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The Costs of Hidden Measures: APEC's Experience with Non-Tariff Measures (NTMs)

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KEY MESSAGES

- Because of a dynamic international trade, goods from across the globe are just within reach. Interconnected supply chains bring economies closer together, but such interdependence makes them vulnerable to trade frictions, such as non-tariff measures (NTMs).
- Despite its impact on trade, it is important to understand that not all NTMs are harmful (i.e., non-tariff barriers). In fact, some NTMs can be trade-facilitating rather than trade-restricting. Many NTMs are also policy tools to advance legitimate public policy objectives.
- Recent data suggests that a significant portion of bilateral trade relationships are affected by NTMs, both globally and in APEC. Some NTMs are also more common than others depending on the industry. Nonetheless, presence alone does not necessarily mean that there are problems—the stringency of procedures is often more relevant.
- Challenges affecting NTMs can be wide-ranging. For instance, it could be as fundamental as differences in development levels and regulatory focuses or the ambiguity of determining "like products". Issues on regulatory heterogeneity and uneven or inconsistent transparency could also increase trade costs. The same goes for procedural burdens arising from conformity assessments and compliance.
- Managing or addressing these challenges requires economies to strike a delicate balance between pursuing domestic policy objectives and minimizing potential trade-restrictive effects. For example, they can include regulatory impact assessments into institutional processes, provide capacity building and technical assistance, and explore creative solutions to overcome the narrow definition of "like products". In the same way, economies could also consider different approaches to resolve regulatory heterogeneity, strengthen efforts to communicate information on NTMs, and develop more flexible and streamlined procedures for implementing measures.
- Ultimately, when cross-cutting challenges like NTMs exist, a logical approach is to think regionally but speak globally. Solutions cannot be siloed, nor should actions be unilateral. Yet, the reality is that each economy operates under different conditions that can shape readiness and reform—circumstances that could be respected through careful diplomacy and a common goal.
- Amid this landscape, APEC's adoption of the Cross Cutting Principles on NTMs in 2018 provides valuable guidance to develop and implement NTMs, laying the foundations to prevent unjustified barriers to trade.

Introduction

Products from around the world have become part of our daily lives. For example, many people can easily enjoy coffee beans from the Americas and tea from Asia—both conveniently placed on your office table. Because of a dynamic international trade, goods from across the globe are just within reach.

Among the wide range of traded goods globally, electronic devices are especially significant. Nowadays, smartphones and laptops have become indispensable to our daily lives, with innovative models and cutting-edge technologies continuously shaping how we live and work. However, many people take for granted our access to high-quality and advanced electronics that largely depends on international trade.

Take the smartphone as an example. It travels across the globe through a complex global supply chain.[1] By specializing on key components, businesses can make production processes more efficient and cost-effective. This means that consumers can get an affordable, high-quality smartphone within a shorter delivery time.

While global supply chains bring benefits, they can also come with looming risks. These interconnected supply chains bring economies closer together, but such interdependence makes them vulnerable to trade frictions. For example, a supply shortage in just one key component can disrupt the entire production line.[2]

This vulnerability emerged in 2019, when export restrictions were imposed on key chemical inputs of semiconductors—essential components in electronic devices.[3] The export restrictions on key components of semiconductors can lead to the disruption of entire global electronics supply chains,[4] ultimately driving up production costs.

While these restrictions were eased in 2020 during the COVID-19 pandemic, new challenges emerged as measures affecting logistics services and shipping capacity came into force. Additionally, global lockdowns led to the closure of some manufacturing plants, further disrupting semiconductor supply chains.[5]

Such risks affect both producers and consumers. Production and shipping delays could mean that anyone would get stuck in a long queue for the latest smartphone model because inventory is limited. But the smartphone industry's experience is not an isolated one. Similar delays may also happen to any products that are produced overseas or are part of global supply chains.[6] And this recurring story reveals one stark fact: that the costs of hidden measures are all around us.

This policy brief provides a broad context on these hidden measures by drawing insights from APEC's experience with non-tariff measures (NTMs) and highlighting challenges that economies often face. In addition, it provides a set of policy approaches to help policymakers manage or address these challenges, including a call-to-action for APEC to speak globally and to think regionally about these hidden measures.

Overview of NTMs

NTMs are formally defined as "policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both."[7] This internationally accepted definition, however, is broad, which makes it difficult to properly manage and study the impact of such measures. This is why the international community, through the Multi-Agency Support Team (MAST) group,[a] worked together to develop a common taxonomy for NTMs.

Figure 1 illustrates a simplified framework on the taxonomy of NTMs. It follows a similar hierarchical structure akin to the Harmonised System used to categorize international trade in goods. At its broadest level, NTMs are categorized by trade flow or direction, that is, into import NTMs and export NTMs. These are further sub-divided into chapters that explore broad categories (level 2) and finally into more detailed categories of up to three digits (level 3).

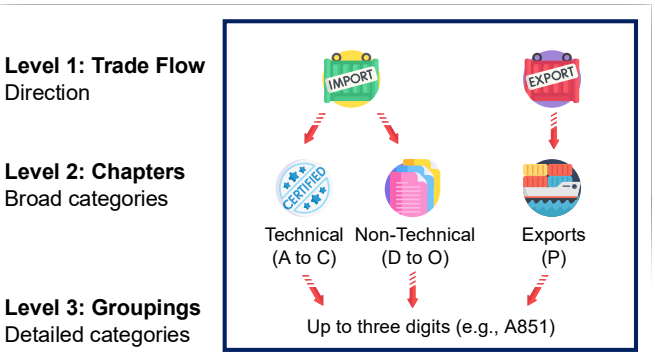

Figure 1. Simplified framework on the taxonomy of NTMs
Source: Adapted from UNCTAD (2019).[8]

[a] The MAST group is formed by representatives from the Food and Agriculture Organization (FAO), the International Trade Centre (ITC), the Organisation for Economic Co-operation and Development (OECD), UN Trade and Development (UNCTAD), the United Nations Industrial Development Organization (UNIDO), the World Bank, and the World Trade Organization (WTO).

Despite its impact on trade, not all NTMs are harmful (i.e., non-tariff barriers or NTBs). In fact, some NTMs can be trade-facilitating rather than trade-restricting. Many NTMs are also policy tools to advance legitimate public policy objectives, such as technical requirements specifying acceptable standards to ensure product safety and consumer confidence (see Box 1). The international taxonomy of NTMs, however, was developed without prejudice to the legitimacy, adequacy, or necessity of such measures—focusing instead on creating a system that fosters transparency and the reporting of comparable and reliable data.

Most NTMs affect imported products, which is why the international taxonomy has a greater emphasis on identifying import NTMs. These measures can either be technical or non-technical. The former are directly related to product quality, typically accompanied by some form of conformity assessment, pre-shipment inspections, and other formalities. This includes sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT), which have great prevalence across APEC. Meanwhile, the latter are often related to broader policies and are more complicated and more difficult to identify. Some examples include price-controls, finance measures, distribution restrictions, and subsidies, among others.

Compared to import NTMs, export measures have a more streamlined classification, generally mirroring categories found under import NTMs. Measures affecting exports are generally fewer and targeted.

Box 1. Why do NTMs exist?[10]

NTMs can vary in their purpose. Some NTMs are non-tariff barriers (NTBs), as they are directly protecting a local producer, or they are more trade-restrictive than necessary to achieve a specific objective. Such barriers can take the form of import quotas, prohibitions, and licensing and contingent trade-protective measures, just to name a few.

However, not all NTMs are NTBs. Indeed, there is a rising number of NTMs launched with legitimate objectives, such as domestic security, customer welfare, and the protection of health and safety affecting life. For example, imported meat and seafood in the supermarket must meet specific standards for storage, shipping, and packing to ensure that they remain fresh. These regulations primarily aim to protect human health and consumer welfare.

The examples of legitimate objectives above demonstrate that trade is not the only concern when economies launch NTMs. In fact, many NTMs in the world are directly related to goals associated to sustainable development and have become a policy tool for economies to advance legitimate concerns.

Landscape of NTMs in APEC

As the international taxonomy suggests, understanding NTMs can be complicated. For instance, despite the presence of a common taxonomy, generating reliable and comparable NTMs data remains costly, difficult, and nuanced—which is why no single database fully captures the breadth and depth of these measures.

The trade costs of NTMs themselves are also not easily observed. Unlike tariffs, NTMs are not necessarily explicit as they could be hidden and could affect trade through procedural obstacles, such as transparency issues, inconsistent or discriminatory implementation, and conformity assessments.

While ad valorem equivalents (AVEs) attempt to capture the impact of NTMs (expressed as a tariff equivalent shown as a percentage of the traded value), its estimation relies heavily on the availability of accurate and detailed price data.[9] Moreover, methodological challenges, such as the treatment of non-protectionist NTMs, can also complicate the policy relevance of these empirical analyses. Hence, while the use of AVEs attaches a "price tag" on NTMs, its appreciation must be carefully understood alongside broader contexts.

Recognizing these limitations, this assessment provides that broader context by profiling the landscape of NTMs in APEC. It utilizes two databases, namely:

(1) the UNCTAD Trade Analysis Information System (TRAINS), which provides information on the presence of NTMs but not on its stringency; and

(2) the Global Trade Alert (GTA) Database, which categorizes NTMs by its potential discriminatory effect, identified by experts and volunteers globally.

Each of these databases has their own usefulness and limitations, hence a full understanding of the broader picture of NTMs affecting APEC is best understood by comparing common insights from these sources.[b]

A significant portion of bilateral trade relationships are affected by NTMs

An analysis of NTMs data from the UNCTAD TRAINS database suggests that a significant portion of all bilateral trade relationships are affected by at least one

[b] Another widely used database is the WTO Integrated Trade Intelligence Portal (I-TIP). However, data from this database is available only up to 2021.

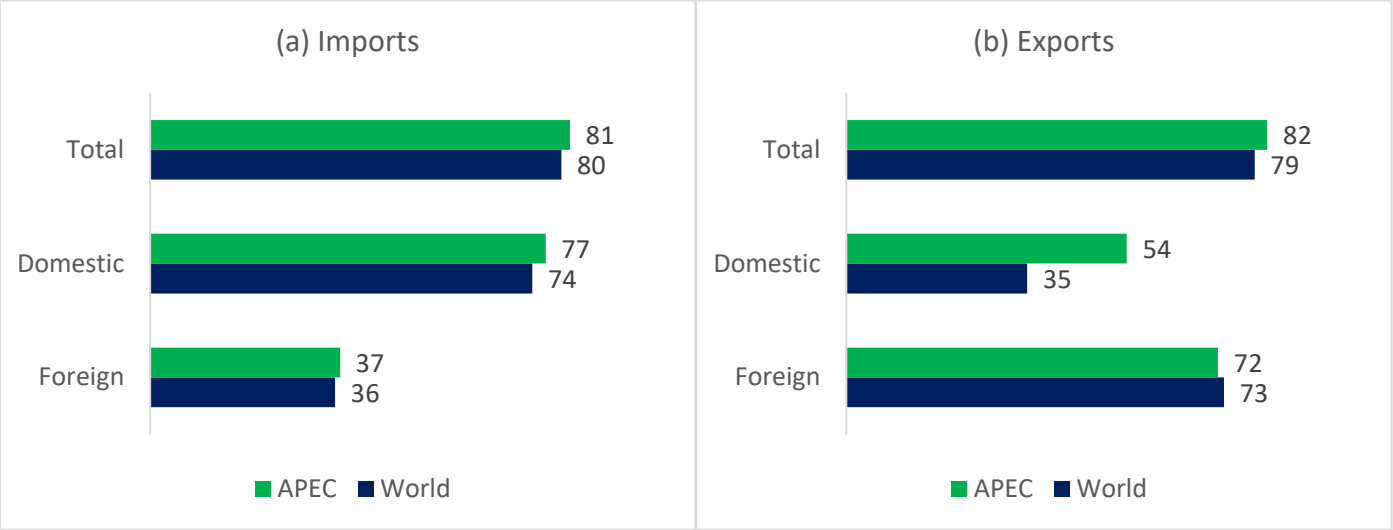

Figure 2. Share of all bilateral trade relationships affected by NTMs, by category (percent)

Note: Domestic NTMs are those that the reporter economy implements on itself, while foreign NTMs are measures imposed by partners. NTM data is the latest year available for each economy (N=131). Trade data is the average of trade during the period 1996-2023. Number of reporter-partner-product combinations with APEC trade: 3,660,680 (imports) and 4,186,732 (exports). APEC aggregate includes intra-APEC trade. APEC aggregate includes data from 20 economies available in UNCTAD TRAINS. The sum of trade affected by domestic 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 (TRAINS) and UN Comtrade (downloaded via the World Integrated Trade Solution or WITS) (accessed 28 September 2024).

NTM (Figure 2). This is true for both APEC and the World, although APEC has a slightly larger percentage of affected relationships.[c] Generally, both importers and exporters are mostly affected by NTMs put in place at the destination market rather than at the source of origin.

Some NTMs are more relevant than others depending on the industry

The prevalence score, which measures the average number of NTMs, is another useful indicator to explore breadth. Across all APEC bilateral trade relationships, the prevalence score reached 4.4 for imports and 1.4 for exports—indicating that importers are three times more exposed to NTMs implemented by APEC.

Moreover, the prevalence score shows that APEC implements around 2–3 times more NTMs on agriculture than on goods related to natural resources and manufacturing (Figure 3). Specific to agriculture imports, 10.1 measures (84 percent) are related to technical measures like SPS and TBT, higher shares than those observed in other groupings (Figure 3a). There is also a significant proportion of technical measures affecting agriculture exports (Figure 3b).

While the high prevalence of such regulations on agricultural products is expected since these ensure the protection of health and safety, it is a concern for APEC economies exporting agricultural products when trade measures are inappropriately designed or implemented, as they can undermine growth and curb trade potential. For instance, a 2023 APEC report examining case studies on major grain trade highlighted the significant burden that exporters experienced from varied regulatory regimes on maximum residue limits (MRLs) from pesticides and required information on phytosanitary certificates.[11] From these case studies, it shows that, under certain circumstances, the absence of a common standard for MRLs has led to zero tolerance, which has been flagged by businesses as impractical (i.e., more trade restrictive than necessary).

Among the non-technical measures, those involving price-controls and traditional trade measures like licenses and quotas were the most common types. Although non-agricultural trade experiences a lower exposure to NTMs compared to agricultural trade, it remains susceptible to burdensome requirements and

[c] The standard approach is to count the number of product codes affected by NTMs. However, this masks asymmetries across partners. To capture these partner-specific incidences, we calculate bilateral frequency indices at the reporter-partner-product level (relationship).

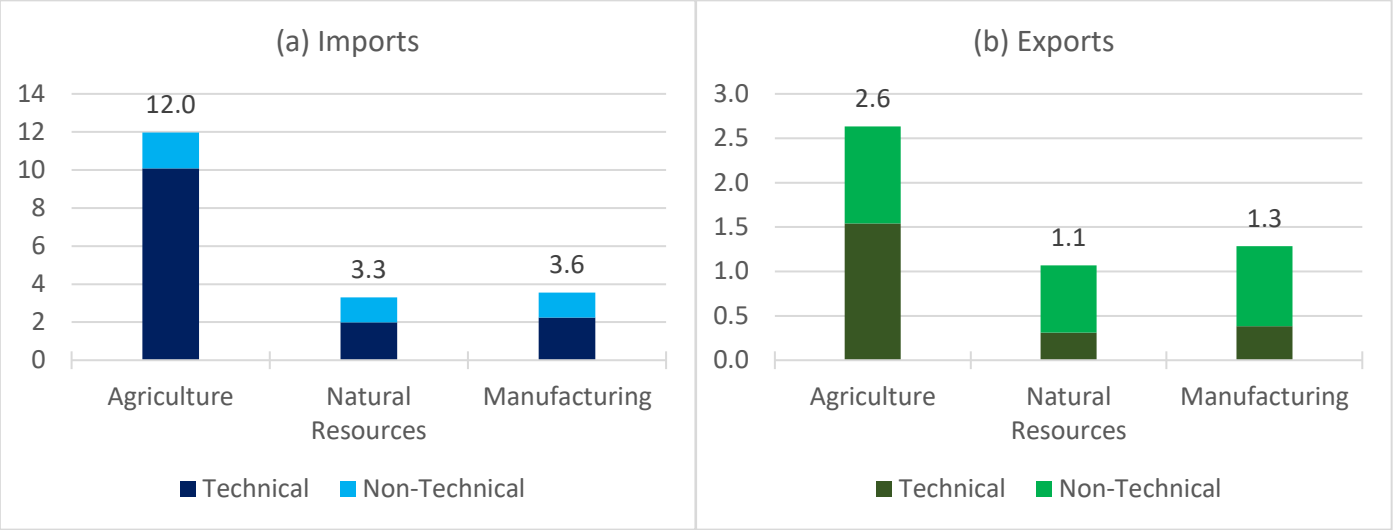

Figure 3. Average number of NTMs implemented by APEC, by broad industry (number per trade relationship)

Note: Data labels are sums. NTM data is the latest year available for each economy (N=131). Trade data is the average of trade during the period 1996-2023. Number of reporter-partner-product combinations with APEC trade: 3,660,680 (imports) and 4,186,732 (exports). APEC aggregate includes intra-APEC trade. APEC aggregate includes data from 20 economies available in UNCTAD TRAINS. Source: APEC PSU calculations using data from UNCTAD TRAINS and UN Comtrade (downloaded via WITS) (accessed 28 September 2024).

additional trade costs. A 2018 APEC report, for example, examined the textiles and garments industry and emphasized the procedural burden caused by the inconsistent implementation of measures, abrupt regulatory changes, and divergence from international standards.[12] A similar experience was reported by exporters of goods reducing greenhouse gas emissions, which identified trade formalities and quantity restrictions (both non-technical measures) as their most widely recognized barriers to trade.[13]

Presence alone does not necessarily mean that there are problems

Data from the GTA database indicates that a total of 23,587 NTMs implemented by APEC remain in force (as of January 2025). This is higher compared to 8,241 measures identified a decade earlier. Regrettably, only 750 NTMs (3 percent) were evaluated as trade enabling measures. And concerningly, the number of discriminatory NTMs restricting trade has practically tripled since 2015—outpacing both trade-facilitating and potentially discriminatory measures.[d]

Moreover, discriminatory NTMs accounted for about 96 percent of all measures implemented by APEC. Among them, subsidies and other forms of support comprised a significant proportion (64 percent). Other chapters with a noticeable presence of discriminatory NTMs are export measures (24 percent), measures on government procurement (4 percent), contingent trade-protective measures (4 percent), measures on investments (2 percent), and traditional trade measures (1 percent).

Nonetheless, despite the high presence of NTMs across sectors, these do not correlate with having high discriminatory NTMs. Figure 4 shows that only 11 sectors had more than 1,000 NTMs flagged as discriminatory. This suggests that discriminatory NTMs are uneven and highly concentrated in certain sectors.

Challenges Affecting NTMs

Different development levels have different regulatory focuses

Research by UNCTAD shows that economies with higher incomes tend to introduce more NTMs, particularly for consumer protection and for pursuing goals associated to sustainable development.[14] As a result, developed economies apply TBT measures more frequently than economies at other stages of development, primarily targeting imports. In fact, developed economies impose TBT measures on imports three times more than developing members. APEC experiences the same wherein developed economies impose 2.4 TBT measures per imported product compared to 1.3 by developing members.[e]

[d] According to GTA, these are measures that "likely involve discrimination against foreign commercial interests".

[e] Developed economies include Australia; Canada; Japan; Korea; New Zealand; and the United States. The average does not include Chinese Taipei due to data unavailability.

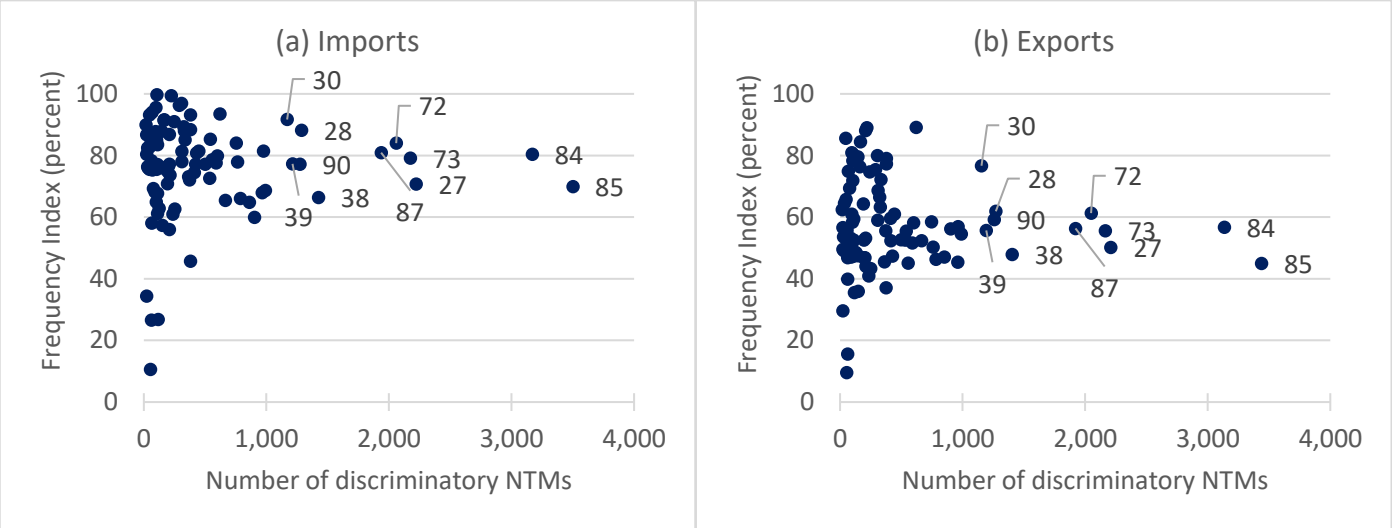

Figure 4. Discriminatory NTMs implemented by APEC vis-à-vis bilateral frequency indices, by HS chapter

Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes (HS 27); inorganic chemicals; organic or inorganic compounds of precious metals, of rare- earth metals, of radioactive elements or of isotopes (HS 28); pharmaceutical products (HS 30); miscellaneous chemical products (HS 38); plastics and articles thereof (HS 39); iron and steel (HS 72); articles of iron or steel (HS 73); nuclear reactors, boilers, machinery and mechanical appliances; parts thereof (HS 84); electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles (HS 85); Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof (HS 87); and optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof (HS 90).

Note: Bilateral frequency indices are the share of all bilateral trade relationships affected by an NTM. Discriminatory NTMs in force as of January 2025. Data labels refer to HS chapters with more than 1,000 discriminatory NTMs. NTM data from UNCTAD is the latest year available for each economy (N=131). Trade data is the average of trade during the period 1996-2023. Number of reporter-partner-product combinations with APEC trade: 3,660,680 (imports) and 4,186,732 (exports). APEC aggregate includes intra-APEC trade. APEC aggregate includes data from 20 economies available in UNCTAD TRAINS. Source: APEC PSU calculations using data from the GTA database (accessed 9 January 2025) and from UNCTAD TRAINS and UN Comtrade (downloaded via WITS) (accessed 28 September 2024).

At the global level, least developing economies tend to adopt more NTMs on exports, such as technical export measures and export licensing. This highlights a key difference: compared to other economies, least developing economies implement fewer technical regulations addressing safety, quality, and the environment. This raises concerns that they may have fewer or weaker standards—an area that may be of interest to APEC as it could hold potential growth for new development or resilient supply chains.[15]

Notwithstanding, these differences may impose disproportionate costs across the supply chain. A key reason is that exporters in developing economies often have limited capacity to meet the higher standards set by developed economies. The lack of experience and accredited verification institutions in developing economies can also increase their compliance burden.[16] In addition, a higher concentration of NTMs is applied in sectors where developing economies have comparative interests, such as agriculture and apparel.

Ambiguity of determining "like products"

Non-discrimination is one of the core principles of the WTO multilateral trading system. Generally, WTO rules do not allow member economies to treat "like products" from partners less favorably compared to their own or to other imported products.[f,17] This principle is also incorporated in the provisions of the General Agreement on Tariffs and Trade (GATT), and the SPS and TBT[g,18] Agreements. However, none of these provides a definitive definition of what constitutes a "like product".[h,19]

While the concept of "like products" may seem straightforward, its determination can sometimes be complex—especially process and production methods (PPMs) that do not affect the final product characteristics.[20] These PPMs usually aim to pursue certain societal values and objectives, such as human rights and the environment. The standard requirements on non-product related PPMs have also increasingly become a policy tool for economies aiming to reduce

[f] GATT Article I, GATT Article III:2 and III:4.
[g] TBT Agreement Article 2.1.

[h] The case for Japan—Taxes on Alcoholic Beverages has an explanation to determine likeness and physical characteristics.

Box 2. NTMs can also be context-specific

Environment-related NTMs. In response to sustainability challenges, economies are increasingly adopting NTMs targeting environmental concerns. These measures are known as environment-related NTMs. APEC economies have been using them more frequently, with the three-year moving average of WTO notifications rising from 505 in 2011 to 875 in 2023.[i]

The proliferation of these NTMs highlights that they have become crucial policy tools, primarily as TBT measures advancing environmental objectives.[21] These goals cover a broad spectrum, including chemical, toxic and hazardous substances management, energy conservation and efficiency, and use of alternative and renewable energy sources.

Gender-related NTMs.[22] While NTMs are not always explicitly designed with gender in mind, their design and implementation could disproportionately affect women as producers, traders, or consumers. For instance, NTMs can impose a greater compliance burden on women entrepreneurs compared to their male counterparts, particularly when women-led businesses are smaller in scale or have less access to technical and financial resources.

Additionally, some NTMs are designed without considering differences between men and women. For example, some pharmaceutical tests overlook different reactions to drugs between men and women. This example highlights the need for women's perspectives in the design and implementation of NTMs to ensure that trade policies are responsive to diverse needs.

NTMs and services. The indirect trade costs caused by NTMs on services are difficult to estimate. Early literature, however, reveals that the stringency of NTMs imposes a negative effect on services exports.[23] This is likely more relevant for services that require physical goods, such as transportation, distribution, and logistics.

carbon footprints, promote eco-friendly products, and improve animal welfare, among others.

However, the complexity of determining "like products" under WTO rules remains unsolved and can hinder the pursuit of legitimate objectives. Between 2019 and 2021, for instance, Indonesia and Malaysia separately raised trade disputes against the European Union (EU) at the WTO. The disputes focused on the EU's renewable energy regulation that aims to reduce greenhouse gas emissions. The regulations sought to phase out the use of palm oil that have high risks of indirect land-use change (ILUC) and introduced a certification scheme for palm oil with low risks of ILUC. However, in both cases, the Panel[j] found that the EU failed to provide sufficient criteria in determining which biofuels were high ILUC risk or low ILUC risk. These deficiencies resulted in arbitrary and unjustifiable discrimination between members where the same conditions prevail. Additionally, the Panel also identified deficiencies in implementing low ILUC risk certification procedures. Together, the EU's measures were deemed inconsistent with the TBT Agreement.[k,24]

Regarding the GATT, the Panel found the EU in violation of the principles of national treatment and most-favoured nation (MFN) treatment. The Panel also found the EU to have failed in justifying its case based on GATT Article XX on General Exceptions.[25,26] Both disputes exemplify that the WTO's current approach to determining "like products"—which excludes the consideration of non-product related PPMs—may fall short of accommodating objectives considered legitimate by a party. In such cases, the defending member needs to provide sufficient evidence or justification to prove its WTO consistency.

Regulatory heterogeneity

The TBT and SPS Agreements allow member economies to adopt NTMs at levels that they considered appropriate to protect their legitimate objectives.[l,27,28] However, this discretion often leads to varied standards across economies. Such variation could impose higher compliance costs and administrative burdens for businesses when entering new markets.

To address this, both the TBT and SPS Agreements encourage member economies to adopt measures based on relevant international standards.[m,29] The SPS Agreement explicitly mentions the Codex Alimentarius Commission, the World Organization for Animal Health, and the International Plant Protection Convention as relevant international standards.[n,30] However, unlike the SPS Agreement, the TBT Agreement does not explicitly identify any international standards.

In 2019, UNESCAP examined the regulatory similarity between domestic regulations and the three international standards identified in the SPS Agreement and found that most economies fail to adopt NTMs

[i] APEC PSU calculations using data from the WTO Environmental Database (accessed 25 April 2025).
[j] A Panel is an independent body established by the WTO when a dispute arises between Members and cannot be resolved through consultations. Experts examine the factual and legal aspects of the dispute and provide findings and recommendations in a document known as the Panel Report.
[k] TBT Agreement Article 2.1.
[l] TBT Agreement Article 2.4, SPS Article 2,1.
[m] TBT Agreement Article 2.6; Annex 3 F.
[n] SPS Agreement Article 3.4.

aligning with those international standards.[o,31] In particular, NTMs adopted by developing economies show a larger regulatory distance from international standards compared to their industrialized counterparts. Moreover, a study conducted in 2021 including 11 APEC economies indicated that regulatory distance also exists between trading partners and industry. This study suggested that APEC economies have more similar regulations in manufacturing than they do in agriculture.[32]

Regulatory distance could also vary by NTM category. For instance, technical measures exhibited more heterogeneity for agriculture and manufacturing. Non-technical measures appear to be an issue only for the agriculture industry.

Uneven or inconsistent transparency

Transparency of NTMs is essential to ensuring a predictable and stable policy environment. When economies adopt NTMs at their own discretion without sufficient transparency, it can make international trade uncertain and unpredictable. A lack of clear information makes it difficult for trading partners and investors to assess risks and potential revenues and formulate responsive business strategies.[33]

To ensure transparency, the TBT and SPS Agreements require member economies to notify draft measures or measures in place that may affect the trade of other member economies and that deviate from international standards.[p,34] However, this system has limitations as only a subset of NTMs have to be notified.

Moreover, inconsistent compliance further undermines transparency. While some member economies notify all newly adopted measures regardless of their alignment with international standards, others only notify those that deviate from international standards. Some do not submit any notifications at all.[35] Take subsidies as an example, according to the WTO, 82 members (49 percent of the total membership) have not yet submitted their notifications that were due in 2021 and 2023.[36] The growing gap between notified and actual implemented measures has raised concerns among trading partners and weakens the transparency of the regulatory environment surrounding NTMs and trade.

Conformity assessment for SPS and TBT measures

One element that distinguishes technical measures is its need for conformity assessments, which the TBT Agreement defines as "any procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled."[37] While this mechanism empowers governments to ensure regulatory compliance, it also adds procedural burden to firms. A 2023 study jointly conducted by UNESCAP and ITC, for instance, observed that exporters[q] experienced more problems trying to prove compliance compared to meeting the relevant SPS and/or TBT requirements.[38]

The most pressing challenges that firms face revolve around acquiring certifications, whose procedural burden comes from two broad streams: the firm and the government. Although it may seem straightforward, getting even one certificate can potentially cost firms a lot of money and time. This is because there are several requirements and processes involved, which could be different across jurisdictions. This forces firms, especially micro, small, and medium-sized enterprises (MSMEs), to strategically allocate already stretched resources. Worse, firms can face fundamental issues on technical capacity, access to information, and even the availability of needed materials in the domestic market.

Even with technical capacity, firms still face obstacles resulting from the government stream. This includes inadequate infrastructure (e.g., accredited testing and storage facilities), overlapping regulations, regulatory heterogeneity, domestic certifications not recognized abroad, and delays. When facilities are unavailable, firms are forced to rely on costlier overseas laboratories, and when facilities are overwhelmed, firms become vulnerable to informal payments.

Together, these factors not only introduce a lot of inefficiencies and risks along the entire process but also weaken business confidence, potentially undermining trade opportunities across the region. In fact, firms[r] responding to an APEC survey mentioned that the greatest barriers they face are bureaucratic red tape (including an increasing need for traceability along the supply chain), varying approaches across jurisdictions, numerous or repeated customs declarations, ambiguous inspection processes, and lack of clarity on verification procedures.[39]

[o] Those APEC economies with a relatively high similarity to international standards are major agricultural goods traders, either as agricultural exporters such as New Zealand, or as food importers, such as Korea.
[p] TBT Agreement Article 2.9.
[q] The study is based on surveys across 11 Asia-Pacific economies, including four APEC members.
[r] This survey includes 200 firms trading goods reducing greenhouse gas emissions. Respondents are from Australia; China; Mexico; Singapore; Thailand; and the United States.

Procedural burdens complying with non-technical measures

Although most firms cite technical measures and its accompanying conformity assessment procedures as their greatest procedural burden, they do face hurdles too on non-technical measures. For instance, rules of origin (ROO) set out the criteria to determine the origin of a product.[40] This typically requires careful documentation across the supply chain.

ROOs determine the eligibility of a product to preferential market access or whether the product is subject to trade remedies by the importing side. Preferential ROOs can be notoriously difficult to fulfil, especially for firms involved in products with multiple components supplied by different economies. Its difficulty incentivizes most firms to use agreements that they are already familiar with. For instance, an APEC PSU study reveals that firms prefer to use simpler bilateral agreements over more complex mega-trade agreements, opting to use the latter only when a bilateral agreement does not exist.[41] This undermines the value of large regional trade agreements.

Many preferential trade agreements include similar ROO provisions, such as regional value content, accumulation and de minimis value for allowing a limited use of non-originating materials, just to name a few. However, specific procedures to operate these provisions can vary across trade agreements, thereby adding a layer of administrative cost.

How Can These Challenges Be Managed or Addressed?

As discussed, NTMs have been widely used to meet economies' legitimate objectives. However, many NTMs entail a cost on firms, which could be transferred to consumers. It is essential for economies to strike a delicate balance when facing the dilemma between pursuing domestic policy objectives and minimizing potential trade-restrictive effects. This section offers policymakers with a set of policy approaches that they could consider, depending on their circumstances and domestic nuances.

Include regulatory impact assessments into institutional processes

One way to have a balanced approach to NTMs is through the institutionalization of regulatory impact assessments when there are plans to introduce or amend a measure. This assessment helps determine whether the measure is more trade-restrictive than necessary to achieve its intended objectives.[s] The assessment involves three key elements: (1) the importance of the legitimate objective pursued by the NTM; (2) the extent to which the NTM contributes to achieving that objective; and (3) the trade-restrictive impact of the NTM.[t,42]

This analysis will also help policymakers to determine if there are less trade-restrictive alternatives. By weighing different aspects, economies can develop more balanced, WTO-consistent policies that both support legitimate objectives and maintain a fair trading environment.

Provide capacity building and technical assistance

It is important to provide capacity-building and technical assistance to support strengthening compliance and verification capacities, in particular in developing economies.[43] For example, Papua New Guinea has received human and institutional capacity building for compliance with the European Deforestation Regulation.[44] Cocoa and coffee producers were trained to collect geolocation data and conduct deforestation risk analyses. This training helps ensure the data meets international verification standards. In the long term, it can enhance the competitiveness of the coffee and cocoa sectors, maintain market access, and promote more sustainable land use in Papua New Guinea.[45]

In addition, economies could explore the feasibility of regional solutions like shared facilities or joint research centers that support compliance with international standards by combining direct interventions with indirect enablers like innovation. For example, the Philippines' International Rice Research Institute has partnered with Singapore's Temasek Life Sciences Laboratory to develop rice varieties that are not only more nutritious but also more resilient to droughts and floods—conditions that make rice vulnerable to SPS concerns like pests and diseases.[46] Regional facilities like this also allow economies with fewer resources to access technical expertise and leverage each other's strengths, thereby supporting compliance with emerging technical measures, such as stricter nutrition requirements.

Economies could also boost technical support, financial assistance, and investments to help bridge gaps in logistics and infrastructure, possibly with the assistance of the private sector through public-private partnerships. APEC can also consider having targeted initiatives to

[s] To examine if the NTM is consistent with TBT Article 2.2.

[t] Appellate Body Report, US-Tuna II (Mexico).

improve the implementation of trade facilitation measures, especially cross-border paperless trade.[47]

Explore creative solutions to overcome the narrow definition of "like products"

Given the constraints of the narrow definition of "like products" under the multilateral trading system, some bilateral trade agreements have begun to incorporate the provision on PPMs that are not related to the physical characteristics or quality of a product.

A groundbreaking milestone is the inclusion of non-product-related PPMs in the Comprehensive Economic Partnership Agreement (CEPA) between Indonesia and the European Free Trade Association (EFTA).[48] Both parties agreed that palm oil produced sustainably—certified according to the Roundtable on Sustainable Palm Oil (RSPO) standard[49]—would be eligible for preferential tariff treatment.[50] This approach creates a distinction between palm oil produced with deforestation risks and those through sustainable practices.

The Indonesia–EFTA CEPA's inclusion of these PPMs offers a valuable template for APEC economies seeking to advance emerging legitimate objectives. Such pioneering efforts benefit from greater flexibility and room for experimentation at the broader regional level.

Resolve regulatory heterogeneity

Rules that vary by jurisdiction can result in substantial trade costs and procedural burden for firms. One study estimates that the lack of regulatory convergence toward international standards in the beef sector alone could lead to a potential loss of up to USD 3.2 billion globally.[51] Economies can resolve this issue through either harmonization or regulatory cooperation.

Harmonizing NTMs with international standards can, however, have a heterogenous and diversionary impact on international trade. For example, low-income economies experience increased export diversification and partners that share standards tend to trade with each other.[52]

When harmonization with international standards remains unfeasible, economies could pursue regulatory cooperation as a pragmatic starting point. Regulatory cooperation, such as through better trade facilitation and mutual recognition mechanisms, can generate benefits that surpass those gained from tariff liberalization by reducing compliance costs and facilitating trade flows.[53]

The case of the Association of Southeast Asian Nations (ASEAN) shows that its members share a degree of regulatory proximity. For example, Malaysia and Thailand demonstrated close regulatory similarity. Although both economies remain divergent from international standards, their regulatory similarity has facilitated stronger bilateral trade and enabled them to become key trading partners for each other.[54]

ASEAN's example can provide APEC economies with valuable guidance. By aligning regulations, APEC members can facilitate better trade volumes and enhance regulatory interoperability between regulatory systems in the region. Supporting channels within APEC, such as the Sub-Committee on Standards and Conformance, the Market Access Group, and the Committee on Trade and Investment, can also be instrumental to advance regulatory cooperation on NTMs.

Strengthen efforts to communicate information on NTMs

Uneven or inconsistent notification practices for NTMs undermine the ability of trading partners and investors to estimate production and trade transaction costs, as well as to make decisions. To enhance regulatory transparency, it is essential for APEC economies to meet the notification obligations under the WTO Agreements.[u] These efforts must also be accompanied by stronger data collection efforts.

In addition, establishing a clear and transparent domestic legislative process is equally important. This includes ensuring that all relevant stakeholders have timely access to information on the implementation of any measures that could have implications on trade. A mix of passive and active information tools can ensure that stakeholders are effectively reached. For example, the APEC Trade Repository consolidates useful references on APEC economies' trade information.[v] Moreover, a reasonable interval between publication and entry into force is necessary to receive feedback from stakeholders.[55]

In addition to having a transparent legislative process, open dialogues with different groups of stakeholders can also be done. Economies are encouraged to establish NTM consultation mechanisms that allow

[u] Under TBT Agreement Article 2.9.2, Members should notify other Members (through the TBT Secretariat) when no relevant international standard exists or when a technical regulation deviates from such standards and may significantly affect the trade of other Members.

[v] For more on the APEC Trade Repository, see: https://tr.apec.org/.

stakeholders, including foreign businesses, to express their concerns and suggestions on a new regulation or amendment.[56] Moreover, engaging expert groups within the consultation process can further enhance interaction. By considering diverse stakeholder perspectives and understanding different positions, regulations can be developed in a more comprehensive and balanced way.

Develop more flexible and streamlined procedures on NTMs

Procedural burden is a significant layer of concern for firms. Developing more flexible and streamlined procedures can help alleviate this burden. For example, economies can consider a systematic review of NTMs, such as licensing and permits whereby annual renewal requirements can be waived up to a specified number of years if the firm has incurred no violation over a given monitoring period (low-risk traders). In fact, most APEC economies grant authorized economic operators (AEOs) with indefinite certifications.[57] Not only will this help ease strained operational capacity among regulators, but it could also incentivize firms to take extra precautions to avoid any form of violation.

Similarly, economies can introduce better flexibility in handling dual-use goods. For example, some jurisdictions may heavily regulate certain chemicals that could be used for explosives.[58] However, these chemicals could also be key materials for other industries like agriculture and manufacturing. Risk-based regulatory approaches can help balance security concerns against trade impacts. For instance, economies could introduce programs with adequate compliance safeguards to accredit "secure importers" of dual-use goods akin to how AEOs are identified.[59]

Speak Globally, Think Regionally

The costs of hidden measures affect everyone. And while it may support legitimate objectives, it also inadvertently undermines trade and erodes trust across the region. When cross-cutting challenges like NTMs exist, a logical approach is to think regionally. Solutions cannot be siloed, nor should actions be unilateral. Yet, each economy operates under different conditions that can shape readiness and reform—circumstances that could be respected through careful diplomacy and a common goal.

Amid this landscape, APEC's adoption of the Cross Cutting Principles on NTMs in 2018[60] represents an important reference to guide APEC member economies in the development and implementation of NTMs. However, these principles are not enough to prevent unjustified barriers to trade. Ultimately, actions will always speak louder than words. By implementing these six cross cutting principles, APEC can show the world that diversity is not a hindrance to collective solutions—but a foundation for it.

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