



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

Perceptions on the Use of Non-Tariff Measures Within the APEC Region



APEC Policy Support Unit
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INTRODUCTION

This study was prepared following discussions at the APEC Committee on Trade and Investment (CTI) meeting in January 2013 concerning the use of Non-Tariff Measures (NTMs). As opposed to tariff duties, which have experienced a substantial decrease over the years (for example, the average tariff in APEC was equal to 16.9% in 1989, 6.6% in 2009, and 5.7% in 2012), there is a general perception that the use of non-tariff measures (NTMs) in recent years has increased worldwide. However, the extent to which NTMs are affecting the APEC region is not clear, since existing databases offer limited coverage due to measurement and data collection challenges.

NTMs are becoming increasingly relevant in the analysis and discussion of trade. The latest WTO report on G-20 Trade Measures, issued in December 2013, mentioned that world trade growth in 2013 was slower than expected and the number of trade restrictions had increased between mid-May and mid-November 2013. Additionally, it mentioned that all import-restrictive measure still in force and adopted since October 2013 cover around 3.9% of world merchandise imports and nearly 5% of G-20 imports¹. Evenett (2013) also mentioned an increase in the application of protectionist measures: “(...) G-20 members implemented 23% more protectionist measures in 2012 than in 2009”².

Discussions within CTI have noted concerns on the potential increase in protectionism as NTMs could be used as tariff substitutes distorting or otherwise affecting trade. In this sense, it is relevant for APEC to further discuss these topics and examine the impact of NTMs on trade in more detail.

The intention of the study is help APEC economies to have a better understanding of the implications in the use of NTMs and raise awareness on how it is possible to achieve legitimate policy objectives by using policy alternatives that facilitate rather than restrict trade and investment, and assist APEC economies to move closer to attaining the Bogor Goals.

The study is divided in three sections. Section 1 includes a literature review on the discussions to define and classify an NTM as well as on the legitimacy of these measures. Findings by previous studies on the economic impact of NTMs are also shown in this section. Section 2 analyses the incidence of NTMs affecting the APEC region. This section identifies the most recurrent types of measures affecting APEC economies and the sectors where NTMs are usually applied, using information from NTM databases developed in recent years by the World Trade Organization (WTO), Centre of Economic Policy Research – Global Trade Alert, and the European Commission. Section 3 focuses on NTMs that have become more recurrent in recent years, namely export subsidies, export taxes and restrictions, and local content requirements. Their effects on trade are discussed by using specific examples in the application of these measures.

Among the main study findings are:

- All non-tariff barriers are NTMs, but not all NTMs are non-tariff barriers. NTMs do not necessarily imply illegitimate measures and/or restrictive implications on trade. In fact, WTO allows the application of NTMs in particular circumstances. In some cases, the

¹ WTO (2013), p. 1-2.

² Evenett (2013), p. 94.

application of legitimate NTMs could even increase trade by giving more information and certainty to producers and consumers. However, some NTMs are barriers as they are implemented with specific protectionist purposes that negatively affect trade. In addition, many NTMs are not transparent since they are hidden in regulations or appear as disguised policies.

- The distinction whether a measure is legitimate or not is challenging in certain cases, since trade partners could have different views on the matter. One party may consider a measure a real barrier while the other may not. These differences are noticeable in the efforts by certain economies or economic blocs to create databases or reports. Table 4 of this report shows that the databases and reports developed by ASEAN, the European Commission, Japan and the United States include different types of measures as NTMs.

- Their impact of NTMs will depend on many factors such as the type of measure in force, the affected sector/product, and the level of development of the parties involved.

- In terms of the incidence of NTMs affecting the APEC region, the information from the WTO's Integrated Trade Intelligence Portal (i-TIP) shows that antidumping, SPS and TBT-related measures around the world were those mostly affecting APEC economies. Chemicals, iron and steel, plastics, textiles, meats, and fruits and nuts were among the most affected sectors. The Global Trade Alert (GTA) database identifies trade defence measures, bail out/state aid measures, export subsidies, and export taxes and restrictions to be among the most recurrent NTMs worldwide affecting at least one APEC economy. The GTA database also shows that chemicals, metals, and machinery were the most affected sectors.

- Governments choose to implement NTMs for a variety of reasons ranging from trade protectionism to addressing legitimate objectives such as public health, safety, and security, among others. They are implemented to monitor trade flows, obtain a source of revenue, and for other objectives. It has been challenging for governments to achieve these objectives without distorting trade.

- Nevertheless, there are some options that could address those interests with measures that facilitate rather than restrict trade. For example, reviewing customs entries instead of issuing automatic licenses to monitor imports and collect statistics; using internal taxes instead of import surcharges to collect revenue; implementing sanitary protocols and technical regulations based on international standards; agreeing on bilateral SPS protocols to facilitate trade of specific products; implementing systems to allow importation from disease-free areas; and developing risk management systems and ex-post verifications to prevent unnecessary customs inspections; among others.

- The study shows that export subsidies, export taxes and restrictions, and local content requirements are implemented to target many different objectives and can create significant distortions to trade. However, in many cases, it is possible to meet the same policy objectives with less costly and less trade distorting alternatives.

- Instead of implementing export subsidies, it is possible to improve export performance and diversify exports by promoting competitiveness via macroeconomic stability, economic openness, development of infrastructure and human resources, and competent export and investment promotion agencies, among others. Export subsidies are also commonly used in the

agriculture sector to support local farmers and due to food security concerns. Nevertheless, it is possible to support farmers in less trade distorting ways by making available market information systems; encouraging associations among small and medium-size farmers; creating proper pest control mechanisms; promoting soil conservation techniques; and developing infrastructure projects such as water irrigation channels and roads. Food security concerns could be tackled by monitoring mechanisms for stockpiling, preventing stocks from flooding overseas, and distorting world prices.

- The alternatives to export taxes and restrictions will depend on the objectives behind these measures. For example, if the intention is to secure the provision of any product in the domestic market at lower prices, it will be less trade distorting to reduce tariff rates to increase the availability of the products in the domestic market. If the objective is to fight environmental problems, then some less trade distorting measures, as mentioned by Karapinar (2012), will be to impose stricter environmental standards on production; implement pollution charges to firms based on their emissions; and promote cleaner and efficient technology. Export taxes are also used as an easy source of government income. An alternative will be to develop an efficient tax administration authority, enhance the revenue base, and use other less trade restrictive taxes such as income and value-added taxes.
- Local content requirements (LCR) are usually implemented as a means to create jobs, develop and protect local producers, and to allow companies in the medium-term to innovate and compete. However, these policies are not easy to administer. They could result in inefficient allocation of resources and impact negatively on trade. LCR also could increase local production costs and reduce production levels and employment.
- Less costly and less trade restrictive options could be implemented to achieve the main objectives of LCR. Hufbauer, et.al. (2013) suggested creating a business-friendly environment to create jobs and stimulate investments; encouraging corporate social responsibility to include local firms in the supply-chain of multinational companies; expanding training; and improving infrastructure. The 2013 APEC Ministerial Meeting endorsed the APEC Best Practices to Create Jobs and Increase Competitiveness, which suggested policy alternatives to LCR such as making economies cost-competitive via an attractive business environment and infrastructure development; spurring innovation through new technologies; attracting investment by improving the investment climate; opening markets; and assisting SMEs to increase export opportunities and facilitate access to supply chain, access to capital and emerging technologies.

CHAPTER 1: LITERATURE REVIEW ON NON-TARIFF MEASURES

Definition of NTM

1. A survey by PECC (2000) on NTMs provided a comprehensive literature review on the definition and classification of NTMs. This survey cited a study by Baldwin (1970) as one of the earliest providing a definition for NTMs: “(...)any measure (public or private) that causes internationally traded goods and services, or resources devoted to the production of these goods and services, to be allocated in such a way as to reduce potential real world income”³.
2. Pasadilla (2007) offered a simpler way to define NTMs, as “all measures, other than tariffs, that affect trade”⁴. Both PECC (2000) and Pasadilla (2007) mentioned that a wide range of measures could be considered as NTM. They emphasized that NTMs are less transparent than tariffs.
3. A more recent definition was made by UNCTAD’s Multi-Agency Support Team (MAST)⁵ in 2009, which stated that NTMs are “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”⁶.
4. According to the ITC (2012), the concept of NTM agreed by MAST is neutral and does not imply a direction of the economic impact. ITC mentioned that non-tariff barriers are a subset of NTMs with a protectionist or discriminatory intent and they imply a negative impact on trade. Carrere and De Melo (2009) mentioned that if a NTM is imposed to protect a domestic industry by reducing import demand, then it is a non-tariff barrier.

Classification of NTMs

5. PECC (2000) provided a review on several NTM classifications developed by experts and international organizations. This study revealed one of the first NTMs classifications by Baldwin (1970), who identified 12 different categories of non-tariff restrictions:

Table 1: NTM Categories

1) Quotas and restrictive state-trading policies	7) Antidumping regulations
2) Export subsidies and taxes	8) Restrictive business practices
3) Discriminatory government and private procurement policies	9) Restrictive administrative and technical regulations
4) Selective indirect taxes	10) Controls over foreign investment
5) Selective domestic subsidies	11) Restrictive immigration policies
6) Restrictive customs procedures	12) Selective monetary controls and discriminatory exchange-rate policies

³ PECC (2000), p. 6.

⁴ Pasadilla (2007), p. 1.

⁵ The Multi-Agency Support Team was set up by UNCTAD’s Group of Eminent Persons on NTMs and included representatives from other organizations such as the Food and Agriculture Organization of the United Nations (FAO), International Monetary Fund (IMF), International Trade Centre (ITC), Organisation for Economic Cooperation and Development (OECD), United Nations Industrial Development Organization (UNIDO), World Bank and World Trade Organization (WTO), as well as observers from the USDA, the USITC and the European Commission

⁶ See UNCTAD, UNCTAD’s Work on Non-Tariff Measures, <http://www.unctad.info/en/Trade-Analysis-Branch/Key-Areas/Non-Tariff-Measures/>

6. PECC (2000) also compared Baldwin's classification with the work by UNCTAD during the 1980s, which started collecting NTMs data and classifying them in seven categories and further subdividing them into particular measures. This survey emphasized that UNCTAD's 1980s classification omitted nearly half of the categories found in Baldwin's classification. The categories in the UNCTAD's 1980s classification are:

- 1) Price control measures (e.g. administrative pricing, VER, variable charges, antidumping and countervailing measures)
- 2) Finance control measures (e.g. advance payment requirements, multiple exchange rates, restrictions on foreign exchange allocation, transfer delays)
- 3) Automatic licensing measures (e.g. automatic licensing, import monitoring)
- 4) Quantity control measures (e.g. non-automatic licensing, quotas, import prohibitions)
- 5) Monopolistic measures (e.g. single channel for imports, compulsory national services)
- 6) Technical measures (e.g. technical regulations, pre-shipment formalities, special customs formalities)
- 7) Miscellaneous measures for sensitive product categories (e.g. public procurement, subsidies).

7. Deardorff and Stern (1997) included 32 non-tariff measures and related policies distributed in five categories:

- 1) Quantitative restrictions and similar specific limitations on imports or exports (e.g. import quotas, export limitations, licensing, VER, exchange and other financial controls, prohibitions)
- 2) Non-tariff charges and related policies affecting imports (e.g. variable levies, advance deposit requirements, antidumping and countervailing duties)
- 3) Government participation in trade, restrictive practices and more general government policies (e.g. subsidies and other aids, government procurement policies, state trading, macroeconomic policies, foreign investment policies, immigration policies)
- 4) Customs procedures and administrative practices (e.g. customs valuation and clearance procedures)
- 5) Technical barriers to trade (e.g. health and sanitary regulations and quality standards, safety and industrial standards and regulations, packaging and labelling standards and regulations).

8. The aforementioned classifications show marked differences on the type of measures to be included as NTMs. In some cases, they could agree on particular categories, but not in the type of specific measures belonging to each category. For example, both Deardorff and Stern and UNCTAD's 1980s classifications included technical barriers to trade/technical measures. Deardorff and Stern considered health and sanitary regulations and quality standards, safety and industrial standards and regulations, packaging and labelling regulations, and advertising and media regulations, while UNCTAD included not just technical regulations, but also pre-shipment formalities, special customs formalities, and obligation to return used products.

9. UNCTAD's Secretary General established in 2006 the Group of Eminent Persons on Non-Tariff Measures (GNTM) and the Multi-Agency Support Team (MAST) which developed a new NTM

classification system⁷. In 2009, MAST agreed on a classification which includes 16 chapters (categories), sub-divided by 61 types of measures, which in turn are disaggregated in 110 measures, some of which are further disaggregated into 47 specific measures. The disaggregation follows the same logic of the Harmonized System classification.

Table 2: UNCTAD's MAST Classification System

Imports	Technical measures	A. Sanitary and phytosanitary measures B. Technical barriers to trade C. Pre-shipment inspection and other formalities
	Non-technical measures	D. Contingent trade-protective measures E. Non-automatic licensing, quotas, prohibitions and quantity-control measures other than for SPS or TBT reasons F. Price-control measures, including additional taxes and charges G. Financial measures H. Measures affecting competition I. Trade-related investment measures J. Distribution restrictions K. Restrictions on post-sales services L. Subsidies (excluding export subsidies) M. Government procurement restrictions N. Intellectual property O. Rules of origin
Exports		P. Export-related measures

Source: UNCTAD (2013), Classification of Non-Tariff Measures.

10. A narrative on some of the specific measures included in the MAST classification is included in Annex 1.⁸ The classification by UNCTAD's MAST is the most detailed one so far. For example, chapter E is sub-divided as follows:

E. Non-automatic licensing, quotas, prohibitions and quantity control measures other than for SPS or TBT reasons

E1 Non-automatic import licensing procedures other than authorizations for SPS or TBT reasons

E11 Licensing for economic reasons

E111 Licensing procedure with no specific ex-ante criteria

E112 Licensing for specified use

E113 Licensing linked with local production

E12 Licensing for non-economic reasons

E121 Licensing for religious, moral or cultural reasons

E122 Licensing for political reasons

E123 Licensing for non-economic reasons n.e.s.

E2 Quotas

E21 Permanent

E211 Global allocation

E212 Country allocation

⁷ See UNCTAD, UNCTAD's Work on Non-Tariff Measures, <http://www.unctad.info/en/Trade-Analysis-Branch/Key-Areas/Non-Tariff-Measures/>

⁸ The entire classification with the description of the measures is available at UNCTAD (2013), Classification of Non-Tariff Measures, http://unctad.org/en/PublicationsLibrary/ditctab20122_en.pdf

- E22 Seasonal quotas
 - E221 Global allocation
 - E222 Country allocation
- E23 Temporary
 - E231 Global allocation
 - E232 Country allocation
- E3 Prohibitions other than for SPS and TBT reasons
 - E31 Prohibition for economic reasons
 - E311 Full prohibition (import ban)
 - E312 Seasonal prohibition
 - E313 Temporary prohibition, including suspension of issuance of licenses
 - E314 Prohibition of importation in bulk
 - E315 Prohibition of products infringing patents or other intellectual property rights
 - E316 Prohibition of used, repaired or remanufactured goods
 - E319 Prohibition for economic reasons n.e.s.
 - E32 Prohibition for non-economic reasons
 - E321 Prohibition for religious, moral or cultural reasons
 - E322 Prohibition for political reasons (embargo)
 - E329 Prohibition for non-economic reasons n.e.s.
- E5 Export-restraint arrangement
 - E51 Voluntary export restraint arrangements (VERs)
 - E511 Quota agreement
 - E512 Consultation agreement
 - E513 Administrative co-operation agreement
 - E59 Export-restraint arrangements n.e.s.
- E6 Tariff-rate quotas (TRQs)
 - E61 WTO-bound TRQ, included in WTO Schedules
 - E611 Global allocation
 - E612 Country allocation
 - E62 Other TRQs included in other trade agreements
 - E612 Global allocation
 - E613 Country allocation

Use of NTM Categories by International Organizations, Think-Tanks and Economies

11. The scope of NTM-related work in APEC is covered by the UNCTAD's MAST classification. The Osaka Action Agenda provides a non-exhaustive list of NTMs by saying that "NTMs include but are not restricted to quantitative import/export restrictions/prohibitions, import/export levies, minimum import prices, discretionary import/export licensing, voluntary export restraints and export subsidies"⁹. Currently, APEC members report their progress on NTMs when submitting their Individual Action Plan updates. They include five categories: quantitative import restrictions/prohibitions, import licensing, import levies, export subsidies, and other non-tariff measures maintained. In recent submissions, member economies have reported SPS measures; export licensing; anti-dumping and countervailing

⁹ APEC (1995), The Osaka Action Agenda: Implementation of the Bogor Declaration, http://www.apec.org/Groups/~media/Files/AboutUs/Action%20Plans/02_esc_oaaupdate.ashx

measures; safeguard measures; technical standards and labelling requirements; and voluntary export restraints in the category of other non-tariff measures.

12. In the effort to increase transparency, WTO has launched the Integrated Trade Intelligence Portal (i-TIP) which includes a new database on NTMs. This database provides access to trade policy information notified by WTO members and reported in WTO committees. Users can obtain all NTMs reported by WTO members for one or more products over a particular timeframe¹⁰. The current version includes sanitary and phytosanitary measures, technical barriers to trade, antidumping, safeguards and countervailing measures. By the end of 2013, work was underway to expand the database coverage, which is expected to include other measures such as import licensing, quantitative restrictions, agricultural notifications, and state trading measures.

13. OECD has not prepared its own classification of NTMs, but has supported studies on this subject such as that by Deardorff and Stern (1997). In this context, OECD (2005) studied 23 business surveys or related analysis indicating what firms consider to be the main impediments to access foreign markets. OECD classified the most frequent NTMs reported in those surveys using the following categories: technical measures; internal taxes or charges; customs rules and procedures; competition-related restrictions in market access (quantitative import restrictions; procedures and administration; public procurement; subsidies; investment restrictions on requirements; transport regulations or costs); and restrictions of services.¹¹

14. The Centre for Economic Policy Research, an academic and policy research think-tank based in London, runs the Global Trade Alert initiative (www.globaltradealert.org), which includes an independent database of government measures that are likely to affect trade. The database includes information about economies implementing the measures (distributed in 22 NTM categories), and those economies being affected by them. The categories are as follows:

Table 3: Global Trade Alert NTM Categories

1) Bail out (state aid measure)	12) Non-tariff barrier (not otherwise specified)
2) Competitive devaluation	13) Other services sector measure
3) Consumption subsidy	14) Public procurement
4) Export subsidy	15) Quota (including tariff rate quotas)
5) Export taxes or restrictions	16) Sanitary and phytosanitary measures
6) Import ban	17) State trading enterprises
7) Import subsidy	18) State-controlled companies
8) Intellectual property protection	19) Sub-national government measure
9) Investment measure	20) Technical barriers to trade
10) Local content requirement	21) Trade remedies
11) Migration measure	22) Trade finance

15. The European Commission maintains a Market Access-Trade Barriers Database, which lists main barriers affecting market access in foreign markets to companies located in the European Union (EU). The information and data are collected by the Directorate-General for Trade from EU trade associations, individual enterprises and EU delegations in export markets. The database groups the trade

¹⁰ WTO (2011), WTO Launches New Tool For Accessing Trade Policy Information
http://www.wto.org/english/news_e/news11_e/anti_14dec11_e.htm

¹¹ OECD (2005) also identified other NTM categories less frequently reported in these surveys, such as trade defence instruments; local marketing regulations; inappropriate legal appeal mechanisms; finance and payment mechanisms; and economic policy environment; among others.

barriers into seven major categories: tariff and duties; trade defence instruments; non-tariff barriers; investment-related barriers; IPR; others (export related); and services specific measures. These categories are divided in 34 sub-categories (see Table 4 for details).

16. The ASEAN NTM Database was set up in August 2004, and covers official notifications by member countries to the ASEAN Secretariat. The notification includes the measures on members' imports according to HS code and NTM type, a brief description of the measure, and the source and date of identification. The notifications are grouped in 24 categories (see Table 4 for category details). According to de Dios (2006), non-automatic licensing, technological regulations, prohibitions, and labeling, testing and inspection were common measures by that time.

17. Japan's Ministry of Economy, Trade and Industry released the 2012 Report on Compliance by Major Trading Partners with Trade Agreements-WTO, FTA/EPAs, and BITs. The report aims to identify the policies/measures of Japan's major trading partners that are deemed not to be aligned with international trade rules. In this report, 146 observations concerning 16 trading partners were included. These observations were listed in 22 categories (see Table 4 for category details), and most of them were in the categories of investment-related measures, standards and conformity systems, and protection of intellectual property.

18. The United States International Trade Commission developed the Compilation of Reported (CoRe) NTMs Database based on information provided in the National Trade Estimate Report on Foreign Trade Barriers (by USTR), the European Commission's Market Access-Trade Barriers Database, the WTO Trade Policy Reviews, and Japan's Report on Compliance by Major Trading Partners. The CoRe NTMs Database includes 12 categories of NTMs (see Table 4 for category details). The database reveals that the most common categories of NTMs are import-related measures; sanitary and phytosanitary measures; investment-related measures; standards, testing, certification and labeling; and export-related measures.

Legitimacy of NTMs at the Government Level

19. According to WTO (2012), NTMs are generally applied to address market failures which tend to occur due to information asymmetry between producers and consumers, negative externalities, among others. Market failures, if not addressed, may lead to negative outcomes of public health, public safety, environment and other social issues, resulting thus in failure to achieve the desired level of national welfare or even reduce it.

20. PECC (2000) and WTO (2012) highlighted that the problem arises when NTMs are not implemented to pursue legitimate policy objectives, but instead are used as tools to restrict trade unnecessarily and protect the interests of domestic producers. The distinction when a measure is legitimate or protectionist is not straightforward. For example, PECC (2000) mentioned the case of licenses, which some governments claim their use for statistical purposes only, while others may consider that they are restricting trade.

21. Given the interconnectedness of markets and global economy, NTMs applied by governments may have international repercussions and affected parties may challenge the legitimacy of the measures. PECC (2000) mentioned that an NTM remains as legitimate, unless a dispute resolution panel has ruled that the measure was implemented to restrict trade and therefore, be considered as a non-tariff barrier.

22. Carrere and De Melo (2009) provided an interesting analysis which identifies the underlying objectives of some types of NTMs and alternative measures that can achieve those objectives in a less distortive manner. For instance, in the case of measures with a protectionist objective, such as TRQ, administrative pricing, non-automatic licenses or quotas, it would be better to use tariffs instead as a more transparent and non-discriminatory measure. An automatic license, whose objective is to monitor imports, could be replaced by ex-post reporting of imports based on customs entries. Technical regulations could achieve their objectives to protect health, safety, environment or security in a less distortive manner by complying with standards in the Codex Alimentarius Commission, the International Plant Protection Convention, etc., as well as working on harmonization and mutual recognition at the regional level.

Table 4: Categories Listed as NTMs by Selected Economies and Integration Blocs

Economy/ Bloc	ASEAN	European Commission	Japan	United States
Source	ASEAN NTM Database: http://www.asean.org/communities/asean-economic-community/item/non-tariff-measures-database	The European Commission, Market Access Database (MADB), website: http://madb.europa.eu/madb/barriers_crossTables.htm	2012 Report on Compliance by Major Trading Partners with Trade Agreements – WTO, FTA/EPAs, BITs, website: http://www.meti.go.jp/english/report/data/gCT2012coe.html	U.S. International Trade Commission, The CoRe NTMs Database: http://www.usitc.gov/publications/332/working_papers/EC201301A.pdf
List of NTMs	<ol style="list-style-type: none"> 1. 1400 Tariff quota duties 2. 2200 Additional taxes and charges 3. 2290 Additional charges n.e.s. 4. 2300 Internal taxes and charges on imports 5. 3100 Administrative pricing 6. 5100 Automatic licensing 7. 6100 Non-automatic licensing 8. 6110 License with no specific ex-ante criteria 9. 6170 Prior authorization for sensitive products 10. 6200 Quotas 11. 6240 Quotas linked with export performance 12. 6270 Quotas for sensitive products 13. 6300 Prohibition 14. 6310 Total prohibition 15. 6710 Selective approval of importers 16. 7100 Single channel for imports 17. 7120 Sole importing agency 18. 8100 Technical regulations 19. 8110 Product characteristic requirements 20. 8120 Marking requirements 21. 8130 Labelling requirements 22. 8140 Packaging requirements 23. 8150 Testing, inspection, quarantine reqs. 	<ol style="list-style-type: none"> A. Tariff and duties <ol style="list-style-type: none"> 1. Tariff quotas 2. Internal taxation 3. Other tariff and duties B. Trade defense instruments <ol style="list-style-type: none"> 4. Anti-dumping measure 5. Countervailing measure 6. Safeguard measures 7. Other trade defense instruments C. Non-tariff barriers <ol style="list-style-type: none"> 8. Registration, documentation, customs procedures 9. Quantitative restrictions and related measures 10. Competition issues 11. Standards, sanitary and other technical requirements 12. Government procurement 13. Subsidies 14. Other non-tariff measures 15. Sanitary and Phytosanitary measures D. Investment related barriers <ol style="list-style-type: none"> 16. Trade related investment measures 17. Direct foreign investment limitations 18. others E. IPR 	<ol style="list-style-type: none"> 1. Uniform administration, transparency, and judicial review 2. Imposition of export tax 3. Right to trade (approval system for trading) 4. Non-tariff measures (import restrictions) 5. Export restrictions 6. Anti-dumping and countervailing measures 7. Subsidies 8. Safeguards 9. Trade-related investment measures 10. Standard and conformity assessment systems 11. Trade in services 12. Protection of intellectual property 13. Government procurement 14. Quantitative restrictions 15. National treatment 16. Rules of origin 17. Unilateral measures 18. Increases in customs duties 19. Increase on log export taxes 20. Import license system 21. Export restrictions 22. Infringement of trademark rights 	<ol style="list-style-type: none"> 1. Import-related measures 2. Sanitary and Phytosanitary measures 3. Investment-related measures 4. Standards, testing, certification and labeling 5. Export-related measures 6. Anticompetitive practices/competition policy 7. Intellectual property rights 8. Government procurement 9. Customs procedures 10. Taxes 11. State-trading 12. Corruption

Economy/ Bloc	ASEAN	European Commission	Japan	United States
	24. 8200 Pre-shipment inspection	19. Legislation on copyright and related rights 20. Trademarks legislation 21. Legislation on appellations of origin and geographic indications 22. Industrial design legislation 23. Legislation on patents (including plant varieties) 24. Legislation on layout designs of integrated circuits 25. Enforcement problems on IPR 26. Other IPR related problems F. Other (export related) 27. Export prohibition and other quantitative restrictions 28. Export taxes 29. Discrimination export licensing 30. Export subsidies G. Services specific measures 31. Market access (quantitative) restrictions 32. Discriminatory treatment 33. Non-quantitative, non-discriminatory measures (domestic regulations) 34. Other trade in services issues		

Legitimacy of NTMs at the Multilateral Level

23. WTO agreements provide the framework to apply some NTMs. Carrere and De Melo (2009) listed some of the WTO legal texts as examples that allow the application of NTMs: GATT's article VII on customs valuation; TBT agreement; SPS agreement; rules on import-licensing procedures; rules of origin; pre-shipment inspection; TRIMs; the Agreement on Pre-shipment Inspection; state-trading enterprises and trade remedies¹². These legal texts establish the particular circumstances that allow the application of NTMs and the type of measures that WTO members are obliged to notify. Carrere and De Melo (2009) mentioned that WTO requires four principles to implement NTMs, namely: transparency, non-discrimination, existence of a scientific basis in the case of SPS measures, and absence of better alternatives.

24. In terms of the necessary conditions to apply NTMs, for example, GATT's Article XI prohibits the application of quantitative restrictions for imports and exports. However, some exceptions are allowed, like temporary export prohibitions or restrictions in the case of critical shortages of foodstuffs in the exporting party; or import restrictions due to Balance-of-Payments difficulties. Another relevant example is GATT's Article XX on General Exceptions, which justifies the application of standards to "protect human, animal or plant life or health" as long as it does not constitute "a means of arbitrary or unjustified discrimination or a disguised restriction on international trade".

Economic Impact of NTMs

25. A review of the economic literature shows that estimating the economic impact of the application of NTM is not an easy task. Besides the lack of comprehensive data, the impact of a particular NTM by itself in domestic prices is hard to measure. As opposed to tariffs, NTMs are not necessarily quantitative. There are many types of NTMs and each of them may affect any particular good in a different way. Moreover, a similar NTM measure does not necessarily have the same impact in every single sector and trade partners.

26. In general, evidence shows an inverse relationship between NTMs and trade. The WTO's World Trade Report 2012 cited various studies such as Hoekman and Nicita (2011), who used ad-valorem equivalents (AVE) of NTMs, and found that reducing AVEs from 10% to 5% would increase trade by 2% to 3%; and Henn and McDonald (2011), who used product-level analysis and found that behind-the-border measures, including NTMs implemented during the global financial crisis, reduced trade flows by 7%. The World Trade Report 2012 also cited preliminary findings which indicated that TBT and SPS measures, raised as specific trade concerns in the TBT and SPS Committees, appeared to reduce the value of exports.

27. Orden et al. (2012) also found evidence that NTMs may lead to trade-diversion effects since stricter NTMs will cause exporters to seek new markets with less rigorous NTMs.

28. The level of restrictiveness that NTMs add to trade is significant. A study by Kee et al. (2009), using AVE for 78 economies, suggested that NTMs added on average 87% to the restrictiveness imposed by tariffs. The restrictiveness caused by NTMs in several economies was larger than those

¹² The application of trade remedies is based on the Agreement on Safeguard, the Agreement on Subsidies and Countervailing Measures, GATT's Article VI (antidumping) and the Agreement on the Implementation of Article VI of GATT 1994

caused by tariffs. This study also found that in 55% of the tariff lines subject to core NTMs, the AVEs of the core NTMs were higher than the tariff rates¹³.

29. Other studies focused on estimating the impact of NTMs on prices in specific sectors. For example, a study by Dean et al. (2006) found that NTM price premia in fruits and vegetables was around 44%, while that for bovine meats was nearly 54%. Similarly, the study found that for processed food and apparel, the price premia was equal to 41% and 50%, respectively. An increase of prices due to the application of NTMs has an impact on trade, by reducing domestic demand for imported products.

30. Andriamananjara et al. (2004) also found that NTM price premia differed significantly across economies. For instance, apparel in the EU had a price premium of 66%, while it was around 16% in the United States.

31. In terms of welfare effects, Andriamananjara et al. (2004) used a computable general equilibrium model to simulate the impact on welfare of the removal of NTMs, such as import quotas, prohibitions, licenses, among others. The study showed that global welfare gains from removing these NTMs amounted to USD 90 – 92 billion, with the largest impact from the removal of NTMs in the apparel sector (USD 64 billion). Bradford (2005) studied the impact of the removal of tariffs and NTMs identified as non-tariff barriers in a group of industrialized economies and found that, in most cases, the extra gains from the removal of those NTMs would outweigh the gains from tariff removal by more than two times.

32. Due to the complexity of NTMs, some studies have focused on the economic impact of specific NTMs. For example, Anders and Caswell (2007) found that the same measures may have different effects on trade partners. They estimated the trade impact of the introduction of a food safety and quality management system called Hazard Analysis Critical Control Points (HACCP) for seafood in the United States. The study found out that seafood exports to the United States by developed economies as a group increased, while similar exports by developing economies as a group decreased. However, larger exporters in developing economies benefitted from the measure. In other words, it is easier for developed economies and larger seafood exporters in developing economies to comply with the measures and to strengthen their product-quality standards.

33. The effect of SPS/TBT measures differs according to the sectors. Moenius (2004) found that the implementation of specific standards hampered trade in non-manufacturing industries, but had an opposite effect in manufacturing industries. Moenius' paper provided one possible explanation: non-manufacturing products were generally homogeneous and requirements for information low, but manufacturing goods required more information. Standards facilitated access to that information and therefore may contribute positively to manufacturing goods' trade.

34. The impact of a type of measure in trade could be the opposite in two products with similar purposes. In the case of the food industry, Disdier and Marette (2010) studied food safety standards in the import of crustaceans. They found that the lower the maximum residual limits of chloramphenicol (antibiotic) allowed by the importing party, the lower the imports. Nevertheless, the study suggested that in most cases a stricter standard increased welfare from the domestic and international

¹³ Kee et al. (2009) considered price control measures, quantity restrictions, monopolistic measures, and technical regulations as core NTMs.

perspective¹⁴. However, Schuetler et al (2009) found an inverse impact between maximum residual limits and bilateral meat trade.

35. Schuetler et al (2009) also found that each type of regulatory measure has a diverse impact on meat trade. Besides maximum residual limits, other measures such as disease prevention measures, conformity assessment, and information requirements had a positive relationship with meat trade, while production process requirements had a negative effect. It seems that certain requirements may affect trade positively by providing more information to consumers on product characteristics and safety, and giving more certainty to producers on the necessary conditions to enter into the market.

36. Harmonization is also associated to an increase in trade, as noted by WTO¹⁵, by allowing access to many markets with the compliance of a single standard. An interesting finding by Shepherd (2008) by using the EU standards database in textiles, clothing and footwear sectors was that a 1% increase in the total number of standards led to a 0.7% decrease in a partner's export variety, but a 1% increase in the number of internationally harmonized standards led to a 0.3% increase in export variety.

37. In some cases, the mere indication of a possible application of a NTM in the future may deter current trade. Staiger and Wolak (1994) found that imports tended to reduce during the investigation period concerning an alleged dumping case. It is interesting to highlight that this occurred even when no provisional antidumping duty was imposed in the course of the investigation.

¹⁴ Indeed, Carrere and De Melo (2009) had previously stated that the imposition of an NTM may decrease imports but not necessarily reduce welfare, as was the case of NTMs regulating hazardous products.

¹⁵ WTO, World Trade Report 2012, p. 149.

CHAPTER 2: INCIDENCE OF NON-TARIFF MEASURES AFFECTING THE APEC REGION

Data Caveats

38. Knowing the actual extent of NTMs affecting the APEC region is not an easy task. According to UNCTAD's Multi-Agency Support Team (MAST), NTMs cover a wide array of measures from technical measures – such as SPS and TBT – to non-technical measures ranging from contingent trade-protective measures to intellectual property matters.

39. Contrary to explicit tariff rates, creating a database of NTMs is challenging since data is not necessarily reported by governments in a harmonized manner. In addition, NTMs are often less transparent than tariffs. For example, a NTM negatively affecting trade may not be directly reported and instead be hidden under a particular government policy.

40. For many years, UNCTAD's Trade Analysis and Information System (TRAINS) was the most complete database on NTMs but it has not been updated since the early 2000s. An UNCTAD paper by Basu et. al. (2012), mentioned that this occurred because of "(...) difficulties in identifying NTMs, a growing perception that the trade control measures did not adequately reflect new measures in certain subcategories, and a shortage of resources" (p. 5).

41. To fill the gaps, several new initiatives to construct NTMs databases have been developed in recent years including the WTO's Integrated Trade Intelligence Portal (i-TIP), the Centre for Economic Policy Research's Global Trade Alert (GTA) database, and the European Commission's Market Access-Trade Barriers Database. An advantage these new databases have is that they cover the entire APEC region and allow the identification of APEC economies and sectors most affected by the implementation of NTMs, as well as the type of NTMs that are more frequent.

42. However, these databases have some caveats. It is important to be cautious with the interpretation of the results since the databases only include a fraction of the NTMs in place. For example, WTO members do not notify or report all NTMs and i-TIP only includes data from official notifications and specific trade concerns raised at WTO committees. These specific trade concerns allow the identification of possible measures that may not have been notified by WTO members.

43. The data collected by the GTA and EC databases, as opposed to WTO's i-TIP, does not depend on official notifications. The GTA database involves trade policy experts around the world identifying government measures that may be discriminatory and proposing them to an evaluation group to decide on their inclusion in the database [Evenett (2009)]. In the case of the European Commission's Market Access-Trade Barriers Database, NTMs have been verified by the European Commission after being reported by business associations and individual companies, who are required to launch a formal procedure under the EU's Trade Barriers Regulation. This database includes a list of measures that negatively affect business through a trade obstacle¹⁶.

¹⁶ European Commission, Market Access Database, Exporting from the EU – What you Need to Know, available at <http://madb.europa.eu/madb/indexPubli.htm>

WTO i-TIP Data: NTMs Worldwide Affecting APEC Economies

44. The NTM information available in i-TIP is based on notifications made by WTO members or specific trade concerns reported to a WTO committee. The i-TIP is the most complete database using only official information on five types of NTMs as at May 2013, namely: antidumping, countervailing duties, safeguards, sanitary and phytosanitary measures (SPS), and technical barriers to trade (TBT)¹⁷.

45. For antidumping measures, countervailing duties and safeguards affecting APEC economies, the information comes from notifications made by the WTO members that implemented the measures, as it is stipulated. The information only considers definitive measures in force by the end of the calendar year¹⁸. In addition, information on safeguards only includes global safeguards. Bilateral safeguards, allowed under FTAs and the Protocol of Accession of new members to the WTO, are not included.

46. In the case of SPS and TBT measures, the i-TIP only includes specific trade concerns reported in the WTO SPS and TBT Committees. The number of notifications is not counted since many of these will not necessarily have an impact on trade (e.g. draft revisions of existing technical regulations, and notifications of new regulations for products with no international standards). Additionally, calculations using these figures would experience a growth-bias over time, since there is no obligation in WTO to notify the termination of a measure. In contrast, specific trade concerns are related to those measures that at least one party feels has had a negative impact on trade. These concerns are eliminated once the affected party is satisfied with the action taken by the other party to resolve the problem.

47. The figures in Table 5 show that the number of NTMs in force imposed against APEC economies increased between 2008 and 2012. Antidumping was the most recurrent measure, followed by TBT specific trade concerns and SPS specific trade concerns.

Table 5: Frequency of NTM Worldwide In Force Affecting APEC Members (End of Year Calendar)

Affecting APEC Members	2008	2009	2010	2011	2012	% Change 2008-2012
Antidumping	902	958	955	972	973	7.9%
Countervailing Duties	23	28	41	49	52	126.1%
Safeguards	63	72	76	86	93	47.6%
SPS – Specific Trade Concerns	296	333	341	354	367	24.0%
TBT – Specific Trade Concerns	292	371	408	478	525	79.8%

Source: WTO i-TIP. APEC Secretariat, Policy Support Unit calculations.

Antidumping

48. For the 973 antidumping measures in force affecting APEC members by the end of 2012, the i-TIP database was able to identify 644 cases associated to the HS sector. Around 54% of these measures could be explained by these seven sectors, namely: organic chemicals (HS chapter 29; 92 cases); articles of iron and steel (HS chapter 73; 65 cases); plastics and articles thereof (HS chapter 39; 54 cases); iron

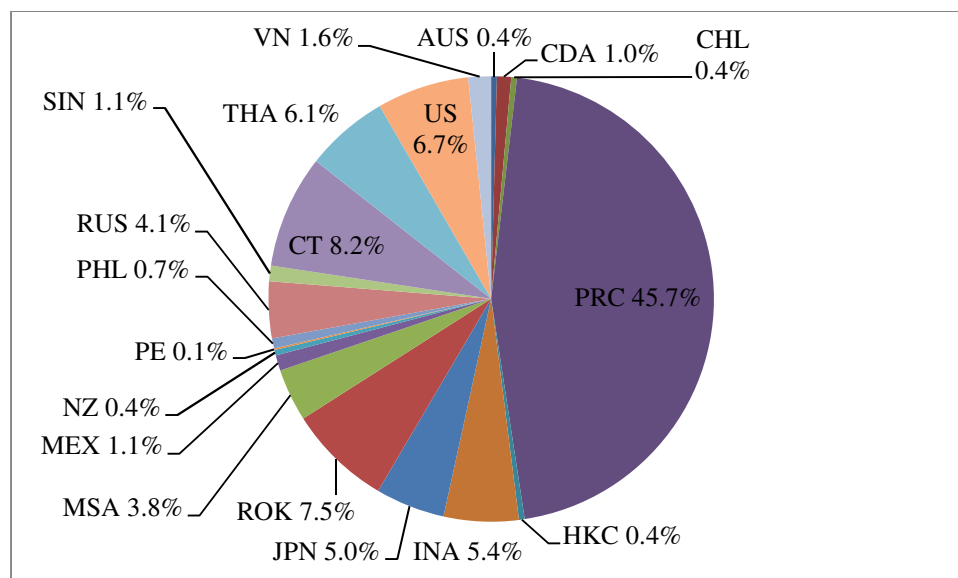
¹⁷ WTO is planning to extend the coverage of i-TIP by including information on import licensing, quantitative restrictions, and agricultural notifications. After the preparation of the statistics for this report, WTO added information on agriculture special safeguards and state trading enterprises.

¹⁸ Provisional measures are not included, since authorities need to return the duties collected if the decision is not to implement definitive measures after the full investigation is finalized.

and steel (HS chapter 28; 37 cases); inorganic chemicals (HS chapter 28; 37 cases); man-made staple fibres (HS chapter 55; 32 cases); and man-made filaments (HS chapter 54; 31 cases).

49. The i-TIP database identified 19 APEC economies that were affected by antidumping. 45.7% of these measures were targeting goods from China. Other economies significantly affected by antidumping were Chinese Taipei (8.2%); Korea (7.5%); United States (6.7%); Thailand (6.1%); Indonesia (5.4%); and Japan (5%).

Figure 1: Antidumping Measures Affecting APEC Economies



Source: WTO i-TIP. APEC Secretariat, Policy Support Unit calculations.

Countervailing Duties

50. In terms of the countervailing duties affecting APEC economies, the i-TIP database associated 46 cases to the HS sector. 65% of these cases were related to six sectors, namely: articles of iron and steel (HS chapter 73; 13 cases); miscellaneous chemical products (HS chapter 38; 5 cases); iron and steel (HS chapter 72; 3 cases); natural reactors, boilers and machinery and mechanical appliances (HS chapter 84; 3 cases); paper and paperboard (HS chapter 48; 3 cases); and mineral fuels, oils and products of their distillation (HS chapter 27; 3 cases).

51. Seven APEC economies were affected by countervailing duties by the end of 2012. China was the main APEC economy affected by countervailing duties (69.2% of all APEC cases), followed by the United States (11.6%).

Safeguards

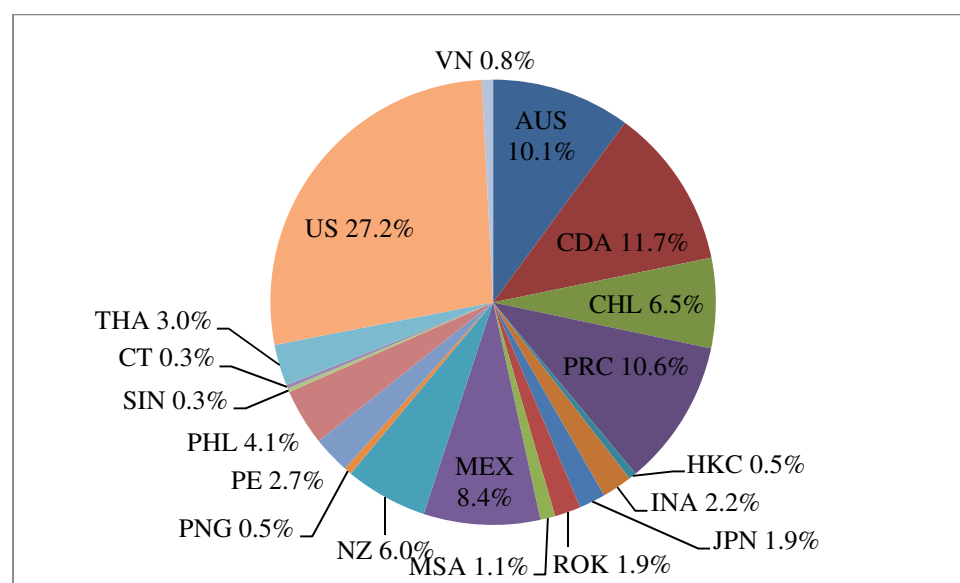
52. The 93 safeguards affecting APEC economies by the end of 2012 were related to 153 types of products at the HS chapter level. The most affected sectors were articles of iron and steel (HS chapter 73; 11 cases); iron and steel (HS chapter 72; 11 cases); and organic chemicals (HS chapter 29; 9 cases). Since the general safeguard measure is applicable to imports regardless of their origin, it is understood that any of these safeguards will affect all APEC economies. Nevertheless, in terms of the impact of the safeguard measure, it affected mostly APEC economies that: 1) exported the product affected by the safeguard; and 2) exported this product to the market that was implementing the safeguard.

Sanitary and Phytosanitary Measures (SPS)

53. Of the 165 SPS-related specific trade concerns affecting APEC economies that could be related to any HS chapter, most of the cases were related to four sectors, namely: meat and edible meat offal (HS chapter 02; 33 cases); edible fruit and nuts (HS chapter 08; 21 cases); products of animal origin not elsewhere specified (HS chapter 05; 14 cases); and live animals (HS chapter 01; 13 cases).

54. Nineteen APEC economies reported that their trade was affected by at least one SPS measure. The United States (27.2% of the ongoing concerns); Canada (11.7%); China (10.6%); and Australia (10.1%) reported most of these SPS-related specific trade concerns in WTO by the end of 2012.

Figure 2: SPS-Related Specific Trade Concerns Affecting APEC Economies

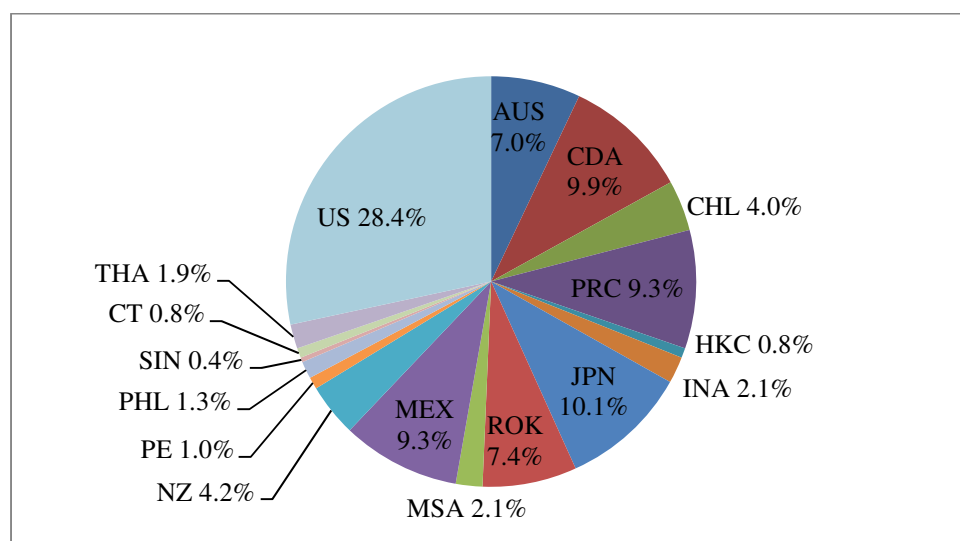


Source: WTO i-TIP. APEC Secretariat, Policy Support Unit calculations.

Technical Barriers to Trade (TBT)

55. It has not been possible to associate HS codes to most of the TBT-specific trade concerns reported by APEC economies. Only 24 cases could be related to any HS sector; the main sectors reported were the following: beverages, spirits and vinegar (HS chapter 22; 5 cases); electrical machinery and equipment and parts thereof (HS chapter 85; 3 cases); dairy products, birds' eggs and natural honey (HS chapter 04; 3 cases); and natural reactors, boilers and machinery and mechanical appliances (HS chapter 84; 3 cases).

56. Eighteen APEC economies reported concerns on TBT measures affecting their trade in WTO. More than 80% of the existing complaints by the end of 2012 were made by seven APEC members, namely: the United States (28.4%); Japan (10.1%); Canada (9.9%); China (9.3%); Mexico (9.3%); Korea (7.4%); and Australia (7%).

Figure 3: TBT-Related Specific Trade Concerns Affecting APEC Economies

Source: WTO i-TIP. APEC Secretariat, Policy Support Unit calculations.

WTO i-TIP Data: Transparency in the Notification of NTMs Implemented by APEC Economies

57. The information available in i-TIP also provides an indication whether APEC economies are becoming more transparent in notifying SPS and TBT-related NTMs that may have a negative impact on trade. For example, of the 94 SPS-specific trade concerns reported in the WTO SPS Committee against APEC economies by the end of 2008, 44 of them had already been notified by the APEC member imposing the measure, which represented 46.8% of the specific trade concerns. By the end of 2012, this percentage had declined to 37.3%, since the number of notified measures did not grow at the same pace as the number of SPS-specific trade concerns.

Table 6: Specific Trade Concerns Notified Against APEC Economies

Year	SPS			TBT		
	STC	Notified measures	% STC notified	STC	Notified measures	% STC notified
2008	94	44	46.81	108	74	68.52
2009	103	46	44.66	132	87	65.91
2010	107	46	42.99	149	97	65.10
2011	118	47	39.83	173	109	63.01
2012	126	47	37.30	188	111	59.04

Source: WTO i-TIP. APEC Secretariat, Policy Support Unit calculations.

58. Similarly, the trend in the percentage of TBT-related specific trade concerns that were properly notified by the corresponding APEC-implementing economies went down from 68.5% to 59% between 2008 and 2012. While the number of TBT-related specific trade concerns increased by 74%, from 108 to 188 concerns, those properly notified by the imposing economies only increased by 50%, from 74 to 111 measures.

Global Trade Alert Data: NTMs Worldwide Affecting APEC Economies

59. The information collected by the GTA database allows the identification of policy initiatives that are discriminatory or are likely to be discriminatory. These initiatives are categorized by the type of measure and sector affected. The information also identifies which jurisdictions are imposing these initiatives and which economies are affected by them.

60. Every policy initiative included in the GTA database is not restricted to a single type of NTM, it could be associated to more than one type of NTM. In this sense, the number of NTMs reflected in the following tables will be greater than the number of policy initiatives listed in the GTA database. For example, an initiative in Switzerland approved by the Federal Council and concerning the approval of CHF 28 million to the agricultural sector was included in the GTA database under three NTM categories: 1) bail out/state aid measures; 2) export subsidies; and 3) local content requirements. This means three NTMs under just one policy initiative.

61. Similarly, the policy initiatives in the GTA database are not restricted to a single sector. The aforementioned example listed four affected sectors, using the Central Product Classification (CPC) rev. 2 nomenclature: 1) live animals; 2) meat, fish, fruits, vegetables, oils and fats; 3) dairy products; and 4) grain mill products and other food products. In other words, four sectors under one policy initiative.

62. Likewise, more than one APEC economy could be affected under one policy initiative. The same example reported seven APEC economies as affected parties (Australia; Canada; China; Mexico; New Zealand; Thailand; and the United States). A similar situation may occur with regards to the implementing jurisdictions. There are a few cases in which a policy initiative is implemented by more than one economy.

63. The GTA database shows that 1,007 NTMs implemented around the world affected at least one APEC member economy as at May 2013. 37.6% of them were related to trade defence measures. This was followed by bail out/state aid measures and non-tariff barriers (not specified) which had a share of 13.6% each.

Table 7: NTMs Worldwide Affecting APEC Economies by Category

Measure	Amount	Share	Measure	Amount	Share
Bail out / state aid measure	137	13.6%	Non-tariff barrier (not specified)	137	13.6%
Competitive devaluation	5	0.5%	Other service sector measure	8	0.8%
Consumption subsidy	6	0.6%	Public procurement	25	2.5%
Export subsidy	41	4.1%	Quota (including TRQ)	17	1.7%
Export taxes or restriction	83	8.2%	SPS measure	6	0.6%
Import ban	33	3.3%	State trading enterprises	4	0.4%
Import subsidy	5	0.5%	State-controlled company	11	1.1%
Intellectual property protection	2	0.2%	Sub-national govt. measure	2	0.2%
Investment measure	40	4.0%	TBT measure	10	1.0%
Local content requirement	33	3.3%	Trade defence measure	379	37.6%
Migration measure	6	0.6%	Trade finance	17	1.7%

Source: Global Trade Alert (GTA) database. APEC Secretariat, Policy Support Unit calculations.

64. As expected, many of the NTMs affecting APEC economies were related to imports. However, 12.3% of the NTMs were export-related measures, which either restricted export quantities (e.g. export taxes or other export restrictions) or provided them an unfair advantage in foreign markets (e.g. export subsidies).

65. Based on the CPC rev.2 nomenclature, the three sectors most affected by NTM occurrences were: 1) metal products, machinery and equipment; 2) other transportable products, except metal products, machinery and equipment; and 3) food products, beverages and tobacco; textiles, apparel and leather products. These three sectors explained 76.9% of all NTM occurrences affecting at least one APEC economy.

Table 8: Reported Sectors in APEC Affected by NTMs Implemented Worldwide

CPC rev. 2 Sector	Amount	Share
Agriculture, forestry and fishery products	207	8.7%
Ores and minerals; electricity, gas and water	172	7.2%
Food products, beverages and tobacco; textiles, apparel and leather products	480	20.1%
Other transportable goods, except metal products, machinery and equipment	640	26.8%
Metal products, machinery and equipment	718	30.0%
Constructions and construction services	24	1.0%
Distributive trade services; accommodation, food and beverage serving services; transport services; and electricity, gas and water distribution services	5	0.2%
Financial and related services; real estate services; and rental and leasing services	45	1.9%
Business and production services	57	2.4%
Community, social and personal services	43	1.8%
Total NTM incidences by sector:	2,391	

Source: Global Trade Alert (GTA) Database. APEC Secretariat, Policy Support Unit calculations.

66. The sub-sectors of basic chemicals (6.1% of incidences); basic metals (5.2%); transport equipment (5.2%); special purpose machinery (4.3%); and fabricated metal products, except machinery and equipment (4.2%) reported the highest number of NTM occurrences.

67. The APEC economies most affected by NTMs implemented worldwide were China and the United States, with 648 and 463 occurrences, respectively, followed by Japan (336) and Korea (325).

Table 9: NTMs Worldwide Affecting APEC – By Economy

Economy	#	Economy	#	Economy	#
Australia	182	Japan	336	Philippines	153
Brunei Darussalam	19	Korea	325	Russian Federation	199
Canada	255	Malaysia	233	Singapore	198
Chile	122	Mexico	216	Chinese Taipei	67
China	648	New Zealand	104	Thailand	298
Hong Kong, China	157	Papua New Guinea	27	United States	463
Indonesia	234	Peru	96	Viet Nam	181

Source: Global Trade Alert (GTA) database. APEC Secretariat, Policy Support Unit calculations.

European Commission's Market Access Database: NTMs Implemented by APEC Economies

68. Sanitary and phytosanitary measures; standards and other technical requirements; and customs procedures are the top three NTMs used by APEC economies, as reported by companies and corroborated at the European Commission. The Market Access Database (MADB) shows that those measures explained 68% of the corroborated measures within APEC. In 2010, the APEC Policy Support Unit's report on the assessment of the Bogor Goals reported 183 NTMs [APEC 2010], which was almost 16% higher than the 154 NTMs APEC was implementing as at May 2013.

Table 10: NTMs by Type of Measure

Measures	Bogor Goals Assessment 2010	Latest Data 2013	Changes 2010 – Present
Competitive Issues	4	3	-1
Government Procurement	15	16	1
Other Non-Tariff Measures	15	13	-2
Quantitative Restrictions and Related Measures	8	9	1
Registration, Documentation, Customs Procedures	31	25	-6
Sanitary and Phytosanitary Measures	59	53	-6
Standards and Other Technical Requirements	35	27	-8
Subsidies	16	8	-8
Overall (Measures)	183	154	-29

Source: European Commission's Market Access Database (MADB). APEC Secretariat, Policy Support Unit calculations.

69. The four categories with the most reduction in the overall number of non-tariff barriers were: subsidies; standards and other technical requirements; sanitary and phytosanitary measures; and customs procedures. Research by the APEC Policy Support Unit showed that subsidies declined 50%, the largest percentage decline among the four categories.

70. The European Commission identified agriculture and fisheries as the sector most affected by NTMs, with 41% of NTMs affecting the sector in the APEC region. Horizontal measures affecting all sectors were next in line, representing 22% of the NTMs.

Table 11: NTMs by Affected Sectors

Affected Sectors	Bogor Goals Assessment 2010	Latest Data 2013	Change 2010 – Present
Agriculture and Fisheries	75	63	-12
Aircraft	2	1	-1
Automotive	7	7	0
Chemicals	3	2	-1
Cosmetics	5	1	-4
Electronics	3	2	-1
Horizontal	31	34	3
Iron, Steel and Non-Ferrous Metals	2	1	-1
Machinery	1	1	0
Other Industries	7	10	3
Pharmaceuticals	14	9	-5
Services- Communication, incl. postal services	2	1	-1
Services- Construction	1	0	-1
Services- Financial	4	4	0
Services- Transport	6	3	-3
Shipbuilding	2	1	-1
Telecommunications Equipment	2	2	0
Textiles and Leather	11	4	-7
Wine and Spirits	4	7	3
Wood, Paper and Pulp	1	1	0
Total	183	154	-29

Source: European Commission's Market Access Database (MADB). APEC Secretariat, Policy Support Unit calculations.

71. The information in MADB allows the identification of the most recurrent types of measures by main economic sectors. For example, most of the NTMs concerning the primary sector were sanitary and phytosanitary measures¹⁹. For the manufacturing sector, standards and other technical measures were the most common NTM applied, followed by registration, documentation and custom procedures²⁰; while for the services sector, half of the NTMs were categorized as other non-tariff measures²¹. In terms of the horizontal NTMs, government procurement and registration, documentation and customs procedures were the most frequent measures.

¹⁹ The primary sector includes agriculture and fisheries; iron, steel and non-ferrous metals; and mining.

²⁰ The manufacturing sector includes the following sub-sectors: aircraft; automotive; ceramics and glass; chemicals; construction industry; electronic; machinery; pharmaceuticals; shipbuilding; telecommunications equipment; textiles and leather; wine and spirits; wood, paper and pulp; and other industries.

²¹ The services sector includes business, including professional services; communication, including postal services; construction; distribution; education; energy; environmental; financial; recreational, including news agency services; tourism and travel; transport; and other services.

Table 12: NTMs by Type of Sector

APEC Total Measures	Primary	Manufacturing	Services	Horizontal
Registration, Documentation, Customs Procedures	0	13	1	11
Quantitative Restrictions and Related Measures	2	5	1	1
Competitive Issues	1	1	0	1
Standards and Other Technical	3	16	2	6
Government Procurement	1	1	0	14
Subsidies	3	5	0	0
Other Non-Tariff Measures	1	7	4	1
Sanitary and Phytosanitary Measures	53	0	0	0

Source: European Commission's Market Access Database. APEC Secretariat, Policy Support Unit calculations.

Addressing Legitimate Policy Objectives: Policy Alternatives to NTMs

72. Governments implement NTMs for a variety of reasons. A frequent motivation is to protect domestic producers against foreign competitors. According to Carrere and De Melo (2009), tariff rate quotas, administrative pricing, non-automatic licenses, and import quotas are among the NTMs that seek to protect domestic producers. The problem with these NTMs is that they could be discriminatory and may lack transparency in some cases. In these cases, if governments want to protect local producers, but in a less discriminatory and more transparent way, imposing tariffs seems to be a better option.

73. However, imposing tariffs is not an optimal solution, since it raises prices, decreases welfare, and moves in the opposite direction of APEC's goals of a free and open trade and investment system. Instead, measures to promote competitiveness are the best alternative to strengthen domestic producers. Better infrastructure, macroeconomic stability, and educational training, among others, are some ways to help firms to be more competitive without being trade restrictive.

74. NTMs are also implemented to monitor trade flows, obtain a source of revenue, and control foreign exchange flows. For example, automatic licenses are another type of NTM, the purpose of which are usually to monitor imports and collect statistics. Despite the fact that these licenses are given for free, the importer spends time and resources to apply for the licenses. Carriere and De Melo (2009) mentioned that the same objectives could be met by just reviewing the customs entries after the import has taken place.

75. In terms of using NTMs to obtain a source of revenue, for example through an import surcharge, incorporating the value of the surcharge into the tariff rate or charging an internal tax to the product regardless if the product is imported or made domestically are more transparent and less trade-distorting options to collect revenue.

76. In some cases, NTMs seek to address legitimate objectives such as public health and safety. For instance, it is common for governments to implement sanitary and phytosanitary (SPS) requirements to make sure only products safe for consumption will be available in the market.

Governments also implement these measures to prevent diseases or pests from spreading into their territories. However, there are occasions in which the requirements for certain markets and products are not based on international standards, thus making it more difficult for foreign producers to meet the conditions and sell in those markets. These measures become non-tariff barriers.

77. Governments' concerns could be addressed by implementing SPS requirements that follow international standards such as the Codex Alimentarius, World Organization for Animal Health (OIE) or the International Plant Protection Convention (IPPC). In addition, governments could agree on bilateral SPS protocols with their counterparts by establishing mutually agreeable procedures in order to facilitate trade of specific products. The enforcement of these protocols may reduce the time needed to issue SPS permits.

78. When implementing SPS measures, particularly in emergency situations, it is common for authorities to temporarily prohibit the importation of certain products that pose a threat to people, local flora or fauna. Sometimes the threat comes from a territory that has isolated the disease to a specific geographic area within the economy. In those cases, a less-restrictive SPS measure could meet the public health and safety objectives of the importing party by allowing the importation of the product from disease-free areas and only ban those products coming from the affected areas. Of course, this could be done if certification and monitoring mechanisms exist in the exporting party in order to prevent products in the affected areas from being exported.

79. Legitimate reasons for governments to implement technical regulations are related to security and environmental grounds. Governments may issue technical regulations to safeguard consumers' well-being. The problem arises when they include provisions that unnecessarily restrict trade; for example, a regulation which prescribes how the product must be manufactured instead of the functions the product must meet in order to be ready for commercialization. Whenever international standards are available, the interested parties could implement technical regulations based on standards prepared by the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU).

80. As mentioned by the WTO (2012), convergence to international standards, harmonization, equivalence, and mutual recognition could mitigate negative effects on trade by reducing policy divergence. At the same time, these measures also assist governments in their interest to meet particular policy objectives such as security and environmental matters.

81. In some cases, simple technical measures such as labeling could become an unnecessary obstacle to trade. It is understood that labeling is important to give consumers access to product information before making their purchase. Information about certain product characteristics, advisory messages, and requirements to include information in the market language are reasonable since they assist consumers to obtain information about quality and compare options before buying. In contrast, arbitrary requirements such as the usage of specific type and size of typography represent an unnecessary barrier to trade. This only adds costs to the producer, and does not provide more critical information to the consumers.

82. Other NTMs frequently found are in customs administrations. Customs inspections for exporters and importers could become unnecessary obstacles to trade. The objectives of the inspections are many, such as security reasons, preventing the arrival of banned or pirated products, and verifying in situ that the merchandise is entitled to benefit from duty-free/preferential treatment, among others.

An alternative measure that could assist customs administrations to achieve its objectives is by implementing risk management systems and strengthening ex-post verifications (auditing).

83. In the case of risk management systems, advance information such as the type of product, cargo volume, declared merchandise value, point of origin, transit points, exporting/importing firms, and others could assist customs administrations as they analyze risk and determine with containers should go through an inspection before they are released. In this way, containers with low risk can be released and efforts can be focused on the inspection of cargo with medium and high risk.

84. As a follow-up measure, authorities could conduct ex-post verifications within a reasonable time span to corroborate that the transaction was made in accordance with the rules and procedures. To assure that authorities will not suffer from unpaid duties corresponding to goods already released, a deposit may be a useful tool. In this sense, if authorities find evidence within a reasonable timeframe that duties were not duly paid or there was a breach in obtaining preferential treatment, the deposit will not be returned to the importer. In this way, it will be possible to achieve the legitimate objectives (customs inspections) and facilitate trade at the same time.

CHAPTER 3: IMPACT OF SPECIFIC NON-TARIFF MEASURES ON TRADE

Export Subsidies

85. Identifying an export subsidy is not a straightforward process. When implemented, they are usually presented as another type of measure instead of as an explicit subsidy.

86. The Global Trade Alert (GTA) database has identified 21 discriminatory export subsidies implemented by APEC economies after November 2008 and which were still in force by May 2013²². Examples include:

- Value-added tax rebates for exporters operating in particular sectors
- Import duty refunds on raw materials if final product is manufactured in the domestic market
- Support to SMEs aiming to sell overseas
- Schemes to reduce income tax to exporting firms
- State guarantees to exporters of local goods.

87. Similarly, this database identified 40 export subsidies in force affecting at least one APEC economy as at May 2013. Twenty-nine of them were implemented by non-APEC economies and 11 by APEC economies. Of the 40 export subsidies, 24 covered industrial products, which cannot be subject to export subsidies in accordance to the WTO. Some of these measures were introduced as:

- Subsidized credits for exporters
- Grant schemes to exporters
- Drawback systems, where import taxes or indirect taxes are suspended on the purchase of local or imported inputs for the production of final goods to be sold overseas
- Tax credits for exporters to be applied when importing goods
- Schemes to assist local producers via domestic support prices, which are higher than world prices.

88. It is difficult to calculate precisely how much trade is affected by export subsidies. Many policies introducing export subsidies do not specifically name the affected products according to standard HS nomenclature, which is commonly used in trade statistics. Another complication arises when the application of export subsidies involves administrative discretion from the authorities who determine which transactions or companies are eligible. In addition, not all exporters who actually qualify for these subsidies may apply to get the benefits.

89. For the purpose of determining the maximum possible export subsidy coverage, the APEC Policy Support Unit made an assumption here that implementing parties of the 40 export subsidies affecting APEC members granted subsidies to all their exports from each eligible sector. Under this extreme scenario, USD 1.3 trillion in exports to the APEC region would have benefitted from those subsidies in 2012, a significant portion of overall APEC trade. However, due to data limitations, it was

²² The Global Trade Alert (GTA) database listed nine APEC economies implementing export subsidies which affected other APEC members. Two of them implemented 12 out of the 21 export subsidies identified.

not possible to determine how much of the USD 1.3 trillion in exports actually benefitted from the subsidies. Notwithstanding, this figure gives an idea of the “potential” of export subsidies to distort the market.

90. The trade distorting implications of these subsidies are clear. When an economy implements export subsidies and is a top producer in any of the eligible products, local companies will have the incentive to increase local production and sales overseas, causing a fall in world prices that would probably not happen in the absence of the subsidy. Furthermore, companies who receive the subsidy will benefit by obtaining resources that importers and producers located overseas do not have access to, giving them an unfair advantage over their competitors.

91. For both cases - export subsidies affecting and implemented by APEC economies - the common pattern is the use of performance requirements. Companies could receive a subsidy in many different ways, either directly (e.g. transfers) or indirectly (e.g. tax rebates and credits, concessional loans), as long as they are able to demonstrate that they are exporting or intend to export.

92. Policy alternatives (I): Determining which alternative policies to implement will depend on the objectives that the export subsidies are trying to achieve. In many cases, the aim is to improve export performance and diversify exports by offering domestic firms a way to reduce production costs and have access to cheaper credit, among others. However, a study by the WTO (2006) mentioned that one of the disadvantages of implementing subsidies is that “beneficiaries have a strong incentive to lobby in favor of continued subsidization. In other words, the use of subsidies makes the government prone to capture by recipient industry groups or other groups in society”²³. In addition, Nogues (1989) and Panagariya (2000) demonstrated that export subsidy schemes are not necessarily the least-cost effective option in achieving those objectives. Both studies show that promoting competitiveness via macroeconomic stability and economic openness – including reducing tariff rates, non-tariff barriers, and attracting foreign direct investment – are more cost-effective than using export subsidies. The development of infrastructure and human resources as well as creating competent export and investment promotion agencies are also relevant in boosting and diversifying exports.

93. Policy alternatives (II): Within the agriculture sector, subsidies have been used to provide support to local farmers by setting high support prices²⁴ in order to guarantee income to farmers and protect employment in rural areas. Other viable options to support farmers include helping them gain competitiveness and facilitating their effective insertion into the food supply chain. This could be done by making available market information systems; encouraging associations among small and medium-size farmers; developing proper pest control mechanisms; and promoting soil conservation techniques; among others. Investment in infrastructure such as irrigation projects and roads are also important²⁵.

94. Policy alternatives (III): Governments have also justified subsidies in the agriculture sector due to food security concerns. The increase in food production encouraged by the subsidy could be

²³ WTO (2006), p. 106.

²⁴ These measures become an export subsidy when part of the production is sold overseas.

²⁵ Theoretically, it is also possible to protect local farmers by using tariffs, which reduces competition from imported goods and encourages domestic farmers to increase their production. As opposed to subsidies, tariffs do not require governments to use public funds. However, tariffs can increase domestic prices which are assumed by consumers. The protection of local farmers should be by increasing their competitiveness and not by unnecessarily raising costs to consumers and governments. Policy alternatives should not steer APEC economies away from the Bogor Goals of free and open trade and investment in the Asia Pacific.

stockpiled and later consumed within the economy. However, a legitimate concern arises if part of it is destined for overseas markets which may depress world prices and affect foreign producers. A possible measure that could facilitate economies to achieve this policy objective without distorting trade is to implement monitoring mechanisms for stockpiling. This would prevent stockpiled food from flooding overseas markets and distorting world prices, affecting foreign farmers - including those selling in their local markets - and exporters of agricultural products.

Export Taxes and Restrictions

95. Export taxes and restrictions seek to discourage firms from exporting in order to allocate more local production to the domestic market. With the application of export taxes or restrictions, companies will reduce their overall domestic production levels. The intention of the measure is that companies increase their sales in the domestic market at the expense of the foreign markets. Governments may also get additional revenue by collecting taxes or by charging for the issuance of quota permits. Prices in the domestic market will be lower than those overseas.

96. If export taxes and restrictions are implemented by an economy which produces a significant portion of global supply in a particular product, global prices of that product are likely to increase. This situation may benefit other exporters, but will negatively affect importers and have consequences for supply chains of some manufacturing and service sectors. For instance, an economy that is a net importer of cement may experience problems developing construction projects if the economy which is the main cement supplier imposes export restrictions. Similarly, manufacturing industries such as electronics and automobiles depend on many raw materials, pieces and components from all over the world. Export restrictions on any of the largest suppliers could jeopardize operations in these sectors.

97. Export taxes and restrictions worldwide are usually implemented on products that are critical to manufacturing industries such as minerals, cotton, rubber, timber, leather, and fuels. They are also found in food products.

98. The Global Trade Alert (GTA) database identified 80 export taxes or restrictions implemented around the world and affecting at least one APEC economy. Forty-two of these measures were implemented by non-APEC members and 38 by six APEC members²⁶. Measures were easily identified in many cases, since they were explicitly introduced as an export tax or as an export quota or prohibition. To tighten exports, it was common to find governments raising export taxes or limiting the issuance of export licenses.

99. The database also found that APEC economies implemented 44 export taxes or restrictions as at May 2013. In particular, four APEC economies implemented 41 out of the 44 measures. Some of the measures did not affect any APEC member.

100. The database showed that many export restrictions affecting or implemented by APEC economies have been applied contravening the WTO principle of non-discrimination. For instance, export bans have been implemented for valid reasons such as environmental or public health concerns. The problem arises when the ban is partial, i.e. a situation in which exports are affected, but domestic sales are not. If the prohibition is related to environmental or health hazards, then it should apply to both domestic and foreign sales in order to minimize or eliminate these problems.

²⁶ Three APEC economies implemented 28 out of the 38 export taxes or restrictions within the APEC region.

101. Another type of discriminatory treatment found was when a measure prohibited exports with the exception of few selected markets²⁷.

102. It was also common to find measures in which companies were not banned to export, but could only do so if they met particular conditions. For example, to export a product, companies had to sell first a minimum amount in the domestic market at an official price, which is usually below world prices. In other cases, a minimum exporting price was required to obtain the authorization to export. Another common condition found was that products could only be exported if a specific part of the manufacturing process took place in the domestic market.

103. Governments have sometimes implemented sophisticated measures to introduce export restrictions. The GTA database identified a measure by an APEC economy (“economy A”) which consisted of government purchases of rice, restricting the amount of rice available for export, and causing rice prices to increase in foreign markets²⁸.

104. In relation to this measure, rice exports by economy A declined between 2011 and 2012 by 28.8% (nearly USD 1.9 billion). Table 13 shows that this decline accounted for nearly half of the fall of world rice exports. This is consistent to the start of the economy A’s government scheme to purchase rice in the second half of 2011. After this scheme started, the participation of economy A in world rice exports fell from 28% to 23.7%. APEC rice imports from economy A were also affected, as they declined by 37.6% (USD 918 million). Nevertheless, total rice imports were not much affected, as APEC economies were able to increase their purchases of rice from other sources.

Table 13: International Trade of Rice (USD Million)

World Rice Exports	2010	2011	2012	% Variation 2011-12
By economy A	5,341	6,507	4,632	-28.8%
By world	19,516	23,244	19,584	-15.7%
% by economy A	27.4%	28.0%	23.7%	
APEC Rice Imports	2010	2011	2012	% Variation 2011-12
From economy A	2,045	2,440	1,522	-37.6%
From world	4,330	6,286	6,197	-1.4%
% from economy A	47.2%	38.8%	24.6%	

Source: World Bank, WITS. United Nations, COMTRADE. APEC Secretariat, Policy Support Unit calculations

105. The negative effect of this measure was reflected in two ways: 1) supply constraints in overseas markets meant economies had to suddenly find alternative sources to buy imported rice; and 2) an increase of global rice prices due to the importance of “economy A” in the world rice market. According to the World Bank, between 2010 and 2012 the international prices of the three most popular types of rice exported by economy A – long grain, broken rice 25% and broken rice 5% – rose by 36.9%, 23.2% and 15.2%, respectively (see Table 14).

²⁷ For example, see http://www.globaltradealert.org/measure?tid=All&tid_1=312&tid_3=2221

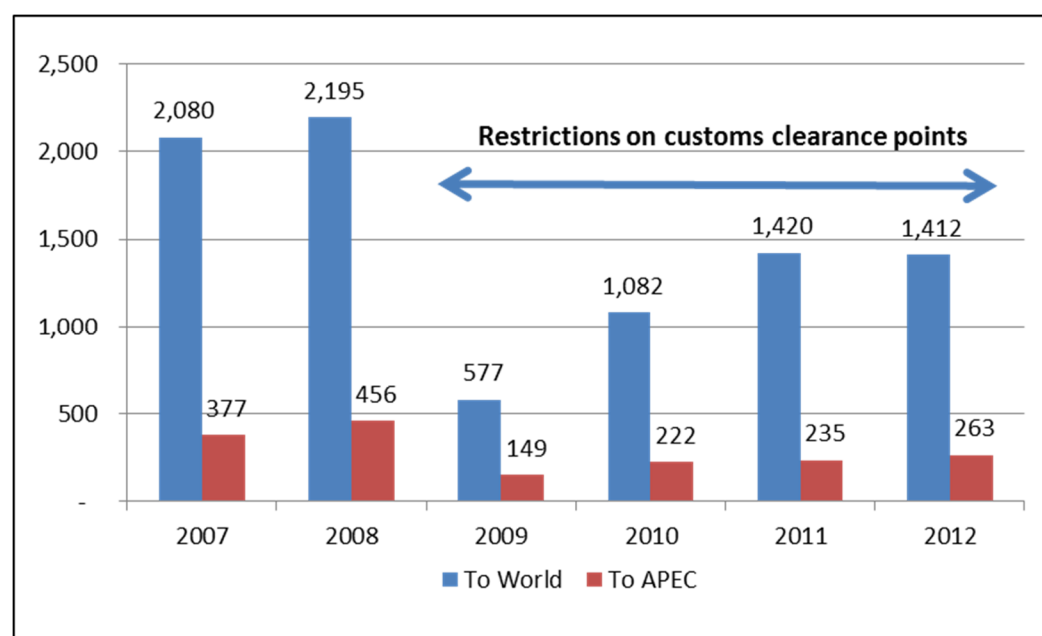
²⁸ See http://www.globaltradealert.org/measure?tid=All&tid_1=477&tid_3=2221

Table 14: Rice Prices (Yearly Average USD Per Metric Ton)

	Long Grain	Broken rice 25%	Broken rice 5%
2010	384	442	489
2011	459	506	543
2012	525	544	563
% Change 2010-12	36.9%	23.2%	15.2%

Source: World Bank, Global Economic Monitor (GEM) Commodities. APEC Secretariat, Policy Support Unit calculations.

106. Export restrictions have also been introduced by creating additional obstacles to authorize exports such as by limiting the number of ports to ship merchandise²⁹. For example, economy B established restrictions of customs clearance points to export ferrous metal scrap in early 2009. The impact of the measure reduced economy B's exports of ferrous metal scrap to APEC and the rest of the world substantially (see Figure 4) and exports have not recovered to the levels achieved before the implementation of this measure.

Figure 4: Exports of Ferrous Metal Scrap by Economy B (USD Million)

Source: World Bank, WITS. United Nations, COMTRADE. APEC Secretariat, Policy Support Unit calculations.

107. The application of many of these export restrictions may be infringing on GATT Article XI which prohibits quantitative export restrictions, with the exception of those temporarily applied to relieve critical shortages of foodstuffs or other essential products, or those necessary for the application of standards or regulations for the classification, grading or marketing of commodities in international trade³⁰.

²⁹ See http://www.globaltradealert.org/measure?page=1&tid=All&tid_1=444&tid_3=2221

³⁰ GATT Article XX establishes general exceptions applicable to GATT obligations, including the Article XI on quantitative export restrictions. Article XX establishes that it is possible to implement export restrictions in case they are not discriminatory; not a disguised restriction to trade; and the measure is related to certain conditions such as the protection of public morals, animal, plants and human health; and conservation of exhaustible national resources; among others. However, many of the export restrictions reported by the Global Trade Alert (GTA) database seem not to meet any of these conditions.

108. Policy alternatives (I): If the intention is to secure the provision of any product in the domestic market at lower prices, it is less trade distorting to reduce tariff rates than to apply an export restriction or tax. By lowering tariffs, domestic consumers will have access to larger quantities of the product at a lower price, due to the increasing availability of imported products.

109. Policy alternatives (II): If export restrictions are implemented for environmental reasons, it is important they are implemented on a non-discriminatory basis and in a less trade distorting way than other available options. Nevertheless, other options could address environmental concerns without the need to implement export restrictions. For example, Karapinar (2012) proposed alternatives that could achieve environmental objectives, such as regulatory mechanisms imposing stricter environmental standards on production, pollution charges directly applied to producers based on their amount of pollutants they discharge³¹, and promotion of cleaner and more efficient technologies.

110. Policy alternatives (III): The application of export taxes as a source of government income usually happens in economies with low income. When the revenue base is limited and the tax collection system is administratively inefficient, it is common for governments to view exports and imports as sources of revenue, with the negative implications on trade. An alternative to export taxes as a source of government revenue is to develop an efficient tax administration authority, enhance the revenue base, and emphasize the use of other less trade restrictive taxes such as income and value-added taxes³².

Local Content Requirements

111. Local content requirements (LCR) have been implemented as a means to develop and protect local producers and ensure that some portion of production will occur domestically and/or with the use of local raw materials or components. However, LCR policies are not easy to administer. For local producers of inputs, LCR provides similar protection to an import quota, but no additional government revenue is obtained for imposing the measure (as opposed to the quota). However, for domestic producers of final goods, LCR does not place limitations on importing inputs, but in order to increase production, they are forced to purchase more domestic inputs³³. Forcing producers to use domestic inputs could raise production costs if foreign producers were able to provide the necessary inputs at a lower cost. As a result, LCR could also increase consumer prices.

112. Kuntze and Moerenhout (2013) listed some of the reasons frequently used to justify the implementation of LCR such as job creation; support of infant industries; effect on increasing revenue base for governments as the local industry expands; and spillovers in the medium-term by having capable companies to innovate and compete. However, this study also mentioned some factors against the use of LCR such as the inefficient allocation of resources; impact on trade; higher prices in the sectors/products subject to LCR; and employment concerns due to lower production levels as a consequence of increasing production costs.

113. In 2013, APEC began discussing local content requirements as part of the work program of the APEC Committee on Trade and Investment (CTI). The topic is particularly timely and relevant as LCR appears to have increased in recent years; Hufbauer (2013) mentioned that more than 100 new LCR have been considered or implemented following the Global Financial Crisis.

³¹ One example is the implementation of carbon taxes.

³² The value-added tax is also known in other places as sales tax or goods and services tax.

³³ Similarly, to increase local production, producers will probably need to buy additional foreign inputs, which will only be used if they buy enough additional domestic inputs to meet the LCR.

114. The Global Trade Alert (GTA) database identified the application of 22 LCR by six APEC economies as of May 2013. Similarly, the database recognized 34 LCR implemented worldwide that directly affected at least one APEC economy. Nineteen of these measures were implemented by non-APEC members.

115. LCR are implemented in many different ways. Within the GTA database, it is common to find LCR set as a percentage in terms of value or quantity to be produced domestically. For instance:

- State guarantees for exports of goods with a minimum percentage of local value content.
- Tariff exemptions for assembling industries if at least a minimum percentage of the equipment is domestic.
- Tax rebates if the full production process takes place at the local level.
- Concessional loans in exchange of increasing local value content.

116. Service activities can also be subject to LCR if policies dictate that certain conditions must be met in the economy where services are offered. For example, some economies specify that internet servers be hosted domestically in order to offer long distance telecommunications services via internet. In other occasions, LCR links export licenses to the use of specific services, such as using only domestic shipping companies to supply certain products to overseas markets. Franchises could also face LCR when they are authorized to operate in the domestic market only if a minimum share of products offered in stores is locally produced.

117. It is common to find LCR targeting investment projects as well. Governments can establish that investment projects can be granted only if the companies assure that a minimum percentage of the cost of the project is explained by the use of local goods and human resources. These LCR also could be generalized in order to apply to all projects related to any specific sectors.

118. LCR could have an impact on trade flows. For example, an economy outside APEC (“economy C”) decided to increase local content requirements in tenders related to the development of a 4G network in early 2012, as part of its efforts to support the local production of transmission devices and optical fibre³⁴. After this decision, economy C’s imports of transmission devices and optical fibre fell by 12.6% and 14.6%, respectively in relation to the previous year. APEC economies were affected by this measure, being the most important region supplying these products. For APEC economies, this measure caused a decline in their sales to economy C by 15.9% and 10.6%, respectively (see Table 15).

Table 15: Economy C’s Imports of Transmission Devices and Optical Fibre (USD Million)

Product	Origin	2010	2011	2012	% Variation 2011-12
Transmission Devices	From World	213	235	206	-12.6%
	From APEC	183	206	173	-15.9%
Optical Fibre	From World	25	45	38	-14.6%
	From APEC	14	24	22	-10.6%
Total Imports All Products	From World	179,685	225,499	223,149	-1.0%
	From APEC	93,539	117,456	114,771	-2.3%

Source: World Bank, WITS. United Nations, COMTRADE. APEC Secretariat, Policy Support Unit calculations.

³⁴ See http://www.globaltradealert.org/measure?tid=All&tid_1=297&tid_3=2219

119. Policy alternatives (I): LCR are not easy to implement. The conditions to make LCR successful and meet their policy objectives are not present everywhere and implementing LCR without those conditions would be too costly. Johnson (2013) mentioned four elements that need to be present for LCR to be effective: 1) market size, since too small markets will not reach economies of scale for cost effective production; 2) neither too restrictive (expensive) nor too low (unnecessary bureaucratic procedures); 3) cooperation among stakeholders (project developers, manufacturers, service providers, government, etc.); and 4) short-term duration (to avoid regulatory capture) with potential for innovation and learning-by-doing. Less costly and less trade restrictive options can be implemented to meet the main objectives of LCR. For example, Hufbauer et.al. (2013) proposed alternatives such as³⁵:

- Creating a business-friendly environment to create jobs and stimulating investments. Low corporate tax rates and honest public sector are important.
- Encouraging corporate social responsibility. Multinationals seeking local firms to be part of their supply chain.
- Expanding training.
- Improving infrastructure. More investment in this area.

120. Policy Alternatives (II): APEC Ministers endorsed in 2013 the APEC Best Practices to Create Jobs and Increase Competitiveness in order to propose alternatives to local content requirements, which have increasingly been adopted since the Global Financial Crisis. This initiative proposes five major policies³⁶:

- Making economies cost-competitive for production, which includes the promotion of an internationally attractive business environment and the support of investment in infrastructure development.
- Spurring innovation through new technologies, by supporting research and development, promoting research collaboration, and providing effective protection of intellectual property rights.
- Attracting investment, via the improvement of the investment climate, the allocation of resources in education and workforce training, the improvement of manufacturing supply chains and logistics, and the promotion of access to the digital economy.
- Opening markets, by addressing market access barriers.
- Assisting SMEs, through the enhancement of SME's export opportunities, facilitating SME's access to supply chains, capital and emerging technologies and providing them with information and tools to improve efficiency and profitability.

³⁵ Hufbauer et.al. (2013) also mentioned that if governments make a political decision to protect a sector, they should choose a tariff over LCR. The cost impact of a tariff is more visible and tariffs are more uniform since all local companies receive the same rate of protection. LCR are more likely to “play favorites” between local firms, since they usually favor a limited number of firms. Nevertheless, both decisions of protecting via tariffs or LCR are trade restrictive as opposed to policies to increase competitiveness via structural reforms that could create jobs and develop competitive sectors, by reducing production costs in a market-friendly manner, and which are closer to the ideals of the Bogor Goals of free and open trade and investment.

³⁶ See http://www.apec.org/Meeting-Papers/Ministerial-Statements/Annual/2013/2013_amm/annexf.aspx

CHAPTER 4: FINAL REMARKS

121. Based on the data compiled by several respected sources showing an accumulation in the use of NTMs affecting trade after the Global Financial Crisis, it is important that APEC members take an active role to refrain from using protectionist measures that can distort trade and decrease welfare in society. In this sense, the discussion on the use of policy alternatives to NTMs is becoming more relevant, not just for APEC, but also for the rest of the world.

122. It is not the objective of this study to argue whether specific NTMs are legitimate or not. Nevertheless, it is a worrying sign that trade partners have reported an increasing number of measures being implemented around the world, including within the APEC region, as trade restrictive. This report proposes a series of options that allow governments to achieve their policy objectives with less costly and less trade restrictive alternatives.

123. To meet policy objectives, APEC members should focus on measures to promote competitiveness via macroeconomic stability, economic openness, provision of proper infrastructure, and development of human resources skills. These measures will increase competitiveness in the long term and contribute to sustainable growth by making the APEC region more resilient from the social and economic perspective, as opposed to the application of NTMs affecting trade. APEC committees and sub-fora are already conducting capacity-building programs to support such measures. However, more efforts can be done to emphasize work in this type of activities.

124. In addition, initiatives to improve cooperation, through increased transparency and exchange of information could be useful for several reasons. For example, agencies can promote the convergence of standards or establish agreeable procedures to facilitate trade of certain products. Businesses could also benefit from these initiatives, by knowing which conditions they will be facing in particular markets. Decision-making will be easier with the availability of official information and companies will avoid incurring unnecessary costs. Trade transactions could be cleared faster and in a less costly manner.

125. Other possible cooperation initiatives that APEC could encourage are the preparation of diagnostic studies to identify measures affecting trade in specific products/markets and propose policy alternatives. In parallel, APEC could implement capacity-building activities to assist APEC developing economies in building analytical capabilities in order to assess measures affecting their products and identify options to overcome those barriers.

126. APEC should encourage discussions to curb the use of NTMs. Many of the existing types of NTMs are subject to WTO rules, which have been in force for decades. A set of revised rules could effectively limit the least desirable trade effects of such measures. The lack of progress in the negotiations of the Doha Development Round has inhibited for many years any attempt to establish stricter conditions on the existing multilateral rules and disciplines that regulate the implementation of many of the types of NTMs discussed in this report. Fortunately, WTO members made a breakthrough by delivering the Bali Package in December 2013, regarding decisions on trade facilitation, agriculture, and development and least-developing countries matters. This has given a new boost to the multilateral process in WTO and could provide an opportunity to renew multilateral talks in other areas, including NTM-related matters.

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ANNEX 1: SUMMARY OF MEASURES INCLUDED IN THE NTM CLASSIFICATION BY UNCTAD'S MAST

Among the SPS and TBT measures (Chapters A and B), the classification includes prohibitions/restrictions of imports for SPS and TBT reasons; tolerance limits for residues and restricted use of substances; labelling, marketing and packaging requirements; production or post-production requirements; and conformity assessment procedures. SPS measures also include hygienic requirements, and treatment for elimination of plant and animal pests and disease-causing organisms. TBT measures also cover product identity requirements, and product quality or performance requirements.

Chapter C on pre-shipment inspections deals with direct consignment requirements; requirements to pass through specified port of customs; import monitoring and surveillance requirements; and other automatic licensing measures. Chapter D on contingent trade protective measures covers antidumping, countervailing, and safeguard measures.

Chapter E deals with measures aimed to restrict the quantity of goods, such as non-automatic import licensing procedures; quotas; prohibitions other than for SPS or TBT reasons; export-restraint arrangement; and tariff-rate quotas. Chapter F comprises of measures to control the prices of imported goods, such as minimum import prices, reference prices, voluntary export price restraints, variable changes, customs surcharges, seasonal duties, additional taxes and charges levied in connection to services provided by the Government, internal taxes and charges levied on imports, and decreed customs valuations.

Financial measures are included in Chapter G. They include advance payment requirements, multiple exchange rates, regulation on official foreign exchange allocation, and regulations concerning terms of payment for imports. Measures affecting competition are included in Chapter H, for example, those involving monopolies such as the use of state trading enterprises for importing.

Trade-related investment measures, such as local content requirements and trade balancing measures are included in Chapter I. Distribution restrictions such as geographical distribution measures and limits on resellers are listed in Chapter J. Restrictions on post-sales services are listed in Chapter K.

Subsidies, excluding those related to exports, are included in Chapter L. Measures related to government procurement restrictions, intellectual property and rules of origin are part of Chapters M, N and O.

Finally, export-related measures, including licenses, quotas and prohibitions, price controls, measures on re-exports, taxes and charges, subsidies and technical measures are contained in Chapter P.

ANNEX 2: NTM WORLDWIDE AFFECTING APEC BY SUB-SECTOR AND TYPE OF MEASURE (*)

HS	Sector	SPS	TBT	A D	C V	S G
01	Live animals	13	0	0	0	2
02	Meat and edible meat offal	33	0	2	0	3
03	Fish and crustaceans, molluscs and other aquatic invertebrates	5	0	0	0	2
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	12	3	0	0	5
05	Products of animal origin, not elsewhere specified or included	14	0	1	0	0
06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage	6	0	0	0	0
07	Edible vegetables and certain roots and tubers	12	0	2	0	2
08	Edible fruit and nuts; peel of citrus fruit or melons	21	0	1	0	3
09	Coffee, tea, mate and spices	5	0	0	0	0
10	Cereals	6	0	0	0	1
11	Products of the milling industry; malt; starches; inulin; wheat gluten	0	0	0	0	6
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruits; industrial or medicinal plants; straw and fodder	2	0	0	0	0
13	Lac; gums, resins and other vegetable saps and extracts	0	0	0	0	0
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included	0	0	0	0	0
15	Animal or vegetable fats and oils and their cleavage products prepared edible fats; animal or vegetable waxes	3	0	2	2	2
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	4	0	0	0	1
17	Sugars and sugar confectionery	2	1	2	0	8
18	Cocoa and cocoa preparations	0	0	0	0	2
19	Preparations of cereals, flour, starch or milk; pastry cooks' products	0	1	0	0	4
20	Preparations of vegetables, fruit, nuts or other parts of plants	2	0	9	0	3
21	Miscellaneous edible preparations	9	1	1	0	4
22	Beverages, spirits and vinegar	3	5	0	0	1
23	Residues and waste from the food industries; prepared animal fodder	3	0	0	0	2
24	Tobacco and manufactured tobacco substitutes	0	0	0	0	0
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	0	1	2	0	2
26	Ores, slag and ash	0	0	0	0	0
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	0	0	5	3	0
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	0	0	37	1	5

HS	Sector	SPS	TBT	A D	C V	S G
29	Organic chemicals	0	0	92	1	9
30	Pharmaceutical products	2	0	0	0	1
31	Fertilisers	0	0	2	0	4
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks	0	1	4	0	0
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	2	0	0	0	0
34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, dental waxes and dental preparation	0	0	1	0	0
35	Albuminoidal substances; modified starches; glues; enzymes	0	0	0	0	1
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	0	0	0	0	5
37	Photographic or cinematographic goods	0	0	2	0	0
38	Miscellaneous chemical products	0	0	24	5	4
39	Plastics and articles thereof	0	1	54	1	3
40	Rubber and articles thereof	0	1	24	0	1
41	Raw hides and skins (other than furskins) and leather	0	0	1	0	0
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silkworm gut)	0	0	0	0	1
43	Furskins and artificial fur; manufactures thereof	0	0	0	0	0
44	Wood and articles of wood; wood charcoal	6	0	12	1	1
45	Cork and articles of cork	0	0	0	0	0
46	Manufactures of straw, of esparto or of other plaiting materials, basketware and wickerwork	0	0	0	0	0
47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	0	0	0	0	0
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard	0	0	13	3	1
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	0	0	0	0	0
50	Silk	0	0	1	0	0
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	0	0	0	0	0
52	Cotton	0	0	4	0	4
53	Other vegetable textile fibres; paper yarn and woven fabric of paper yarn	0	0	2	0	0
54	Man-made filaments; strip and the like of man-made textile materials	0	0	31	0	1
55	Man-made staple fibres	0	0	32	0	0
56	Wadding, felt and nonwovens; special yarns, twine, cordage, ropes and cables and articles thereof	0	0	1	0	0
57	Carpets and other textile floor coverings	0	0	0	0	0

HS	Sector	SPS	TBT	A D	C V	S G
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	0	0	5	1	0
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	0	0	4	1	0
60	Knitted or crocheted fabrics	0	0	4	0	0
61	Articles of apparel and clothing accessories, knitted or crocheted	0	0	1	0	2
62	Articles of apparel and clothing accessories, not knitted or crocheted	0	0	1	0	0
63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags	0	0	5	1	3
64	Footwear, gaiters and the like; parts of such articles	0	0	3	0	3
65	Headgear and parts thereof	0	0	0	0	0
66	Umbrellas, sun umbrellas, walking sticks, seat-sticks, whips, riding-crops and parts thereof	0	0	0	0	0
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair	0	0	0	0	0
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	0	0	6	1	0
69	Ceramic products	0	0	10	1	6
70	Glass and glassware	0	0	20	0	5
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin	0	0	0	0	0
72	Iron and steel	0	0	45	3	11
73	Articles of iron or steel	0	0	65	13	11
74	Copper and articles thereof	0	0	6	0	0
75	Nickel and articles thereof	0	0	0	0	0
76	Aluminium and articles thereof	0	0	5	2	0
78	Lead and articles thereof	0	0	0	0	0
79	Zinc and articles thereof	0	0	0	0	0
80	Tin and articles thereof	0	0	0	0	0
81	Other base metals; cermets; articles thereof	0	0	6	0	0
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal	0	0	6	0	0
83	Miscellaneous articles of base metal	0	0	5	0	1
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0	3	23	3	2
85	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	0	3	26	1	7
86	Railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electromechanical) traffic signalling equipment of all kinds	0	0	1	0	0
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	0	1	9	1	2

HS	Sector	SPS	TBT	A D	C V	S G
88	Aircraft, spacecraft, and parts thereof	0	0	0	0	0
89	Ships, boats, and floating structures	0	0	0	0	0
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	0	0	8	0	2
91	Clocks and watches and parts thereof	0	0	0	0	0
92	Musical instruments; parts and accessories of such articles	0	0	0	0	0
93	Arms and ammunition; parts and accessories thereof	0	0	0	0	0
94	Furniture; bedding, mattresses, mattresses supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated nameplates and the like; prefabricated buildings	0	2	3	0	0
95	Toys, games, and sports requisites; parts and accessories thereof	0	0	0	0	1
96	Miscellaneous manufactured articles	0	0	13	1	1
97	Works of art, collectors' pieces and antiques	0	0	0	0	0
99	Business services, health, financial/insur., legal/real estate, hotels, and misc repairs business services	0	0	0	0	2

(*) This table only includes information as at December 2012 concerning the measures or specific trade concerns that have been associated with particular HS codes. Some measures, in particular TBT-related, have not been associated with any HS code yet.

Source: WTO i-TIP.