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Working Paper

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FERDI Working Paper, No. P183

Provided in Cooperation with:
Fondation pour les études et recherches sur le développement international (FERDI), Clermont-Ferrand

Suggested Citation: Ing, Lili Yan; Cadot, Olivier; Anandhika, Rizqy; Urata, Shujiro (2016) : Non-tariff Measures in ASEAN: A Simple Proposal, FERDI Working Paper, No. P183, Fondation pour les études et recherches sur le développement international (FERDI), Clermont-Ferrand

This Version is available at:
https://hdl.handle.net/10419/269464

FONDATION POUR LES ÉTUDES ET RECHERCHES SUR LE DÉVELOPPEMENT INTERNATIONAL

Working Paper 183 December 2016 Development Policies

Non-tariff Measures in ASEAN: A Simple Proposal*

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1. Introduction

After close to 70 years of trade liberalization, a series of recent events suggests that the tide may well be turning. International trade as a proportion of global gross domestic product (GDP) has stopped growing in the last decade, in what Constantinescu et al. (2015) dub the 'Great Trade Slowdown'. Momentum for trade liberalization at the multilateral level has stumbled on the Doha round's failure, with limited hopes for revival. Even regional trade agreements, sometimes seen as alternatives to multilateral liberalization, are under heavy attack by politicians of all strides in the United States, traditionally the bulwark of free trade. Last but not least, while the 2008–2009 global financial crisis did not lead to the explosion of protectionism feared by many, the use of temporary trade measures by emerging countries has been markedly rising (Didier et al., 2016)

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* Support from ERIA under project ERIA-RD/RA-001-001-501/16/FY15 is gratefully acknowledged. Cadot also gratefully aknowledges support from France's Agence Nationale de la Recherche under "Investissement d'Avenir" grant ANR-10-LABX-14-01. The authors are grateful to ASEAN Senior Economic Officers for useful comments.

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In a volatile international political context, these converging trends should be taken seriously. A cycle of globalization followed by a political backlash would be nothing new: between 1870 and 1890, a rise of protectionist forces in all advanced countries nearly brought to an end the cycle of globalization that had started in the middle of the 19th century. If trade kept on growing because of shrinking transport costs, all countries except the United Kingdom erected stiff trade barriers (Bairoch and Kozul-Wright, 1996) and, more ominously, a semantic drift in political discourses led from protectionism to xenophobia and, ultimately, war.

One key difference between now and then is the existence of the World Trade Organization (WTO) and of its treaties, which today impose disciplines on what countries can and cannot do, together with better knowledge of the harm that protectionism can do. However, there is one area where WTO disciplines are comparatively weak: non-tariff measures (NTMs).

NTMs are defined in general as policy measures, other than tariffs, that can affect international trade. The term covers sanitary and phytosanitary (SPS) regulations, technical barriers to trade (TBT) regulations, and a wide and diverse array of policy interventions affecting trade flows and prices such as, *inter alia,* rules of origin, licensing, price-control measures, or distribution restrictions (UNCTAD, 2013). While many NTMs stem from non-trade policy objectives (for example, food safety or environmental protection), they can also be used as instruments of commercial policy; even NTMs pursuing legitimate, non-trade objectives can have restrictive or distortionary effects on international trade.

NTMs are more complex policy instruments than tariffs not just because of multiple objectives: They are also, in themselves, technically complex (this is particularly true, for instance, of technical and sanitary regulations). Moreover, unlike tariffs that have essentially rent-shifting effects, NTMs can affect market structure in intricate ways (Asprilla et al., 2016). Their opacity, the indirect nature of their effects, and the frequent involvement of the private sector in their design make them vulnerable to capture by special interests, in particular in view of the relatively weak disciplines that the WTO imposes on them.

Disciplines on regulations were established during the Uruguay Round, in particular in the SPS and TBT agreements. For instance, Article 5.2 of the SPS agreement requires sanitary regulations to be science-based. Likewise, the TBT agreement requires technical regulations to be necessary and proportionate to the problem at hand. Taken seriously, those disciplines are not trivial; in some cases they can even go against consensual societal choices, as in the case of the European Union's (EU) hormones regulation. However, many measures can still go under the radar screen; most importantly, the system has not been

tested against a general breakdown of goodwill. Thus, in a deteriorating political environment, NTMs might prove to be a weak spot of regional and multilateral trading systems.

For all the danger of hidden protectionism, an exclusive focus on the effect of NTMs on trade and doing-business costs may miss an important part of their motivation and may even run contrary to equally important public policy objectives. In a trend that started in industrial countries and has since spread around the world, public demand for insurance against health, consumption-related or environmental hazards has been rising (Vogel, 1996), leading to increased 'regulatory demand'. Failure to respond to this public demand because of real or alleged trade constraints would only fuel the current anti-globalization backlash.

The message of this paper is that the solution to this dilemma is not to try – yet again – to 'negotiate down' NTMs, but rather to take the issue back to the country level and to embed it in a drive for better regulations. As the WTO's 'static' (rules-based) disciplines may not prove sufficient to ensure that regulations correctly balance regulatory demands against economic efficiency, we argue that 'dynamic' disciplines should be put in place in the form of quality control on regulatory processes. By quality control, we mean essentially two things. First, good regulations should pass a basic test of economic rationality, that is, set correct incentives from a societal point of view. This would weed out most of the regulations pushed by special interests against the common good. Second, they should fully internalize externalities between different areas of government intervention, trade-related or not; for instance, the productivity gain expected from a subsidy to agricultural inputs (pesticides and fertilizers) should be balanced against its environmental cost. Few governments have structures in place to do this kind of trade-offs explicitly.

Institutionally, the quality-control systems we advocate would take the form of regulatory supervision bodies or National Economic Council (NEC), possibly building on the NTM committees set up under the WTO's Trade Facilitation Agreement, with strong in-house analytical capabilities and the power to review and screen all existing and proposed regulations. This is the direction that Cambodia, Myanmar, and Lao People's Democratic Republic (Lao PDR) have been taking recently.

Because of the externalities that NTMs exert on trade partners, regional bodies such as the ASEAN Secretariat could play a key role in encouraging and coordinating the creation of NEC and providing common training to their staff (with support from development partners), thus fostering a climate of regional cooperation at the technical level. In turn, technical cooperation in the design and review of regulations would facilitate the emergence of 'regulatory convergence' and thus contribute to make regional agreements mutually compatible.

Last but not least, as recent research underscores the impact of NTMs on market structure, NEC should ultimately be merged with competition commissions in order to coordinate regulatory and anti-trust supervision, which deal with similar issues and draw on similar staff skills. Combined regulatory and/or antitrust supervision bodies would have more resources and clout, having a balanced view and mandate to discipline both the private and the public sectors.

Against this background, this paper provides an overview of the state of play in the Association of Southeast Asian Nations (ASEAN) member states in the area of NTMs[1], together with an outline of the proposed policy architecture. Section 2 discusses conceptually the channels through which NTMs affect trade and market structure. Section 3 describes recent trends in tariffs and non-tariff measures in ASEAN, detailing non-tariff measures in ASEAN by type of NTM, issuing agency, and product. Section 4 outlines our key policy proposal. Section 5 concludes.

2. How NTMs affect trade and market structure

The costs imposed by NTMs on businesses can be decomposed into three broad classes: enforcement costs, sourcing costs, and process-adaptation costs. In this section, we argue that these costs affect simultaneously trade flows and market structure. Beyond 'economies of scope' at the level of supervisory agencies, this linkage between trade and market-structure effects is our rationale for proposing joint regulatory and/or antitrust supervision.

Enforcement costs relate to the effort that private companies must expend to show compliance with NTMs. This may involve staff devoted to processing paperwork, inspections by officials from enforcement agencies, or efforts to encourage the certification of foreign suppliers under national standards. Because these costs are largely fixed, they weigh more heavily on small firms than on larger ones. They might also weigh more heavily on foreign firms less familiar with local administrative processes, although foreign firms tend to be larger ones who can purchase legal and/or consulting assistance locally. Thus, through enforcement costs, NTMs may affect differentially local vs. foreign firms and small vs. large ones.

Sourcing costs are generated by the switch from low-grade intermediate sources to high-grade ones in order to meet NTM standards. A given standard can have different effects depending on products and users. For instance, Indonesia's steel standard, adopted in 2009, set maximum levels of carbon, manganese, phosphorous and sulphur for flat products and hot-rolled coils. For users of low-grade long products in the construction sector (Harmonized System [HS] code 7207), the standard was binding and involved

[1] A previous study on NTMs in ASEAN using the 2009 ASEAN NTM database, Cadot, et al., 2015.

changes in procurement choices. By contrast, for users of high-grade flat products in the automobile industry (HS code 7208), company standards were generally higher than those mandated by the regulation, so no sourcing changes were involved. In their case, supplier certification requirements, being redundant, were perceived as just a nuisance.

Sourcing costs are essentially variable costs, as they affect every unit produced. If the standard is non-discriminatory, they affect domestic firms and importers in the same way. However, intermediate producers from different countries may have unequal abilities to comply with NTMs due to variations in the effectiveness of national SPS and quality infrastructure. As a result, an NTM may affect sourcing patterns with complex effects. For instance, Mauritius' regulation on pigments used in paints forced domestic producers to switch from their traditional supply sources to more expensive German-made pigments. In general, Disdier et al. (2015) show that harmonization clauses in North-South agreements, which typically mean a stiffening of standards for the Southern partners, tend to reduce South-South trade. This 'shutting-door' effect on imports from Southern third-party suppliers may be so large as to raise the profitability of home intermediate producers, as was the case in Morocco after harmonization with EU standards (Augier et al., 2016).

Process-adaptation costs relate to changes in capital equipment needed to meet NTM standards. For instance, dairy standards force farmers to buy expensive equipment to ensure that milk is not contaminated by bacteria before being pumped into tank trucks. Investment in compliant capital equipment typically requires also the upgrading of operator skills. These costs are similar to the costs typically incurred by firms when they start exporting. They involve the hiring of white-collar workers and engineers and, most importantly, higher skill levels in every occupation (Verhoogen, 2008; Bustos, 2011).

Process-adaptation costs are essentially fixed costs and therefore affect small firms more than larger ones, again potentially affecting market structure. This market-structure effect can interact in subtle ways with traditional rent-shifting effects. To see this, consider a world with symmetric firms and transport costs. Because of transport costs, firms sell systematically smaller volumes on their export markets than on their home markets. Suppose now that each country sets a particular (different) standard. Then firms spread country-specific process-adaptation costs on smaller volumes on their export markets than on their home markets; it is as if home firms were always larger than foreign ones, in spite of the initial symmetry. In that case, NTMs mechanically generate a home bias even if they are not *de jure* discriminatory. The picture becomes more complex with heterogeneous firms, as process-adaptation costs induce the exit of the smallest firms, both foreign and domestic, allowing larger ones (again both foreign and domestic) to expand market shares. As a result, foreign firms may find themselves better off, a conjecture that is documented empirically by Asprilla et al. (2016).

If quality upgrading takes place on a sufficiently large scale in the economy (say, because a wave of new NTMs are adopted following a trade agreement) the complementarity between recent-vintage capital and skills can raise the skill premium in the whole economy, resulting in a widening of wage inequalities between educated and non-educated workers. This effect, documented in the case of an expansion of export opportunities by Bustos (2011), can induce a sorting of firms, with the largest upgrading and expanding, while the smallest are forced to exit, squeezed by the NTM's requirements and the rising cost of skilled manpower.

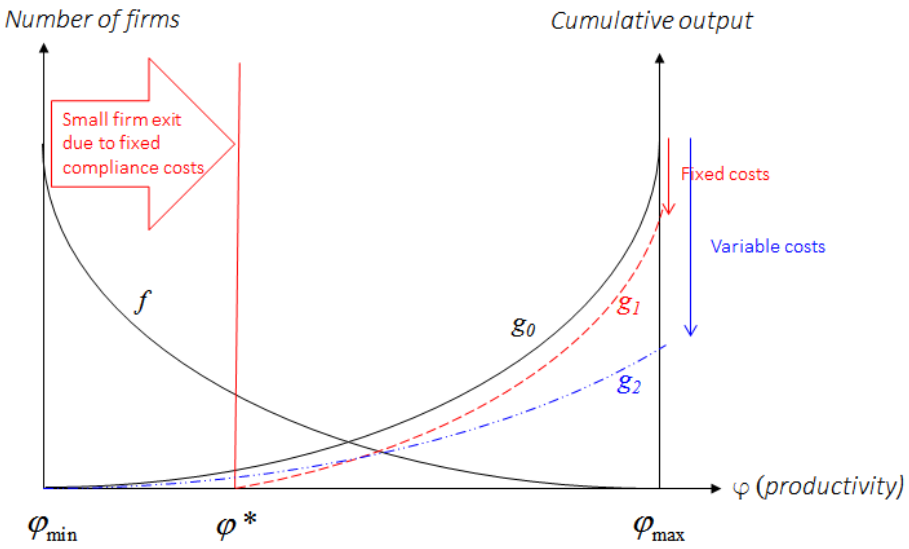
While the scale of these effects varies across contexts and is, as yet, not widely documented, a good rule of thumb is that variable costs matter for aggregate trade flows while fixed costs matter for market structure.

The underlying reasoning is illustrated in Figure 2.1. Consider a two-country world where country *A* imposes an NTM affecting *B's* exporters. Figure 2.1 plots the frequency of *B's* exporters *(f)* and the corresponding cumulative trade flow *(g)* as a function of a parameter φ indexing both their productivity and their size. The shape of *f* is chosen to correspond loosely to a Pareto distribution (Freund and Pierola, 2015); intuitively, as φ increases, the density of firms goes down (there are fewer firms at high levels of productivity). By contrast, *g* is upward-sloping and concave because, as one adds increasingly larger/more productive firms, each contributes more and more to aggregate output.

Figure 2.1 illustrates qualitatively the NTM's effect on fixed and variable costs. An increase in fixed costs induces the exit of firms between φ_{min} and φ*, shifting the *g* function horizontally from g_0 to g_1. This extensive-margin effect alters the market's structure. However, even if the exit movement is large (as shown), the effect on trade flows is small because the exiting firms represent a small fraction of the aggregate flow (although the horizontal shift of the *g* function is large, it vertical shift is small). By contrast, an increase in variable costs affects the whole distribution, rotating *g* from g_0 to g_2, including the top firms that account for the bulk of trade flows.[2] Thus, market structure does not change (all firms reduce their flows proportionately), but aggregate flows change markedly.

[2] Freund and Pierola (2015) document that the top 1 percent of firms account for roughly half of export flows.

Figure 2.1: Fixed-cost and Variable-cost Effects with Heterogeneous Firms



Source: Cadot and Ing (2015).

The argument illustrated above has important implications for the empirical analysis of NTMs and its policy implications. Currently, practically all work on NTMs is focused on estimating their ad-valorem equivalents (AVEs) based on how they affect trade flows. The idea is to use AVEs estimated by product and country as a basis for the calculation of welfare gains to be expected from trade agreements through the use of computable general equilibrium (CGE) models, and as a basis for negotiated reductions. This approach is wrong on at least two counts.

First, as illustrated here, effects on trade flows are only part of the story; effects on market structure may be equally important. In other words, a 10 percent reduction in trade flows can have very different implications if it is an equi-proportionate reduction in the exports of all active firms or if half the firms exit the market, leaving the remaining ones with expanded market shares and reinforced market power (Asprilla et al., 2016).

Second, AVEs measure only the gross costs of NTMs, although the WTO's necessity and proportionality tests logically imply that society should be concerned by their net cost, that is, by the difference between regulatory costs and benefits.[3] The benefits of SPS regulations can be, for instance, fatalities and diseases avoided, which can be priced statistically through a variety of techniques (see for example, Hall and Jones, 2007).

[3] The recall of nearly eight million vehicles from ten automakers including Toyota and of more than five million from Honda since 2013, through national and regional actions for the potentially deadly Takata airbag inflators, the 2015 discovery of Volkswagen's large-scale cheating with US emissions tests, or Singapore's February 2016 ban on Mars chocolate products due to the possible presence of plastic, serve as reminders that regulatory benefits (or, alternatively, the costs of non-enforced or ineffective regulations) might well be substantial relative to lost 'Harberger triangles'.

Likewise, environmental benefits can be evaluated for example, through the valuation of ecosystem services (Pearce et al., 2006). However, in spite of the availability of analytical tools, regulatory benefits are rarely quantified (Renda et al., 2013). With only one-sided quantification, NTM rankings in terms of their gross costs (AVEs) could be very distorted, leading to biased CGE estimates of the welfare gains from trade agreements. As a result, AVEs may provide poor guidance to policymaking and hence to negotiations.

All in all, our message here is that NTMs, which are currently viewed primarily through a trade-only prism, might well be viewed instead from a triple angle: (i) trade (the traditional one), (ii) competition policy, and (iii) public-good provision and valuation. Against this background, we now turn to a description of the state of play in ASEAN in terms of NTMs.

3. Recent trends in tariffs and non-tariff measures in ASEAN

Import tariffs have been successfully reduced through multilateral and regional negotiations, with ASEAN tariffs declining from 8.9 percent in 2000 to 4.5 percent in 2015. By 2010, tariffs had been outright eliminated on 98 percent of the product lines in the ASEAN-6 countries,[4] with Cambodia, Lao PDR, Myanmar, and Viet Nam to follow by 2018.

In spite of these tariff reductions, intra-ASEAN trade increased merely from 23.0 percent of member states' total trade in 2000 to 25.3 percent in 2014, with ASEAN Trade in Goods Agreement preferences suffering from chronic under-utilization. Besides rules of origin (Cadot and Ing, forthcoming), NTMs, whose number swelled from 1,634 to 5,975 between 2000 and 2015 may be the 'missing factor' explaining the slow rise of intra-ASEAN trade.

Indeed, most traded products are today covered by one measure or another. Table 2.1 shows coverage ratios, that is, the percentage of imports covered by one measure or another, using whichever source of trade data is available (direct or mirrored). Coverage ratios are all high, with a number of countries having all imports covered (100 percent coverage ratios).

[4] The ASEAN-6 are Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Table 2.1: NTM Import Coverage Ratios in ASEAN, 2015

	NTM Coverage (simple average)[a]	NTM Coverage (weighted average)[b]	Trade Year Used[c]	Remarks
Brunei Darussalam	65%	57%	2014	
Cambodia	100%	100%	2014 (mirrored)	NTMs on all products since 2008
Indonesia	75%	72%	2014	
Lao PDR	100%	100%	2014 (mirrored)	NTMs on all products since 2012
Malaysia	71%	69%	2014	
Myanmar	42%	42%	2014 (mirrored)	
Philippines	100%	100%	2014 (mirrored)	NTMs on all products since 1976
Singapore	100%	100%	2014	NTMs on all products since 1999
Thailand	100%	100%	2014	NTMs on all products since 1992
Viet Nam	100%	100%	2014	NTMs on all products since 2007

ASEAN = Association of Southeast Asian Nations; Lao PDR = Lao People's Democratic Republic; NTM = non-tariff measure.

Notes:

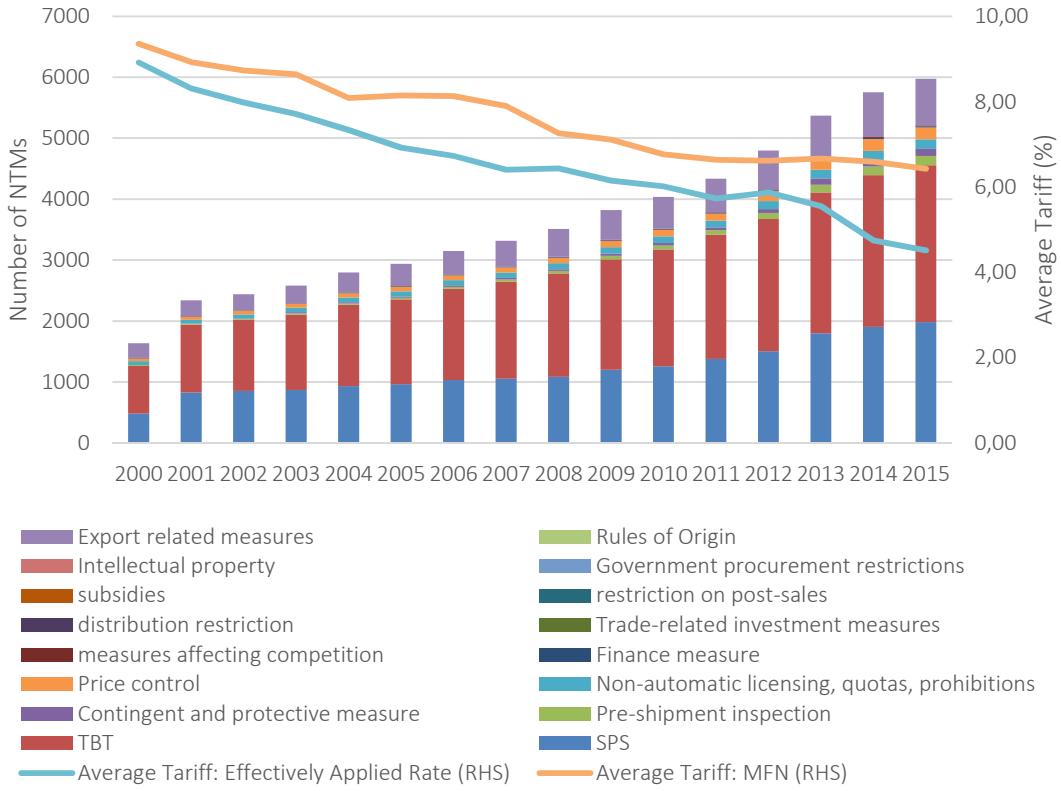
a/ Simple tariff line means we treat 1 NTM in national tariff line as 1 NTM in 6-digit Harmonized System (HS) code.

b/ Weighted tariff line means we treat 1 NTM in national tariff line as 1 divided by number of national lines in the respective 6-digit HS code.

c/ Trade year used is based on latest available import data for HS-6 digit from WITS, World Bank.

ASEAN's high coverage ratios reflect a spectacular rise in the number of NTMs during a period where tariffs, both most favoured nation (MFN) and preferential, were steadily cut (Figure 2.2.). One can read the scissor-blade movement in tariffs and NTMs apparent in Figure 2.2 in two alternative ways, with sharply different implications.

Figure 2.2: Trends of Tariff and Non-tariff Measures in ASEAN, 2000–2015



ASEAN = Association of Southeast Asian Nations; NTM = non-tariff measure; SPS = sanitary and phytosanitary; TBT = technical barriers to trade.

Source: Authors' calculation based on 2015 ASEAN-ERIA-UNCTAD Database.

First, the number of NTMs could have risen as a substitute for shrinking tariffs. The substitutability of tariffs and non-tariff barriers (NTBs) is an old idea in trade theory and empirics (Deardorff and Stern, 1997). The idea is that, as tariffs are constraints by bindings (although, for many developing countries, there is substantial water in the tariffs) or by regional commitments, countries may resort to NTBs to perform an equivalent protectionist function. Observing such substitutability in ASEAN data between tariffs and the broad array of measures called NTMs (which include many measures that are not NTBs) might betray an intention to use them as trade-protection instruments to replace tariffs; we will call this the 'political-economy (PE) hypothesis'.

Alternatively, shrinking tariffs (opening up) and expanding numbers of NTMs (regulatory expansion) are two parallel symptoms of a modernizing economy, with consumers demanding both more product variety and more product safety. This hypothesis is in line with both theory and empirics. It has been observed that the average unit value of a country's imports tends to rise with its level of income (Hummels and Lugovskyy, 2009). Thus, with or without standards, consumers naturally tend to switch to higher-quality and safer products when their incomes rise. Expanding regulations may simply reflect this shift in preferences, as risk-averse regulatory agencies seek to minimize the risk of incidents in

increasingly mediatized and safety-sensitive environments. As for the negative relationship with tariffs, first note that trade liberalization may reflect a growing demand for product variety as incomes rise. In that case, the correlation between trade liberalization (decreasing tariffs) and regulatory inflation would reflect a common factor (rising income). But there may be also a direct causal mechanism. As trade liberalization leads to more variety in terms of import sources, quality heterogeneity can be expected to rise (unit values vary not just by importer income but by exporter income as well; see Schott 2004, and Bernard et al., 2011); in particular, as market access improves for low-income exporters with deficient SPS and product-safety infrastructure, importing countries may choose to scrutinize imports more carefully. In that case, trade liberalization leads to import-quality heterogeneity which itself causes regulatory controls. Whether due to a common factor or to a direct causal mechanism, we will call this the 'income-effect (IE) hypothesis'.

The breakdown by type of measure shown in Figure 2.2 helps to discriminate between the PE and IE hypotheses. Under the IE hypothesis, NTM inflation should be attributable primarily to instruments targeting the quality of products – SPS and TBT regulations. Figure 2.2 shows that this is true on average; indeed SPS and TBT measures together account today for 76.3 percent of the stock of NTMs (Table 2.2 and 2.3).

Table 2.2: NTMs by Type in ASEAN, 2015

Code	NTM by Type	Number of NTMs	%
A	Sanitary and phytosanitary (SPS) measures	1984	33.2%
B	Technical barriers to trade TBT)	2573	43.1%
C	Pre-shipment inspection and other formalities	153	2.6%
D	Contingent trade protective measures	112	1.9%
E	Non-automatic licensing, quotas, prohibitions and quantity control measures other than SPS or TBT reasons	159	2.7%
F	Price control measures including additional taxes and charges	195	3.3%
G	Finance measures	15	0.3%
H	Measures affecting competition	16	0.3%
I	Trade-related investment measures	0	0.0%
J	Distribution restrictions	2	0.0%
K	Restriction on post-sales services	0	0.0%
L	Subsidies (excluding export subsidies under P7)	0	0.0%
M	Government procurement restrictions	0	0.0%
N	Intellectual property	0	0.0%
O	Rules of origin	0	0.0%
P	Export-related measures	766	12.8%
Total coded NTMs		5975	100%

ASEAN = Association of Southeast Asian Nations; NTM =non-tariff measure.

Source: Authors' calculation based on the 2015 ASEAN–ERIA–UNCTAD Database

Table 2.3: NTMs by Type and by Country in ASEAN, 2015

Country	Total (number)	SPS (%)	TBT (%)	Export-related Measures (%)	Others (%)
Brunei Darussalam	516	31	56	9	4
Cambodia	243	15	50	29	7
Indonesia	638	20	51	12	18
Lao PDR	301	13	30	27	30
Malaysia	713	36	47	10	7
Myanmar	172	44	24	20	12
Philippines	854	27	42	17	13
Singapore	529	24	59	9	7
Thailand	1630	48	34	8	9
Viet Nam	379	37	37	17	8
Total/average	5975	29	43	16	12

ASEAN = Association of Southeast Asian Nations; Lao PDR = Lao People's Democratic Republic; NTM = non-tariff measure; SPS = sanitary and phytosanitary; TBT = technical barriers to trade.

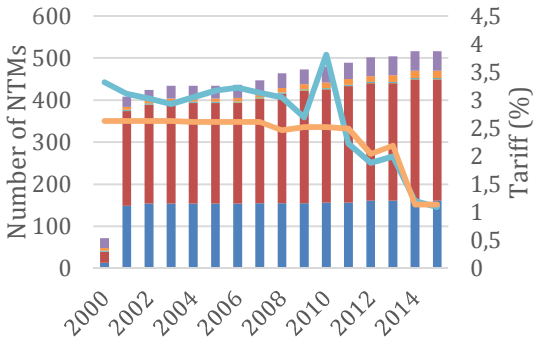
Source: Authors' calculation based on the 2015 ASEAN–ERIA–UNCTAD Database.

Figure 2.3 reproduces Figure 2.2 by ASEAN member country. Trends by county offer a diverse picture in terms of profile and timing of the decrease in tariffs and concomitant rise in NTMs, although the overall trend is qualitatively the same for many. Interestingly, Singapore has seen a rise in the number of its NTMs (today, Singapore has 529 measures covering the entirety of its imports) even though it had no tariffs to eliminate at the start (Singapore, a service economy, also has relatively few manufacturing jobs to protect). Thus, the PE hypothesis cannot hold in the case of Singapore. Indonesia, Malaysia, and the Philippines are three cases of moderate decreases in preferential tariffs with largely unchanged MFN ones. In all three cases, the rise in the number of NTMs has been steady, albeit from a high base in Malaysia. Cambodia, Viet Nam, and Thailand have undergone more energetic tariff reductions as all three started from high levels. They have also had substantial rises in the number of NTMs. Other cases (Myanmar, Lao PDR, Brunei Darussalam) are in between or have idiosyncratic profiles.

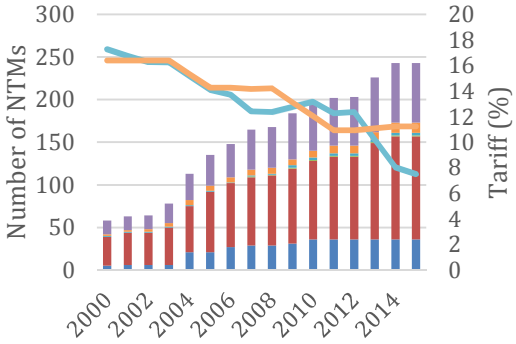
In terms of composition, the rise in NTMs is driven by SPS and TBT measures in the Philippines, Singapore, Thailand and Viet Nam. By contrast, in Cambodia, Indonesia, Myanmar, and Lao PDR, export-related and other measures that have nothing to do with product safety have also been on the rise, suggesting more support for the PE hypothesis.

Figure 2.3: Tariffs and Non-tariff Measures by ASEAN Member, 2000–2015

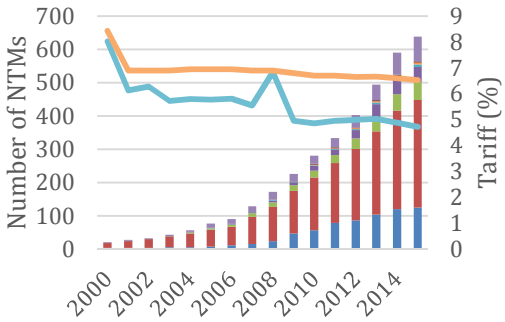
(a) Brunei Darussalam



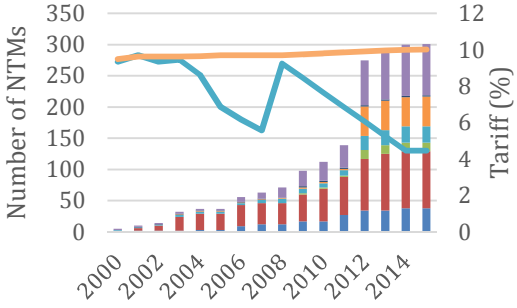
(b) Cambodia



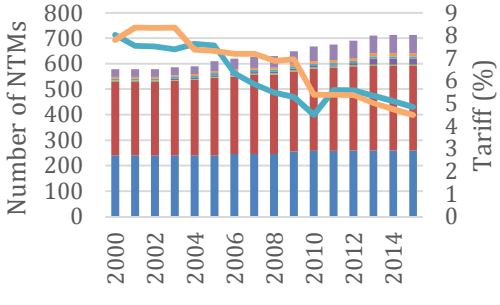
(c) Indonesia



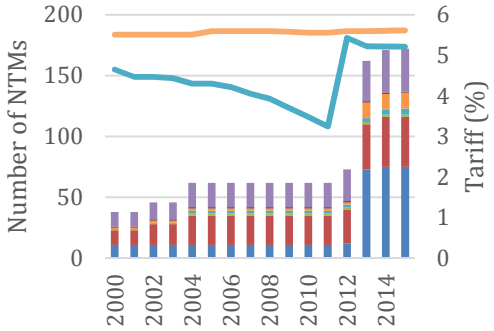
(d) Lao PDR



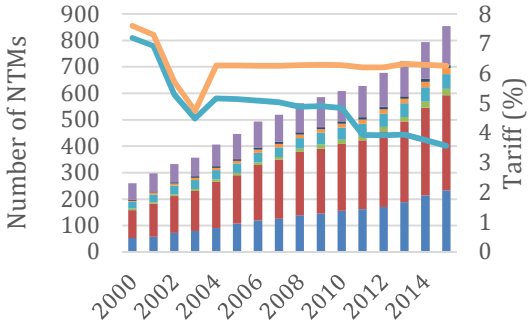
(e) Malaysia



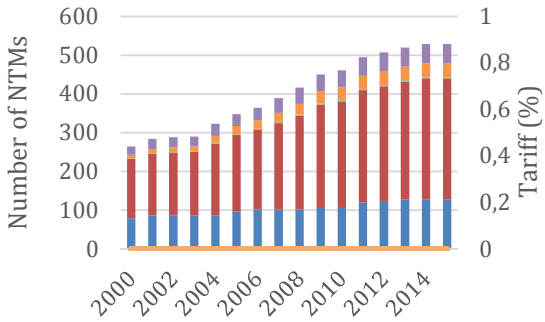
(f) Myanmar



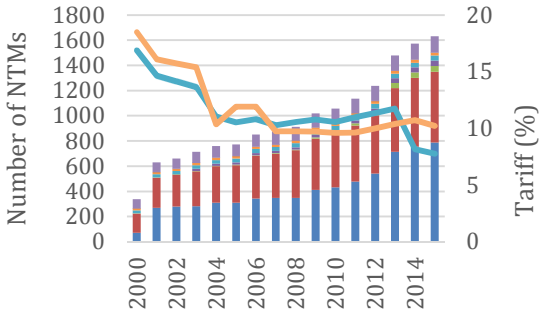
(g) Philippines



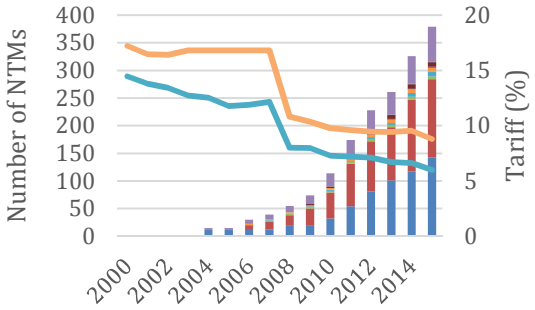
(h) Singapore



(i) Thailand



(j) Viet Nam



ASEAN = Association of Southeast Asian Nations; Lao PDR = Lao People's Democratic Republic; NTM = non-tariff measure.

Note: Number of NTMs measured on the LHS; tariff (in %) measured on the RHS. Colour coding of NTMs and tariff types is as in Figure 2.2.

Sources: Authors' calculations based on COMTRADE data on tariffs and 2015 ASEAN–ERIA–UNCTAD NTM Database.

A breakdown of the number of measures by product category in Table 2.4 also suggests a mixed picture. Among the most heavily regulated products (three or more NTMs), one finds both products that are clearly sensitive from a public-health perspective (animal products, foodstuffs, chemicals) but also products where the rationale for state regulation is less clear. For instance, machinery/electrical equipment covers sensitive products such as consumer electrical equipment and appliances but also machinery, a highly differentiated category of products typically purchased by corporate buyers with the

capability to assess quality by themselves, perhaps even better than government agencies. Yet it is one of the most heavily regulated sectors. It is also, together with automobile (another heavily regulated sector) an important provider of jobs in middle-income countries, and hence a strategic sector from a PE perspective. Textiles is also an economically strategic sector but one where safety standards are of secondary importance; yet it is substantially affected by NTMs.

Table 2.4: NTMs by Product Group and by Number of Measures in ASEAN, 2015

HS Code	Product Group	Affected by 1 NTM	Affected by 2 NTMs	Affected by 3 NTMs or more
01-05	Animal & animal products	0%	0%	7%
06-15	Vegetable products	0%	0%	8%
16-24	Foodstuffs	0%	0%	6%
25-27	Mineral products	0%	0%	2%
28-38	Chemicals & allied industries	2%	2%	9%
39-40	Plastics/rubbers	1%	1%	2%
41-43	Raw hides, skins, leather, & furs	0%	0%	1%
44-49	Wood & wood products	0%	1%	6%
50-63	Textiles	1%	2%	6%
64-67	Footwear/headgear	0%	0%	0%
68-71	Stone/glass	1%	1%	1%
72-83	Metals	1%	2%	4%
84-85	Machinery/electrical	3%	6%	11%
86-89	Transportation	1%	1%	5%
90-99	Miscellaneous	1%	1%	3%

ASEAN = Association of Southeast Asian Nations; HS = Harmonized System; NTM = non-tariff measure.
Source: Authors' calculation based on the 2015 ASEAN-ERIA-UNCTAD Database.

Table 2.5 sheds additional light on the issue by looking at who is responsible for the issuance of NTMs. Under the PE hypothesis, one would expect trade and industry ministries to account for a substantial fraction of NTMs. By contrast, under the IE hypothesis one would expect the health and environment ministries to loom large. Measures issued by agriculture ministries could fit under both hypotheses, as agri-food products are both health sensitive and the object of strong protectionist pressures. Health and environment ministries together account for about one-third of all NTMs (34.3 percent). By contrast, trade and industry ministries account for less than 15 percent of the measures. Thus, a raw count of where measures originate from suggests more weight for the IE hypothesis.

Table 2.5: NTMs by Issuing Agency in ASEAN, 2015

Number	Ministry/agency	Number of NTMs	Total Number of NTMs (%)
1	Ministry of Health	1868	31.3%
2	Ministry of Agriculture (including forestry, plantation, fisheries)	1865	31.2%
3	Ministry of Trade	468	7.8%
4	Other institutions (not mentioned in countries' table)	463	7.7%
5	Ministry of Industry	425	7.1%
6	Ministry of Environment, environmental agencies	178	3.0%
7	Government Office	175	2.9%
8	World Trade Organization (provided by WTO)	87	1.5%
9	Ministry of Finance	86	1.4%
10	Ministry of Energy, energy agency	64	1.1%
11	Other institutions	296	5.0%
Total NTMs		5975	100.0%

ASEAN = Association of Southeast Asian Nations; NTM = non-tariff measure.

Note: Data on measures of Antidumping, countervailing duties and safeguards are provided by the WTO. The WTO does not issue any regulations.

Source: Authors' calculation based on the 2015 ASEAN-ERIA-UNCTAD Database.

All in all, this brief overview of NTMs in ASEAN suggests that exclusive focus on the PE hypothesis is unlikely to do justice to the variety of motivations that preside, across countries, over the issuance of NTMs.

The data in Table 2.5 also highlight one of the distinguishing features of NTMs; namely, that authority over them, unlike tariffs, is fragmented and spread over a large spectrum of government agencies. Moreover, these agencies have different mandates, and their personnel are unlikely to have much in common in terms of training or vision. Thus, the narrow, trade-centred prism through which economists look at NTMs stands in sharp contrast with the diverse constituencies that have a say in their making. This may be one of the reasons why they are still so poorly understood.

Also, the fragmentation of authority over NTMs may reproduce at the country level a problem that has been long noticed at the supra-national level. When a country adopts a trade-policy measure, NTM or other, it is likely to affect its trade partners in one way or another. Without a supra-national coordination mechanism, these so-called 'externalities' would not be taken into account in national decision-making, and the outcome would not be collectively optimal. The WTO, its agreements, and its dispute-settlement body provide a forum and mechanism to discuss and internalize the externalities.

A somewhat similar – if less acute – coordination problem exists within countries in the area of NTMs. While all the agencies that form a government share, in principle, a stake in the pursuit of the common good, each has, in practice, a particular and possibly narrow mandate. While measures (in particular, NTMs) taken by one agency may well have implications that spill over to other areas, there is typically no forum or mechanism to discuss and resolve them. Spillovers (say, from environmental protection to competitiveness, or from liberalization to product safety) are typically ignored, or, when recognized, solved in ad-hoc fashion by bargaining between ministries, with the most powerful one winning the case. Correctly resolving the trade-offs generated by cross-area spillovers would require, instead, an institutional setup geared toward their explicit recognition and their resolution in the pursuit of the common good rather than through bargaining.

4. A simple proposal

Our brief and very preliminary overview of the state of play in NTMs in ASEAN suggests that neither the PE hypothesis nor the IE one can be ruled out with certainty. Therefore, appropriate policy guidance should take into account both types of motivations and offer a balanced policy mix with both 'disciplines' in a traditional trade sense and tools to facilitate trade-offs between conflicting objectives at the sub-national (agency) level.

The WTO SPS and TBT agreements offer rules that governments can rely on to solve certain trade-offs. They are useful, but they are not enough, because rules are never 'complete contracts' – they cannot cover all possible situations. What we propose here is to complement the rules with a standard institutional set up which, up to a certain degree of adaptation to fit national realities, could provide a common blueprint to resolve trade-offs and ensure regulatory coherence both within and between countries.

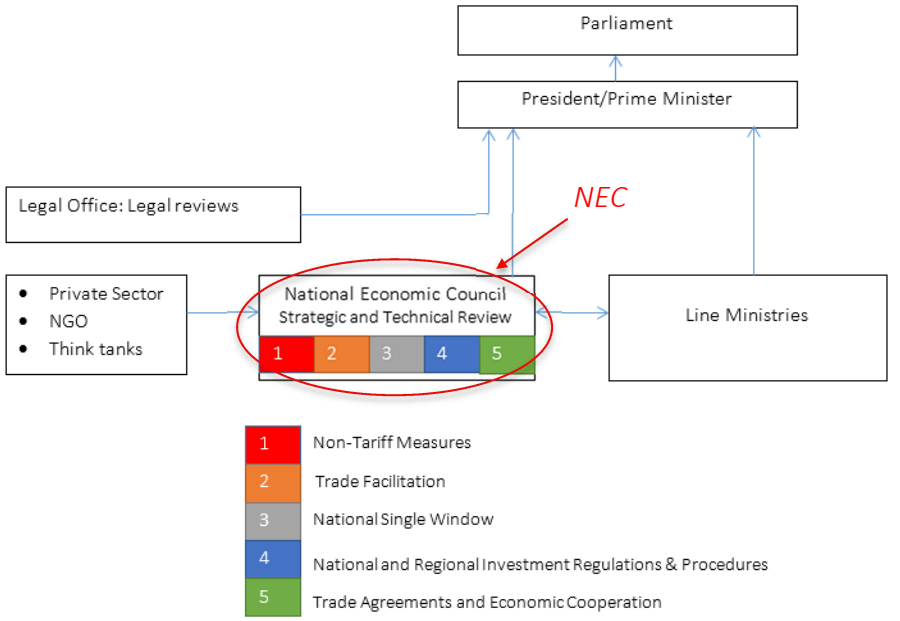
The setup is simple. We establish a National Economic Council (NEC) (the name can vary in each country) that has a direct mandate from the president or prime minister. It consists of related in-line ministers and high-level government officials with a technical secretariat. The mandate is to review and design strategic trade and investment policies and regulations. The NEC consists of divisions of trade facilitation, NTMs, national single window, investment procedure and regulations, and free trade agreements and/or economic cooperation.

The NTM division will review all existing and upcoming NTMs. The key aspect of our proposal is the NEC's technical secretariat . In order to add value, the NEC needs two things. First, to be endowed with independent research capabilities in order to identify where real problems are and recommend feasible and socially optimal solutions. For that, the secretariat must be staffed with high-level (masters or PhD) economists and trade and investment lawyers capable of conducting logical, factual, and quantitative analysis and of

defending it effectively, which also requires a mixture of junior and senior staffing. Second and equally important, it needs to have a dispute settlement mechanism capable of resolving disputes for the common good and not just through bargaining.[5] This may entail either a collective-decision procedure or higher-level arbitrage, or both.

The proposed setup is illustrated in Figure 2.4. The left-hand side of the figure shows the entry points into the process, which may include private-sector complaints, non-government organizations' petitions, and other segments of civil society. It is also important that the NEC be allowed to seize cases on its own initiative, in particular in the early stages of its life where it may have low visibility and private-sector complaints may be slow to come. The upper part of the figure shows higher levels (for example, president or prime minister's office), which may be where all reviews and decisions on trade and investment policy and regulations will be agreed and set. Colour codes illustrate possible areas of NEC competence, although more can be included, in particular through a merger with the antitrust body (more on this below).

Figure 2.4: Proposed Institutional Setup



NGO = nongovernment organization.

Source: Prepared by the authors.

The setup illustrated in Figure 2.4 is merely a blueprint. Although an appropriate institutional setup is key, an NTM streamlining process, like any reform process, is only worth the political goodwill and commitment that is placed in it. The case of Mexico is

[5] There is a parallel here with the evolution of dispute-settlement at the WTO. While the first panels resolved disputes essentially through bargaining in order to avert the recourse to force, with time, the system evolved toward third-party arbitration, and ultimately to one where disputes are resolved in a way that ensures consistency. See Jackson (1997).

telling in this regard. The drive for regulatory reform in Mexico came in early 1995 when the December 1994 'Tequila Crisis' underscored the need to modernize the economy. The country embarked in a top-down regulatory reform driven by a small group of technocrats with strong support from the presidency. The process was institutionalized through the creation of a regulatory-simplification agency, the *Unidad de Desregulacion Economica* (UDE), placed under the Secretariat of Trade's authority, but given, by presidential decree, a broader authority than the secretariat itself. UDE gathered credibility and clout by starting with 'low-hanging fruits' – regulatory reforms that were easy and widely seen as urgent – and then embarked on an ambitious reform agenda. UDE required all ministries not just to notify regulations, but also to justify them, leading to the outright elimination of 45 percent of all regulations (many of them useless). UDE was then transformed into a formal federal agency, Comisión Federal de Mejora Regulatoria or Federal Commission on Regulatory Improvement (COFEMER), with a staff of 60 professionals, a budget of $5 million, and an independent status with a president-appointed head. The law's objective was to ensure that new regulations would obey transparency and rationality standards. However, in spite of the reform's institutionalization, it was only as strong as the president's political backing. When elections returned a hostile parliamentary majority, partisan politics and reform fatigue in the face of disappointing growth eroded political support for further regulatory reform. In 2003, COFEMER lost a key battle against the telecommunications sector; the same year, its head was abruptly replaced, and it lost most of its clout (Cadot, 2015). Mexico's regulatory reform emphasized deregulation because of its particular legacy of over-regulation. As we made clear at the outset, the present paper does *not* promote de-regulation as a universal fix; quite the opposite—our premise is that regulations are a basic and legitimate public demand that should be taken as a given. What Mexico's story of reform and backtracking highlights, instead, is the need to ensure that the reform process –whatever its ultimate aim— gathers clout as it matures, rather than lose steam in increasingly difficult battles.

In order for the process to be anchored and stable, it needs what was partially lacking in Mexico – outside support and commitment. The ASEAN Secretariat has a key role to play in this regard in setting up regional dynamics that encourage and fuel the NTM streamlining process simultaneously in several – if not all – member states. Support could come through common training and technical assistance, possibly with the involvement of development partners. Familiarity acquired through common training would have the added advantage of fostering the emergence of a common vision among national NEC, facilitating informal communication at the technical level between commonly-trained staff in different NEC. Technical cooperation between staff at similar levels of responsibility, and below the radar screen of the media and politicians, was the hallmark of Franco–German cooperation in the early days of European integration; it proved a powerful tool to prevent tensions. In an ASEAN context, it would facilitate regional regulatory coherence and could

also contribute to convergence across overlapping blocs (for example, ASEAN and TPP) through the adoption of regulatory best practices.

Ultimately, the reform process should lead to a convergence of regulatory supervision and antitrust. Regulations do harm when they create monopoly positions. In turn, to be stable, monopoly positions often need regulatory barriers to entry. We already discussed in this paper how NTMs affect market structure. This interdependence needs to be recognized explicitly and 'internalized'. The best way to do this would be to have a single regulatory and antitrust supervision body (e.g. National Economic Council, NEC). This would have two key advantages. First, it would leverage economies of scale, as the staff skills needed for antitrust and regulatory analysis are broadly of the same nature – law and economics and, within economics, 'industrial organization'. Second, a joint NEC with both the private and public sectors under its supervision would be perceived as more balanced than either of its components, which would contribute to its clout.

5. Concluding remarks

We argued in this paper that the belief, widely shared in the trade community, that NTMs can be somehow 'reduced' through trade negotiations, is doomed. Many NTMs are not just trade instruments – notwithstanding the analogy with tariffs that is implicit in their name. Regulatory systems have become increasingly risk-averse in a mediatized and safety-conscious world; not only will NTMs not be reduced – they will keep on proliferating. Because of their potential dual use (for consumer-safety and job-protection purposes) and the relatively weak disciplines to which they are subjected, their proliferation creates a systemic risk for regional and multilateral trading systems. However, finger pointing is counterproductive, as NTM reforms are held back by the perception that they would be concessions to trade partners, like tariff reductions, and should therefore be undertaken only as part of a negotiated *quid pro quo*.

What we propose, instead, is to take back NTM streamlining to the country level, with the ASEAN Secretariat providing support in various ways, e.g. through regular NTM reviews at the regional level. Regional disciplines on transparency also have a key role to play, together with momentum toward mutual recognition and, whenever feasible, harmonization. The key aspect of our proposal is its dynamic aspect: instead of rules and constraints, we propose the adoption of simple institutional setups at the country level that would be conducive to the emergence of best practices. These could be called 'dynamic disciplines'.

Practically, a possible roadmap to implement our proposal would blend regional and multilateral approaches. At the multilateral level, the WTO's Trade Facilitation Agreement mandates that each country set up a trade portal and a trade facilitation committee. An ambitious reading of the agreement would make the trade portal an open-access

repository of all NTMs, in local languages and in English. This would be a tremendous step towards transparency, and it would be politically acceptable if it were clear that posting was not the first step toward negotiated elimination. Likewise, trade facilitation committees could be used as stepping-stones towards the creation of our proposed National Economic Council, coordinating trade facilitation, non-tariff measures, national single windows, investment and trade-related regulations and procedures. Thus, the streamlining and harmonization of NTMs would make headway at all three levels -national, regional and multilateral, contributing to (paraphrasing Baldwin and Thornton, 2008 and Baldwin and Kawai, 2013) "multilateralize" Asian regionalism.

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"Sur quoi la fondera-t-il l'économie du monde qu'il veut gouverner? Sera-ce sur le caprice de chaque particulier? Quelle confusion! Sera-ce sur la justice? Il l'ignore."

Pascal

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