 12 economies.

The CPTPP provides extensive market access through deep trade liberalization, ranging from tariff elimination and improved market access for goods, services, investment, and labor mobility, to modern rules on digital trade, data flows, and labor and environmental standards (Government of Canada, 2023). For trade in goods, the CPTPP aims to eliminate tariffs on 98 percent of exports among members. The agreement schedules the reduction of 33 percent of tariff lines to zero in the first year of implementation, followed by an additional 1 percent in the second and third years, and a gradual phase-down of 12 percent of tariff lines from 2022 to 2029. Individual members may adopt their own tariff-reduction schedules. For example, Singapore eliminated nearly all tariffs upon entry into force in 2018, while economies such as Mexico, Malaysia, and Peru removed tariffs on more than 20 percent of their tariff lines (Banh et al., 2023).

2.2 Trade Creation and Trade Diversion Effects of FTA

Building on Viner's (1950) framework, free trade agreements (FTAs) increase intra-member trade through trade creation, which occurs when tariff reductions and lower non-tariff barriers shift sourcing away from higher-cost domestic producers toward more efficient member suppliers, thereby improving welfare through lower prices, expanded variety, and productivity gains (Krueger, 1999; Mattoo et al., 2022). Deep FTAs, which extend beyond tariff reduction to include behind-the-border policy areas such as competition policy, intellectual property rights, and other regulatory issues, can lead to even greater trade creation (Mattoo et al., 2022). FTAs may also generate trade diversion, where member countries shift imports away from more efficient non-member suppliers toward less efficient partners within the agreement, thereby reducing global welfare (Mattoo et al., 2022). The effects on exports, output, and welfare depend on the balance between these two effects.

2.3 CGE Model for FTA Impact Analysis

Computable general equilibrium (CGE) models have long been used to assess the economic impacts of free trade agreements (FTAs). Early work, such as and Black (1974), laid the groundwork for using CGE frameworks to assess policy-induced

changes. A key strength of CGE models is their capacity to simulate both the potential consequences of FTAs before they are implemented and their economy-wide impacts, including adjustments in production, consumption, and trade flows (Ferrantino et al., 2020; Li & Moon, 2018; Petri & Plummer, 2020).

Li and Moon (2018) used a CGE model to simulate the effects of RCEP on China and Korea. Ferrantino et al. (2020) examined the original Trans-Pacific Partnership (TPP), CPTPP, RCEP, and the Free Trade Area of the Asia-Pacific (FTAAP) in the Asia-Pacific region, while Petri and Plummer (2020) analyzed the impact of CPTPP on China.

Because CGE analysis draws on input–output databases, it provides estimates of a wide range of economic implications, including effects on trade, output, income, resource movement, and welfare, both within and between countries (Francois, 2004). With increasingly comprehensive input–output data, CGE models can describe interrelationships between production sectors and nations (Aguiar et al., 2023). This is why GTAP, a global CGE model, has been widely used in prior research to examine the impacts of multilateral FTAs and mega FTAs in the Asia-Pacific region.

Numerous studies use CGE models to simulate the benefits of FTAs for participating economies in terms of GDP growth, welfare improvements, and output changes in particular sectors (Acharya et al., 2012; Ariyasajjakorn et al., 2009; Breuss, 2022; Brown et al., 2005; Engelbert et al., 2014; Itakura & Lee, 2019; Jean et al., 2014; Kawasaki, 2015; Kitwiwattanachai et al., 2010; Lee et al., 2004; Qi & Zhang, 2018; Shin & Balistreri, 2022; Siriwardana, 2007; Yi, 2020; Zhu & Huang, 2023). Many of these studies rely on the GTAP database and model. Nonetheless, the distribution of FTA benefits varies across participating economies. Members from developing countries often gain the most, followed by those from developed countries, while low-income countries benefit the least (Ariyasajjakorn et al., 2009). Developing countries often play important roles as providers of intermediate products in global value chains (GVCs), which is one reason their participation in trade agreements can be particularly beneficial. Country size also influences the benefits gained within each development group. For example, while China appears to benefit the most among developing countries (Lee et al., 2004), it may also be among the most affected if a trade war breaks out with a major partner (Li et al., 2020). Although the distribution of gains is uneven across countries involved in FTAs and across sectors within countries (Acharya et al., 2012; Ariyasajjakorn et al., 2009; Jean et al., 2014; Siriwardana, 2007), simulation results also suggest that countries involved in multiple major trade agreements may have greater potential gains from trade (Breuss, 2022). Recent CGE results further show that reductions in non-tariff measures (NTMs) may generate larger benefits because tariffs are already relatively low in many sectors (Engelbert et al., 2014; Yi, 2020). Moreover, the benefits of FTAs tend to increase as membership expands (Ariyasajjakorn et al., 2009; Kawasaki, 2015). Thus, CGE analysis can reveal FTA effects in multiple dimensions and, with appropriate modifications, can be used to investigate the distribution of integration gains and the impacts of NTM reductions.

Several studies assess the impacts of CPTPP on member and non-member economies (Table 1). Petri and Plummer (2016) used a CGE model to evaluate the benefits of the original TPP. Reductions or elimination of tariffs, NTMs on goods and services, and barriers to foreign direct investment (FDI) are expected to raise members' real income by 1.1 percent and exports by 11 percent over the baseline scenario by 2030. Viet Nam and Malaysia benefit the most in relative terms, while the United States is expected to benefit the most in absolute terms, with a real income increase of US$131 billion. According to the World Bank (2016), the TPP is expected to increase GDP by an average of 1.1 percent and trade by 11 percent by 2030. Petri et al. (2017) assessed the effects of the TPP, CPTPP (with the US withdrawal), and a CPTPP scenario with five additional economies—Indonesia, Korea, the Philippines, Taiwan, and Thailand. The CPTPP with five additional economies generates the largest gains among the three scenarios, with a 2.2 percent increase in real income from the baseline scenario by 2030, while the TPP and CPTPP yield increases of 1.1 percent and 1.0 percent, respectively. Furthermore, the estimated gains for CPTPP members are only around one-third of those expected under the TPP.

Table 1. Estimated Impacts of the CPTPP and TPP in Previous Studies

Scenario	World Bank (2016)	Petri and Plummer (2016, 2020) Petri et al. (2017)
TPP (12 members)	GDP: +1.1%; Trade: +11%	Real income: +1.1%; Export: +11%
CPTPP (11 members, US withdrawal)		Real income: +1.0%
CPTPP +5 (India, Korea, the Philippines, Taiwan, and Thailand)		Real income: +2.2%
CPTPP + China		Global income: +US$632 billion

Source: Authors' compilation.

Recent empirical studies include Itakura and Lee (2019) and Petri and Plummer (2020). Itakura and Lee (2019) investigate the welfare and sectoral output effects of the CPTPP and an expanded CPTPP that includes six economies that have expressed interest in accession: China, Korea, Indonesia, the Philippines, Thailand, and Taiwan. The results suggest that economic welfare increases for CPTPP members and for these six candidate economies. Singapore, Brunei Darussalam, Malaysia, and Thailand are projected to benefit significantly. Petri and Plummer (2020) estimate the impact of China's CPTPP membership and find that, if China enters the pact, expected global income gains would be US$632 billion, which is approximately four times the global income gain under the CPTPP with 11 signatories.

It is notable that even when countries participating in trade liberalization gain benefits, some gains may spill over to non-participating countries. However, the spillover benefits have been shown to be insufficient to offset losses incurred by non-members, because agreements are typically negotiated in specific sectors chosen by member countries rather than across randomly selected products (Kitwiwattanachai et al., 2010; Stern & Deardorff, 2006). Thus, non-members have limited options to avoid losses, making participation the more attractive choice (Stern & Deardorff, 2006). More importantly, disintegration from trade liberalization—or the emergence of a "trade war"—can affect participating economies in multiple ways, including production, output structure, and GDP growth, in both the short and long run (Li et al., 2020; Robinson & Thierfelder, 2018; Shin & Balistreri, 2022).

3. Methodology and Data

3.1 The GTAP Model

To assess the effects of the CPTPP on ASEAN economies, this study employs the Global Trade Analysis Project (GTAP) computable general equilibrium (CGE) framework. The CGE model is used to simulate alternative CPTPP membership scenarios involving ASEAN members and prospective entrants, capturing economy-wide adjustments across interconnected production sectors and regions. The GTAP model is a comparative-static tool that evaluates how key economic variables change in response to policy shocks relative to a baseline equilibrium.

The GTAP framework links multiple sectors and economies under standard neoclassical assumptions. Economic agents are assumed to optimize (households maximize utility; firms minimize costs) in perfectly competitive markets with constant returns to scale and positive but diminishing marginal productivity. Equilibrium is determined in general equilibrium, consistent with Walras's Law, such that a policy shock induces price and quantity adjustments until a new equilibrium is reached (Corong et al., 2017; Hertel, 2017). In this study, the primary shocks are tariff reductions (and, where applicable, quantifiable non-tariff measure reductions) consistent with the CPTPP liberalization scenarios.

3.2 Data

In this study, the latest GTAP database (Version 11) is used. It includes input–output data for 141 economies worldwide, covering 65 production sectors, as well as detailed bilateral trade flows and an estimated trade-protection database. The GTAP 11 trade-protection database primarily reports applied ad valorem tariffs for these 141 economies. In addition, the database includes information on non-tariff measures (NTMs) for selected sectors, although coverage is partial.

The 141 economies in the GTAP 11 database are aggregated into six groups: (1) each ASEAN country separately; (2) high-income, non-ASEAN CPTPP members, including the United Kingdom; (3) developing-country CPTPP members; (4) current Asian applicants for CPTPP membership; (5) other current applicants for CPTPP

membership; and (6) the rest of the economies in the GTAP database. The 65 GTAP sectors are aggregated into 15 sectors. Table 2 provides additional details.

Table 2. GTAP Model Coverage—Countries/Regions and Sectors

Countries/Regions	Sectors
1) Brunei Darussalam	1) Agricultural products
2) Cambodia	2) Fuel & other resource extractions
3) Indonesia	3) Food products
4) Lao PDR	4) Textile & wearing apparel
5) Malaysia	5) Petroleum, coal, & chemical products
6) The Philippines	6) Metal products
7) Singapore	7) Machinery & equipment
8) Thailand	8) Computers, electronics, & electronic equipment
9) Viet Nam	9) Motor vehicles & parts
10) The rest of ASEAN	10) Transportation equipment
11) A group of high-income, non-ASEAN CPTPP members with the UK (Australia, New Zealand, Japan, Canada and the UK)	11) Other manufacturing
12) A group of developing-country CPTPP members (Mexico, Chile and Peru)	12) Basic pharmaceutical products
13) A group of current Asia applicants for CPTPP membership (China and Taiwan)	13) Utilities & constructions
14) A group of the rest of current applicants for CPTPP memberships	14) Trade & transport
15) The rest of the countries in GTAP database including the EU, African countries, and the rest of the world	15) Communications, financial services, & other services

Source: Authors' aggregation based on GTAP 11 database (Aguiar et al., 2023).
Note:

1. *The scope of this study covers the ASEAN-10 countries and excludes Timor-Leste.*
2. *"The rest of ASEAN" corresponds to the GTAP 11 region "rest of Southeast Asia" and, in practice, primarily reflects Myanmar, as the database does not include an updated input–output table for Myanmar.*
3. *Accordingly, values for "The rest of ASEAN" are constructed as the residual of total ASEAN minus the reported values for Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam (Aguiar et al., 2023).*

3.3 Scenarios

The goal of this study is to examine the potential benefits of the CPTPP for ASEAN countries. Because the ASEAN Economic Community (AEC) aims to deepen trade linkages through regional production networks and global value chains (Itakura & Lee, 2019; Sun et al., 2023), the impacts of ASEAN economies joining the CPTPP may also spill over to other ASEAN members. In addition, several non-CPTPP ASEAN countries have expressed interest in joining the agreement. Accordingly, this quantitative assessment is designed to illustrate how benefits may be distributed across ASEAN members under alternative membership configurations.

Four simulation scenarios with incremental liberalization are established for this purpose:

•**Scenario 1 (S1):** Trade liberalization among the 12 CPTPP members. The CPTPP includes four ASEAN members: Brunei Darussalam, Malaysia, Singapore, and Viet Nam.

•**Scenario 2 (S2):** S1 plus accession by CPTPP applicants (China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine).

•**Scenario 3 (S3):** S2 plus Thailand.

•**Scenario 4 (S4):** S3 plus Cambodia, Indonesia, Lao PDR, the Philippines, and the rest of ASEAN joining the CPTPP (a hypothetical scenario; Timor-Leste is excluded).

Across Scenarios 1–4, CPTPP membership expands from the current 12 signatories to include the applicant economies, Thailand, and finally a hypothetical case in which all ASEAN-10 members (excluding Timor-Leste) accede (Figure 1). These scenarios allow an assessment of how CPTPP-related gains and losses are distributed across ASEAN economies as membership broadens.

In each scenario, all tariff rates and the quantifiable portion of non-tariff measures (NTMs) in the GTAP database are set to zero across all products to illustrate the maximum potential effects of full CPTPP trade liberalization. This approach provides a clear benchmark for long-run impacts by focusing on the direct effect of removing trade barriers, without incorporating phased implementation schedules, sensitive-product exclusions, or country-specific exceptions. However, the CPTPP is implemented gradually over many years, and the comparative-static nature of the model does not capture potential dynamic gains (e.g., investment responses and productivity effects). Moreover, because NTM coverage in the GTAP database is partial, the simulations reflect only part of the agreement's broader regulatory and institutional reforms. As a result, the estimated welfare gains are likely to be conservative relative to the full potential effects of implementation.
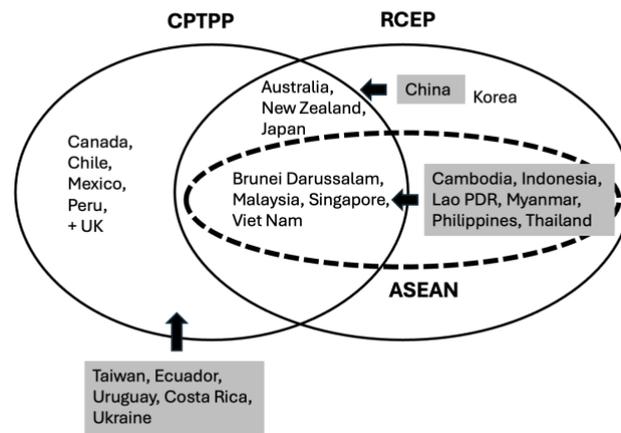
Figure 1. Current and Potential Members of CPTPP
Source: Authors' illustration.

4. Research Results

The simulation results for the four scenarios are reported in Tables 3–5. Table 3 summarizes the key macroeconomic outcomes (income and trade effects) for each ASEAN economy, while Tables 4 and 5 report the sectoral output and trade effects generated under alternative CPTPP membership scenarios.

4.1 Income Effect

The estimated income effects are reported in Table 3. Under Scenario 1 (S1), ASEAN economies that are CPTPP members generally experience higher GDP, with Viet Nam showing the largest gain. Malaysia is an exception, registering a small decline. Under Scenario 2 (S2)—which expands the CPTPP to include China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine—the results for existing ASEAN CPTPP members remain broadly similar to those in S1. By contrast, for non-member ASEAN economies (including Thailand), GDP effects are negative in S1 and become more adverse in S2. One plausible explanation is that the entry of China—an economy with comparative advantages across multiple sectors—intensifies competitive pressures and trade diversion against non-members.

The GDP results under Scenarios 3 (S3) and 4 (S4) provide stronger support for broader ASEAN participation. For Thailand, the GDP effect shifts from negative to positive once it accedes to the CPTPP in S3, and the gain is slightly larger in S4 when the remaining ASEAN members also join. Although several additional ASEAN entrants still face negative GDP effects, their outcomes are generally less adverse when they participate than when they remain outside the agreement. Cambodia is a notable exception, experiencing a larger negative GDP effect upon accession. As noted above, one reason may be that, once China is included in S3 and S4, its sectoral comparative advantages reduce the relative gains available to smaller ASEAN economies.

Finally, Malaysia—despite being an industrialized developing economy—shows negative GDP effects in S1, and these losses deepen as membership expands

from S2 to S4. A similar pattern of diminishing gains is observed for Singapore and Viet Nam, whose GDP effects remain positive but decline as the agreement expands.

4.2 Trade Effect

Changes in the terms of trade indicate that, in most cases, ASEAN economies that join the CPTPP experience an improvement in their terms of trade, suggesting stronger export performance and, in general, greater comparative advantage in international markets. Conversely, a deterioration in the terms of trade may signal relative comparative disadvantage for the affected economies. Under Scenario 1 (S1), ASEAN CPTPP members record more favorable terms of trade. Under Scenario 2 (S2), however, the terms of trade worsen for all ASEAN economies—both CPTPP members and non-members—possibly reflecting stronger competitive pressures following China's entry, given its comparative advantages across a wide range of sectors. Under Scenario 4 (S4), when all ASEAN economies join the CPTPP, the terms of trade improve for most ASEAN members, with especially notable gains for Thailand and Lao PDR, while Cambodia continues to experience a deterioration.

Table 3 also reports export value effects. Except for the Philippines, the results suggest that ASEAN economies generally experience higher export values, with Viet Nam recording the largest increase under S4. Sectoral export effects are discussed in the next subsection.

4.3 Welfare Effect

Equivalent variation (EV) results in Table 3 summarize overall welfare changes for each ASEAN economy. The simulations indicate that Thailand gains the most from CPTPP accession, and its welfare gains increase further under full ASEAN participation. Singapore also benefits under broader ASEAN accession, while Viet Nam and Lao PDR tend to record positive welfare effects. In contrast, Indonesia, the Philippines, Malaysia, Cambodia, and Brunei Darussalam experience welfare losses across the simulated scenarios.

4.4 Sectoral Income Effect

Table 4 reports sectoral changes in real output. Under S1, real output rises in several sectors across ASEAN economies—for example, textiles expand in Viet Nam and Malaysia—while other sectors contract, indicating comparative disadvantages (e.g., Viet Nam's motor vehicle sector). As CPTPP membership expands, sectoral gains and losses become more pronounced, and S2 shows larger expansions and contractions.

Scenario 3 (S3) illustrates the effects of Thailand's accession. The results suggest that Thailand has a comparative advantage in motor vehicles & parts (hereafter, motor vehicles) and food products, as real output expands in these sectors, while electronics, machinery, and metal products contract. Under S4, when all ASEAN economies join, sectoral adjustments intensify further. Notably, Indonesia's motor vehicle output declines by 2.44%, contributing to a 0.29% GDP reduction. This pattern is consistent with trade diversion, where Indonesia's production is displaced by more

competitive suppliers—particularly Thailand, whose motor vehicle output increases by 8.15%, and Japan.

4.5 Sectoral Trade Effect

Table 5 presents changes in sectoral export quantities, highlighting shifts in comparative advantage. Overall, many sectors across ASEAN economies show export expansion. Thailand's export growth is especially strong in food products, chemicals, and motor vehicles, particularly after its accession (S3 and S4). Singapore also shows strong performance in food-related exports.

Under S4, Indonesia's sectoral exports expand modestly in most sectors, except motor vehicles. Malaysia's exports also increase modestly overall, but motor vehicles and electronics appear to be disadvantaged relative to China. For Viet Nam, export expansion is more evident in food and textiles, while several other sectors show declining export volumes. For Lao PDR, export quantities decline in most sectors except food, petroleum, and chemical products. In contrast, Cambodia's exports increase in most sectors, including motor vehicles.

Table 3. Impacts of the CPTPP on ASEAN Economies under Alternative Membership Scenarios (GTAP Simulations)

Country	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Change in Value of GDP (% Change)				
CPTPP Member				
Brunei Darussalam	0.01	-0.22	-0.20	-0.16
Malaysia	-0.03	-0.20	-0.24	-0.25
Singapore	0.23	0.14	0.13	0.17
Viet Nam	0.46	0.42	0.28	0.35
Non-CPTPP Member				
Thailand	-0.14	-0.47	1.30	1.36
Cambodia	-0.16	-0.38	-0.50	-1.47
Indonesia	-0.11	-0.60	-0.69	-0.29
Lao PDR	-0.06	-0.29	-0.06	1.27
The Philippines	-0.03	-0.35	-0.36	-0.45
The rest of ASEAN	-0.06	-0.32	-0.33	4.20
Change in Terms of Trade (% Change)				
CPTPP Member				
Brunei Darussalam	-0.01	-0.11	-0.11	-0.08
Malaysia	0.02	-0.07	-0.11	-0.13
Singapore	0.11	0.08	0.07	0.09
Viet Nam	0.23	0.23	0.18	0.21
Non-CPTPP Member				
Thailand	-0.09	-0.29	0.71	0.73

Country	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Cambodia	-0.08	-0.14	-0.40	-0.61
Indonesia	-0.09	-0.45	-0.54	-0.25
Lao PDR	-0.01	-0.08	-0.30	0.59
The Philippines	-0.01	-0.24	-0.26	-0.29
The rest of ASEAN	-0.01	-0.13	-0.26	2.45
Change in Value of Export (% Change)				
CPTPP Member				
Brunei Darussalam	-0.09	-0.23	-0.30	1.41
Malaysia	-0.03	-0.16	-0.18	0.31
Singapore	-0.08	-0.22	1.44	1.44
Viet Nam	-0.05	-0.12	-0.11	5.71
Non-CPTPP Member				
Thailand	0.63	0.42	0.45	0.47
Cambodia	0.09	1.03	1.15	1.18
Indonesia	-0.03	-0.06	-0.17	1.15
Lao PDR	0.25	0.11	0.09	0.07
The Philippines	0.01	-0.13	-0.13	-0.12
The rest of ASEAN	-0.09	-0.23	-0.30	1.41
Equivalent Variation (Million USD)				
CPTPP Member				
Brunei Darussalam	-0.87	-6.32	-6.25	-4.70
Malaysia	93.81	-128.67	-232.20	-260.65
Singapore	399.05	291.46	256.06	313.78
Viet Nam	637.37	631.33	429.59	506.81
Non-CPTPP Member				
Thailand	-304.87	-949.14	2629.91	2698.95
Cambodia	-18.10	-36.07	-94.21	-43.08
Indonesia	-175.70	-880.30	-1088.47	-514.93
Lao PDR	-0.66	-6.50	-29.86	59.66
The Philippines	-18.06	-299.68	-337.13	-373.84
The rest of ASEAN	-4.66	-40.37	-79.89	639.17

Source: Authors' simulation results.

Note: "The rest of ASEAN" refers to the GTAP regional aggregate "rest of Southeast Asia,"
which primarily represents Myanmar in this study.

Table 4. Change in Real Output by Sector (%): ASEAN Economies under Alternative CPTPP Membership Scenarios (GTAP Simulations)

Sector	ASEAN Country									
	CPTPP Member				Non-CPTPP Member					
	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Thailand	Cambodia	Indonesia	Lao PDR	The Philippines	The rest of ASEAN
Scenario 1: Free Trade in CPTPP										
1. Agricultural Products	0.00	-0.09	0.16	-0.27	-0.05	0.01	-0.01	-0.02	-0.06	-0.01
2. Resource Extraction	-0.01	-0.07	-0.13	-0.50	0.06	0.00	0.06	0.03	0.02	0.04
3. Food Products	-0.14	-0.27	9.49	0.28	-0.31	-0.02	-0.05	-0.11	-0.04	-0.05
4. Textiles	0.20	1.74	1.29	3.53	0.19	-0.06	0.13	-0.42	-0.11	-0.26
5. Petroleum and Chemical Products	-0.08	0.04	-0.22	-1.03	0.12	0.06	0.15	-0.12	0.01	0.12
6. Metal Products	-0.12	-0.22	-0.39	-1.59	0.28	-0.06	0.19	0.28	0.08	0.11
7. Machinery and Equipment	-0.37	0.04	-0.56	-0.37	0.26	-0.01	0.32	0.18	0.12	0.05
8. Electronic Products	-0.12	-0.20	-0.54	-1.12	0.24	0.00	0.46	0.25	0.06	0.07
9. Motor Vehicle and Parts	0.74	-0.24	-1.68	-3.34	-1.02	-0.18	-0.48	0.00	-0.41	0.01
10. Transport Equipment	1.16	0.96	-0.41	-1.07	0.22	0.00	0.18	0.12	0.04	-0.05
11. Other Manufacturing	0.11	0.92	-0.34	-0.83	0.07	-0.05	0.08	-0.24	0.04	0.00
12. Basic Pharmaceutical Products	0.16	0.36	-0.62	-1.21	0.18	0.37	0.15	-0.01	-0.01	0.12
13. Utility & Construction	0.00	0.12	0.14	0.60	-0.14	-0.14	-0.12	-0.01	-0.01	-0.02
14. Trade & Transport	0.03	0.03	-0.03	-0.23	0.01	-0.02	-0.01	0.00	0.00	0.01
15. Other Services	0.00	-0.06	-0.06	-0.29	0.06	0.11	0.01	0.03	0.01	0.02
Scenario 2: S1 plus Applicants for CPTPP										
1. Agricultural Products	0.18	0.32	0.22	-0.11	-0.04	0.02	0.11	-0.03	-0.02	-0.04
2. Resource Extraction	0.08	0.04	-0.19	-0.40	0.15	0.02	0.33	0.15	0.16	0.10
3. Food Products	0.45	0.75	10.34	1.21	-0.06	-0.14	0.10	-0.19	0.04	-0.22
4. Textiles	0.55	2.14	1.28	3.57	0.43	-0.13	1.55	0.10	0.35	0.22
5. Petroleum and Chemical Products	-0.68	0.98	-0.45	-0.47	-0.18	0.33	0.56	-1.79	0.01	-0.59
6. Metal Products	-0.02	0.10	-0.75	-1.65	0.95	0.34	0.99	0.87	0.69	-0.02
7. Machinery and Equipment	0.85	0.25	-1.13	-0.84	0.34	-0.19	1.63	1.03	0.64	0.19
8. Electronic Products	0.78	-1.23	-1.80	-2.21	0.02	-0.96	2.18	0.47	-0.39	0.08
9. Motor Vehicle and Parts	1.05	-0.28	-2.94	-3.20	-1.69	-0.47	0.24	0.05	-0.41	0.03
10. Transport Equipment	1.85	2.02	0.59	-1.05	0.46	0.23	0.98	0.45	0.38	-0.02

| Sector | ASEAN Country | | | | | | | | | |
| | CPTPP Member | | | | Non-CPTPP Member | | | | | |
	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Thailand	Cambodia	Indonesia	Lao PDR	The Philippines	The rest of ASEAN
11. Other Manufacturing	0.17	1.73	1.25	-0.30	0.07	0.07	0.29	-0.25	0.37	-0.05
12. Basic Pharmaceutical Products	0.49	0.92	-0.77	-1.16	0.50	0.42	0.87	0.01	0.15	0.30
13. Utility & Construction	-0.52	-0.01	-0.10	0.47	-0.72	-0.46	-1.01	-0.13	-0.48	-0.22
14. Trade & Transport	0.05	-0.15	0.11	-0.21	-0.04	-0.04	-0.08	-0.01	0.02	0.01
15. Other Services	-0.04	0.01	0.00	-0.22	0.18	0.25	0.03	0.13	0.11	0.07
Scenario 3: S2 plus Thailand as a member of CPTPP										
1. Agricultural Products	0.20	0.29	0.29	-0.11	0.54	0.18	0.14	-0.03	-0.01	0.01
2. Resource Extraction	0.08	0.06	-0.19	-0.39	-0.77	0.06	0.40	-0.22	0.16	0.20
3. Food Products	0.35	0.63	9.77	0.99	4.43	0.07	0.13	-0.38	0.04	-0.17
4. Textiles	0.48	2.13	1.24	3.55	-2.33	-0.06	1.93	-2.73	0.36	0.10
5. Petroleum and Chemical Products	-0.79	0.97	-0.51	-0.42	1.40	0.49	0.73	-3.77	0.06	-0.41
6. Metal Products	-0.11	0.09	-0.70	-1.57	-4.00	-1.26	1.16	-1.17	0.74	-0.18
7. Machinery and Equipment	0.89	0.33	-1.08	-0.68	-3.04	-0.90	2.03	0.33	0.75	0.36
8. Electronic Products	0.69	-1.20	-1.79	-2.08	-4.79	-2.12	2.71	-3.14	-0.30	0.14
9. Motor Vehicle and Parts	0.49	-0.75	-5.09	-6.35	8.65	-1.81	-1.67	-2.87	-2.89	-0.23
10. Transport Equipment	1.84	2.08	0.59	-1.59	0.56	-1.72	1.32	0.15	0.41	-0.06
11. Other Manufacturing	0.15	1.73	1.21	-0.27	-1.83	-0.14	0.39	-0.58	0.43	-0.05
12. Basic Pharmaceutical Products	0.40	0.96	-0.84	-1.14	-2.41	0.78	1.05	1.76	0.21	0.94
13. Utility & Construction	-0.53	-0.03	-0.12	0.57	2.03	-0.98	-1.16	0.81	-0.50	-0.33
14. Trade & Transport	0.05	-0.16	0.15	-0.23	-0.02	-0.20	-0.11	-0.23	-0.01	-0.03
15. Other Services	-0.04	0.03	0.01	-0.28	-0.71	0.19	0.04	-0.13	0.11	0.05

Source: Authors' simulation results.

Note: Scenario 1 reports CPTPP-12 liberalization. Scenario 2 adds China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine. Scenario 3 adds Thailand. Scenario 4 assumes full ASEAN-10 accession (excluding Timor-Leste). "The rest of ASEAN" corresponds to the GTAP regional aggregate "Rest of Southeast Asia," which largely captures Myanmar in this study.

Table 4. Change in Real Output by Sector (%): ASEAN Economies under Alternative CPTPP Membership Scenarios (GTAP Simulations) **(Cont.)**

| | ASEAN Country | | | | | | | | | |
| | CPTPP Member | | | | Non-CPTPP Member | | | | | |
Sector	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Thailand	Cambodia	Indonesia	Lao PDR	The Philippines	The rest of ASEAN
Scenario 4: S3 plus Cambodia, Indonesia, Lao PDR, Philippines, and the rest of ASEAN as members of CPTPP										
1. Agricultural Products	0.21	0.35	0.38	-0.04	0.76	-0.63	0.08	-0.24	-0.07	2.91
2. Resource Extraction	0.08	0.09	-0.18	-0.37	-0.70	-0.86	0.12	-2.04	0.24	-2.61
3. Food Products	0.23	0.74	11.45	1.52	5.12	-2.22	0.15	-0.42	-0.23	13.87
4. Textiles	0.4	2.13	1.02	3.41	-2.49	0.53	0.64	-5.38	0.69	-10.57
5. Petroleum and Chemical Products	-0.95	0.90	-0.32	-0.60	1.20	1.90	1.71	48.92	0.33	18.21
6. Metal Products	-0.36	-0.03	-1.37	-1.26	-4.45	4.54	-0.57	-6.99	0.87	-7.89
7. Machinery and Equipment	1.71	0.32	-1.29	-0.73	-3.26	3.03	0.79	-6.40	1.02	-4.71
8. Electronic Products	0.48	-1.23	-1.99	-2.22	-5.00	5.46	0.52	-6.18	-0.14	-5.87
9. Motor Vehicle and Parts	0.55	-0.76	-5.37	-6.40	8.15	-0.81	-2.44	-6.00	-4.28	-8.12
10. Transport Equipment	1.64	2.10	0.41	-1.58	0.52	11.01	0.62	-7.98	0.50	-3.79
11. Other Manufacturing	0.1	1.75	1.23	-0.37	-1.86	-5.30	0.47	-5.19	0.70	-3.34
12. Basic Pharmaceutical Products	0.35	0.98	-1.06	-1.09	-2.31	0.56	0.22	-1.73	0.10	-15.49
13. Utility & Construction	-0.53	-0.05	-0.09	0.62	2.07	2.64	-0.49	0.78	-0.26	0.53
14. Trade & Transport	0.04	-0.17	0.17	-0.23	-0.04	0.30	-0.07	0.32	-0.04	-1.22
15. Other Services	-0.04	0.05	0.00	-0.28	-0.73	-0.09	-0.01	-0.66	0.08	-0.42

Source: Authors' simulation results.

Note: Scenario 1 reports CPTPP-12 liberalization. Scenario 2 adds China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine. Scenario 3 adds Thailand. Scenario 4 assumes full ASEAN-10 accession (excluding Timor-Leste). "The rest of ASEAN" corresponds to the GTAP regional aggregate "Rest of Southeast Asia," which largely captures Myanmar in this study.

Table 5. Percentage Change in Export Quantities by Sector, ASEAN Economies under Alternative CPTPP Membership Scenarios (GTAP Simulations)

Sector	ASEAN Country									
	CPTPP Member				Non-CPTPP Member					
	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Thailand	Cambodia	Indonesia	Lao PDR	The Philippines	The rest of ASEAN
Scenario 1: Free Trade in CPTPP										
1. Agricultural Products	-0.49	0.41	-1.79	-1.48	0.49	0.22	0.13	-0.15	-0.85	-0.06
2. Resource Extraction	-0.01	-0.31	-0.42	0.04	0.25	-0.11	0.18	0.06	0.05	0.08
3. Food Products	0.51	1.21	17.26	3.14	-0.88	-0.44	-0.28	-0.51	-0.76	-0.34
4. Textiles	1.03	2.91	1.77	4.34	0.27	-0.09	0.15	-0.48	-0.25	-0.45
5. Petroleum and Chemical Products	-0.24	0.30	-0.23	-0.98	0.19	-0.03	0.22	-0.14	-0.06	0.18
6. Metal Products	-0.59	0.40	-0.85	-1.65	0.36	-0.15	0.34	0.31	0.11	0.19
7. Machinery and Equipment	-0.49	0.23	-0.70	-0.43	0.37	0.23	0.43	0.31	0.13	0.17
8. Electronic Products	-0.18	-0.19	-0.55	-0.96	0.29	0.07	0.58	0.25	0.06	0.31
9. Motor Vehicle and Parts	2.99	0.98	-2.06	-1.89	-1.59	-0.80	-1.37	-0.40	-1.46	-0.39
10. Transport Equipment	1.28	1.46	-0.39	-1.83	0.51	0.03	0.62	0.24	0.10	-1.18
11. Other Manufacturing	1.71	2.23	-0.70	-0.40	0.22	-0.26	0.40	-0.54	0.06	0.06
12. Basic Pharmaceutical Products	-0.18	1.74	-0.66	-2.36	0.46	0.66	0.53	0.19	0.00	0.36
13. Utility & Construction	0.03	-0.23	-0.38	-1.87	0.64	0.27	0.62	0.00	0.28	0.14
14. Trade & Transport	0.07	-0.21	-0.20	-1.95	0.37	0.44	0.39	0.21	0.12	0.25
15. Other Services	0.02	-0.31	-0.46	-2.15	0.49	0.52	0.47	0.21	0.11	0.26

Source: Authors' simulation results.

Note: Scenario 1 reports the benchmark CPTPP-12 liberalization; Scenario 2 adds China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine; Scenario 3 adds Thailand; and Scenario 4 assumes full ASEAN-10 accession (excluding Timor-Leste). "The rest of ASEAN" corresponds to the GTAP regional aggregate "Rest of Southeast Asia," which primarily represents Myanmar in this study.

Table 5. Percentage Change in Export Quantities by Sector, ASEAN Economies under Alternative CPTPP Membership Scenarios (GTAP Simulations) **(Cont.)**

Sector	CPTPP Member				Non-CPTPP Member					
	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Thailand	Cambodia	Indonesia	Lao PDR	The Philippines	The rest of ASEAN
Scenario 2: S1 plus Applicants for CPTPP										
1. Agricultural Products	-0.83	-0.40	-2.01	-1.77	-0.87	0.79	0.75	-0.22	-0.65	0.51
2. Resource Extraction	0.20	-0.74	-0.40	-1.73	1.38	1.05	1.22	0.33	0.34	0.27
3. Food Products	2.26	3.28	18.69	6.31	-0.38	-1.24	0.40	-0.93	-0.07	-1.83
4. Textiles	1.36	3.26	1.79	4.34	0.46	-0.20	1.94	0.08	0.02	0.15
5. Petroleum and Chemical Products	-1.73	2.10	-0.49	1.07	-0.46	0.36	0.70	-2.10	-0.42	-2.32
6. Metal Products	0.17	0.84	-1.49	-1.49	1.14	0.67	2.10	0.96	1.41	-0.55
7. Machinery and Equipment	0.96	0.43	-1.49	-1.01	0.42	-0.20	2.23	1.65	0.90	-0.59
8. Electronic Products	1.05	-1.44	-1.94	-2.18	-0.04	-1.48	2.69	0.47	-0.64	-0.73
9. Motor Vehicle and Parts	4.06	0.77	-3.65	-0.98	-2.21	-2.37	-0.11	0.27	-1.37	-4.02
10. Transport Equipment	1.97	3.07	1.29	-0.84	1.44	0.34	3.46	0.88	1.18	-1.16
11. Other Manufacturing	2.85	3.81	2.60	1.06	0.46	0.24	2.04	-0.62	1.78	-0.24
12. Basic Pharmaceutical Products	0.46	3.45	-0.86	-2.40	1.16	0.92	2.95	0.91	1.04	1.10
13. Utility & Construction	0.46	0.10	-0.03	-1.48	1.88	0.74	2.77	0.16	1.63	1.08
14. Trade & Transport	0.80	0.42	0.15	-1.67	1.20	1.08	2.03	0.89	1.08	1.04
15. Other Services	0.89	0.21	-0.08	-1.91	1.52	1.16	2.46	0.97	1.21	1.14
Scenario 3: S2 plus Thailand as a member of CPTPP										
1. Agricultural Products	-0.81	0.29	-1.52	-1.60	-9.89	2.25	1.21	-0.18	-0.68	0.70
2. Resource Extraction	0.21	-0.68	-0.35	-1.39	-6.33	2.60	1.43	-0.42	0.32	0.48
3. Food Products	1.14	3.13	17.61	5.60	14.91	-2.25	0.47	-4.16	-0.48	-2.80
4. Textiles	1.13	3.25	1.75	4.33	-2.80	-0.15	2.42	-3.15	0.04	-0.15
5. Petroleum and Chemical Products	-1.95	1.98	-0.58	1.01	3.45	0.03	0.90	-4.57	-0.54	-3.02
6. Metal Products	-0.12	0.77	-1.36	-1.36	-5.46	-2.03	2.44	-1.57	1.39	-1.13
7. Machinery and Equipment	1.04	0.53	-1.40	-0.80	-4.28	-1.56	2.80	0.35	0.95	-0.80
8. Electronic Products	0.92	-1.42	-1.93	-2.02	-6.17	-3.11	3.40	-3.18	-0.53	-0.91
9. Motor Vehicle and Parts	2.88	-4.56	-6.31	-3.39	16.15	-10.6	-4.80	-14.4	-9.46	-7.08
10. Transport Equipment	1.95	3.13	1.31	-0.48	1.16	-1.86	4.51	-0.53	1.19	-3.14

| | ASEAN Country | | | | | | | | | |
| | CPTPP Member | | | | Non-CPTPP Member | | | | | |
Sector	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Thailand	Cambodia	Indonesia	Lao PDR	The Philippines	The rest of ASEAN
11. Other Manufacturing	2.68	3.79	2.55	1.07	-4.66	-0.90	2.54	-2.56	1.81	-0.74
12. Basic Pharmaceutical Products	0.24	3.55	-0.94	-2.01	-5.89	0.19	3.61	-1.73	1.39	0.67
13. Utility & Construction	0.32	0.26	0.15	-1.35	-4.11	0.28	3.29	3.09	1.78	1.14
14. Trade & Transport	0.84	0.54	0.26	-1.58	-2.64	1.20	2.40	-0.22	1.22	1.25
15. Other Services	0.90	0.44	-0.03	-1.80	-4.92	1.46	2.95	0.20	1.33	1.43
Scenario 4: S3 plus Cambodia, Indonesia, Lao PDR, Philippines, and the rest of ASEAN as members of CPTPP										
1. Agricultural Products	-0.87	0.34	-1.73	-1.98	-10.25	6.17	1.76	-3.28	-0.03	-32.98
2. Resource Extraction	0.22	-0.59	-0.45	-1.53	-6.61	5.74	0.28	-4.30	1.90	-6.76
3. Food Products	0.24	3.31	20.62	7.45	16.79	4.05	2.37	3.53	4.00	137.11
4. Textiles	0.98	3.27	1.50	4.21	-3.01	0.57	0.84	-5.62	1.10	-13.93
5. Petroleum and Chemical Products	-2.30	1.84	-0.35	0.59	3.21	6.33	4.36	57.89	1.30	73.82
6. Metal Products	-1.55	0.47	-2.74	-0.20	-6.08	7.20	1.26	-7.96	1.60	-11.41
7. Machinery and Equipment	2.25	0.52	-1.69	-0.85	-4.54	11.07	1.67	-8.60	1.33	-5.19
8. Electronic Products	0.65	-1.45	-2.14	-2.16	-6.39	9.32	0.63	-6.23	-0.34	-10.19
9. Motor Vehicle and Parts	2.99	-4.70	-6.66	-3.61	15.32	-2.02	-5.69	-21.4	-7.47	-5.54
10. Transport Equipment	1.74	3.15	1.07	-0.44	1.14	12.80	2.76	-12.2	1.48	-9.45
11. Other Manufacturing	2.55	3.82	2.53	0.84	-4.68	9.53	2.22	-8.46	3.75	-11.83
12. Basic Pharmaceutical Products	0.02	3.58	-1.18	-1.06	-5.35	2.36	1.36	-9.17	1.62	-29.30
13. Utility & Construction	0.17	0.44	0.16	-0.22	-3.55	6.18	1.74	-0.81	1.81	-9.31
14. Trade & Transport	0.82	0.64	0.27	-1.68	-2.67	1.56	1.02	-4.10	1.17	-8.28
15. Other Services	0.82	0.56	-0.12	-1.95	-5.07	0.73	1.10	-5.18	1.26	-11.04

Source: Authors' simulation results.

Note: Scenario 1 reports the benchmark CPTPP-12 liberalization; Scenario 2 adds China, Taiwan, Ecuador, Costa Rica, Uruguay, and Ukraine; Scenario 3 adds Thailand; and Scenario 4 assumes full ASEAN-10 accession (excluding Timor-Leste). "The rest of ASEAN" corresponds to the GTAP regional aggregate "Rest of Southeast Asia," which primarily represents Myanmar in this study.

5. Conclusions

This study uses a comparative-static CGE (GTAP) simulation framework to assess how the CPTPP may affect ASEAN economies under alternative membership configurations. Across the four scenarios, the results show a clear pattern: ASEAN economies that participate in the CPTPP tend to gain in terms of GDP and welfare, whereas most ASEAN non-members face adverse outcomes. This indicates that CPTPP participation is generally preferable for ASEAN countries, as non-membership can expose economies to trade diversion and reduced welfare.

However, the magnitude and direction of impact vary across ASEAN members and scenarios. In particular, as the CPTPP expands to include additional economies—especially large, competitive non-ASEAN participants—some ASEAN members experience smaller gains or even losses. This suggests that the benefits of early CPTPP participation may be partially redistributed as new ASEAN members and major external economies join, reducing relative advantages and altering competitive positions within the bloc. The simulations also indicate that broader ASEAN participation can mitigate some negative impacts faced by non-members, but the aggregate benefits do not increase proportionally with additional ASEAN accession.

Sectoral outcomes reinforce that the distribution of gains depends on comparative advantage and regional production structures. The results suggest that ASEAN economies can benefit more sustainably when they strengthen sector-specific competitiveness and deepen regional value-chain linkages, particularly in sectors where ASEAN shows export potential. Finally, the study notes that, given the comparative-static nature of the GTAP framework and data constraints on fully capturing non-tariff measures and dynamic adjustments, the estimated impacts may understate longer-run channels such as investment responses and productivity effects.

6. Policy Implications

The simulation findings imply several policy considerations for ASEAN governments and regional institutions.

First, CPTPP accession can reduce exclusion costs. Because non-members generally experience adverse impacts relative to members, ASEAN countries that remain outside the CPTPP may face trade diversion and weaker welfare outcomes. From a regional perspective, broader ASEAN participation can help distribute gains more widely and lessen negative spillovers among ASEAN members.

Second, benefits depend on comparative advantage and can be diluted as membership expands. The results suggest that as the CPTPP grows—particularly with the inclusion of large, competitive economies—some ASEAN members may see smaller gains due to intensified competition and changes in relative comparative advantage. This highlights the importance of strategic preparation prior to accession, rather than assuming uniform gains from membership expansion.

Third, sector targeting and value-chain strengthening are essential. To maximize CPTPP-related benefits, ASEAN members should identify sectors where competitiveness can be strengthened and where upgrading is feasible. Policies that support productivity improvement, standards compliance, and supply-chain upgrading can help ASEAN economies maintain and expand their market position within the CPTPP. The findings also suggest that regional production-network strategies—linking upstream and downstream activities across ASEAN—can amplify gains by supporting specialization and economies of scale, consistent with ASEAN's objectives under the AEC framework.

Fourth, ASEAN-level coordination can enhance outcomes. Given heterogeneous impacts across members, ASEAN institutions can support coordinated approaches in trade facilitation, rules-of-origin utilization, regulatory readiness, and connectivity. Strengthening coordination through the AEC can help member states build capabilities—especially in regional supply chains—so that CPTPP accession (whether partial or full) yields more inclusive benefits.

Finally, future analysis should refine policy-relevant details. Because the simulations assume full tariff elimination and only partially capture non-tariff measures, further work is recommended to examine (i) phased tariff schedules and sensitive products, (ii) more comprehensive treatment of NTMs where data permit, and (iii) potential dynamic effects that may emerge beyond the comparative-static framework. More sector-focused analysis could also generate more actionable guidance for industrial and trade policy.

7. References

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