

A GAP analysis of NTM data ^{*}

This version: June 2016

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Abstract: This paper uses the Methodology Inventory Database on Non-Tariff Measure (MIND) framework to identify gaps in the research of non-tariff measures. Furthermore, we identify gaps in current NTM raw data, as well as make suggestions for additional NTM data collection useful for trade policy analysis. We find that there are significant gaps in terms of geographic and time coverage for those databases that employ survey methodologies in a resource-intensive data collection effort, while other databases with established and/or mandated data collection systems cover more countries and multiple years. Suggestions for additional data collection mainly concern information that would involve some degree of value judgement, e.g. assessing the restrictiveness of a measure. With respect to NTM research we find that most studies were conducted for trade of goods with only a few in the context of services trade. The purpose of these studies was in most cases to examine the outcome of an NTM by means of regression analysis. These results provide a first snapshot based on the current status of the MIND and data collection efforts.

JEL Codes: To be added

Key Words: Non-tariff measures, state of the art methods

^{*} The authors acknowledge that this paper is produced as part of the project “Productivity, Non-tariff Measures, and Openness (PRONTO)” funded by the European Commission under its Seventh Framework Programme – Contract No. FP7-SSH-613504.

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1. Introduction

Using the framework of the MIND, we identify gaps in the research of NTMs. The gap analysis is based on the Methodology Inventory Database on Non-Tariff Measures (MIND), which presents a conceptual framework for a categorization of different approaches of analysing NTMs applied in the existing literature. The MIND was developed within WP1 of the PRONTO project and is documented in Davies et al. (2015). The MIND classification has a clear focus on the methodology of the analysis of NTMs.

Combining methodological aspects with information about the measures and their scope as well as the countries and product/sectors affected allows us to evaluate the existing studies in a systematic approach. The results of the subsequent analysis provide a good overview of the studies and can be used to point out the gaps of NTM research. The results provide a snapshot of the currently available literature, illustrating main trends in the scope and coverage of NTMs looked at as well as the methods applied.

In order to collect information on existing studies about NTMs, a questionnaire was developed for making an inventory of the studies that are considered as relevant for NTM research. Hence the inventory was conducted as a kind of survey, which researchers working on the topic were asked to contribute to by inserting studies that they considered as relevant. In the survey of inventory, the questionnaire comprises general information about the studies, including specifics on measures, countries, products. Also questions on the scope of the studies as well as on the methods applied were asked, following the MIND. The survey of inventory was made available online, and some checks and controls of the quality of the information inserted were established to ensure good quality results of the inventory. Note that the survey of the inventory is ongoing and thus we do provide neither an exhaustive nor a complete list of all studies but rather a selection of studies that people working on the topic considered as being relevant.

This report presents the results of the survey of inventory (as of June 2016) as well as insights about gaps in the databases and research needs. First of all, the survey results provide an overview of the NTMs covered in the inventory as a repository of relevant studies. More specifically we look at the type of measures covered and the sector/products affected, followed by the country coverage. Before presenting insights from the MIND we first assess data availability in the main NTM databases, and thereby identifying gaps in the raw data, as well as make suggestions on what NTM information would be useful to add to the current portfolio of data¹.

¹ Note that data collection of many of the databases is currently ongoing. Thus, data availability statistics are being constantly updated.

2. Official NTM databases

Official NTM databases based on the collection efforts of international organisations are used by most of the studies entailed in the current version of the MIND. For NTMs in goods, the UNCTAD database of the NTM regulatory inventory is mainly used but also the product market regulation database by OECD. The databases by the World Bank, WTO, IFC/World Bank as well as USITC are also mentioned, respectively. For NTMs in services, the OECD Service Trade Restrictions and the OECD Product Market Regulation database is mentioned as a source of the NTM information looked at in the studies in the inventory. It is interesting to note that only 6 studies in the inventory report on own data collection efforts, in particular conducting surveys on NTMs. Surprisingly, 19 studies do not seem to use any NTM database, probably relying on NTM information provided in the literature. These studies could be literature reviews or specific case studies of NTMs, which may be too specific for the application of the NTM database available.

Before the next chapter looks further into how information on NTMs has been used in the literature, this chapter assesses the availability of raw data of NTMs and corresponding gaps in the main databases, which are summarised in Rau & Vogt (2016). We will consider the following four dimensions: First, we identify geographic gaps, as well as coverage of the time dimension. Next, for those databases that map their data to the MAST classification we will compare which chapters are covered by the different databases. Last, we make an assessment of what kind of measures or complementary information of current measures are not collected but would enable researchers to answer pressing question in trade policy analysis.

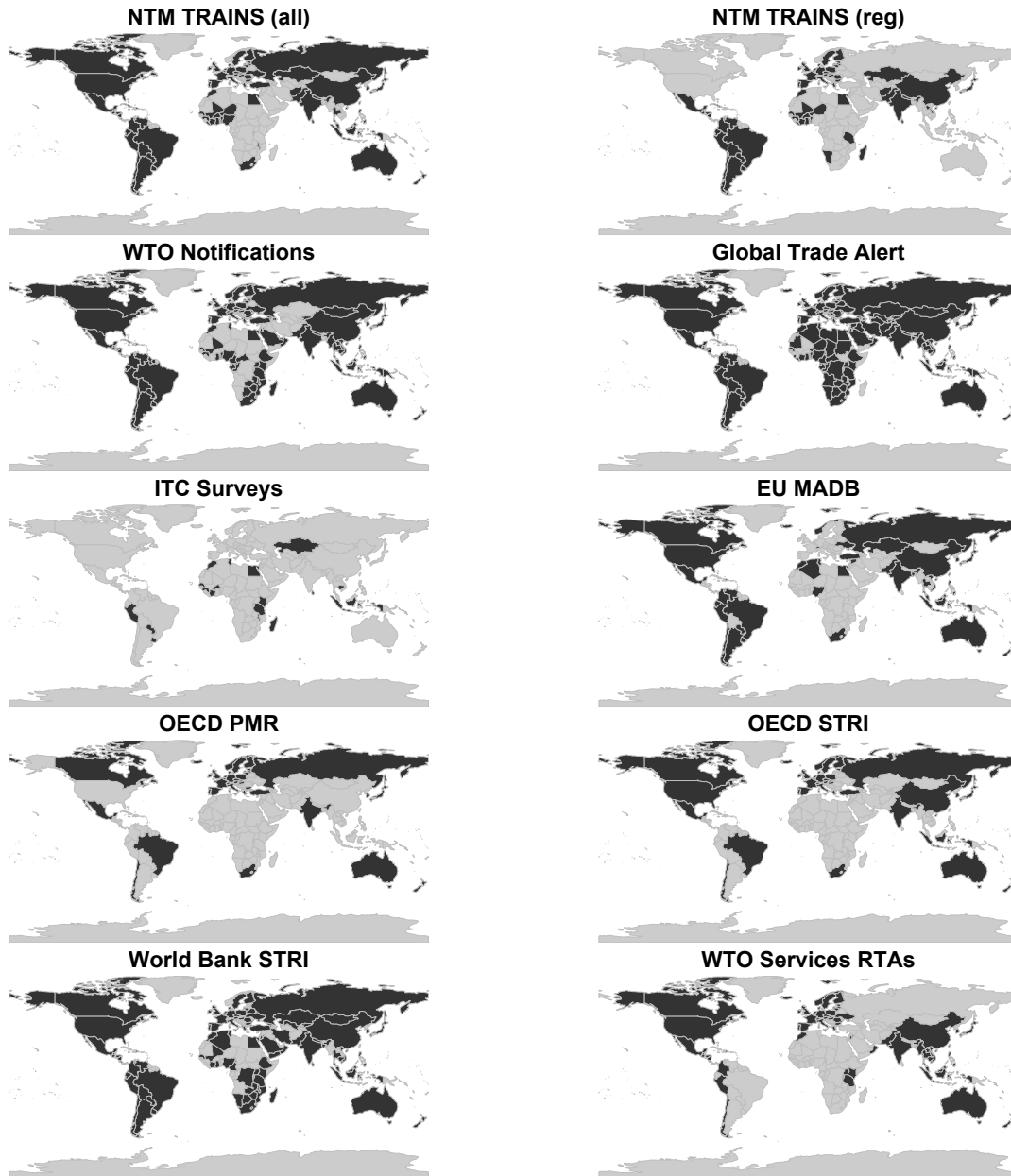
2.1. Geographic coverage

To facilitate cross-country analysis of NTMs, a wide geographic coverage of information is necessary. A larger sample of countries helps to make more nuanced statements, comparing across different countries, or groups of similar countries. Here, for example, the question if developing countries are affected more by NTMs than developed countries seems to be of particular interest. In addition, certain countries or groups of countries may use NTMs more than other countries, or impose specific NTMs that other countries do not apply.

Figure 1 compares the country coverage of the main NTM databases (see Appendix I for more detail). For goods trade, the largest country coverage is available for the WTO notifications (138 countries), and the NTM TRAINS database (90 countries), while for services trade this is the case for the GATS schedules of commitment (160 countries), and World Bank STRI (103 countries). Further, the Global Trade Alert - GTA (164 countries), as well as WTO Trade Policy Reviews (120 countries) have large country coverage and contain information on both, service and goods NTMs. Smaller databases are the EU Market Access Database (MADB) with complaints entered for 43 countries, as well as the OECD databases focusing on developed (i.e. OECD) countries. Furthermore, full regulatory reviews in NTM TRAINS are currently available for 45 countries, and results of ITC NTM Surveys can be retrieved for 23 countries. Note however that Figure 1 summarizes the information for all available years. This means that a country is marked “available” if it has a data point at some point in time. Thus, the country

coverage of e.g. the NTM TRAINS regulatory reviews has been achieved over a time period of 6 years (see next section).

Figure 1: Geographic overview of NTM data availability.



Source: Compiled by authors as of 2015

Figure 1 illustrates that despite large scale data collection efforts data gaps with respect to country coverage are in part still significant. This is particularly true for databases with complex, resource intensive data collection efforts such as the ICT surveys or regulatory reviews of NTM TRAINS. A good country coverage is especially achieved by those that have institutionalized (i.e. WTO) and/or permanent (e.g. GTA) collection mechanisms in place. However, as the World

Bank STRI illustrates this does not rule out collecting NTM information for a large number of countries at once. In addition, some databases are simply constrained by whether countries actually have certain policy instruments in place (e.g. RTAs with a services component), their institutional focus (e.g. OECD databases), or participation of the business community (i.e. complaint portal like the EU MADB).

Another geographic component relevant to assess the impact of NTMs is whether measures are targeted at all countries (i.e. MFN) or only at a set of countries (or even bilaterally). That is, in line with a standard gravity model set up, we optimally would like to have bilateral (or bilateralized) information on NTMs. Some of the databases mentioned above contain to a large degree information that applies MFN but very little bilateral measures. By definition exceptions are the MFN exemptions to the GATS schedules of commitment, services RTAs, as well as the EU MADB. Furthermore, in the GTA, WTO notifications, and NTM TRAINS affected partners are identified. The total share of bilateral information is however relatively little in the WTO notifications (ca. 8% of observations) and to a certain degree overstated in NTM TRAINS due to the fact that a bilateral measure can also apply to multiple countries, thus being overrepresented in terms of observations compared to an MFN measure.

Last, in order to advance NTM research that accounts for regional heterogeneity *within* countries, information on regional policies still needs to be collected (e.g. state level regulation). To a very limited degree this is already done in the OECD STRI database for those regulations that fall under the jurisdiction of a geographical or rather administrative unit. However, here a representative geographical or rather administrative unit is chosen based on previous treatment in the OECD PMR database, as well as the size of the population, level of output and comparability of industry structure to the national average. For example, in the case of Germany Bavaria is the representative state. As the requirement for a license or an authorization to practice as an engineer is state-level regulated, the Bavarian “Baukammergesetz” is stated as the reference regulation.

2.2. Time coverage

In order to capture effects of policy changes over time, NTM data needs to be available for multiple years. Table 1 summarizes the availability of NTM data over time. The WTO notifications provide the longest coverage back in time. While the first 15 years exclusively contain temporary trade barriers (antidumping and countervailing measures), from 1995 onwards the number of measures increases significantly with the notification requirements under e.g. the WTO SPS and TBT Agreement. A similar split within the database can be observed for NTM TRAINS, where the first seven years are temporary trade barriers with the full regulatory reviews starting from 2009 onwards. Information for relatively many years can also be found in the WTO Trade Policy Reviews (TPRs) and Services RTA databases, as well as the EU MADB. However, it is not the case that each year covers all countries and/or measures – rather, this depends on reporting cycles, when agreements have been made, or reporting of stakeholders, respectively.

NTM databases with limited time coverage are the OECD and World Bank STRI databases. While data collection efforts can span several years the current character of these databases is

that of a cross-section. Updates such as the 2015 one of the OECD STRI are on-going but a time series of multiple years for full regulatory inventories is not yet available. A compromise is the OECD PMR database, which so far has been updated four times every five years since 1998. Here, we have a comprehensive account of regulatory environments since 1998 with the downside that a regulatory change can only be attributed to fall within a period of five years, i.e. the exact moment in time, such as the initiation date in the WTO notifications, is not provided. A thematically narrower indicator with greater time coverage is the FDI Restrictiveness Index, which is available annually from 2006 onwards.

Table 1: Summary of NTM databases' time coverage

| Database | Period | Nr years | Comment |
|---------------------------|-------------|----------|---|
| OECD PMR | 1998 - 2013 | 4 | Data available for 1998, 2003, 2008, and 2013 |
| OECD STRI | 2014 - 2015 | 2 | 2015 updated |
| OECD FDI Restrictiveness | 1997 - 2015 | 11 | Data available for 1997 and 2003, and from 2006 to 2015 |
| World Bank STRI | 2008 - 2012 | 4 | Majority observations from 2008 |
| WTO Trade Policy Review | 1996 - 2015 | 19 | Country coverage dependent on review cycle |
| GATS | 1995 | 1 | GATS notifications dependent on a country's policy. First entry 2001. |
| WTO Services RTAs | 1994 - 2015 | 21 | Depending on whether agreements were notified and coded in I-TIP |
| Investing Across Borders | 2011 - 2012 | 1 | Data collected in 2011 and 2012 |
| ITC Surveys | 2010 - 2015 | 5 | Survey conducted once per country |
| EU Market Access Database | 1996 - 2015 | 19 | Depending on complains submitted |
| Global Trade Alert | 2009 - 2015 | 6 | |
| NTM TRAINS | 2002 - 2015 | 13 | Full regulatory reviews added since 2009, Temporary Trade Barriers (Chapter D of MAST) since 2002 |
| WTO Notifications | 1980 - 2015 | 35 | Depending on notifications of members |

Source: Compiled by authors

2.3. Coverage of measures against current classification

While the next section will make a first account of what type of measures (or characteristics thereof) are currently not or only partially represented in the databases, here we take a look at what MAST chapters are covered by the relevant databases, i.e. the WTO notifications, NTM TRAINS, and ITC surveys. Data collected by these three agencies are mapped to the MAST NTM classification, giving them a common structure and increasing comparability. This is particularly interesting given that collection methods differ. Thus, it can for example be assessed which NTM-product combinations in the NTM TRAINS regulatory inventory are particularly burdensome for businesses as stated in the ITC surveys.

However, such an assessment is limited by the scope of each database as well as collection exercise for a given country. While the ITC surveys indeed ask for the full range of NTMs defined by the MAST classification, perceptions by the surveyed enterprises still determine whether the NTM is burdensome and consequently enters the database, or not. Thus, taking only the ITC surveys we cannot derive a full NTM profile of a country, since we cannot draw a difference between non-burdensome NTMs and no NTM in place – i.e. as stated above, we would need one of the other databases to complement the survey results.

Table 2 summarizes data availability by MAST chapter for the three databases. In contrast to ITC’s full coverage, the chapter coverage of UNCTAD’s regulatory reviews differs per country. In total, 43² countries have been reviewed with SPS and TBT measures included each time. Other chapters have not been covered as consistently with e.g. measures related to distribution restrictions only available for three countries. Furthermore, while WTO notifications are currently limited to SPS, TBT, and temporary trade barriers, they provide relatively high country coverage.

Table 2: Number of countries per MAST chapter

| MAST Chapter | NTM TRAINS | WTO Notifications | ITC |
|---|---------------|----------------------|-----|
| A Sanitary And Phytosanitary Measures | 43 | 116 | 23 |
| B Technical Barriers To Trade | 43 | 118 | 23 |
| C Pre-Shipment Inspection And Other Formalities | 34 | | 23 |
| D Contingent Trade-Protective Measures | 70 | 61 | 23 |
| E Non-Automatic Licensing, Quotas, Prohibitions And Quantity-Control Measures | 41 | | 23 |
| F Price-Control Measures, Including Additional Taxes And Charges | 35 | | 23 |
| G Finance Measures | 12 | | 23 |
| H Measures Affecting Competition | 18 | | 23 |
| I Trade-Related Investment Measures | 6 | | 23 |
| J Distribution Restrictions | 3 | | 23 |
| K Restrictions On Post-Sales Services | | | 23 |
| L Subsidies | | | 23 |
| M Government Procurement Restrictions | | | 23 |
| N Intellectual Property | | | 23 |
| O Rules Of Origin | 5 | | 23 |
| P Export-Related Measures | 42 | | 23 |

Source: Compiled by authors

Table 3 lists the countries for which ITC surveys are available and indicates their presence in NTM TRAINS and the WTO notifications. NTM data for 11 countries are available in all three databases enabling a comparison of what is notified to the WTO, what is found in the regulatory reviews, and which NTMs are eventually perceived as burdensome by importers. Furthermore,

² Reviews have been conducted for the EU as one entity. 43 includes EU countries counted separately.

for 14 and 19 countries, their regulatory reviews and notifications, respectively, can be compared to ITC business surveys. Note, that ITC differentiates between NTMs implemented by the importer and exporter. At the time of writing no detailed information on partner countries was available. Consequently, at the moment we can only indicate whether it is possible to compare burdensome NTMs as perceived by the importer to the regulatory review/notifications (e.g. burdensome NTMs perceived by Kazakhstani importers vs. all NTMs in the regulatory review implemented by Kazakhstan). Once information on burdensome NTMs implemented by the partner becomes available, the number of countries for which such a comparison is possible increases (e.g. burdensome NTMs perceived by exporter in Senegal vs. all NTMs in the regulatory review implemented by Kazakhstan). Of course such an analysis will only be possible for the MAST chapters available in NTM TRAINS and WTO notifications.

Table 3: Survey vs. regulatory data

| Country | NTM TRAINS | WTO Notification | ITC Survey |
|------------------------------|------------|------------------|------------|
| Burkina Faso | ✓ | | ✓ |
| Cambodia | | ✓ | ✓ |
| Cote d'Ivoire | ✓ | | ✓ |
| Egypt* | ✓ | ✓ | ✓ |
| Guinea | ✓ | ✓ | ✓ |
| Indonesia | | ✓ | ✓ |
| Jamaica | | ✓ | ✓ |
| Kazakhstan | ✓ | | ✓ |
| Kenya | | ✓ | ✓ |
| Madagascar | ✓ | ✓ | ✓ |
| Malawi | | ✓ | ✓ |
| Mauritius | ✓ | ✓ | ✓ |
| Morocco* | ✓ | ✓ | ✓ |
| Palestine, State of | | | ✓ |
| Paraguay | ✓ | ✓ | ✓ |
| Peru | ✓ | ✓ | ✓ |
| Rwanda | | ✓ | ✓ |
| Senegal | ✓ | ✓ | ✓ |
| Sri Lanka | ✓ | ✓ | ✓ |
| Tanzania, United Republic of | ✓ | ✓ | ✓ |
| Trinidad and Tobago | | ✓ | ✓ |
| Tunisia | | ✓ | ✓ |
| Uruguay | ✓ | ✓ | ✓ |
| Total | 14 | 19 | 23 |

Source: Compiled by authors, *: No Export-related measures in NTM TRAINS

2.4. Additional NTM information

Next to the raw data gaps identified above additional information currently not, partially, or collected in a different context would enable a more comprehensive analysis of NTM impacts. The following is a non-exhaustive list of possible areas where additional information could be useful:

1. *Current measures*: This concerns adding further information to the data currently collected. In most cases we have binary information that only tells us whether a measure is in place or not. For instance, an actual tax rate, services charge, or residue limit is however important information to assess e.g. the trade restrictiveness of a measure. Furthermore, additional qualitative information on e.g. specific labeling requirements could be useful for a more nuanced welfare analysis (i.e. reduction of asymmetric information between producer and consumer).
2. *Interaction of measures*: In many cases multiple measures are imposed on a good. Together they form a set of regulations that determine how restrictive it is to trade from country A to B. However, oftentimes we cannot evaluate measures in isolation, as bundles of measures can be interdependent. In other words, there is a hierarchy of measures that needs to be taken into account when evaluating the overall trade restrictiveness or aggregate effect. The OECD and World Bank have taken this into account when constructing their STRIs. However, for goods NTMs such an exercise is still outstanding.
3. *Regulatory authority/dimension*: As indicated above, the governance level of NTMs differs. While federal authorities regulate most of NTMs, some are governed on the regional level. Additionally, global governance (e.g. supra-national bodies like the WTO) and multi- and bilateral relationships (e.g. trade agreements) add dimensions to the way NTMs can be governed. More detailed assessments of NTM impacts require including such aspects in data collection activities more systematically.
4. *Implementation and enforcement*: Next to regulatory information it is also important to know whether and how measures are implemented and enforced. This is not only important to assess the actual trade restrictiveness but also see whether policy objectives behind an NTM can be met. To a certain extent information about the former is included in the responses of business surveys. However, we cannot distinguish whether the restrictiveness is primarily caused by the measure itself or the way of implementation.
5. *Outcome variables*: Connected to the just mentioned policy objectives it is necessary to relate NTMs to (non)economic outcome variables. This would facilitate an assessment with respect to whether NTMs have actually worked or not. For example, we would be able to make statement about regulatory benefits (consumer safety, lower rate of industrial accidents, etc) and compare these to (possible) trade restrictiveness.
6. *Indicators*: Next to information about the actual measure new indicators need to be developed capturing different aspects of NTMs. For example, rather than looking at the restrictiveness of the measure itself regulatory divergence can be assessed, i.e. the development of indicators that capture differences in regulation. Also, indicators regarding regime uncertainty (e.g. differences in applied policies and international commitments) can capture trade costs not entailed in the measure per se.
7. *Institutional information relevant to NTMs*: The quality of NTM compliance infrastructure determines to a large degree how restrictive an NTM is to the exporter (e.g. fast and reliable testing and certification institutes facilitate compliance with certain TBTs). The World Bank's domestic LPI and UNIDO's standard compliance reports contain information specific to SPS and TBT measures. However, a mapping of institutional requirement to all MAST and services NTMs has not yet been undertaken.

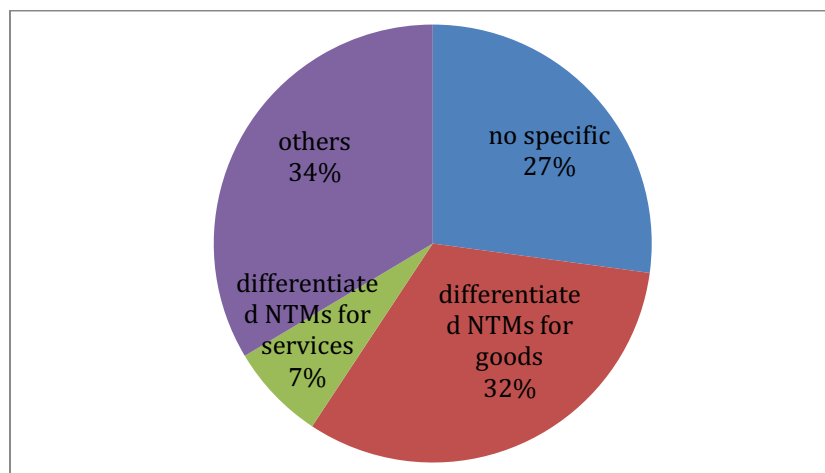
3. Use of NTM data

In total, 122 studies were inserted in the MIND, thereby providing the information of the questionnaire (see Annex II). The large majority of studies (108 studies) deal with specific NTMs. Note that some studies covered more than one NTM in the analysis.

3.1. NTMs and sectors/products affected

Without considering the numbers of studies, Figure 2 illustrates the share of NTMs looked at. As shown, the studies in the inventory cover about 55 specific measures for goods or/and services, and 47 measures do not refer to specific sectors. In more detail, 45 differentiated NTMs for goods are reported, making up for 32% of all measures looked at, and 10 differentiated NTMs for services, making up for 7% of all measures looked at. The studies in the inventory cover 38 non-specific NTMs, being 27% of all measures looked at.

Figure 2: Share of the count of NTMs looked at in the studies in the MIND inventory.



Source: Survey results.

As extra information, the detailed types of measures according to the MAST classification of NTMs or according to the World Bank classification of services are provided for some studies. With regard to the list of all NTMs in the MAST classification, only about one third of the NTMs for goods are analysed in the studies. The other two thirds of measures are not covered. Amongst those covered, measures are from the chapters A, E and F are mainly analysed: chapter A - Sanitary and phytosanitary (SPS) measures (SPS), chapter E - non-automatic licensing/quotas, prohibitions and quantity control measures other than for SPS or TBT reasons and chapter F – price control measures. For services, measures C and K under Mode II and O under Mode IV are mainly analysed: C - Regulatory barriers to establishment (e.g. licensing restrictions), K - Other Investment regulation measures and O Intellectual property (e.g. limited protection on corporate IP).

Table 4 combines the results of the general info about the NTMs and the sectors looked at. As shown, the studies reported in the inventory mainly look into differentiated NTMs for agri-food products, followed by manufacturing. The focus on the agri-food sector in the studies in the

inventory is not surprising since SPS measures are often imposed and are predominantly relevant for the agri-food sector. When NTMs are not specified in details, the studies are mainly about manufacturing but in general they seem to have a broader scope.

Table 4: Counts of NTMs and sector focus, as reported in the study inventory

| | No specific | Differentiated NTMs for goods | Differentiated NTMs for services | Others |
|---------------------|-------------|-------------------------------------|-------------------------------------|--------|
| Not specified | 13 | 6 | 6 | 13 |
| Manufacturing | 22 | 22 | 6 | 24 |
| Services | 6 | 9 | 8 | 6 |
| Agro-food sector | 18 | 34 | 6 | 20 |
| Others | 5 | 7 | 1 | 7 |

Source: Survey results.

Most of the studies take the perspective of the respective sectors, more specifically the firm-level perspective, at the country level. This perspective is mentioned in 43 studies. The perspective of consumers is only reported to be looked at in 6 studies. Furthermore, the public sector perspective is taken only once according to the survey. We can hence refer to clear focus on the business side at the country level in the studies included in the inventory.

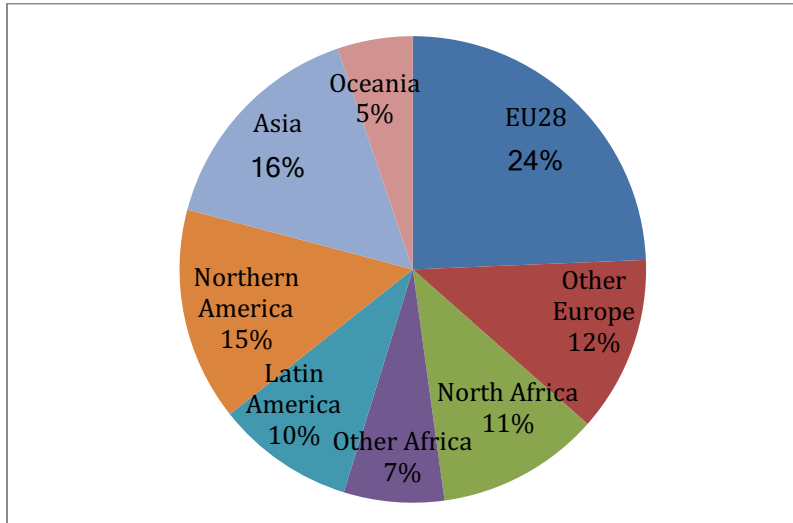
3.2. Geographic coverage

Looking at the country coverage, the studies in the inventory mainly look at NTMs for the entire world (45 studies). In more detailed, 42 studies look at multiple countries, and only 33 concentrated on one country only.

With regard to the countries implementing the NTMs, the survey results show that NTMs implemented by developed countries are analysed in the studies in the inventory. Amongst them, the US are mentioned most often, closely followed by EU member states, specifically France, Germany and Sweden. For the perspective of NTMs by developing or transition countries, Morocco is mentioned as imposing NTMs looked at.

Figure 3 gives the overview of the countries affected by the NTMs looked at in the studies in the inventory. The EU28 is mentioned most often, followed by Northern America. The inventory of studies hence points to a focus on NTMs in trade between developed countries, i.e. the NTMs looked at in the collection of studies are imposed by developed countries and the effect of these NTMs on developed countries is analysed. Studies on NTMs in developing countries seem to be investigating less. Note that we refer to the studies that have been collected in the inventory, and thus the results only provide a limited overview. However, the indication seems reasonable. The inventory collected recent studies, and recent main topics of NTMs relate to regional trade agreements between industrialised developed countries, like TTIP, TTP and ASEAN. Furthermore, studies on NTMs in investment and services score high in the recent literature. These topics of interest add to NTMs in the food and agricultural sector, which have been analysed in detail for trade between developed and developing countries (south-north trade) and to a limited extent also in trade amongst developing countries (south-south trade).

Figure 3: Which country is affected by the NTM under review



Source: Survey results.

3.3. Methodology applied

The survey of inventory asks specific questions on the methodology applied in the studies by taking the framework developed in the MIND, see Davies et al. (2015). The four main methodological approaches for the following purposes have been identified:

- Construct alternative NTM measure
- Examine the outcome of the NTM
- Determinants of NTM usage
- Literature review

Table 5 presents an overview of the purpose for NTMs, as defined in the survey for making the inventory of studies. Most studies are reported to examine the outcome of the NTM under review, while constructing alternative measures or determinants of NTM is mentioned less often. The alternative measure of NTMs mainly refers to an indicator analysis of counts or other measure of NTMs which can be used as input into the analysis of the effects of NTMs. The survey results reveal that studies either construct an alternative measures, such as frequency or count measures of NTMs for example, or conduct an impact assessment in order to examine the outcome of the NTM. The latter studies seem to take insights on the NTM under review from the literature and use these in impact assessment. The impact assessment of the outcome of NTMs include gravity estimations, which gauge the NTM impact in terms of increases or decreases of trade, thus a quantity effect that can subsequently be translated into a price or cost effect via elasticities. Most studies seem to examine the outcome of NTMs for differentiated measures for goods or general NTMs, which are not specifically defined.

As shown in table 5, the outcome for differentiated NTMs for goods is examined by 25 studies in the inventory. NTMs in services seem to be much less frequently analysed. Studies looking into the determinants of NTMs, which usually apply political economy methods, are also less frequent. 10 studies look into the determinants of the differentiated NTMs for goods. Finally, the

inventory of studies reports on a few literature reviews, with six studies not covering specific NTMs.

Table 5: Number of studies on NTMs for different purposes

| Purpose | No specific | Differentiated | Differentiated | Other |
|-----------------------------------|-------------|----------------|-------------------|-------|
| | | NTMs for goods | NTMs for services | |
| Construct alternative NTM measure | 10 | 8 | 1 | 7 |
| Examine the outcome of NTMs | 15 | 25 | 2 | 35 |
| Determinants of NTM usage | 6 | 10 | 3 | 5 |
| Literature review | 7 | 4 | 3 | 2 |
| Other | 8 | 10 | 3 | 4 |

Source: Survey results.

Table 3 zooms in on the respective methods for constructing alternative NTM measure, examining the outcome of the NTM and analysing the determinants of NTM usage, providing more detail on the methodological approach in the NTM analysis.

As an alternative NTM measure, prices in terms of price difference due to NTMs as well as restrictiveness, for example indices of restrictiveness, are most often mentioned in the survey. These methods to measure NTMs are the state of the art, the quantity of NTM is often translated into price difference in order to insert them in simulation models in order to analyse the outcome of the NTM under review. In such studies on the NTM outcome several methods are applied, ranging from gravity estimations and other econometric analysis to simulation models of general computable equilibrium models (CGEs). For the description of the different methodological approaches see Davies et al. (2015). Most studies seem to apply some kind of regression approach, and can thus be expected to apply gravity estimation to gauge the trade effect of NTMs. A simulation analysis is conducted in quite a few studies as the survey results reveal.

It is interesting to note that var analyses and the back of the envelope approach are not applied in the studies in the inventory. The predominance of regressions seems to point out the popularity of gravity modelling, which has become the workhorse for analysing trade and NTMs. Only one study applies a cost-benefit analysis, and this analysis is conducted for NTMs for goods (see table 3). Looking at the details of the study reported, the NTM under review belongs to the category of SPS measures and hence including the benefits of such measures as public policy instruments seems to be appropriate. Usually studies do not directly consider the benefits of measures when examining their outcome. Not considering the benefits seems to be a main gap in the analysis of NTMs and would require targeted research efforts beyond the state of the art and additional data collection initiatives.

As opposed to the other methods, the analysis of determining NTMs relies on qualitative approaches, rather than regression analyses providing quantitative results about the driving factors of NTMs.

Table 6: Number of studies on NTMs for different purposes

| Purpose | Method | No specific | Differentiated NTMs for goods | Differentiated NTMs for services | Other |
|-----------------------------------|-----------------|-------------|-------------------------------|----------------------------------|-------|
| Construct alternative NTM measure | Price | 3 | 1 | 0 | 1 |
| | Quantity | 2 | 0 | 0 | 1 |
| | Restrictiveness | 1 | 3 | 0 | 3 |
| | Other | 4 | 4 | 1 | 2 |
| Examine the outcome of NTMs | Regression | 9 | 12 | 0 | 24 |
| | Simulation | 4 | 7 | 1 | 6 |
| | Cost-benefit | 0 | 1 | 0 | 0 |
| | Event-study | 1 | 0 | 1 | 3 |
| | Var analysis | 0 | 0 | 0 | 0 |
| | Back of envelop | 0 | 0 | 0 | 0 |
| | Other | 1 | 5 | 0 | 2 |
| | | | | | |
| Determinants of NTM usage | Regression | 1 | 1 | 0 | 2 |
| | Qualitative | 3 | 5 | 1 | 1 |
| | Other | 2 | 4 | 2 | 2 |

Source: Survey results.

Overall, the survey results for the study in the MIND inventory reveal that studies mainly analyse NTMs for goods rather than NTMs for services. This lack may be due to many reasons; one reason seems to be the limited data available but also the lack of a common classification of NTMs for services. Along the same lines, data limitations seem to determine the methods that are applied in the analysis of NTMs. As mentioned for the potential benefits of measures, data is by and large missing such that cost-benefit analyses are less frequently applied.

4. Concluding remarks

This paper assessed NTM data gaps from two perspectives. First, we find that the geographic coverage of NTM data is particularly limited the more complex the collection methods employed. This is especially true for NTM surveys as well as full regulatory reviews (not based on expert surveys), which both are very resource-intensive exercises. In contrast, high country availability is achieved by those databases that rely on established data collection efforts that use a certain structure and/or are undertaken on a regular basis, such as the WTO notification (notification requirements of WTO members) and the GTA (continuous news screening). These are also the databases that consistently cover multiple years, in the effort of updating the data. Furthermore, NTM data can be compared with the help of a common classification framework (i.e. the MAST classification of NTMs). The ITC surveys, NTM TRAINS, and WTO notifications use MAST. However, only 11 countries are represented in all three databases. Thus, a comparative assessment is limited.

Next to these data gaps we identified a non-exhaustive list of additional NTM information that would be useful for answering questions related to NTM impact. These additional pieces of information often involve value judgements, for example judging the restrictiveness of measures or the relevance of measures, given technical or other changes in production processes. Second, we use the current status of the MIND to look at what NTM aspects have been researched. We find that only a third of the studies investigate NTMs classified by MAST. Those studies that do not use MAST seem to be case studies that focus on one specific measure such that the context of different measures is not necessary. The majority of studies were conducted for goods with only few for services NTMs. Furthermore, the geographic focus was on the EU (24%), Northern America (15%), and Asia (16%). Particularly, the outcomes of NTMs were assessed by the means of regression (45 studies) or simulation (18 studies) analysis. It should be noted that MIND is a living inventory of studies that will be updated in the future. Thus, results are only a snapshot of the studies currently classified in MIND. As data collection efforts are on-going, the raw data of NTM information can be expected to improve and gaps identified in chapter 2 may be eventually be closed.

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Annex I: Detailed geographic coverage of database

| ISO3 | Country | OECD PMR | OECD STRI | OECD FDI Restrictiveness | World Bank STRI | WTO Trade Policy Review | GATS | WTO Services RTAs | Investing Across Borders | ITC Surveys | EU Market Access Database | Global Trade Alert | NTM TRAINS (all) | NTM TRAINS (regulatory review) | WTO Notifications | Total |
|------|---------------------------------|----------|-----------|--------------------------|-----------------|-------------------------|------|-------------------|--------------------------|-------------|---------------------------|--------------------|------------------|--------------------------------|-------------------|-------|
| AFG | Afghanistan | | | | | | | | ✓ | | | ✓ | ✓ | ✓ | | 4 |
| ALB | Albania | | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | 6 |
| ATA | Antarctica | | | | | | | | | | | | | | | 0 |
| DZA | Algeria | | | | ✓ | | | | ✓ | | ✓ | ✓ | | | | 4 |
| ASM | American Samoa | | | | | | | | | | | | | | | 0 |
| AND | Andorra | | | | | | | | | | | | | | | 0 |
| AGO | Angola | | | | | ✓ | ✓ | | ✓ | | | ✓ | | | | 4 |
| ATG | Antigua and Barbuda | | | | | | ✓ | | | | | | | | ✓ | 2 |
| AZE | Azerbaijan | | | | | | | | ✓ | | | ✓ | | | ✓ | 3 |
| ARG | Argentina | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 10 |
| AUS | Australia | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 12 |
| AUT | Austria | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | 11 |
| BHS | Bahamas | | | | | | | | | | | | | | | 0 |
| BHR | Bahrain | | | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | 6 |
| BGD | Bangladesh | | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | | | | 6 |
| ARM | Armenia | | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | 6 |
| BRB | Barbados | | | | | ✓ | ✓ | | | | | | | | ✓ | 3 |
| BEL | Belgium | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | 10 |
| BMU | Bermuda | | | | | | | | | | | ✓ | | | | 1 |
| BTN | Bhutan | | | | | | | | | | | | | | | 0 |
| BOL | Bolivia, Plurinational State of | | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | ✓ | 8 |
| BIH | Bosnia and Herzegovina | | | | | | | | ✓ | | | ✓ | | | | 2 |
| BWA | Botswana | | | | ✓ | ✓ | ✓ | | | | | ✓ | | | ✓ | 5 |

| ISO3 | Country | OECD PMR | OECD STRI | OECD FDI Restrictiveness | World Bank STRI | WTO Trade Policy Review | GATS | WTO Services RTAs | Investing Across Borders | ITC Surveys | EU Market Access Database | Global Trade Alert | NTM TRAINS (all) | NTM TRAINS (regulatory review) | WTO Notifications | Total |
|------|--------------------------------|----------|-----------|--------------------------|-----------------|-------------------------|------|-------------------|--------------------------|-------------|---------------------------|--------------------|------------------|--------------------------------|-------------------|-------|
| BVT | Bouvet Island | | | | | | | | | | | | | | | 0 |
| BRA | Brazil | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 12 |
| BLZ | Belize | | | | | ✓ | ✓ | | | | | ✓ | | | ✓ | 4 |
| IOT | British Indian Ocean Territory | | | | | | | | | | | | | | | 0 |
| SLB | Solomon Islands | | | | | ✓ | ✓ | | ✓ | | | | | | | 3 |
| VGB | Virgin Islands, British | | | | | | | | | | | | | | | 0 |
| BRN | Brunei Darussalam | | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | 6 |
| BGR | Bulgaria | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | 10 |
| MMR | Myanmar | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | 6 |
| BDI | Burundi | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | 7 |
| BLR | Belarus | | | | ✓ | | | | ✓ | | | ✓ | | | | 3 |
| KHM | Cambodia | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | 8 |
| CMR | Cameroon | | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | 6 |
| CAN | Canada | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | 12 |
| CPV | Cabo Verde | | | | | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | 5 |
| CYM | Cayman Islands | | | | | | | | | | | ✓ | | | | 1 |
| CAF | Central African Republic | | | | | ✓ | ✓ | | | | | ✓ | | | ✓ | 4 |
| LKA | Sri Lanka | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 9 |
| TCD | Chad | | | | | ✓ | ✓ | | ✓ | | | ✓ | | | | 4 |
| CHL | Chile | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| CHN | China | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| TWN | Taiwan, Province of China | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | 8 |
| CXR | Christmas Island | | | | | | | | | | | | | | | 0 |
| CCK | Cocos (Keeling) Islands | | | | | | | | | | | | | | | 0 |
| COL | Colombia | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| COM | Comoros | | | | | | | | | | | | | | | 0 |

| ISO3 | Country | OECD PMR | OECD STRI | OECD FDI Restrictiveness | World Bank STRI | WTO Trade Policy Review | GATS | WTO Services RTAs | Investing Across Borders | ITC Surveys | EU Market Access Database | Global Trade Alert | NTM TRAINS (all) | NTM TRAINS (regulatory review) | WTO Notifications | Total |
|------|--|----------|-----------|--------------------------|-----------------|-------------------------|------|-------------------|--------------------------|-------------|---------------------------|--------------------|------------------|--------------------------------|-------------------|-------|
| ISL | Iceland | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | 9 |
| IND | India | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| IDN | Indonesia | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | 12 |
| IRN | Iran, Islamic Republic of | | | | ✓ | | | | | | | ✓ | | | | 2 |
| IRQ | Iraq | | | | | | | | ✓ | | | ✓ | | | | 2 |
| IRL | Ireland | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | 11 |
| ISR | Israel | ✓ | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | ✓ | 9 |
| ITA | Italy | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | 11 |
| CIV | Cote d'Ivoire | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | 8 |
| JAM | Jamaica | | | | | ✓ | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | 6 |
| JPN | Japan | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| KAZ | Kazakhstan | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | 8 |
| JOR | Jordan | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | 8 |
| KEN | Kenya | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | 8 |
| PRK | Korea, Democratic People's Republic of | | | | | | | | | | | | | | | 0 |
| KOR | Korea, Republic of | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | 12 |
| KWT | Kuwait | | | | ✓ | ✓ | ✓ | | | | | ✓ | | | ✓ | 5 |
| KGZ | Kyrgyzstan | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | 7 |
| LAO | Lao People's Democratic Republic | | | | | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | 5 |
| LBN | Lebanon | | | | ✓ | | | | | | | ✓ | | ✓ | | 3 |
| LSO | Lesotho | | | | ✓ | ✓ | ✓ | | | | | ✓ | | | | 4 |
| LVA | Latvia | ✓ | | ✓ | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | 8 |
| LBR | Liberia | | | | | | | | ✓ | | | ✓ | ✓ | ✓ | | 4 |
| LBY | Libya | | | | | | | | | | | ✓ | | | | 1 |
| LIE | Liechtenstein | | | | | | ✓ | ✓ | | | | | | | | 2 |
| LTU | Lithuania | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | 9 |

| ISO3 | Country | OECD PMR | OECD STRI | OECD FDI Restrictiveness | World Bank STRI | WTO Trade Policy Review | GATS | WTO Services RTAs | Investing Across Borders | ITC Surveys | EU Market Access Database | Global Trade Alert | NTM TRAINS (all) | NTM TRAINS (regulatory review) | WTO Notifications | Total |
|------|----------------------|----------|-----------|--------------------------|-----------------|-------------------------|------|-------------------|--------------------------|-------------|---------------------------|--------------------|------------------|--------------------------------|-------------------|-------|
| LUX | Luxembourg | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | 9 |
| MAC | Macao | | | | | ✓ | ✓ | | | | | | | | ✓ | 3 |
| MDG | Madagascar | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | 7 |
| MWI | Malawi | | | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | 7 |
| MYS | Malaysia | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | 10 |
| MDV | Maldives | | | | | ✓ | ✓ | | | | | ✓ | | | | 3 |
| MLI | Mali | | | | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | 7 |
| MLT | Malta | ✓ | | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | 7 |
| MTQ | Martinique | | | | | | | | | | | | | | | 0 |
| MRT | Mauritania | | | | | ✓ | ✓ | | | | | ✓ | | | | 3 |
| MUS | Mauritius | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | 8 |
| MEX | Mexico | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| MCO | Monaco | | | | | | | | | | | | | | | 0 |
| MNG | Mongolia | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | | | ✓ | 6 |
| MDA | Moldova, Republic of | | | | | | ✓ | | ✓ | | | ✓ | | ✓ | | 4 |
| MNE | Montenegro | | | | | | ✓ | ✓ | ✓ | | | ✓ | | | | 4 |
| MSR | Montserrat | | | | | | | | | | | | | | | 0 |
| MAR | Morocco | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 12 |
| MOZ | Mozambique | | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | 6 |
| OMN | Oman | | | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | 6 |
| NAM | Namibia | | | | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | | 5 |
| NRU | Nauru | | | | | | | | | | | | | | | 0 |
| NPL | Nepal | | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | ✓ | 8 |
| NLD | Netherlands | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | 11 |
| CUW | Curacao | | | | | | | | | | | | | | | 0 |
| ABW | Aruba | | | | | | | | | | | | | | | 0 |

| ISO3 | Country | OECD PMR | OECD STRI | OECD FDI Restrictiveness | World Bank STRI | WTO Trade Policy Review | GATS | WTO Services RTAs | Investing Across Borders | ITC Surveys | EU Market Access Database | Global Trade Alert | NTM TRAINS (all) | NTM TRAINS (regulatory review) | WTO Notifications | Total |
|------|--------------------------|----------|-----------|--------------------------|-----------------|-------------------------|------|-------------------|--------------------------|-------------|---------------------------|--------------------|------------------|--------------------------------|-------------------|-------|
| SOM | Somalia | | | | | | | | | | | | | | | 0 |
| ZAF | South Africa | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | 11 |
| ZWE | Zimbabwe | | | | ✓ | ✓ | ✓ | | | | | ✓ | | | ✓ | 5 |
| ESP | Spain | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| SSD | South Sudan | | | | | | | | | | | | | | | 0 |
| SDN | Sudan | | | | | | | | ✓ | | | ✓ | | | | 2 |
| ESH | Western Sahara | | | | | | | | | | | | | | | 0 |
| SDN | Sudan | | | | | | | | ✓ | | | ✓ | | | | 2 |
| SUR | Suriname | | | | | ✓ | ✓ | | | | | | | | ✓ | 3 |
| SJM | Svalbard and Jan Mayen | | | | | | | | | | | | | | | 0 |
| SWZ | Swaziland | | | | | ✓ | ✓ | | | | | ✓ | | | ✓ | 4 |
| SWE | Sweden | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | 10 |
| CHE | Switzerland | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | 9 |
| SYR | Syrian Arab Republic | | | | | | | | ✓ | | ✓ | ✓ | | | | 3 |
| TJK | Tajikistan | | | | | | ✓ | | | | | ✓ | | | | 2 |
| THA | Thailand | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | 9 |
| TGO | Togo | | | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | 6 |
| TKL | Tokelau | | | | | | | | | | | | | | | 0 |
| TON | Tonga | | | | | ✓ | ✓ | | | | | | | | | 2 |
| TTO | Trinidad and Tobago | | | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | 7 |
| ARE | United Arab Emirates | | | | | ✓ | ✓ | | | | | ✓ | | | ✓ | 4 |
| TUN | Tunisia | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ | 9 |
| TUR | Turkey | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | 11 |
| TKM | Turkmenistan | | | | | | | | | | | ✓ | | | | 1 |
| TCA | Turks and Caicos Islands | | | | | | | | | | | | | | | 0 |
| TUV | Tuvalu | | | | | | | | | | | | | | | 0 |

| ISO3 | Country | OECD PMR | OECD STRI | OECD FDI Restrictiveness | World Bank STRI | WTO Trade Policy Review | GATS | WTO Services RTAs | Investing Across Borders | ITC Surveys | EU Market Access Database | Global Trade Alert | NTM TRAINS (all) | NTM TRAINS (regulatory review) | WTO Notifications | Total |
|------|--|----------|-----------|--------------------------|-----------------|-------------------------|------|-------------------|--------------------------|-------------|---------------------------|--------------------|------------------|--------------------------------|-------------------|-------|
| UGA | Uganda | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | 7 |
| UKR | Ukraine | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | 9 |
| MKD | Macedonia, the former Yugoslav Republic of | | | | | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | 5 |
| EGY | Egypt | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| GBR | United Kingdom | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | 11 |
| GGY | Guernsey | | | | | | | | | | | | | | | 0 |
| JEY | Jersey | | | | | | | | | | | | | | | 0 |
| IMN | Isle of Man | | | | | | | | | | | | | | | 0 |
| TZA | Tanzania, United Republic of | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | 9 |
| USA | United States | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | 11 |
| VIR | Virgin Islands, U.S. | | | | | | | | | | | ✓ | | | | 1 |
| BFA | Burkina Faso | | | | | ✓ | ✓ | | ✓ | ✓ | | | ✓ | ✓ | | 6 |
| URY | Uruguay | | | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 9 |
| UZB | Uzbekistan | | | | ✓ | | | | | | | ✓ | | | | 2 |
| VEN | Venezuela, Bolivarian Republic of | | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | 9 |
| WLF | Wallis and Futuna | | | | | | | | | | | | | | | 0 |
| WSM | Samoa | | | | | | ✓ | | | | | | | | | 1 |
| YEM | Yemen | | | | ✓ | | ✓ | | ✓ | | | | | | | 3 |
| ZMB | Zambia | | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | 6 |
| | Total | 43 | 40 | 58 | 103 | 120 | 160 | 75 | 104 | 23 | 43 | 164 | 90 | 73 | 138 | |

Annex II: MIND Survey

Note – PRONTO WP1 Inventory



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Achim Vogt (ECORYS)

May 2015

EU project “PRONTO”, WP1 Survey for the MIND – inventory of NTM studies

The aim of the survey is to bring together the existing literature by applying the categories as described in the NTM inventory, referred to as the MIND. Note that we do not aim to collect information on the complete body of the literature, but rather the studies that experts on the topic consider as most relevant.

It could be that several of the persons entering items want to include the same study. In order to avoid this type of duplication, the surname of the author of the study needs to be entered first, then a list of all studies (titles) by the respective author in the database will be generated and the person entering the item will thus see if the study she/he wanted to add is already in the database.

When the item is entered, the person needs to declare the item as being “ready to be checked”. This is to ensure that all information is actually provided. Each item declared as “ready to be checked” goes into a quality control procedure, after which the item is considered “quality approved”.

Persons entering items need to register in order to access the survey. The username will be the e-mail address of the person. The person can be then easily be reached in case of questions about the specific entries they provided.

Questionnaire of the survey for the MIND

Q0: General information (please specify)

- First author (for example: Venables, A. J.): _____
- Other co-authors (surname, X. Z., surname, X. Z.): _____
- Full title: _____
- Type of publication (please one tick):
 - Journal article
 - Book chapter
 - Report, working paper
 - Master/PhD Thesis
 - Other: _____
- Full reference: _____
- Link where to find the study online: _____

The pdf should not be uploaded but a link should be provided where to download the paper.

INFORMATION ON CONTENTS – measure, country, product/sector

Q1.1: Which NTM is looked at in the study? (multiple ticks)

- No specific NTMs, i.e. NTMs are not differentiated; the study considers NTMs in general as one aggregate.
- Differentiated NTMs for goods – several specific NTMs or only one specific NTM
- Differentiated NTMs for services – several specific NTMs or only one specific NTM
- Others – please specify

Could you provide further details on the measure looked at in the studies (optional)? If so, please click here. The additional information is on the measures, codes of measures using the MAST classification and a classification of service measures (see appendix A1 and A2) (Q1.1.1).

Q1.2: Which product/sector is affected by the NTM(s) under review? (multiple ticks)

- Not specified
- Manufacturing
- Services
- Agri-food sector
- Others – please specify

Could you provide further details on the products/sector in the study (optional)? If so, please click here. The additional information is about the specific products and/or sectors. For services: specific sector categories (see appendix A3), for goods: Specific products/sector categories according to HS/SITC classification (see appendix A4), (Q1.2.1).

Q 1.3: What is the country focus of the study? (multiple ticks)

- Single country
- Multiple countries
- Worldwide

Could you provide further details on the countries looked at in the study (optional)? If so, please click here. The additional information is as follows:

Q1.3.1: Which country implements the NTM under review? Please tick and specify.

- Single country
If single country, please specify country – list with autofill function
- Multiple countries, including geographic regions or unions (e.g. EU) that may be considered as one entity.
If multiple countries: Does the study refer to a specific trade agreement?
 - No
 - Yes, if yes please specify which one (abbreviation), e.g. ASEAN, NAFTA, EFTA, EU – Autofill references list where entries are saved in a list for selection

Q1.3.2: Which country is affected by the NTM(s) under review? For which country is the NTM effect analysed?

- Single country
If single country, please specify country – list with autofill function
- Multiple countries, regions
If multiple countries - list of regions, UN geographical regions, in addition to considering the EU perspective in particular, no detail countries (appendix A5):
 - EU28
 - Other Europe (including EFTA: Iceland, Liechtenstein, Norway, Switzerland)
 - North Africa
 - Other Africa (not North Africa)
 - Latin America and the Caribbean
 - Northern America

- Asia
- Oceania
- Worldwide

Q1.4: Which database of NTM data is used? (Multiple ticks)

- No NTM database(s) used
- NTM database by the following agencies – please specify the agency using autofill list (please add a list that includes the possibilities, i.e. agency that people specify – autofill list, starting: EU, FAO, ITC, OECD, UNCTAD, Worldbank, WTO)
- Own data collections - surveys
- Other – please specify where the NTM data used comes from

Could you provide further details on the data used in the study (optional)? If so, please click here. The additional information is about the specific database used (for the list of databases see appendix A5) (Q1.4.1).

QUESTION WITH LINKS TO THE MIND DOCUMENT

PURPOSE (link to text of MIND doc, section 2.1)

Q2: What is the purpose of the study? (multiple ticks)

- Construct alternative NTM measure
- Examine the outcome of the NTM
- Determinants of NTM usage
- Literature review
- Other – please specify: _____

PERSPECTIVE (link to text of MIND doc, section 2.2)

Q3.1: What is the level of analysis in terms of economic agents considered in the NTM analysis? (multiple ticks)

- Firm-level
- Sector-level
- Consumer-level
- Public-sector level
- Country level
- Other – please specify: _____

Q3.2: What is the perspective of the study? (multiple ticks)

- Retrospective
- Predictive
- Other – please specify: _____

SCOPE (link to text of MIND doc, section 2.3)

Q4: What is the scope of the study? (multiple ticks)

- General equilibrium
- Partial equilibrium
- Other – please specify: _____

METHOD

If answer to Q2: Construct alternative NTM measure: **Q5: What are the methods for alternative measures? (link to text of MIND doc, section 3) (multiple ticks)**

- Price: use price data – price gap method
- Quantity: use quantity data

- Restrictiveness (e.g. index)
- Other- please specify: _____

If answer to Q2: Examine the outcome of the NTM: **Q5: What are the methods for outcomes? (link to text of MIND doc, section 4)** (multiple tick)

- Regression (MIND doc, section 4.1.) (multiple ticks)
 - Gravity, impact on globalisation (trade, FDI, migration)
 - Other economic outcome: growth, productivity...
 - Non-economic outcome: security, life expectancy, health, quality...
 - Other – please specific: _____
- Simulation (multiple ticks) (MIND doc, section 4.2) (multiple ticks)
 - Sector-level simulation
 - Computable general equilibrium
 - Other – please specific: _____
- Cost-Benefit
- Event study
- VAR analysis
- Back of envelop
- Other – please specific: _____

If answer to Q2: Determinants of NTM usage: **Q5: What are the methods for determinants studies of NTMs? (link to text of MIND doc, section 5)** (multiple ticks)

- Regression
 - Implementation: what determines the presences and/or level of NTMs?
 - Opinion: political voting patterns
 - Other – please specific: _____
- Qualitative (case study, historical approach)
- Other – please specify: _____

Appendix

A1: For goods: List of measures, NTMs according to MAST (question Q1.1.1)

List with measures at the one digit level (letters, A-P), options to tick two-digit measures once a category has been chosen.

| |
|---|
| <p>A SANITARY AND PHYTOSANITARY MEASURES</p> <p><u>TEXT for explanation – pop-up box</u></p> <p>Measures that are applied: to protect human or animal life from risks arising from additives, contaminants, toxins or disease-causing organisms in their food; to protect human life from plant- or animal-carried diseases; to protect animal or plant life from pests, diseases, or disease-causing organisms; to prevent or limit other damage to a country from the entry, establishment or spread of pests; and to protect bio-diversity. These include measures taken to protect the health of fish and wild fauna, as well as of forests and wild flora.</p> |
| <p>A1 Prohibitions/restrictions of imports for SPS reasons</p> <p>A2 Tolerance limits for residues and restricted use of substances</p> <p>A3 Labelling, Marking and Packaging requirements</p> <p>A4 Hygienic requirements</p> <p>A5 Treatment for elimination of plant and animal pests and disease-causing organisms in the final product (e.g. Post-harvest treatment)</p> <p>A6 Other requirements on production or post-production processes</p> <p>A8 Conformity assessment related to SPS</p> <p>A9 SPS measures n.e.s.</p> |
| <p>B TECHNICAL BARRIERS TO TRADE</p> <p><u>TEXT for explanation – pop-up box</u></p> <p>Measures referring to technical regulations, and procedures for assessment of conformity with technical regulations and standards, excluding measures covered by the SPS Agreement</p> |
| <p>B1 Prohibitions/restrictions of imports for objectives set out in the TBT agreement</p> <p>B2 Tolerance limits for residues and restricted use of substances</p> <p>B3 Labelling, Marking and Packaging requirements</p> <p>B4 Production or Post-Production requirements</p> <p>B6 Product identity requirement</p> <p>B7 Product quality or performance requirement</p> <p>B8 Conformity assessment related to TBT</p> <p>B9 TBT Measures n.e.s.</p> |
| <p>C PRE-SHIPMENT INSPECTION AND OTHER FORMALITIES</p> |
| <p>C1 Pre-shipment inspection</p> <p>C2 Direct consignment requirement</p> <p>C3 Requirement to pass through specified port of customs</p> <p>C4 Import monitoring and surveillance requirements and other automatic licensing measures</p> <p>C9 Other formalities, n.e.s.</p> |
| <p>D CONTINGENT TRADE PROTECTIVE MEASURES</p> <p><u>TEXT for explanation – pop-up box</u></p> <p>Measures implemented to counteract particular adverse effects of imports in the market of the importing country, including measures aimed at "unfair" foreign trade practices, contingent upon the fulfilment of certain procedural and substantive requirements.</p> |
| <p>D1 Antidumping measure</p> <p>D2 Countervailing measure</p> <p>D3 Safeguard measures</p> |
| <p>E NON-AUTOMATIC LICENSING, QUOTAS, PROHIBITIONS AND QUANTITY CONTROL MEASURES</p> |

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| <p>OTHER THAN FOR SPS OR TBT REASONS</p> <p><u>TEXT for explanation – pop-up box</u></p> <p>Control measures generally aimed at restraining the quantity of goods that can be imported, regardless of whether they come from different sources or one specific supplier. These measures can take the form of non-automatic licensing, fixing of a predetermined quota, or through prohibitions. All measures introduced for SPS and TBT reasons are classified in Chapters A and B above.</p> |
| <p>E1 Non-automatic import licensing procedures other than authorizations for SPS or TBT reasons</p> <p>E2 Quotas</p> <p>E3 Prohibitions other than for SPS and TBT reasons</p> <p>E5 Export restraint arrangement</p> <p>E6 Tariff Rate Quotas</p> <p>E9 Quantity control measures n.e.s.</p> |
| <p>F PRICE CONTROL MEASURES INCLUDING ADDITIONAL TAXES AND CHARGES</p> <p><u>TEXT for explanation – pop-up box</u></p> <p>Measures implemented to control or affect the prices of imported goods in order to, inter alia, support the domestic price of certain products when the import prices of these goods are lower; establish the domestic price of certain products because of price fluctuation in domestic markets, or price instability in a foreign market; or to increase or preserve tax revenue. This category also includes measures, other than tariffs measures, that increase the cost of imports in a similar manner, i.e. by fixed percentage or by a fixed amount: they are also known as para-tariff measures.</p> |
| <p>F1 Administrative measures affecting customs value</p> <p>F2 Voluntary export price restraints (VEPRs)</p> <p>F3 Variable charges</p> <p>F4 Customs Surcharges</p> <p>F5 Seasonal duties</p> <p>F6 Additional taxes and charges levied in connection to services provided by the Government</p> <p>F7 Internal taxes and charges levied on imports</p> <p>F8 Decreed Customs Valuations</p> <p>F9 Price control measures n.e.s</p> |
| <p>G FINANCE MEASURES</p> <p><u>TEXT for explanation – pop-up box</u></p> <p>Financial measures are intended to regulate the access to and cost of foreign exchange for imports and define the terms of payment. They may increase import costs in the same manner as tariff measures.</p> |
| <p>G1 Advance payment requirement</p> <p>G2 Multiple exchange rates</p> <p>G3 Regulation on official foreign exchange allocation</p> <p>G4 Regulations concerning terms of payment for imports</p> <p>G9 Finance measures n.e.s.</p> |
| <p>H MEASURES AFFECTING COMPETITION</p> <p><u>TEXT for explanation – pop-up box</u></p> <p>Measures to grant exclusive or special preferences or privileges to one or more limited group of economic operators.</p> |
| <p>H1 State trading enterprises, for importing; other selective import channels</p> <p>H2 Compulsory use of national services</p> <p>H9 Measures affecting competitions, n.e.s.</p> |
| <p>I TRADE-RELATED INVESTMENT MEASURES</p> <p><u>TEXT for explanation – pop-up box</u></p> |

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| Requirements to purchase or use certain minimum levels or types of domestically-produced, and restrictions on the importation of products used in or related to local production. |
| I1 Local content measures I2 Trade balancing measures I9 Trade-related investment measures, n.e.s |
| J DISTRIBUTION RESTRICTIONS <u>TEXT for explanation – pop-up box</u> Distribution of goods inside the importing country may be restricted. It may be controlled through additional license or certification requirement. |
| J1 Geographical restriction J2 Restriction on resellers |
| K RESTRICTION ON POST-SALES SERVICES* <u>TEXT for explanation – pop-up box</u> Measures restricting producers of exported goods to provide post-sales service in the importing country. |
| L SUBSIDIES (excluding export subsidies under P7) <u>TEXT for explanation – pop-up box</u> Financial contribution by a government or public body, or via government entrustment or direction of a private body (direct or potential direct transfer of funds: e.g., grant, loan, equity infusion, guarantee; government revenue foregone; provision of goods or services or purchase of goods; payments to a funding mechanism), or income or price support, which confers a benefit and is specific (to an enterprise or industry or group thereof, or limited to a designated geographical region). |
| M GOVERNMENT PROCUREMENT RESTRICTIONS <u>TEXT for explanation – pop-up box</u> Measures controlling the purchase of goods by government agencies, generally by preferring national providers |
| N INTELLECTUAL PROPERTY <u>TEXT for explanation – pop-up box</u> Measures related to intellectual property rights in trade: intellectual property legislation covers patents, trademarks, industrial designs, lay-out designs of integrated circuits, copyright, geographical indications and trade secrets. |
| O RULES OF ORIGIN <u>TEXT for explanation – pop-up box</u> Rules of origin cover laws, regulations and administrative determinations of general application applied by government of importing countries to determine the country of origin of goods. Rules of origin are important in implementing such trade policy instruments as anti-dumping and countervailing duties, origin marking, and safeguard measures. |
| P EXPORT RELATED MEASURES <u>TEXT for explanation – pop-up box</u> Export-related measures are measures applied by the government of the exporting country on exported goods. |
| P1 Export license, quota, prohibition and other quantitative restriction[13] P2 State trading enterprises, for exporting; other selective export channels P3 Export price control measures P4 Measures on Re-Export P5 Export taxes and charges P6 Export technical measures P7 Export subsidies P8 Export credits |

P9 Export measures n.e.s.

A2: For services: List of measures, NTMs according to OECD (question Q1.1.1) (one list with measures A – O)

Mode I

A Restrictions on cross border sales (e.g. internet banking is restricted)

B Restrictions on customer movement (e.g. medical treatment)

Mode II

C Regulatory barriers to establishment (e.g. licensing restrictions)

D Restrictions on majority ownership (e.g. required local ownership)

E Restrictions on movement of personnel linked to affiliate (e.g. visas for personnel)

F Non-automatic licensing or certification of affiliate (e.g. home regulatory certification not recognized)

G Finance measures and restrictions (e.g. limit on repatriation of profits)

H Professional certification limits (e.g. professional standards not recognized)

I Location requirements (e.g. local data servers)

J Measures affecting or restricting competition (e.g. limit on number of customers of branches)

K Other Investment regulation measures

Mode III

L Price-control measures, including additional taxes and charges (e.g. regulated minimum prices)

M Subsidies for competitors (e.g. subsidies to SOEs)

N Government procurement restrictions (e.g. preference for local providers)

Mode IV

O Intellectual property (e.g. limited protection on corporate IP)

A3: Classification of sectors for services (question Q1.2.1) (ISIC code)

ISIC 40: Electricity, gas, steam

ISIC 41: Water supply

ISIC 45: Construction

ISIC 50-52: Wholesale, retail, distribution

ISIC 55: Hotels, Restaurants

ISIC 60: Land transport

ISIC 61: Water transport

ISIC 62: Air transport

ISIC 63: Other transport and storage

ISIC 64: Post and communications

ISIC 65,671: Financial services

ISIC 66,672: Insurance and pensions

ISIC 70-74: Business and ICT services

ISIC 75, 80, 85: Public services

ISIC 90-93: Consumer services

Education

Medical services

Tourism, recreation

A4: Classification for goods, based on HS code, as used by WTO – option to tick (multiple ticks) sector categories/headings (question Q1.2.1)

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| S01 Live animals and products |
| TEXT for explanation – pop-up box |
| 01 LIVE ANIMALS |
| 02 MEAT AND EDIBLE MEAT OFFAL |
| 03 FISH AND CRUSTACEANS, MOLLUSCS AND OTHER AQUATIC INVERTEBRATES |
| 04 DAIRY PRODUCE; BIRDS' EGGS; NATURAL HONEY; EDIBLE PRODUCTS OF ANIMAL ORIGIN, NOT ELSEWHERE SPECIFIED OR INCLUDED |
| 05 PRODUCTS OF ANIMAL ORIGIN, NOT ELSEWHERE SPECIFIED OR INCLUDED |
| S02 Plant products: Vegetable (products), fruits and crops, including oil seed |
| TEXT for explanation – pop-up box |
| 06 LIVE TREES AND OTHER PLANTS; BULBS, ROOTS AND THE LIKE; CUT FLOWERS AND ORNAMENTAL FOLIAGE |
| 07 EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS |
| 08 EDIBLE FRUIT AND NUTS; PEEL OF CITRUS FRUIT OR MELONS |
| 09 COFFEE, TEA, MATÉ AND SPICES |
| 10 CEREALS |
| 11 PRODUCTS OF THE MILLING INDUSTRY; MALT; STARCHES; INULIN; WHEAT GLUTEN |
| 12 OIL SEEDS AND OLEAGINOUS FRUITS; MISCELLANEOUS GRAINS, SEEDS AND FRUIT; INDUSTRIAL OR MEDICINAL PLANTS; STRAW AND FODDER |
| 13 LAC; GUMS, RESINS AND OTHER VEGETABLE SAPS AND EXTRACTS |
| 14 VEGETABLE PLAITING MATERIALS; VEGETABLE PRODUCTS NOT ELSEWHERE SPECIFIED OR INCLUDED |
| S03 Animal and vegetable fats, oils and waxes |
| TEXT for explanation – pop-up box |
| 15 ANIMAL OR VEGETABLE FATS AND OILS AND THEIR CLEAVAGE PRODUCTS; PREPARED EDIBLE FATS; ANIMAL OR VEGETABLE WAXES |
| S04 Prepared foodstuff; beverages, spirits, vinegar; tobacco |
| TEXT for explanation – pop-up box |
| 16 PREPARATIONS OF MEAT, OF FISH OR OF CRUSTACEANS, MOLLUSCS OR OTHER AQUATIC INVERTEBRATES |
| 17 SUGARS AND SUGAR CONFECTIONERY |
| 18 COCOA AND COCOA PREPARATIONS |
| 19 PREPARATIONS OF CEREALS, FLOUR, STARCH OR MILK; PASTRYCOOKS' PRODUCTS |
| 20 PREPARATIONS OF VEGETABLES, FRUIT, NUTS OR OTHER PARTS OF PLANTS |
| 21 MISCELLANEOUS EDIBLE PREPARATIONS |
| 22 BEVERAGES, SPIRITS AND VINEGAR |
| 23 RESIDUES AND WASTE FROM THE FOOD INDUSTRIES; PREPARED ANIMAL FODDER |
| 24 TOBACCO AND MANUFACTURED TOBACCO SUBSTITUTES |
| S05 Mineral products |

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| <p>TEXT for explanation – pop-up box</p> <p>25 SALT; SULPHUR; EARTHS AND STONE; PLASTERING MATERIALS, LIME AND CEMENT</p> <p>26 ORES, SLAG AND ASH</p> <p>27 MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES</p> |
| <p>S06 Products of the chemical and allied industries</p> |
| <p>TEXT for explanation – pop-up box</p> <p>28 INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES</p> <p>29 ORGANIC CHEMICALS</p> <p>30 PHARMACEUTICAL PRODUCTS</p> <p>31 FERTILISERS</p> <p>32 TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INK</p> <p>33 ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS</p> <p>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</p> <p>35 ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES</p> <p>36 EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; CERTAIN COMBUSTIBLE PREPARATIONS</p> <p>37 PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS</p> <p>38 MISCELLANEOUS CHEMICAL PRODUCTS</p> |
| <p>S07 Resins, plastics and articles; rubber and articles</p> |
| <p>TEXT for explanation – pop-up box</p> <p>39 PLASTICS AND ARTICLES THEREOF</p> <p>40 RUBBER AND ARTICLES THEREOF</p> |
| <p>S08 Hides, skins and articles; saddlery and travel goods</p> |
| <p>TEXT for explanation – pop-up box</p> <p>41 RAW HIDES AND SKINS (OTHER THAN FURSKINS) AND LEATHER</p> <p>42 ARTICLES OF LEATHER; SADDLERY AND HARNESS; TRAVEL GOODS, HANDBAGS AND SIMILAR CONTAINERS; ARTICLES OF ANIMAL GUT (OTHER THAN SILKWORM GUT)</p> <p>43 FURSKINS AND ARTIFICIAL FUR; MANUFACTURES THEREOF</p> |
| <p>S09 Wood, cork and articles; basketware</p> |
| <p>TEXT for explanation – pop-up box</p> <p>44 WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL</p> <p>45 CORK AND ARTICLES OF CORK</p> <p>46 MANUFACTURES OF STRAW, OF ESPARTO OR OF OTHER PLAITING MATERIALS; BASKETWARE AND WICKERWORK</p> |
| <p>S10 Paper, paperboard and articles</p> |

TEXT for explanation – pop-up box

47 PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERIAL;
RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD

48 PAPER AND PAPERBOARD; ARTICLES OF PAPER PULP, OF PAPER OR OF
PAPERBOARD

49 PRINTED BOOKS, NEWSPAPERS, PICTURES AND OTHER PRODUCTS OF THE
PRINTING INDUSTRY; MANUSCRIPTS, TYPESCRIPTS AND PLANS

S11 Textiles and articles

TEXT for explanation – pop-up box

50 SILK

51 WOOL, FINE OR COARSE ANIMAL HAIR; HORSEHAIR YARN AND WOVEN
FABRIC

52 COTTON

53 OTHER VEGETABLE TEXTILE FIBRES; PAPER YARN AND WOVEN FABRICS
OF PAPER YARN

64 MAN-MADE FILAMENTS; STRIP AND THE LIKE OF MAN-MADE TEXTILE
MATERIALS

55 MAN-MADE STAPLE FIBRES

56 WADDING, FELT AND NONWOVENS; SPECIAL YARNS; TWINE, CORDAGE,
ROPES AND CABLES AND ARTICLES THEREOF

57 CARPETS AND OTHER TEXTILE FLOOR COVERINGS

58 SPECIAL WOVEN FABRICS; TUFTED TEXTILE FABRICS; LACE; TAPESTRIES;
TRIMMINGS; EMBROIDERY

59 IMPREGNATED, COATED, COVERED OR LAMINATED TEXTILE FABRICS;
TEXTILE ARTICLES OF A KIND SUITABLE FOR INDUSTRIAL USE

60 KNITTED OR CROCHETED FABRICS

61 ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, KNITTED OR
CROCHETED

62 ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, NOT KNITTED OR
CROCHETED

63 OTHER MADE-UP TEXTILE ARTICLES; SETS; WORN CLOTHING AND WORN
TEXTILE ARTICLES; RAGS

S12 Footwear, headgear; feathers, artificial flowers, fans

TEXT for explanation – pop-up box

64 FOOTWEAR, GAITERS AND THE LIKE; PARTS OF SUCH ARTICLES

65 HEADGEAR AND PARTS THEREOF

66 UMBRELLAS, SUN UMBRELLAS, WALKING STICKS, SEAT-STICKS, WHIPS,
RIDING-CROPS AND PARTS THEREOF

67 PREPARED FEATHERS AND DOWN AND ARTICLES MADE OF FEATHERS OR
OF DOWN; ARTIFICIAL FLOWERS; ARTICLES OF HUMAN HAIR

S13 Articles of stone, plaster; ceramic prod.; glass

TEXT for explanation – pop-up box

68 ARTICLES OF STONE, PLASTER, CEMENT, ASBESTOS, MICA OR SIMILAR
MATERIALS

69 CERAMIC PRODUCTS

70 GLASS AND GLASSWARE

S14 Pearls, precious stones and metals; coin

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| <p>TEXT for explanation – pop-up box</p> <p>71 NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMI-PRECIOUS STONES, PRECIOUS METALS, METALS CLAD WITH PRECIOUS METAL, AND ARTICLES THEREOF; IMITATION JEWELLERY; COIN</p> |
| <p>S15 Base metals and articles</p> |
| <p>TEXT for explanation – pop-up box</p> <p>72 IRON AND STEEL</p> <p>73 ARTICLES OF IRON OR STEEL</p> <p>74 COPPER AND ARTICLES THEREOF</p> <p>75 NICKEL AND ARTICLES THEREOF</p> <p>76 ALUMINIUM AND ARTICLES THEREOF</p> <p>78 LEAD AND ARTICLES THEREOF</p> <p>79 ZINC AND ARTICLES THEREOF</p> <p>80 TIN AND ARTICLES THEREOF</p> <p>81 OTHER BASE METALS; CERMETS; ARTICLES THEREOF</p> <p>82 TOOLS, IMPLEMENTS, CUTLERY, SPOONS AND FORKS, OF BASE METAL; PARTS THEREOF OF BASE METAL</p> <p>83 MISCELLANEOUS ARTICLES OF BASE METAL</p> |
| <p>S16 Machinery and electrical equipment</p> |
| <p>TEXT for explanation – pop-up box</p> <p>84 NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF</p> <p>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</p> |
| <p>S17 Vehicles, aircraft and vessels</p> |
| <p>TEXT for explanation – pop-up box</p> <p>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</p> <p>87 VEHICLES OTHER THAN RAILWAY OR TRAMWAY ROLLING STOCK, AND PARTS AND ACCESSORIES THEREOF</p> <p>88 AIRCRAFT, SPACECRAFT, AND PARTS THEREOF</p> <p>89 SHIPS, BOATS AND FLOATING STRUCTURES</p> |
| <p>S18 Instruments, clocks, recorders and reproducers</p> |
| <p>TEXT for explanation – pop-up box</p> <p>90 OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC, MEASURING, CHECKING, PRECISION, MEDICAL OR SURGICAL INSTRUMENTS AND APPARATUS; PARTS AND ACCESSORIES THEREOF</p> <p>91 CLOCKS AND WATCHES AND PARTS THEREOF</p> <p>92 MUSICAL INSTRUMENTS; PARTS AND ACCESSORIES OF SUCH ARTICLES</p> |
| <p>S19 Arms and ammunition</p> |
| <p>TEXT for explanation – pop-up box</p> <p>93 ARMS AND AMMUNITION; PARTS AND ACCESSORIES THEREOF</p> |

S20 Miscellaneous manufactured articles

TEXT for explanation – pop-up box

94 FURNITURE; BEDDING, MATTRESSES, MATTRESS SUPPORTS, CUSHIONS AND SIMILAR STUFFED FURNISHINGS; LAMPS AND LIGHTING FITTINGS, NOT ELSEWHERE SPECIFIED OR INCLUDED; ILLUMINATED SIGNS, ILLUMINATED NAMEPLATES AND THE LIKE; PREFABRICATED BUILDINGS

95 TOYS, GAMES AND SPORTS REQUISITES; PARTS AND ACCESSORIES THEREOF

96 MISCELLANEOUS MANUFACTURED ARTICLES

S21 Works of art and antiques

TEXT for explanation – pop-up box

97 WORKS OF ART, COLLECTORS' PIECES AND ANTIQUES

A5: List of databases of NTMs used in the study? (Question Q1.4.1)**One list, possibly subheadings to indicate data for goods and services****NTMs for goods**

| | |
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| UNCTAD | NTB TRAINS |
| ITC | Market Access Map |
| WB | World Bank Temporary Trade Barriers Database |
| WB | Technical Barriers to Trade Database |
| WB | Overall Trade Restrictiveness Indices |
| WB | EU Standards Database |
| WB | Trade Facilitation Indicators: Hard and Soft Infrastructure |
| WB | Trade Costs and Facilitation |
| WTO | I-Tip Goods: WTO notifications |
| WTO | I-Tip Goods: WTO specific trade concerns |
| IFC/WB | Doing Business - Trading Across Borders |
| OECD | Restrictions on Exports of Raw Materials |
| OECD | Maritime Transport Costs |
| Ecorys | Ecorys NTB database |
| EU | Market Access Database (MADB) |
| EFSA | RAFFS |
| Bryant Christie Inc. | Global MRL database |
| USDA | MRL database |
| USITC | CoRe NTMs Database |
| ASEAN | Asean NTM database |

NTMs for services

| | |
|----------------------|--|
| WTO/WB | I-Tip Services |
| WTO | Air Services Agreements |
| WB | Service Trade Restrictions Database and Service Trade |
| WB | Regulation and supervision of banks database |
| OECD | Product Market Regulation (PMR) database |
| OECD | Service Trade Restrictions Database |
| Hobolth (2012) | European Visa Database |
| Government Australia | Measures of Restrictions on Trade in Services Database |