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More than Just Another Expansion: Why Does the 3rd Information Technology Agreement (ITA3) Need to Be Bold?

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KEY MESSAGES

- Digital technologies and related conveniences have transformed people's daily lives but behind these is a range of elements, including information and communications technology (ICT) goods, that must come together for the digital economy to function seamlessly.
- Trade is a major channel through which economies access ICT goods. Yet, such trades can be hampered by trade frictions like tariffs and non-tariff barriers (NTBs). Both the ITA1 and the ITA2, participated by 17 and 13 APEC economies, respectively, were developed to overcome some of these frictions.
- The ITA1 and ITA2 have arguably supported globalisation, improved the general affordability of ICT goods, and encouraged innovation across different sectors. Factors, such as a "zero-in, zero-out" tariff approach, the binding nature of tariff liberalisation commitments, and the efficiency and productivity gains from these goods could have contributed to the increase in their trade values over time.
- But a rapidly changing technology landscape calls for another ITA expansion. Hence, a prospective ITA3 could help facilitate the adoption of new and emerging technologies, especially those that advance environmentally sustainable and resilient economic growth. The rate at which the world is digitalising also means that access to affordable and reliable digital goods, which could be enhanced through a prospective ITA3, has arguably become a necessity.
- APEC's relative performance on a prospective ITA3 goods trade suggests that there is a significant room for improvement. One way is through better market access given that APEC's average most-favoured nation (MFN) tariffs for prospective ITA3 goods remains higher than both the ITA1 and the ITA2 goods. Effectively addressing NTBs, which were largely overlooked in existing ITAs, in a prospective ITA3 could bring greater benefits considering that it is becoming more of a concern in the present trade environment.
- APEC economies could lead the process towards a bold ITA3 by strengthening dialogues between governments and industries to identify potential ITA3 products and relooking approaches to ensure that the prospective ITA3 remains evergreen. APEC economies could also incorporate stronger interventions related to NTBs and deepen the prospective ITA3 by institutionalising provisions on capacity building.

Introduction

It has become progressively difficult to think about a life without digital technologies. Take the mundane task of grocery shopping as an example: placing orders online within the comfort of one's home and having them delivered is something that many people appreciate. Even when individuals purchase their groceries at nearby shops and supermarkets, the experience will most likely include an aspect of digitalisation.

The ubiquitousness of such digital conveniences makes it easy to take things for granted. However, a multitude of elements must work together seamlessly for the digital economy[a] to function. Going back to the earlier example, purchasing a loaf of bread or a sack of rice requires a reliable and affordable internet connection. When transactions involve parties in different economies, information will need to cross borders, necessitating a level of standardisation and security. Payment providers, for instance, use various tools to verify the authenticity of transactions at the point of sale.

Underpinning these conveniences are the information and communications technology (ICT) goods, such as mobile phones and broadband modems. Many economies recognise that the acquisition of these goods is important for benefitting from the digital economy. Often, trade is a major channel by which economies accomplish this goal since global value chains (GVCs) have led to such goods, including their parts and components, being made around the world. However, as with other goods, such trades can be hampered by trade frictions like tariffs and non-tariff barriers (NTBs).[b]

Cognisant that such frictions can slow down the digital economy's development, 14 economies,[c] including 9 APEC members, signed the first Information Technology Agreement (ITA1) in 1996.[1] Following the most-favoured nation (MFN) principle,[d] the ITA1 sought to liberalise tariffs on 203 goods mainly covering ICT products such as computers, telecommunication equipment, semiconductors, and printed circuit boards, as well as their respective manufacturing equipment. Nineteen years later, a subset of the ITA1 parties signed a second agreement (ITA2) that expanded coverage to an additional 201 goods, including not just those traditionally associated with the ICT sector (e.g., new generation semiconductors and optical media) but also goods outside of it like video game consoles and medical equipment. Despite being related, these two agreements are separate.

Although both have somehow contributed to the increase in the trade of many goods, it has been more than 25 years since the ITA1 was reached and close to 10 years since the ITA2 was concluded. Many things have since changed and, as the technological landscape is rapidly transforming, the time is now right (if not overdue) to call for another expansion—perhaps with a bold ITA3.

This policy brief provides context by recounting APEC's history with both the ITA1 and the ITA2. Building from this, the succeeding section will elaborate on why an expansion is relevant for the region. This policy brief also discusses why and how economies could make this prospective ITA3 bold and urges APEC to, yet again, take a key role in advancing free trade.

Recounting APEC's History with the ITA1 and the ITA2

Why were the ITAs developed?

Like many other trade agreements, the ITA1 was born from the intersection of various interests and special circumstances, including the unfolding ICT revolution.[2] The ITA1 started as a private sector idea: in the early 1990s, an alliance of export-oriented ICT companies from Canada; the European Union; Japan; and the United States urged their respective governments to negotiate an agreement that would liberalise tariffs on ICT goods. This is unsurprising considering that tariffs on certain ICT goods could reach up to 14 percent at the time, therefore potentially slowing down the development of the digital economy.

In 1994, however, the difficulty of negotiating an ITA1 became apparent as negotiators failed to reach a common ground, although parties remained open to further discussions. It was only in 1996 that the ITA1 saw progress. What broke the standstill was APEC's intervention, with both Economic Leaders and Trade Ministers endorsing the ITA1's completion during the first World Trade Organization (WTO) Ministerial Conference in Singapore.[3] Since its culmination in 1996, the ITA1 has seen its membership grow further from just

[a] Technically, the digital economy came after the internet economy, which developed in the early 1990s to the late 2000s (the period when the ITA1 was conceived). For simplicity, the term digital economy is used synonymously with the internet economy in this policy brief.

[b] Note that NTBs are a subset of non-tariff measures (NTMs). While some NTMs can be trade-enhancing, NTBs are all discriminatory measures considered to be protectionist.

[c] The European Union and its members are counted as one. The same applies throughout this policy brief, unless specified otherwise.

[d] The MFN principle "seeks to replace the frictions and distortions of power-based (bilateral) policies with the guarantees of a rules-based framework where trading rights do not depend on the individual participants' economic or political clout" (see: https://www.wto.org/english/tratop_e/serv_e/cbt_course_e/c1s6p1_e.htm). In practice, MFN tariffs represent the highest rate that economies can charge on fellow WTO members.

14 economies to 56 economies (including 17 APEC members), as of December 2024.[e]

Despite the successful completion of the ITA1, it was and remains to be a product of compromise. This was noticeable from the presence of product exclusions,[f] primarily consumer electronics, and members backtracking from their initial plan of having a negotiated elimination of NTBs.[4] On hindsight, the exclusion of certain ICT goods eventually became problematic. This is because many ICT goods have since converged to form multifunctional products, hence making it difficult to correctly categorise whether these fall under the scope of the agreement. For instance, while mobile phones are still primarily for communication, they have also evolved for entertainment, as in the case of smartphones.

Recognising the ITA1's limitations amid rapid technological advancements, six ITA1 members, all of which are APEC economies, called for its expansion in 2012.[5] Yet again, the private sector played a key role in urging their governments to pursue this expansion. Indeed, just a year prior, APEC Economic Leaders heeded the private sector's call by agreeing to play a key role in the ITA2 negotiations. In 2015, the ITA2 was successfully concluded at the Tenth WTO Ministerial Conference in Nairobi, with 24 economies, including 13 APEC members, as its founders. As of December 2024, membership in the ITA2 has not increased.[g]

APEC trade in ITA1 and ITA2 goods have increased

Both the ITA1 and the ITA2 have arguably supported globalisation, improved the general affordability of ICT goods, and encouraged innovation activity across multiple sectors.[6] Globally, gross exports of ITA1 and ITA2 goods were valued at USD 3.8 trillion and USD 2.5 trillion in 2022, respectively.[h] This represents a compound annual growth rate (CAGR) of 6.2 percent for the ITA1[i] and 4.6 percent for the ITA2 since these agreements were each signed.[j] Estimates showed that a 1.0 percent tariff reduction of ITA1 products led to a 0.7–0.8 percent increase in imports.[7] The impact of the ITA2, however, is inconclusive.

The APEC region too saw its gross exports grow and likely benefited from the entry into force of at least the ITA1. On the one hand, gross exports of ITA1 goods had collectively increased by close to five times, from USD 0.7 trillion in 2000 to USD 3.2 trillion in 2022. This represents a CAGR of about 7.4 percent, which is higher than the world aggregate. APEC's share of global ITA1 gross exports has also grown over the years, from about 66 percent in 2000 to 85 percent in 2022.

On the other hand, APEC gross exports of ITA2 goods increased by approximately 33 percent from USD 1.4 trillion in 2015 to USD 1.9 trillion in 2022. This translates to a CAGR of about 4.2 percent, which is lower than the world aggregate. Interestingly, APEC gross exports of ITA2 goods grew faster (5.4 percent) in the same length of time prior to the ITA2's conclusion.[k] This counter-intuitive observation may suggest the presence of factors aside from tariffs (e.g., NTBs, an economy's absorptive capacity) that can potentially complicate the realisation of expected benefits. Between 2015 to 2022, APEC's share of global ITA2 gross exports hovered around 75–77 percent.

The complexities notwithstanding, these agreements' "zero-in, zero-out" tariffs approach could have contributed to the increase in the trade value of these products as it reduces the overall cost in trading them.[8] Here, the cost reduction does not come only from the tariff savings but also from eliminating burdensome administrative procedures. Doing away with tariffs means that economies could also do away with the process, hence the cost associated with their collection. In turn, by speeding up customs border clearances, traders can save on logistics costs, including those related to storage and warehousing.

Complementing this tariff approach is the binding nature of tariff liberalisation commitments undertaken by participants (i.e., these commitments are enforceable via the WTO dispute settlement system). Collectively, they increase policy certainty and contribute to a favourable trading environment. A paper by Henn and Gnutzmann-Mkrtchyan (2015), for instance, implied that an economy's ITA participation could encourage multinational firms to relocate to these economies, as the manufacturing of these products tends to involve

[e] The United Kingdom is counted separately since its exit from the European Union. See: https://www.wto.org/english/tratop_e/inftec_e/inftec_e.htm

[f] Some of these excluded products were met with high tariffs, such as 14 percent on televisions.

[g] Technically, the United Kingdom's separation from the European Union means that it should be counted separately, that is, the ITA2 is participated in by 25 economies. Notwithstanding, this is not an actual increase since the United Kingdom has always been part of the ITA2.

[h] APEC PSU calculations using data from UN Comtrade (downloaded via the World Integrated Trade Solution (WITS), accessed 26 June 2024). For consistency, the product codes from these lists were translated into the 1996 nomenclature of the Harmonised System (HS). Following the WTO definition, product codes with ex-outs (partially covered goods) have been removed, except for 8529.90 and 8456.10. In addition, the world aggregate excludes re-exports from Hong Kong, China but includes intra-EU trade. Data for Hong Kong, China from 2017 onwards are estimated. Data for missing years are estimated based on the nearest previous year data available.

[i] The CAGR for the ITA1 is referenced to 2000 because of data unavailability in 1996.

[j] For comparison, the ITA2 grew at a pace of 3.4 percent in the same length of time prior to its conclusion, that is, 2007-2014.

[k] Excluding the pandemic years did not alter this observation.

many parts and components produced across different economies. However, the study also noted that the impacts can vary depending on the economy's reason for joining the ITA and its positions in the relevant GVCs.[9] In other words, under the right conditions, participating in the ITA can help an economy to better integrate into the GVCs of ICT products.

The nature of the products covered by the ITA1 and the ITA2 (and their contributions to the digital economy) means that those utilising them can also benefit from the efficiency and productivity gains spurred by these agreements. There is an abundance of literature on how the adoption of digital tools has widened market access,[10] expedited processes,[11] and facilitated information exchanges,[12] among others.

Notwithstanding the increase in the trade value of the ITA1 and ITA2 goods, it should be acknowledged that some economies, particularly developing ones, have not benefitted—with some even losing competitiveness (e.g., declining domestic output and exports of related goods).[13] As alluded above and in the beginning of this policy brief, these agreements are but "a cog in the wheel" of the digital economy. Various elements must come together to augment an ITA participant's absorptive capacity and its likelihood of benefitting from the agreement (e.g., investment attraction, increased GVC participation, increased exports). Indeed, one's ITA participation has to be complemented with strategic policy reforms and adjustments in several areas, such as the business environment and education. To illustrate, a holistic approach can look like a combination of investment policies that encourage foreign firms to establish and maintain local operations, education policies that produce a steady supply of appropriately skilled workers, and structural reform policies that facilitate capital accumulation and relevant infrastructure development.

Why is a Bold ITA3 Relevant?

In 2020, APEC Economic Leaders adopted a renewed vision under the APEC Putrajaya Vision 2040, which called for "an open, dynamic, resilient and peaceful Asia-Pacific community by 2040, for the prosperity of all our people and future generations".[14] This vision was operationalised a year after through the Aotearoa Plan of Action (APA).[15] Under the APA, various objectives were identified, such as delivering a free, open, fair, non-discriminatory, transparent and predictable trade and investment environment, as well as fostering an enabling environment that is market-driven and supported by the digital economy and innovation.

Improving access to affordable and reliable ICT products, facilitated by a potential ITA3, is one way to achieve these objectives. In an expanding digital economy, access to these products has also become a necessity (see Box 1). Additionally, ICT products can support sustainability and help mitigate some of the environmental risks posed by climate change.[16]

Examples of relevant technologies whose diffusion and adoption can be facilitated by a potential ITA3 include energy-efficient products, renewable energy technologies, semiconductors (and their manufacturing equipment and related components), and smart manufacturing (Table 1). Furthermore, new manufacturing methods mean that products, which may appear familiar on the surface, could be produced with equipment not covered by existing ITA agreements. Therefore, it makes sense to consider including this equipment in a potential ITA3.

Category[/a]	Examples
Energy-efficient products	Solar water heaters, photovoltaic generators, lithium and lithium-ion batteries
Renewable energy technologies	Energy storage systems and artificial graphite
Semiconductors, semiconductor manufacturing equipment, and related components	Circular polishing pads and diamond blades used in the manufacturing of semiconductor wafers
Smart manufacturing	Industrial and agricultural robots, additive manufacturing, drones for commercial and personal use, medical technologies (e.g., cameras designed for internal organ exams, smart wearables, telepresence robots)

Table 1. List of proposed ITA3 goods

[/a]These categories are without prejudice to the types of goods that can be included in a potential ITA3. Their use in this policy brief is solely to facilitate discussions and deliberations.

Note: For brevity, the product codes are not listed. Readers are encouraged to explore the cited sources for the full list of goods.

Source: APEC PSU compilation based on Ezell and Long (2023) and the National Board of Trade Sweden (2024).

At first glance, it may seem difficult to rationalise the inclusion of certain products in an ITA, particularly those typically associated with non-ICT sectors. However, it is important to recognise that increasing digitalisation means ICT components are now found in a wider array of products. For instance, energy-efficient products increasingly rely on microchip systems to control, measure, and convert electricity.[17] Control panels for electric vehicles and their chargers also contain

Box 1. Living in a world defined by an expanding digital economy

For years, various stakeholders have called for universal broadband access. The Broadband Commission Manifesto, for example, calls on the global community to recognise digital connectivity as the foundational element of the United Nations 2030 Agenda for Sustainable Development.[18] In APEC, the achievement of universal broadband access is among the 11 key focus areas identified in the APEC Internet and Digital Economy Roadmap (AIDER), a living document designed to promote the development and growth of the internet and the digital economy in the region and to highlight potential areas of cooperation among APEC fora.[19]

The swift digital transformation of the global economy has rendered it nearly impossible to envision a world devoid of digital technologies' influence. This shift underscores the urgency of the aforementioned initiatives. Arguably, having no digital connectivity could be akin to having no access to necessities. After all, more and more government services are now (and will be) provided digitally. For instance, Indonesia's Presidential Regulation Number 82 of 2023 aims to accelerate the digitalisation and interoperability of government systems, including the integration of hundreds of existing apps into one public service portal.[20] Meanwhile, Thailand's Digital Government Development Agency (DGA) has collaborated with 13 local government units to bolster knowledge in utilising digital platforms and, in doing so, facilitate a more efficient access to government services.[21]

Noting these, many economies (including in APEC) have also developed strategies and plans aimed at enhancing digital connectivity. For example, Australia's Statutory Infrastructure Provider (SIP) obligations, whose arrangements commenced on 1 July 2020, ensure that all Australian premises can access superfast broadband services of 25 Mbps or better.[22] Elsewhere, the Philippines' National Broadband Plan, indicated in the Philippine Development Plan 2023-2028, provides a set of proposed policy, regulatory, and infrastructure interventions to provide quality broadband services.[23,24] Although many factors have to come together to effectively access and utilise critical digital technologies, an ITA participation could be one step among them.

embedded ICT components.[25] Likewise, ICT parts are at the core of smart manufacturing technologies such as industrial robots and 3D printing. Furthermore, advocating for the inclusion of so-called "non-ICT products" in an ITA is not a new idea. In fact, the ITA2 already covers some medical equipment, such as scanners and magnetic resonance imaging machines.

For the analysis of this policy brief, and without prejudice to how a potential ITA3 may be operationalised, these new and emerging technologies were defined by combining the operational definitions from two lists: one industry-led[26] and the other from the National Board of Trade (Sweden).[27] After modifications, this combined list renders a total of 290 unique product codes,[l] some of which overlap with those in the ITA1 and the ITA2.[m]

Looking at trade and tariffs

Trade data from UN Comtrade shows that APEC gross exports of these proposed ITA3 goods rose from USD 0.4 trillion in 2000 to USD 1.2 trillion in 2022 (Figure 1a).[n] APEC represented a fairly unmoving 51 percent of world gross exports of ITA3 goods during this period (Figure 1b). These are lower than APEC's gross exports of both the ITA1 (USD 3.2 trillion) and the ITA2 (USD 1.9 trillion) in 2022, which respectively represented 85 percent and 75 percent of world gross exports.[o]

APEC's relative performance on ITA3 goods trade suggests that there is a significant room for improvement—a room which may be filled in many ways. One way is by minimising tariffs, which is also the primary objective of the ITA1 and the ITA2. For context, the latest data from the WTO shows that APEC's mean MFN tariff for ITA3 goods has been decreasing over the past two decades (Figure 2a). Mean rates dropped from 6.3 percent in 2000 to 3.4 percent in 2022, although it remains higher than both the ITA1 (0.9 percent) and the ITA2 (1.8 percent).[p]

A closer examination of the mean MFN tariffs by HS 6-digit product codes further reveals that the number of ITA3 goods with duties above five percent went down from 118 in 2000 to 75 in 2022. Notwithstanding these improvements, the maximum MFN tariff for ITA3 goods could still reach as high as 20 percent.[q] It is worthwhile to note that despite improvements on tariff levels and it being traded less in terms of value relative to the ITA1 and the ITA2, the ITA3 has the largest monetary equivalent of its mean MFN tariffs at USD 38.2 billion in

[l] For consistency, the product codes from these lists were translated into the 1996 HS nomenclature, thus rendering a combined 307 unique product codes. However, following the WTO definition, 17 product codes with ex-outs have been removed, except for 8529.90 and 8456.10. APEC gross exports of these omitted products with ex-outs had a value of USD 622 billion in 2022.

[m] Twelve product codes overlap with the ITA1 while 15 product codes overlap with the ITA2.

[n] For comparison, gross imports of ITA3 goods were valued at USD 0.3 trillion in 2000 and USD 1.1 trillion in 2022. This represents a CAGR of 5.6 percent.

[o] APEC share of world gross imports of ITA3 goods reached 47 percent in 2022, lower than both the ITA1 (76 percent) and the ITA2 (67 percent).

[p] Contrary to expectations, both the ITA1 and the ITA2 mean MFN tariff rates are not zero because of two potential reasons. First is that since tariffs data is patchy, the analysis used the preceding year tariff rate to complete missing years. Second is that some economies are still imposing non-zero tariffs on listed ITA goods.

[q] For comparison, the maximum MFN tariffs for the ITA1 and the ITA2 in 2022 were 8.3 percent and 13.9 percent, respectively.

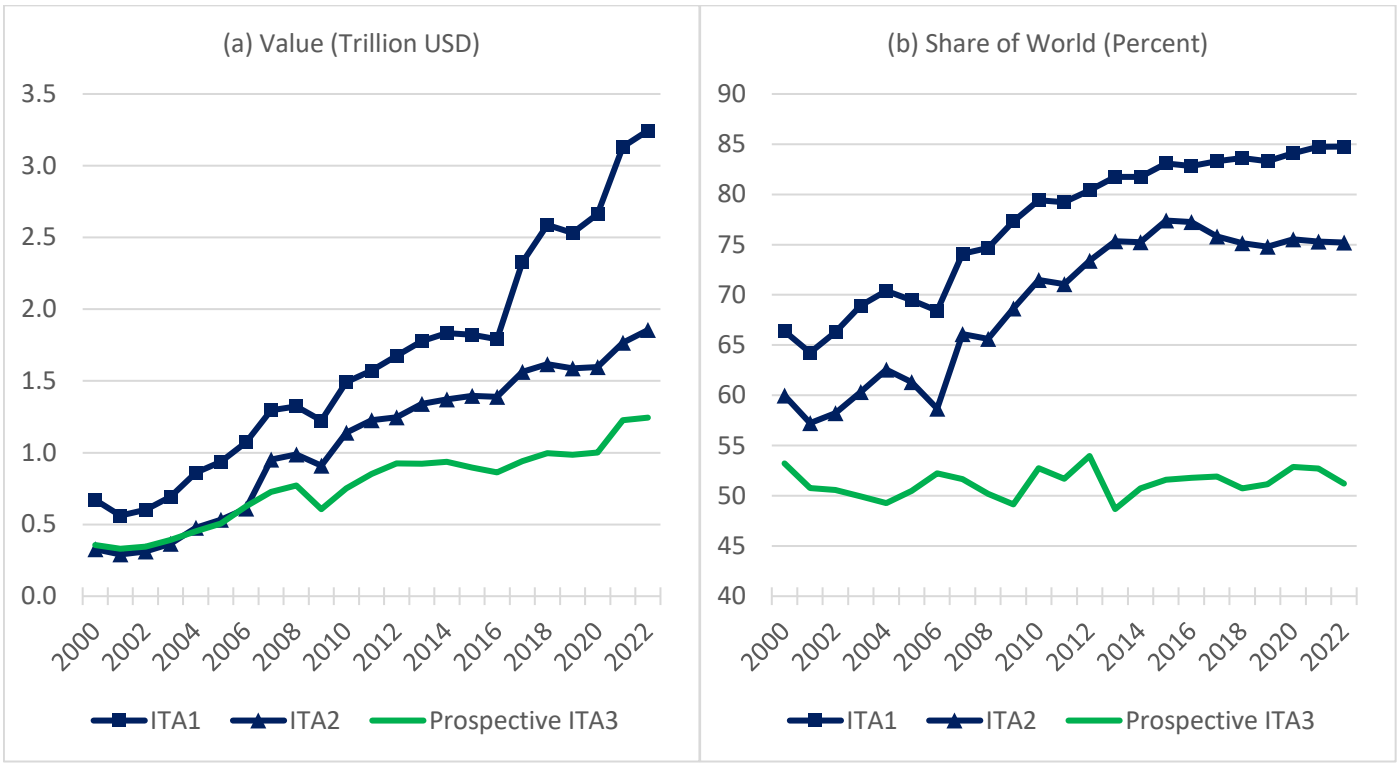

Figure 1. APEC gross exports of ITA goods in 2000–2022, by category

Note: Following the WTO methodology, re-exports from Hong Kong, China are excluded, while the world aggregate includes intra-EU trade. Data for Hong Kong, China from 2017 onwards are estimated. Data for missing years are estimated based on the nearest previous year data available. Source: APEC PSU calculations using data from UN Comtrade (downloaded via WITS) (accessed 26 June 2024).

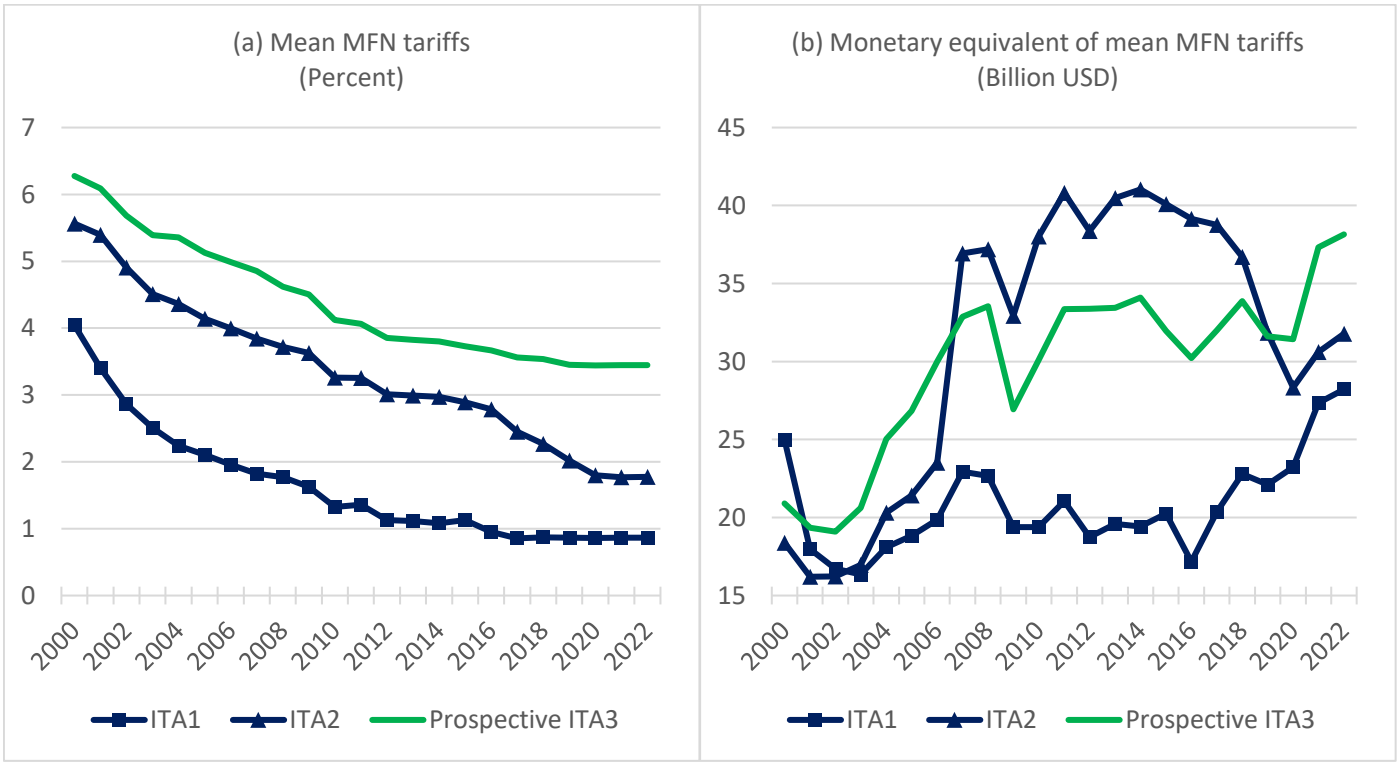

Figure 2. APEC mean MFN tariffs and its monetary equivalent in 2000–2022, by category

Note: Mean MFN tariff rates are calculated by first averaging simple averages at the economy level and then at the regional level. Data for missing years are estimated based on the nearest previous year data available. Monetary equivalent of mean MFN tariffs is calculated based on gross imports. Source: APEC PSU calculations using data from the WTO Integrated Database (downloaded via WITS) (accessed 9 July 2024).

2022 (Figure 2b). This is about 35 percent and 20 percent more compared to the ITA1 (USD 28.2 billion) and the ITA2 (USD 31.8 billion), respectively.

Liberalising tariffs on ITA3 goods reduces inefficiencies from tariffs, which could then encourage productivity gains and innovation activity. Ahn et al. (2018), for instance, demonstrated that a percentage point decline in input tariffs generated a two percent increase in total factor productivity.[28] Similar gains are echoed partly by other studies like Shu and Steinwender (2018) that observed how gains could be felt differently—emerging economies tend to see a positive impact on firm productivity and innovation as a result of trade liberalisation, whereas developed economies benefit more from export opportunities and better access to imported intermediates since this encourages innovation activities.[29] As alluded to earlier, other factors can also affect whether or not an economy successfully benefits from trade liberalisation (see Box 2).

Going beyond just tariffs

Tariff liberalisation is part and parcel of the ITAs but to truly achieve the goals of the APA requires economies to go beyond just that. Notably, NTMs, which remain largely unresolved in both the ITA1 and the ITA2, are becoming a more pressing concern in the current trade environment. However, the treatment of NTMs can be complicated primarily because of two reasons. First is that the costs of NTMs are not easily observed. Unlike tariffs, NTMs typically affect trade through procedural obstacles, such as transparency issues, inconsistent or discriminatory implementation, and conformity assessments. Second is that NTMs could be a policy tool to advance legitimate public policy objectives. For example, an NTM specifying certain technical requirements ensures that a product is safe for consumer use. Notwithstanding, NTMs can still translate to extra costs for most firms, especially micro, small, and medium-sized enterprises (MSMEs).

One way to explore the potential burden imposed by NTMs is by calculating descriptive incidence indicators, such as the percentage of traded goods subject to NTMs and the value of affected trade.[30] It is important to understand that these descriptive indicators neither account for stringency nor for how the NTMs are being implemented. In other words, this analysis examines only the presence of NTMs in policies. In addition, this analysis follows the approach done by Kuriyama et al. (2023), which presents these incidence indicators not only from the standard perspective of the reporting economy (domestic, that is, pertaining to NTMs that the economy applies on itself) but also those imposed by partner economies (foreign).[35] This minor modification was done by interchanging the reporting economy and partner economy variables before merging it with reported NTMs data.

Figure 3a shows that 85 percent of APEC ITA3 gross imports and 84 percent of gross exports were affected by at least one NTM, whether domestic or foreign.[r]

Box 2. Strengthening other "cogs in the wheel" to benefit from a prospective ITA3

The journey to success extends beyond one's participation in an ITA, whether the first or its expansions. It necessitates the strengthening of related factors, such as an economy's absorptive capacity. Improved technology diffusion from freer trade offers little benefits if the receiving firms and industries cannot utilise these technologies productively. One study suggests that success is more likely if highly productive firms are already present prior to trade liberalisation as it mitigates the "low-productive entrant effect"—a phenomenon whereby new entrants, due to their exposure to low-productive firms, tend to adopt similarly low-productive technologies, thereby negatively impacting overall labour productivity.[31]

Parallel strengthening of firm-level and industry-level variables is crucial.[32] Firm-level factors could include involvement in the innovation process and characteristics such as size, location, and human capital development. Industry-level capacities could encompass the presence of trade associations lobbying for government funding, the diversity of available diffusion paths (e.g., network effects and competition), and a supportive policy environment, such as intellectual property rights protection and openness to foreign direct investments.

The proliferation of digital services, which can also enhance firm productivity, adds further complexity. The regulatory environment for services trade is more intricate compared to goods, primarily due to the prevalence of behind-the-border measures specific to services. This complexity is magnified in the realm of digital services trade. A 2020 study by the APEC PSU highlighted the diverse regulatory approaches of different economies, illustrating the varied landscapes that digital services providers and users must navigate.[33]

Underscoring the importance of reforms in complementary areas such as labour and product markets, Ahn et al. (2018) emphasised that the productivity effects of trade liberalisation could vary depending on existing policies and institutions.[34] They referenced a study by Helpman and Itskhoki (2014), which showed that labour market frictions could lead to labour misallocation, hence depressing productivity during the transition to a new status quo (steady state) following trade liberalisation.

[r] NTMs are counted only when there is trade for a reporter-partner-product pair (connection). The APEC aggregate is calculated by summing the economy-level figures. This means that intra-APEC trade is included in the APEC aggregate.

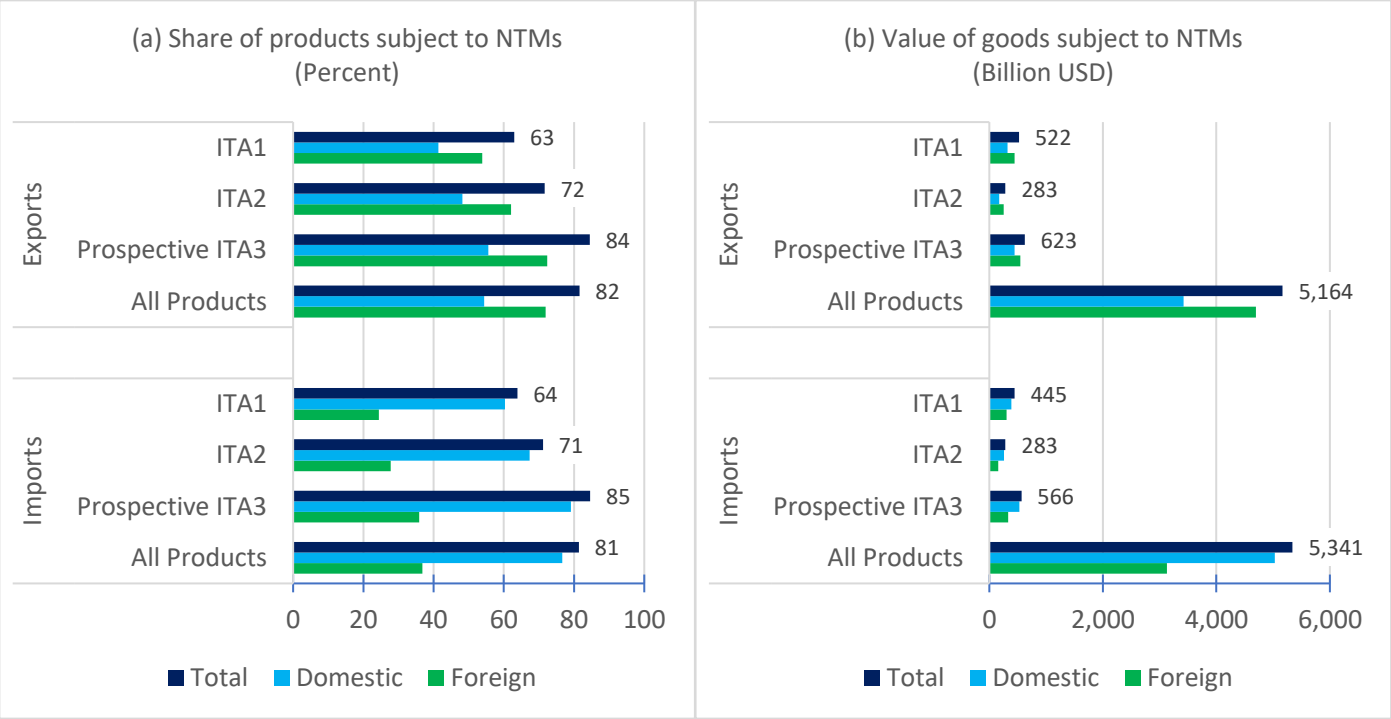

Figure 3. Incidence of NTMs on APEC trade, by category

Note: Data labels shown are for the totals. NTMs data is the latest year available for each economy (N=130). Trade data is the average of trade during the period 1996–2023. APEC aggregate includes intra-APEC trade. APEC aggregate does not include Chinese Taipei due to NTMs data unavailability. The sum of trade affected by domestic NTMs and foreign NTMs will exceed the total since some products are affected by NTMs imposed by both the exporting and importing sides. Source: APEC PSU calculations using data from the UNCTAD Trade Analysis Information System and UN Comtrade (downloaded via WITS) (accessed 28 September 2024).

These percentage shares are noticeably higher compared to ITA1, ITA2, and even for all products. Interestingly, exporters face both foreign and domestic NTMs, while importers are primarily impacted by domestic NTMs, indicating a greater prevalence of import NTMs on trade. Estimates for ITA3 reveal that USD 566 billion worth of gross imports and USD 623 billion worth of gross exports are affected, higher than the figure for ITA1 and ITA2 (Figure 3b).

The most prevalent type of domestic NTM applied by APEC economies on their imports of ITA3 goods is technical barriers to trade (TBT) measures, covering 61 percent of traded goods (Table 2). For example, electric vehicle supply equipment (HS 85) must undergo verification and inspection procedures to ensure its adherence to quality requirements.

Meanwhile, partners imposed mostly export licences, quotas, prohibition and other restrictions other than for sanitary and phytosanitary (SPS) or TBT reasons, which affected 23 percent of APEC's imports of ITA3 goods. Saudi Arabia, for instance, restricts the exportation of agglomerated synthetic or natural diamonds (HS 6804.21), justified under the General Agreement on Tariffs and Trade (GATT) Article XX(d).[s] Diamonds are useful in dissipating heat in power electronics.[36]

For APEC exports of ITA3 goods, Table 3 shows that APEC economies primarily applied on themselves export licences, quotas, prohibition and other restrictions other than for SPS or TBT reasons (37 percent). One example is a licensing measure regulating the exportation of gold (HS 7108.13) to safeguard domestic financial security and to monitor domestic consumption. Gold is a key material widely used in electronics due to its malleability and resistance to corrosion, offering superior qualities compared to other highly conductive metals like copper and silver.[37]

[s] This provision is within the general exceptions, specifically on measures necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of the [GATT], including those relating to customs enforcement, the enforcement of monopolies operated under paragraph 4 of Article II and Article XVII, the protection of patents, trade marks and copyrights, and the prevention of deceptive practices.

Type	ITA1	ITA2	Prospective ITA3	All Products
Domestic NTMs				
A	12.4	15.3	19.9	26.5
B	50.1	54.3	60.7	58.5
C	11.6	12.0	17.8	20.4
D	0.0	0.0	0.0	0.1
E	26.4	31.0	33.1	32.4
F	38.8	44.4	50.7	50.2
G	5.6	6.1	7.6	7.0
H	5.6	6.1	7.7	7.1
I	0.2	0.0	0.1	0.4
J	0.0	0.0	0.0	0.0
Foreign NTMs				
P	24.4	27.8	35.9	36.8
P1	10.1	11.3	13.2	15.6
P2	4.3	4.8	5.1	4.7
P3	14.5	16.9	22.6	20.7
P4	8.5	10.2	11.3	11.2
P5	1.5	1.5	1.8	1.7
P6	4.6	5.1	5.9	6.0
P7	2.8	3.0	3.4	3.3
P9	7.1	8.1	9.5	9.7

Table 2. Share of APEC imported products subject to NTMs, by category (percent)

A-SPS measures; **B**-TBT measures; **C**-Pre-shipment inspection and other formalities; **D**-Contingent trade-protective measures; **E**-Non-automatic import licensing, quotas, prohibitions, quantity-control measures and other restrictions not including SPS measures or measures relating to TBT; **F**-Price-control measures, including additional taxes and charges; **G**-Finance measures; **H**-Measures affecting competition; **I**-Trade-related investment measures; **J**-Distribution restrictions; **P**-Export-related measures; **P1**-Export measures related to SPS measures and TBT; **P2**-Export formalities; **P3**-Export licences, quotas, prohibition and other restrictions other than SPS or TBT measures; **P4**-Export price-control measures, including additional taxes and charges; **P5**-State-trading enterprises, for exporting, other selective export channels; **P6**-Export-support measures; **P7**-Measures on re-export; **P9**-Export measures not elsewhere specified.

Source: APEC PSU calculations using data from the UNCTAD Trade Analysis Information System and UN Comtrade (downloaded via WITS) (accessed 28 September 2024).

Meanwhile, the most prevalent type of import NTM imposed by partners is TBT measures, affecting 58 percent of traded goods. For instance, Ecuador applies a mandatory standard regulating HS 8481.80 (appliances for pipes, boiler shells, tanks, vats, or the like), which is implemented to protect human health and safety. Thermostatically controlled valves, which fall under this sub-heading, are key components in many renewable energy systems like wind turbines.[38]

Type	ITA1	ITA2	Prospective ITA3	All Products
Foreign NTMs				
A	7.2	8.7	13.6	19.6
B	44.2	50.6	57.7	57.8
C	15.7	19.3	20.7	21.6
D	0.0	0.0	0.0	0.1
E	28.5	35.4	37.9	35.0
F	23.9	27.9	32.9	32.7
G	7.7	8.8	10.6	10.0
H	3.4	4.0	4.2	3.7
I	0.5	0.5	0.6	0.7
J	0.0	0.0	0.0	0.0
Domestic NTMs				
P	41.4	48.2	55.6	54.4
P1	16.0	19.5	21.2	23.2
P2	6.8	8.1	7.7	6.3
P3	28.2	32.1	36.9	32.1
P4	14.2	17.6	18.7	17.9
P5	0.2	1.2	1.0	0.4
P6	8.5	9.2	10.0	10.0
P7	5.4	6.1	6.1	5.2
P9	5.5	7.1	6.9	8.2

Table 3. Share of APEC exported products subject to NTMs, by category (percent)

A-SPS measures; **B**-TBT measures; **C**-Pre-shipment inspection and other formalities; **D**-Contingent trade-protective measures; **E**-Non-automatic import licensing, quotas, prohibitions, quantity-control measures and other restrictions not including SPS measures or measures relating to TBT; **F**-Price-control measures, including additional taxes and charges; **G**-Finance measures; **H**-Measures affecting competition; **I**-Trade-related investment measures; **J**-Distribution restrictions; **P**-Export-related measures; **P1**-Export measures related to SPS measures and TBT; **P2**-Export formalities; **P3**-Export licences, quotas, prohibition and other restrictions other than SPS or TBT measures; **P4**-Export price-control measures, including additional taxes and charges; **P5**-State-trading enterprises, for exporting, other selective export channels; **P6**-Export-support measures; **P7**-Measures on re-export; **P9**-Export measures not elsewhere specified.

Source: APEC PSU calculations using data from the UNCTAD Trade Analysis Information System and UN Comtrade (downloaded via WITS) (accessed 28 September 2024).

How Can Economies Ensure a Bold ITA3?

Strengthen dialogues between governments and industries to identify potential ITA3 products

The rapidly changing technological landscape necessitates the inclusion of new products and manufacturing equipment, particularly those poised to drive environmentally sustainable and resilient economic growth in a prospective ITA3. Historically, the private sector has played a key role in shaping the past ITAs. Learning from this, it would be beneficial for governments and industries to strengthen dialogues to systematically identify potential ITA3 products, like

those examples in Table 1. The approach for these dialogues could be further discussed and agreed upon.

One possibility is to utilise established frameworks. In the case of the WTO, the ITA Committee is well-suited for this task, given its role in reviewing and expanding product coverage. In APEC, the APEC Business Advisory Council (ABAC) serves as a conduit to gather private sector insights on the merits of an ITA3 and potential products to include. The ITA3 also presents an opportunity for economies to reconsider products that were excluded in the ITA1 and/or the ITA2, despite being present at that time. To elicit fruitful discussions and actionable outcomes, economies could initiate workshops or informal meetings centred around digitalisation in specific sectors.

Relook approaches to ensure that the ITA3 remains evergreen

Although the ITA1 and the ITA2 were both negotiated using a positive list approach, this may not be the optimal method. Arguably, this approach has led to a narrow interpretation of eligible products.[39] Given the rapidly changing technological landscape, where digital components are becoming more pervasive, bolder solutions should be considered for a prospective ITA3. This could be by using a negative list approach instead where listed products are those that are excluded from the agreement. In effect, a negative list approach could overcome the issues of exclusions and insufficient coverage that have beset the past ITAs. If a positive list remains preferred, participants could agree on product coverage using 4-digit HS headings instead of the current 6-digit HS sub-headings. Alternatively, economies could consider a mix of these approaches. If history is of any guide, previous ITA negotiations have been successfully concluded through the use of creative approaches.[40]

Incorporate stronger interventions related to NTBs

Recognising that not all NTMs are NTBs, it is important to systematically assess NTMs affecting prospective ITA3 goods to properly identify NTBs. These NTBs add additional burdens on firms, resulting in inefficiencies that could undermine tariff liberalisation efforts. With the continued reduction or removal of tariffs, NTBs have arguably become the primary concern of economies and traders. The ITA Committee's role includes consulting on such measures for trade in eligible products under the ITAs. While the Committee has undertaken various activities (including formulating an NTMs work programme, adopting guidelines, and organising capacity-building workshops), stronger interventions are needed. For instance, negotiating an elimination of identified NTBs could be a focus area.

Deepen the ITA3 by institutionalising provisions on capacity building

Capacity building should be at the core of a potential ITA3. Recent trade agreements often include chapters or provisions on this matter. For example, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) had a dedicated chapter recognising cooperation on implementation, enhancing absorptive capacity, and promoting and facilitating trade and investment.[41] Bilateral agreements like the Peru-Australia Free Trade Agreement (PAFTA) have similar provisions.[42] In addition, a proposal was made in the WTO to institutionalise regular symposiums or workshops where industry representatives and stakeholders can share the latest developments in the ICT sector and enhance information sharing on the implementation of the ITA1, among others.[43]

To fully leverage the products included in the prospective ITA3, participants must recognise the importance of capacity building. For importing economies, the usefulness of energy-efficient products and smart manufacturing technologies depends on suitable infrastructure and the population's skills to effectively utilise them. Likewise, participation in GVCs for these products require robust human capital. Employment policies and practices must be reevaluated to ensure that digitalisation contributes to employment quality and productivity while addressing its challenges, preventing them from becoming barriers to digital adoption.[44] For exporting economies, increasing the trade value of these products depends on strong market demand. Capacity building activities tailored to the unique needs of individual participating economies are critical to realising the prospective ITA3's full potential. These activities should extend beyond just product scope to include other "cogs in the wheel" of the digital economy.

The Role of APEC in the International Stage

As recounted earlier in this policy brief, APEC's fingerprints could arguably be found throughout the development of the ITA1 and the ITA2. Now, APEC has another opportunity to lead the way with a more ambitious ITA3. To begin with, APEC needs to send a strong signal that pursuing agreements like the ITA and its expansions is valuable, particularly in an environment of increasing protectionism. A practical step towards this goal is ensuring full participation by member economies in existing ITAs.

Moreover, APEC must recognise that while the existing ITAs could have contributed to the increase in trade of related goods, there are limitations that may have

constrained the potential benefits. Technological advancements have led to the exclusion of many products from the existing ITAs, including those that could promote environmentally sustainable and resilient economic growth. Lower tariffs could facilitate the trade of these products. It is also crucial for the prospective ITA3 to address factors beyond tariffs, such as better approaches for identifying product lists, NTBs, and the absorptive capacity of participating economies, some of which could have been overlooked in the existing ITAs.

The current structure of APEC ideally positions it to discuss these matters. The Market Access Group (MAG), for instance, focuses on issues related to tariffs and NTMs and engages in efforts to support the multilateral trading system. Additionally, digital-related works undertaken by the Digital Economy Steering Group (DESG) and other relevant fora, like the Policy Partnership on Science, Technology and Innovation (PPSTI), can enrich the discourse on what is necessary for a prospective ITA3 to reach its full potential. Cross-fora dialogues, whether bilateral or more, can be highly effective.

Furthermore, APEC could leverage insights from ABAC to better understand the private sector's perspective on their desired direction, opening pathways for possible collaboration and coordination. Conducting a deeper study on how APEC economies have benefited from the existing ITAs and how a prospective ITA3 could build on these benefits would value-add to the discussions. APEC's coordinating role also makes it an excellent platform for sharing knowledge and facilitating capacity building activities.

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