

## Key Issues:

- NTMs should be improved through government regulation reform
- Transparency and dynamic discipline are two main challenges of better NTMs

**Olivier Cadot**  
University of Lausanne, CEPR  
and FERDI

**Ernawati Munadi**  
University of Wijaya Kusuma  
Surabaya

**Lili Yan Ing**  
Economic Research Institute for  
ASEAN and East Asia (ERIA)

## Streamlining NTMs in ASEAN: The Way Forward\*

By OLIVIER CADOT, ERNAWATI MUNADI and LILI YAN ING

Dealing with NTMs as if dealing with a trade tool like tariffs is an improper approach, as NTMs could play a role of check and balance for quality of goods. To improve NTMs, efforts should be packaged as part of government regulation reform. Two main areas to work on are transparency through collective and uniform data collection as well as setting up an institution for better coordination and more objective evaluation of NTMs.

The global financial crisis in 2008 brought fear that countries would become protectionist. Unlike the time when the World Trade Organization (WTO) did not exist to regulate tariffs, protectionism today resides not in the form of tariffs but in the form of NTMs. In fact, the 'inappropriate use' of NTMs is a possible channel for a country to become protectionist. Nonetheless, there is more to NTMs than hidden protectionism. NTMs have a role to protect consumers' safety and the environment. The ideal situation is to have NTMs effectively address consumers' concerns without creating economic inefficiencies or giving in to the interests of lobbyists.

Poorly designed NTMs will hurt key sectors of the economy because they are not targeted at the right problem, or they are too broad ranging, or involve unduly cumbersome compliance verification mechanisms. Designing NTMs, however, is a challenging task for governments due to weak cross-ministerial and agency coordination and unmanageable verification mechanisms. In most countries, the responsibility of designing NTMs is scattered over a number of ministries and agencies that have no experience—and little incentive—to talk to each other. As a consequence, many NTMs have been implemented without a 'bigger picture' understanding of how they might impact on other sectors or on the economy as a whole. Trade ministries, the most obvious hope for coordination, often have wrong perceptions about NTMs by looking at them as 'bargaining chips' for future trade negotiations. Agreeing to eliminate NTMs or expected to be followed by reciprocity from trading partners to lower or simplify their respective NTMs, which is more complex to establish than in the case of tariffs.

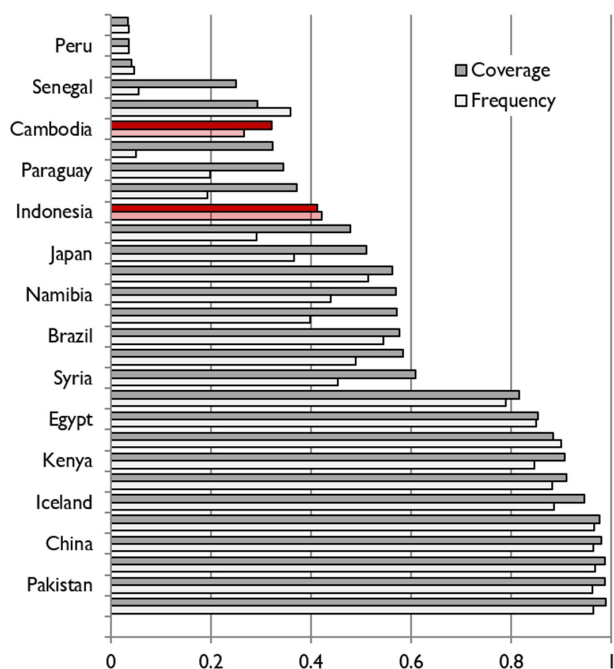
\* The authors thank Gracia Hadiwijaya for her excellent assistance in writing a summary of the research papers. The paper is published as "Streamlining NTMs in ASEAN: The Way Forward", *Asian Economic Papers*, 2015, Vol. 14(1), pp.35-70.

As the main problems of NTMs are found at the government level, dealing with NTMs as if dealing with a trade tool like tariffs is the wrong approach. To improve NTMs, alterations should be packaged as part of government regulation reform. Before presenting NTMs to the regional level, only to be 'notify-negotiate-eliminate' by trading partners, each individual country must retract, review, and re-establish NTMs that support the economy as a whole.

### Understanding NTMs and their Rigidity

While tariffs are explicitly imposed by governments strictly through price mechanisms, NTMs cover a wide range of measures that are not directly aimed at limiting trade, but impact trade anyway. Generally, NTMs aim to protect consumers' health and the environment. Nonetheless, the additional requirements increase costs, thus affecting trade. For example, a ban on plastic bags, chemical use in children toys, or level of pesticides in fruit and vegetables are meant to protect the environment and consumers' health but will undoubtedly affect trade due to, for example, the requirement to change material from plastic to possibly a more expensive one.

**Figure 1. Worldwide Incidence of NTMs: Coverage and Frequency Ratios**



Note: Frequency ratios are the proportion of Harmonized System (HS) six-digit lines covered by one or more NTM. Coverage ratios are the proportion of import value covered by one or more NTM. Import data is averaged over 2008–2011.

Source: Authors calculations based on multilateral NTM database using MAST classification.

**Table 1: World Trade Frequency Ratios and AVEs of SPS, TBT, and QR Measures, by Sector**

Section		Frequency ratios <sup>a/</sup>			Average AVEs <sup>b/</sup>		
		SPS (A)	TBT (B)	QRs (E)	SPS (A)	TBT (B)	QRs (E)
1	Animals	0.94	0.85	0.74	0.23	0.13	0.23
2	Vegetables	0.94	0.51	0.86	0.21	0.28	0.39
3	Fat & oils	0.94	0.57	0.33	-0.11	0.52	0.28
4	Beverages & tobacco	0.95	0.81	0.37	0.59	0.24	0.00
5	Minerals	0.20	0.08	0.19	-0.07	0.53	0.84
6	Chemicals	0.21	0.34	0.71	0.73	0.35	0.32
7	Plastics	0.00	0.37	0.35	0.20	0.61	0.52
8	Leather	0.12	0.14	0.55	0.67	3.31	3.11
9	Wood products	0.27	0.18	0.51	0.08	0.03	0.03
10	Paper	0.00	0.24	0.76	0.31	0.66	0.76
11	Textile and clothing	0.01	0.95	0.82	0.17	0.84	0.45
12	Footwear	0.00	0.57	0.76	-0.10	0.55	0.61
13	Stone & glass	0.00	0.16	0.16	0.79	1.70	1.56
14	Pearls	0.00	0.00	0.04	0.06	-0.20	0.00
15	Metals	0.00	0.24	0.59	0.06	0.56	0.38
16	Machinery	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
17	Vehicles	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
18	Optical & med. Instr.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
19	Arms	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
20	Miscellaneous	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

AVE = ad valorem equivalent; n.a. = not available; QR = quantitative restriction; SPS = sanitary and phytosanitary; TBT = technical barriers to trade.

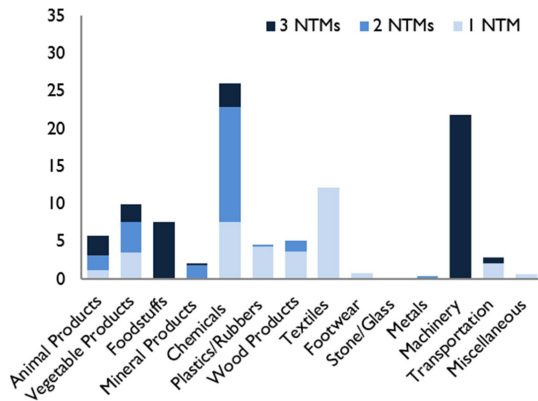
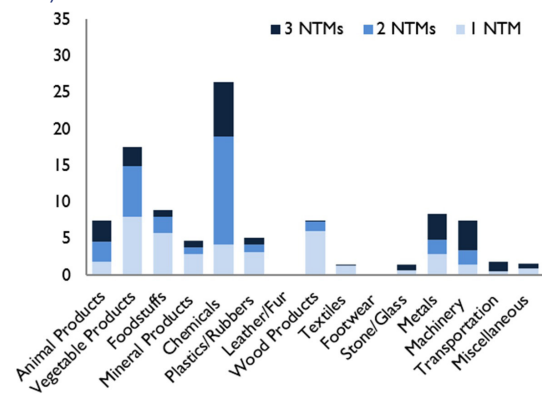
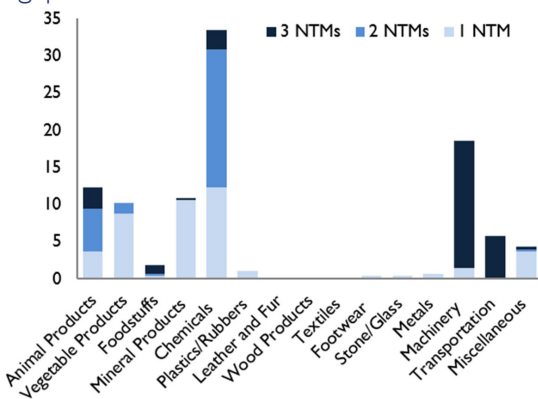
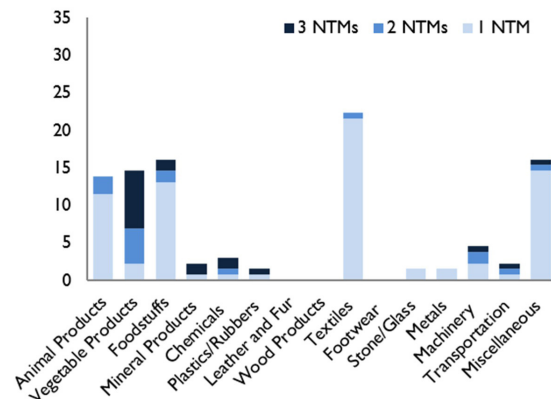
Notes: <sup>a/</sup> Proportion of countries imposing any type A (resp. type B, type E) NTM on a given Harmonized System (HS) six-digit product.

<sup>b/</sup> Average AVE over all products in section, in algebraic form (0.23 = 23%), which means it will increase prices by 23%.

Source: Authors calculations based on multilateral NTM database using MAST classification.

Non-tariff barriers (NTBs), on the other hand, are the subset of NTMs with a protectionist intent. NTBs can explicitly reduce trade through quantitative restrictions or voluntary export restrictions or may not directly aim at trade but appear obvious in their trade limiting traits as they affect trade much more than the non-trade objective. For instance, an over-strict quality standard on steel beams for the construction sector could be ostensibly to ensure building safety, but have the effect of protecting a domestic steel producer. Typically, the impact of NTMs is assessed along two dimensions: incidence and severity. Their incidence is measured by either the frequency ratio (the proportion of product categories covered by one or more NTM) or the coverage ratio (the proportion of imports covered). Meanwhile, severity is measured by ad valorem equivalents (AVEs).

The incidence dimensions of at least two ASEAN countries, Indonesia and Cambodia, are much more moderate in NTMs in comparison to some African countries and the European Union. Although one would expect high-income consumers to be more concerned about health and the environment, NTM coverage ratios worldwide do not seem to follow intuition and correlate negatively with income levels

**Figure 2: Incidence of Multiple NTMs, by Country and Sector****(a) Indonesia****(b) Malaysia****(c) Singapore****(d) Thailand**

Note: ASEAN Secretariat classification is converted into MAST classification in our analysis.

Source: Authors' calculations based on ASEAN Secretariat data.

with more parsimonious use of NTMs for middle-income countries than for low-income ones. This reflects the uncompetitiveness trait of low-income countries and inability to come up with efficient NTMs, little relation with enforcement capabilities on the ground.

The severity of NTMs is their price-raising effect in the domestic market of the country imposing them. This is measured by so-called AVEs that can be estimated statistically using either price-based or quantity-based methods. Price-based approaches look at the gaps between the price of a good affected by an NTM in the affected import market with its price in a comparator market where no NTM is applied. Quantity-based methods use observed variations in trade flows to infer how high are the barriers created by NTMs, once other trade barriers (tariffs and so on) are controlled for.

Results of quantity-based estimates of world trade show that chemicals are affected by highly price-raising regulations (73% for sanitary and phytosanitary [SPS] and 35% for technical barriers to trade [TBT]), which is to be expected given the risks involved in the production of chemicals for public health and the

environment. However technical regulations have very strong price-raising effects on textile and clothing (84%), raising a suspicion of hidden protectionism as textile and clothing has traditionally been a sector affected by heavy protectionism.

### NTMs in ASEAN

The ASEAN region suffers from a transparency gap in terms of NTMs as information is incomplete and the existing data do not follow the same classification as other regions in the world, making comparisons difficult. Nonetheless based on the data available, an analysis on ASEAN NTMs finds that their incidence in ASEAN is moderate by comparison with other regions of the world.

The incidence of NTMs in ASEAN vary greatly across member countries. Indonesia and Singapore, for instance, use two or three NTMs at a time for the machinery sector, whereas Malaysia heavily guards its chemical sector, and Thailand its textile sector. Nonetheless a common pattern emerges of relatively moderate use of NTMs, as no sector has more than one third of its lines covered by measures in any one of the four member countries for which we have data. ASEAN countries are not excessive users of NTMs, foodstuffs, in particular, are relatively lightly

covered. The current lightweight regulatory environments in ASEAN are goods for trade, however, this situation may soon change as ASEAN consumers increasingly demand food safety and force governments to adopt protective regulations.

AVEs are roughly comparable with other countries and follow predictable patterns. In Indonesia, Philippines, Cambodia, and Lao PDR for example, the costliest regulations, in terms of the price-raising effect, are in footwear, textiles, and clothing. Measures other than regulatory—procedures, price measures, and quantitative restrictions (QRs)—seem to have a substantial price-raising effect in the automobile sector. Cross-product patterns of NTM applications are similar to ‘international best practices’ such as those in the European Union, Japan, Chile, Mauritius and Mexico.

### **Challenges and Approaches to NTM Streamlining**

NTM streamlining suffers mainly from data and institutional issues. To this day there is no single NTM authoritative source of NTM data. Fragmentation and incentives are the two key difficulties in gathering accurate information on NTMs. NTMs are issued by various government agencies that typically do not coordinate effectively and are reluctant to admit their doings. As NTMs can be implemented at the expense of business simplicity, agencies are also afraid they will be blamed when their ‘Doing Business’ ratings are low. The private sector collects data for its own needs that often lack in sample and objectivity. The notification of members to the WTO on their NTMs is an alternative source of data; however, as countries are vulnerable to being criticized when admitting burdensome NTMs, not all countries are willing to report their NTMs.

Internationally, several efforts have been made to solve these issues. In 2001, United Nations Conference on Trade and Development (UNCTAD) led a comprehensive NTM data collection effort in 100 countries. The data system, called the Trade Analysis Information System or TRAINS, includes all trade-relevant regulations, whether they were SPS, TBT, or nontechnical measures such as QRs or other state interventions in international trade. Local consultants (academics, think tanks), in collaboration with national authorities, (trade, agriculture, health, and industry ministries, and standards bureaus), collected the information. Once recorded, UNCTAD performed cross-checks and asked for further clarification and revision if needed. Although successful, a key challenge

after the data collection is to make it sustainable. This will only be possible by setting up mechanisms for follow-up and updating that requires regional and within country coordination.

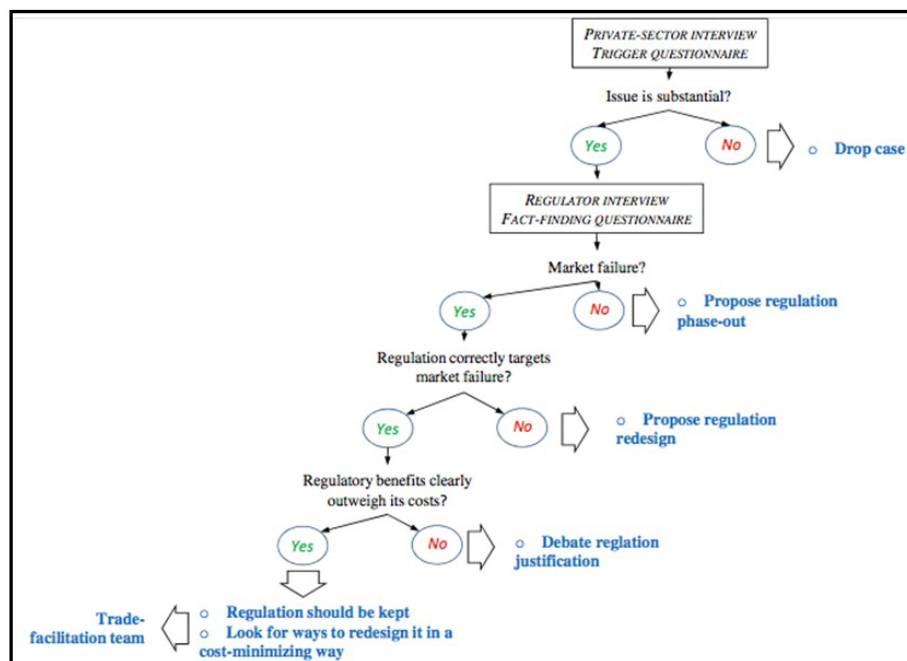
The role of regional players such as ASEAN is to ensure the flow of information, transparency, and cooperation. The ASEAN secretariat could work to improve transparency in NTMs by coordinating and energizing NTM data collection among member countries. ASEAN could initiate a multilateral template to facilitate comparison and benchmarking that is accessible for the private sector. Moreover, ASEAN could provide training and technical assistance for countries that want to strengthen their capacity in designing or implementing NTMs.

Aside from the data collection effort, the WTO, through the Uruguay Round that set the SPS and TBT agreements, has provided basic disciplines that are still highly relevant to prevent protectionism from creeping into legitimate regulations, transforming NTMs into NTBs. The SPS agreement allows WTO members to set regulations as needed for the protection of plant, animal, and human health if they are based on science. With no scientific evidence, importing countries should phase out the precautionary measures.

The TBT agreement that regulates technical regulations should not favour domestic products over imported ones. Countries are encouraged to adopt international standards instead of national ones, and whenever feasible to apply mutual recognition. It also requires transparency in the imposition of technical measures, in particular, through the notification system as well as good-governance principles in terms of advance notice of regulatory changes. Other WTO rules also apply to the many forms of NTMs including licensing, customs valuation, and quantitative restrictions.

In the region, the ASEAN Economic Community has focused on the removal of NTMs affecting intra-regional trade; mainly minerals, electrical appliances, and machineries. The ASEAN secretariat is responsible for collecting and classifying NTBs into three categories: green for NTMs that are not NTBs, amber for NTMs whose trade-restrictiveness could be discussed, and red for clear-cut NTBs. The secretariat’s classification is reviewed by member countries, after which measures are examined and prioritized for elimination by negotiating bodies.

Individual sectors in several countries in the Asia-Pacific region have also taken the initiatives for harmonization

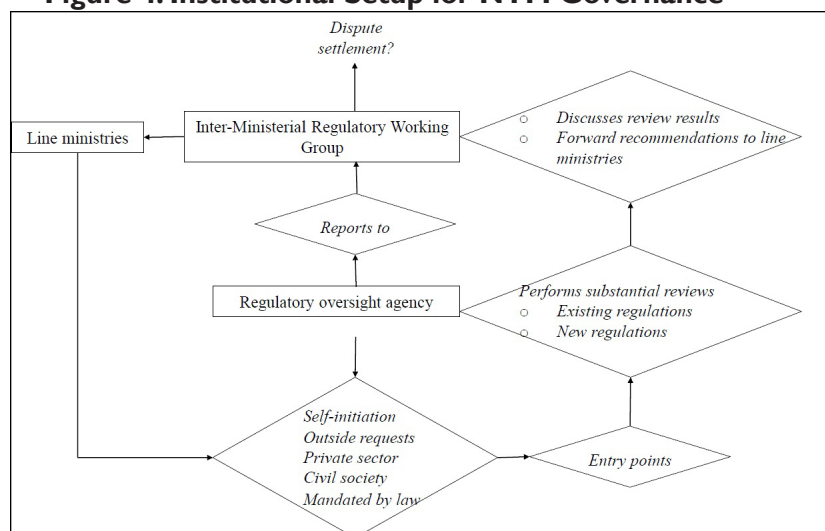
**Figure 3: The Logical Flowchart of an NTM Review**

NTM = non-tariff measure.

Source: World Bank (2011).

and mutual recognition particularly for cosmetics, agricultural products, and electrical and electronic equipment. Most initiatives take the road of developing mutual recognition agreements that so far have progressed slowly but seem promising. ASEAN has also established the Work Programme on Streamlining ASEAN NTMs 2013–2014. Among others, ASEAN Member States aim to establish an NTM inventory using the WTO consistent UNCTAD classification and put in place an NTM information portal at the country and ASEAN levels, review and streamline NTMs through agreed principles, and, establish an institutional mechanism to monitor and enforce agreed NTM streamlining objectives at the country and ASEAN levels.

Despite continuous efforts at the global and regional level to stop protectionism, best efforts should come from within a country. Although NTMs are trade-relevant, NTMs involve better governance problems; therefore, treating NTM streamlining the same as tariff negotiations will not work. In doing that, the first step required is to distinguish between NTMs and NTBs at the country level. Only NTBs should be eliminated, while NTMs should be improved to minimize their costs for the private sector. A proper analysis of NTMs, however, should involve a cost-benefit analysis rather than a simple cost analysis via AVEs. The World Bank suggests a careful cost-benefit analysis that would start with a private sector complaint about an NTM, triggering a review and possibly an elimination of NTMs (See flowchart in Figure 3).

**Figure 4: Institutional Setup for NTM Governance**

NTM = non-tariff measure.

Source: World Bank (2011).

This method requires an institutional setup that should be either under the prime minister's or president's authority or outright independence, consisting of an inter-ministerial regulatory working group.

To maintain credibility, such institutions must be given legal existence and be endowed with sufficient resources to be able to recruit young, skilled experts rather than 'borrow' staff from existing ministries. Over the long run, the regulatory oversight body could be merged with a competition oversight body, as the type of skills and expertise needed to review competition issues—mergers and acquisitions, dominant positions, collusive and anticompetitive arrangements—are largely the same as those needed to assess the economic effects of regulations. The advantage of merging the two functions would be multiple, including economies of scale, increased clout, and a balanced authority over the private and public sectors.

## References

- UNCTAD (2012), Non-tariff Measures to Trade: Economic and Policy Issues for Developing Countries. Geneva: United Nations.
- UNCTAD (2013), Classification of Non-Tariff Measures February 2012 Version. Geneva: United Nations.
- World Bank (2011), Lessons for Reformers: How to Launch, Implement, and Sustain Regulatory Reform. Washington, DC: IFC/World Bank.



### ERIA Policy Briefs 2014–2017

No.2017-02: Kimura, Fukunari, and L. Chen, "E-Commerce as Asia's New Growth Engine", October 2017.

No.2017-01: Kimura, Fukunari, and L. Chen, "To Enhance E-Commerce Enabling Connectivity in Asia", October 2017.

No.2016-04: Ambashi, Masahito, "ASEAN as an FDI Attractor: How Do Multinationals Look at ASEAN?", January 2017.

No.2016-03: Kimura, Fukunari, and L. Chen, "Implications of Mega Free Trade Agreements for Asian Regional Integration and RCEP Negotiation", December 2016.

No.2016-02: Kimura, Fukunari, L. Chen, M.A. Iliutenu, S. Yamamoto and M. Ambashi, "TPP, IPR Protection, and Their Implications for Emerging Asian Economies", April 2016.

No.2016-01: Li, Yanfei, "Power Grid Interconnections in East Asia: Investment in Several Key Projects are Well Justified", January 2016.

No.2015-03: Kawasaki, Norihiro, "ASEAN PPP: From Institutional Development to Streamlined Implementation", December 2015.

No.2015-02: Cadot, Olivier and L.Y. Ing, "Non-Tariff Measures: Not All that Bad", October 2015.

No.2015-01: Majuca Ruperto and J. Pagaduan, "Transmission Channels of Economic Shocks in ASEAN", March 2015.

No.2014-08: Wihardja, Maria Monica, "Financial Integration Challenges in ASEAN Beyond 2015", August 2014.

No.2014-07: Pettman, Simon, "Delivering Results in Standards and Conformance in ASEAN: the Critical Roles of Institutional Strengthening and the Private Sector", August 2014.

No.2014-06: Rasiah, Rajah, "Stimulating Innovation in ASEAN Institutional Support, R&D Activity and Intellectual Property Rights", August 2014.

No.2014-05: Sukma, Rizal, "ASEAN Beyond 2015: The Imperatives for Further Institutional Change", August 2014.

No.2014-04: Khee-Jin Tan, Alan, "The ASEAN Single Aviation Market: Liberalizing the Airline Industry", June 2014.

No.2014-03: Desker, Barry, M. Caballero-Anthony and P.Teng, "ASEAN Food Security: Towards a More Comprehensive Framework", June 2014.

No.2014-02: Chia, Siow Yue, "Towards Freer Movement of Skilled Labour in AEC 2015 and Beyond", May 2014.

No.2014-01: Tullao, Jr., Tereso S. and C. J. Cabuay, "Education and Human Capital Development to Strengthen R & D Capacity in ASEAN", May 2014.



**Headquarters:**  
The ASEAN Secretariat  
Mezzanine Floor  
70A Jalan Sisingamangaraja  
Jakarta 12110,  
Indonesia

**Annex Office** (mailing address):  
Sentral Senayan II 5th & 6th Floors  
Jalan Asia Afrika No. 8,  
Gelora Bung Karno, Senayan,  
Jakarta Pusat 10270,  
Indonesia

Tel: (62-21) 5797-4460  
Fax: (62-21) 5797-4464  
E-mail: [contactus@eria.org](mailto:contactus@eria.org)

**ERIA Policy Brief**  
can be downloaded at [www.eria.org](http://www.eria.org)