

Chapter 2

Services Liberalization toward the ASEAN Economic Community

Philippa Dee

Crawford School of Economics and Government, The Australian National University

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CHAPTER 2

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PHILIPPA DEE

Crawford School of Economics and Government
The Australian National University

The purpose of this paper is to map the existing policy space in three key services sectors — air transport, maritime services (both shipping and port services), and telecommunications services — as well as to provide evidence on whether the implementation of the ASEAN Single Window is helping to achieve the broader objectives of the revised Kyoto Convention on customs procedures. By mapping actual policies, the paper gives an indication of the extent of real policy reform that will be needed in each ASEAN member country in order to achieve the liberalization targets laid out in the ASEAN Economic Community Blueprint. Some of the key findings and recommendations of the paper are as follows.

According to survey responses, only one ASEAN country meets the Blueprint target of allowing at least 70 per cent foreign ownership in domestically established air services companies by 2010. However, effective liberalization of trade in air services not only requires the reform of investment laws, it also requires the reform of withholding clauses in air services agreements so that at minimum, they allow substantial ownership by an ASEAN community of interests. ASEAN members should be working towards further reform of their air services agreements, and should be demanding much greater transparency of their provisions.

Most countries of the region have taken a relatively liberal approach to many aspects of maritime regulation. But few have stated that they grant exemptions from cabotage restrictions. ASEAN members should be looking to expand the scope of these exemptions, given how costly cabotage restrictions have been shown to be for developing countries. No ASEAN country meets the Blueprint target of allowing at least 51 per cent foreign ownership by 2010 in all maritime services. However, some countries meet it for some services.

Only two ASEAN countries currently meet the Blueprint's foreign equity targets in all telecommunications services. The remaining restrictions on foreign equity

limits are hard to understand, given the extent of existing competition in most countries, even in fixed line services. These restrictions should be phased out. The persistence of very high market shares of incumbent service suppliers in a few ASEAN countries is perhaps indicative of remaining problems with general regulation in those countries.

There is little apparent variation in countries' participation in formal ASEAN efforts to improve customs clearance procedures. Differences arise in the extent to which this participation is translating into better customs procedures on the ground. The publication of clearance times would provide the acid test as to whether ASEAN cooperation efforts were achieving their ultimate aims. This should be a priority for all ASEAN members.

1. Services Targets in the ASEAN Economic Blueprint

The establishment of the ASEAN Economic Community is intended to deepen economic integration in East Asia as a whole. To achieve that end, the ASEAN Economic Community Blueprint lays out an ambitious reform agenda designed to establish an ASEAN single market. It envisages the free flow of services, investment, and skilled labour, along with the free flow of goods and the freer flow of capital.

In services, it is intended that by 2015, there should be substantially no restriction to ASEAN services suppliers in providing services and in establishing companies across national borders within the region, subject to domestic regulations. For four priority sectors — air transport, healthcare, e-ASEAN and tourism — this target is to be achieved earlier, by 2010. For logistics services, the target is to be achieved by 2013.

The blueprint contains detail about the scheduled sequence of events by which these targets are to be achieved. Liberalization is to occur through consecutive rounds of negotiations, every two years. The number of sectors to be liberalized is to be expanded in each round. For each new group of sectors, the liberalization commitments are to include:

- no restrictions on service delivery via mode 1 (cross-border trade, where neither the producer nor the consumer moves, and trade often occurs via the internet) and mode 2 (consumption abroad, where the consumer moves

temporarily to the country of the producer), except where there are bona fide regulatory reasons, such as public safety;

- gradual expansion of the foreign (ASEAN) equity participation permitted in each sector, to be no less than 70 per cent by 2010 in the four priority sectors, and to be no less than 51 per cent by 2010 and 70 per cent by 2015 in all other sectors; and
- progressive removal of other limitations on market access via mode 3 (commercial presence, where the producer sets up a permanent commercial presence in the country of the consumer) by 2015.

The negotiations are also to set the parameters of liberalization for limitations on national treatment (ie liberalization involving the removal of discrimination against foreign providers), liberalization of service delivery via mode 4 (the movement of natural persons, whereby the individual service provider moves temporarily to the country of the consumer) and the liberalization of horizontal limitations on market access (ie limitations that apply across a range of services sectors, possibly affecting both domestic and foreign providers) by 2009. Commitments are then to be made according to these parameters from 2009.

The blueprint allows for some overall flexibilities in achieving these objectives, including via an ASEAN minus X formula (where countries that are ready to liberalize can proceed first and be joined by others later). In financial services, the process of liberalization should also take place with due respect for national policy objectives and the level of economic and financial sector development of the individual members.

The key purpose of this paper is to map the existing policy space in three key services sectors — air transport, maritime services (both shipping and port services), and telecommunications services — as well as to provide evidence on whether the implementation of the ASEAN Single Window is helping to achieve the broader objectives of the revised Kyoto Convention on customs procedures. The air transport sector is one of the priority sectors to be liberalized by 2010, while maritime and telecommunications services and customs clearance are key components of the logistics chain. By mapping actual policies, the exercise gives an indication of the extent of real policy reform that will be needed in each ASEAN member country in

order to achieve the liberalization targets laid out in the ASEAN Economic Community Blueprint.

Note that the ASEAN countries have recently finalized their seventh package of commitments under the ASEAN Framework Agreement on Services. In some respects, these commitments go further than the broad targets outlined in the ASEAN Economic Community Blueprint, because they make specific commitments on national treatment and market access for each mode of service delivery in each sector. But in other respects, the seventh package of commitments still lags the targets outlined in the Blueprint. In particular, the limits on foreign equity participation in the seventh package are often less than would be required by the Blueprint in 2010. The current exercise maps the existing policy space in each sector, not just with respect to foreign equity limits, but also with respect to some of the more common limitations on national treatment and market access by mode of service delivery in these sectors.

Note too that in many ASEAN countries, the commitments made under the ASEAN Framework Agreement on Services have tended to lag behind actual practice (although this gap is closing over time). Thus an examination of current commitments in the seventh package could potentially overstate the amount of real reform required to meet the Blueprint's liberalization targets. By examining actual practice, the current exercise avoids this source of overstatement. However, the current exercise maps existing policies on a most-favoured nation (MFN) basis, meaning that it maps policies without taking into account any real, binding preferences that have been granted to other ASEAN member countries. Because of this, it *might* overstate the amount of real reform required to meet the Blueprint's liberalization targets, if those targets are to be met on a purely preferential basis (ie via commitments that apply only to other ASEAN member countries). However, this is not a foregone conclusion. Many services trade barriers are difficult or impossible to liberalize on a preferential basis. Some services trade barriers would be unwise to liberalize on a preferential basis. And the wording of the Blueprint itself only suggests preferential liberalization in the case of foreign equity limits.

The information on actual policies affecting trade in air transport, maritime and telecommunications services, and on the actual implementation of the ASEAN

Single Window, has been collected using four separate questionnaires. The questionnaire instruments are reproduced at the end of this report. The questionnaires were completed for each ASEAN economy over the period September 2009 to March 2010 by researchers contracted by the Economic Research Institute for ASEAN and East Asia (ERIA). Complete responses were received for all questionnaires from all countries, with the exception of maritime in Brunei. The researchers involved in the project, whose hard work is gratefully acknowledged, are as follows:

- Brunei — Shazali Sulaiman, KPMG Brunei;
- Cambodia — Chap Sotharith and Chiek Chansamphors, Cambodian Institute for Cooperation and Peace;
- Indonesia — Raymond Atje, Mochamad Pasha and Ira Titiheruw, Centre for Strategic and International Studies;
- Lao PDR — Leeber Leebouapao, National Economic Research Institute;
- Malaysia — Zakariah Abdul Rashid, Samirul Ariff Bin Othman, Musalmah Johan and Bashirah Lwin Thida Nwe, Malaysian Institute of Economic Research;
- Myanmar — Kan Zaw, Daw Win Myint and Nu Nu Lwin, Yangon Institute of Economics;
- Philippines — Josef T. Yap, Erlinda M. Medalla and Gilberto M. Llanto, Philippine Institute of Development Studies;
- Singapore — Hank Lim and Tay Yi Xun, Singapore Institute of International Affairs;
- Thailand — Wisarn Puppavesa and Jirawat Panpiemras, Thailand Development Research Institute, and
- Vietnam — Vo Tri Thanh and Trinh Quang Long, Central Institute of Economic Management.

The survey responses, along with any accompanying explanatory notes that were provided by the survey respondents, have been compiled in four spreadsheets, one for each survey. The spreadsheets are an integral part of the output of this project. They make transparent and publicly available both the detailed qualitative information contained in the survey responses, as well as the methods by which

summary indexes have been generated. It is anticipated that scrutiny of this detailed information by stakeholders in the ASEAN region will lead to greater general understanding of the policies and practices affecting air transport, maritime, telecommunications and customs clearance in each economy.

It should be stressed, however, that the relative rankings of countries in the results should be regarded as indicative, rather than definitive. Despite efforts to develop a common understanding about the survey questions among the respondents, there is inevitable variation in the ways in which questions have been interpreted, and in the depth and quality of responses.

The following sections summarize the survey results for each of the sectors under study. Each section begins with a discussion of the relevant regulatory regimes in that sector. As will be seen, regulatory restrictions can reduce contestability and performance and limit trade in these services in ways that go far beyond the standard definitions of barriers to trade in services. Each section then describes the survey instrument and the survey results. A final section draws together the main findings and key recommendations for achieving the services targets of the ASEAN Economic Community Blueprint.

2. Air Transport

2.1. Key features of the regulatory regime for air transport

Air transport is a priority sector under the ASEAN Economic Community Blueprint, although commitments are being negotiated separately from those under the ASEAN Framework Agreement of Services. Its inclusion in the Blueprint is notable, because a large portion of the sector is typically carved out of services agreements, including the General Agreement on Trade in Services (GATS) under the WTO. Instead, international air transport (the most intensely traded portion of the sector) has been regulated for over 50 years by a system of bilateral air services arrangements, largely outside the multilateral framework of trading rules. The bilateral system developed because international air flights require international cooperation to provide the necessary infrastructure and air traffic rights. However,

the bilateral system has also created various limits on competition and trade in aviation services.

Recent studies have catalogued the key restrictions imposed by bilateral air services agreements, and have quantified the costs of these restrictions in terms of their impact on air fares and traffic volumes. While air services agreements cover a wide range of topics that would be deemed legitimate targets of regulation (such as aviation security, incident investigation, immigration and control of travel documents), they also include seven key features that have been identified by the WTO Secretariat (WTO 2006) as restricting scheduled air passenger services.

- **Designation** governs the right to designate one (*single designation*) or more than one (*multiple designation*) airline from the home country to operate the agreed services between the two countries.
- **Withholding** defines the ownership conditions required for the designated airline(s) of the foreign country to be allowed to operate the agreed services. Restrictive conditions require *substantial ownership and effective control* to be vested in the designating country or its nationals, meaning that the designated airline is the ‘flag carrier’ of that country. More liberal regimes are the *community of interests* and *principal place of business* regimes. Community of interests still requires substantial ownership and effective control, but it can be vested in one or more of a group of countries that are defined in the agreement. The principal place of business regime removes the substantial ownership requirement, but still requires the designated airline to be incorporated in the designating country, and to have its principal place of business there. It is thus (by a small margin) the most liberal regime, though it falls far short of the relatively generous ‘rules of origin’ typically written into services trade agreements. These would typically require only ‘substantial business’ in the designated country, irrespective of ownership.
- **Grant of rights** that defines the rights to provide air services between two countries. The dimensions in which air services agreements are generally being liberalized is in the granting of the fifth, sixth and seventh freedoms and cabotage. The *fifth freedom* is the freedom to carry passengers between two countries by an airline of a third country on a route with origin or

destination in its home country. The *sixth freedom* is the freedom to carry passengers between two countries by an airline of a third country on a route that goes via its home country. (Note that sixth freedoms can also be constructed via a combination of the third and fourth freedoms from different bilateral agreements, and so are rarely specified explicitly.) The *seventh freedom* is the freedom to carry passengers between two countries by an airline of a third country on a route with no connection to its home country. *Cabotage* is the freedom to carry passengers within a country by an airline of another country on a route with origin or destination in its home country.

- **Capacity clause** that identifies the regime to determine the capacity of an agreed service, where capacity refers to the volume of traffic, frequency of service and/or aircraft type. Sorted from the most restrictive to the most liberal regime, three commonly used capacity clauses are predetermination, Bermuda 1 and free determination. *Predetermination* requires that capacity is agreed or approved by the two governments or regulatory agencies prior to the service commencing. *Bermuda 1* gives limited rights to the designated airlines to set their capacity without government approval. *Free determination* allows the designated airlines to determine capacity outside of regulatory control.
- **Tariff approval** refers to the regime of fare setting. The most restrictive regime is *dual approval*, whereby the aeronautical authorities of both countries have to approve a fare before it can be applied. The most liberal regime is *free pricing*, where fares are not subject to the approval of either aeronautical authority. Intermediate regimes are *country of origin disapproval* (where fares may be disapproved only by the country of origin), *dual disapproval* (where both countries have to disapprove the fares in order to make them ineffective), and *zone pricing* (where parties agree to approve fares falling within a specific range and meeting certain characteristics, while outside this zone one or a combination of the other regimes may apply).
- **Statistics** provides rules on exchange of statistics between countries or their airlines. If exchange of statistics is (or can be) requested, it is a sign that the

parties intend to monitor the performance of each other's airline and is thus viewed as a restrictive feature of an agreement.

- **Cooperative arrangements** define the right for the designated airlines to enter into cooperative marketing arrangements (such as code sharing and alliances). This right is considered as a liberal feature because it provides a means to rationalize networks, in the absence of liberalization of the ownership clause.

These restrictive features of air services agreements have been shown to impose costs, by raising international airfares and restricting international traffic. Gonenc and Nicoletti (2000) and Doove et al. (2001) found a positive and significant effect of the restrictiveness of air services agreements on passenger air fares. For example, Doove et al. (2001) estimated that the restrictive provisions of the agreements in place at the time had inflated international airfares from Indonesia and the Philippines by over 20 per cent, and from Malaysia, Singapore and Thailand by 16–18 per cent. Piermartini and Rousová (2008) found that an increase in the degree of liberalization from the 25th to the 75th percentile would increase passenger traffic volumes between countries linked by a direct air service by about 30 per cent. In particular, they found that the removal of restrictions on the determination of prices and capacity, cabotage rights, and designation were found to be the most traffic-enhancing provisions.

The restrictive provisions of air services agreements also impose costs on air freight services. Most air freight is carried in the belly of passenger aircraft, and is thus affected by exactly the same provisions as passenger traffic. Freight-only flights are generally also governed by the same provisions as passenger flights, although in some instances they are granted more liberal traffic rights. Grosso (2008) found a positive and statistically significant relationship between relaxing restrictions and the value of merchandise trade. Achard (2009) found a significant correlation between liberal air services agreements and the volume of air cargo.

In recognition of such costs, a growing number of countries are negotiating more liberal air services agreements. The typical 'open skies' agreement grants third, fourth and fifth freedom rights, and removes restrictions on designation, capacity, frequencies, code-sharing and fares. Open skies agreements typically do not grant

cabotage rights, nor lift foreign ownership restrictions on domestic airlines. Seventh freedom rights are sometimes included, but often restricted to cargo-only traffic.

Increasingly, countries have also liberalized their domestic aviation services, which they can do on a unilateral basis. Such liberalization has typically included allowing additional domestic and foreign entry on domestic routes, particularly by low cost carriers, and freeing up restrictions on domestic air fares. Sometimes, liberalization has also included the full or partial privatization of government-owned carriers.

As air services proper have been liberalized, restrictions on the operation of airport services have become more binding constraints to economic performance. When the incumbent airlines own, or control access to, airport services (such as gateways, landing slots, and baggage and freight handling services), they can exercise this control to thwart competition by new entrants, even when formal regulatory restrictions on entry have been removed. Increasingly, the operation of airport services has been removed from the control of incumbent airlines, been placed under independent regulatory control, and made more contestable in various ways, even if ownership of airports has stayed in government hands. Some of the ways that services have been made more contestable include having concession arrangements for baggage handling and other services, and auctioning flight slots and gate slots.

2.2. Scorecard for air transport

As can be seen from the above, regulatory restrictions can reduce contestability and limit trade in air transport services in ways that go far beyond the standard GATS definitions of barriers to trade in services. The questionnaire covering actual barriers to trade in air transport services therefore asks about a range of regulatory policies, whether or not they would be seen as formal barriers to trade in services.

Under commercial presence, the questionnaire asks whether there are restrictions on the entry of new service providers wanting to establish commercially, whether they are domestically-owned, foreign-invested or both. The question covers a variety of air transport services separately — international passenger services (both scheduled and charter services), international freight-only services, domestic

passenger services (both scheduled and charter services), domestic freight-only services, provision of fuel, luggage and freight loading and unloading, aircraft repair and maintenance, the selling and marketing of air transport services, and the provision and operation of computer reservation systems. Note that Singapore and Brunei do not have a domestic air transport service, so they did not complete this part of the questionnaire.

The questionnaire also asks a number of questions about the provisions of air service agreements, both bilateral and plurilateral, under the heading of a restriction on cross-border trade in air services (mode 1). The reason that air service agreements restrict cross-border supply is because an airline located in a foreign country cannot offer international passenger or freight services if it does not have the necessary air traffic rights (for example, if it is excluded because of restricted designation, or because it does not meet the ownership requirements). Similarly, an airline located in a foreign country cannot offer domestic passenger or freight services unless the relevant air services agreement grants cabotage rights.

Importantly, however, air services agreements can also restrict the provision of air services supplied via commercial presence. This is because a foreign-invested airline located in the home country cannot offer international passenger or freight services from that country unless it meets the ownership requirements of the relevant air services agreement, which may include the requirement for substantial ownership and effective control by domestic entities. So even if the local investment laws allow majority foreign ownership of airlines established domestically, the provisions of air services agreements can negate the liberal nature of those investment laws.

Note that one of the questions about air services agreements is whether the country is a member of any plurilateral open skies agreements. However, for these agreements to come into force, they need to be ratified as well as signed. All ASEAN countries have signed the ASEAN Multilateral Agreement on Air Services (Manila, 20 May 2009). But only two countries have ratified it — Singapore and Thailand. Thus in the course of administering the survey, this question was refined so that it covered ratification, not just signing.

In practice, it proved impossible for the researchers to obtain complete information about the provisions of air services agreements (including ownership

clauses and traffic rights). Some air transport authorities were willing to provide a breakdown of the numbers of agreements with each type of provision, though they were not willing to provide details of which countries those agreements were with. Some other countries were unwilling to provide even a breakdown of numbers of agreements. Thus it has not been possible to isolate the exact provisions that each ASEAN country applies to other ASEAN Members. The secrecy surrounding the provisions of air services agreements constitutes a major impediment to outside observers being able to monitor progress towards achieving the commitments of the ASEAN Economic Community Blueprint in air transport.

Even knowing whether a country has ratified the ASEAN Multilateral Agreement on Air Services does not resolve the uncertainty. While the agreement specifies the gradual extension of third, fourth and fifth freedom traffic rights between ASEAN Member countries, it allows countries to retain any sort of withholding clause, including ‘substantial ownership and effective control’. Thus an ASEAN Member country could pass an investment law that allowed 70 per cent foreign (ASEAN) ownership of airlines, as required by the Blueprint, and could also ratify the ASEAN Multilateral Agreement on Air Services, but if its neighbours still required ‘substantial ownership and effective control’ in order to grant designation, a majority foreign-invested airline would be unable to offer international air services out of that country. To effectively meet the ASEAN Economic Community Blueprint targets, countries would need to liberalize their withholding clauses, at minimum to allow ‘community of interests’ (ie substantial ownership and effective control by a *group* of ASEAN countries). This is not required by the ASEAN Multilateral Agreement on Air Services. Furthermore, the secrecy surrounding the provisions of air services agreements means that it is difficult for outsiders to verify whether such liberalization has taken place.

Under mode 4, the questionnaire asks about limitations on the movement of intra-corporate transferees (ie the employees of foreign-invested airline companies), which might take the form of nationality or residency requirements on certain classes of directors, executives, managers or employees, or a requirement for labour market testing to establish that there is no qualified domestic person available for a position before a foreign person can be hired.

Under ownership restrictions, the questionnaire asks whether there are maximum limits on the equity participation of either private domestic or foreign shareholders in locally established air services firms. This question covers the full variety of air transport services separately. As just noted, however, the provisions of investment laws are not necessarily the binding constraint to whether majority foreign-invested firms can offer international air transport services. The questionnaire also asks whether governments have retained special voting rights in airlines. Finally, it asks about the ownership structure of the top 5 international airports — whether they are publicly or privately owned, and whether they are publicly or privately operated.

In the final section, the questionnaire also asks about potentially anti-competitive aspects of the domestic regulatory regime. It covers how flight slots and gate slots are allocated, whether alliances and code-sharing are allowed, and whether airfares are regulated. It also asks whether the licensing conditions (if any) for foreign-invested operators of the various air services differ from the conditions for domestic operators. It covers so-called ‘State aids’ to the industry — whether governments subsidize domestic airlines or cover their operating losses. Finally, it asks about whether large airlines have universal service obligations, because this can potentially distort the contestability of the local market.

2.3. Scorecard results for air transport

As noted earlier, the detailed responses (including comments) are recorded in separate spreadsheets. For ease of summarizing the survey responses, the qualitative information about trade restrictions and regulatory regimes has been coded in a zero-one fashion, where for each question, a score of 1 has been assigned if the restriction applies, and 0 if it does not. These detailed results are shown in Table 1.

Sometimes an intermediate score is assigned for intermediate stages of restrictiveness. In the case of air transport services, partial scores are assigned as follows. For private and foreign equity restrictions, partial scores are allocated in inverse proportion to the equity limitation. For example, if equity participation is limited to 25 per cent, then a score of 0.75 is assigned, while if equity participation is allowed to reach 75 per cent, then a score of 0.25 is assigned. If there are limitations on equity participation, but no numerical limited is stated, this is taken as a sign that

bureaucratic discretion is involved, and this is taken to be relatively restrictive — it is assumed to be equivalent to a 25 per cent equity limit, and so receives a score of 0.75. When scoring the ownership structure of airports, public ownership but private operation receives an intermediate score of 0.5, while public ownership and operation receives a score of 1.0, and private ownership and operation receives a score of 0. When scoring the allocation of flight and gate slots, auctioning receives a score of 0, allocation at the discretion of an independent authority, or some combination of grandfathering and auctioning, both receive a partial score of 0.5. Other allocation methods (such as by flag carrier discretion) receive a score of 1.0.

Table 1: Restrictions on Trade in Air Transport Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippine	Singapore	Thailand	Vietnam	Average
A. Commercial presence (mode 3) - restrictions on entry											
1	Are there policy restrictions to new entry (via commercial establishment)?										
	Any firm?										
	0	0	0	0	0	0	0	0	0	0	0
	International air passenger transport (scheduled services)										
	0	0	0	0	0	0	0	0	0	0	0
	International air passenger (non-scheduled charter services)										
	0	0	0	0	0	0	0	0	0	0	0
	International air freight (all-cargo carriers, express delivery)										
	0	0	0	0	0	0	0	0	0	0	0
	Domestic air transport (scheduled services)										
	na	0	0	1	0	0	0	na	0	0	0.13
	Domestic air transport (non-scheduled charter services)										
	na	0	0	1	0	0	0	na	0	0	0.13
	Domestic air freight (all-cargo carriers, express delivery)										
	na	0	0	1	0	0	0	na	0	0	0.13
	Provision of fuel										
	1	1	na	1	0	1	0	0	0	0	0.44
	Luggage and freight loading and unloading										
	0	0	0	1	0	1	0	1	0	0	0.3
	Aircraft repair and maintenance										
	0	0	0	1	0	0	0	1	0	0	0.2
	Selling and marketing of air transport services										
	0	0	0	0	0	0	0	0	0	0	0
	Computer reservation system										
	1	0	0	0	0	1	0	0	0	0	0.2
	Foreign firms?										
	International air passenger transport (scheduled services)										
	0	0	0	0	1	0	0	0	0	0	0.1
	International air passenger (non-scheduled charter services)										
	0	0	0	0	1	0	0	0	0	0	0.1
	International air freight (all-cargo carriers, express delivery)										
	0	0	0	0	1	0	0	0	0	0	0.1
	Domestic air transport (scheduled services)										
	na	0	0	1	1	0	0	na	0	1	0.38
	Domestic air transport (non-scheduled charter services)										
	na	0	0	1	1	0	0	na	0	1	0.38
	Domestic air freight (all-cargo carriers, express delivery)										
	na	0	0	1	1	0	0	na	0	1	0.38
	Provision of fuel										
	1	1	na	1	0	1	0	0	0	1	0.56
	Luggage and freight loading and unloading										
	0	0	0	1	1	1	0	1	0	0	0.4
	Aircraft repair and maintenance										
	0	0	0	1	0	0	0	1	0	0	0.2
	Selling and marketing of air transport services										
	0	0	0	0	0	0	0	0	0	0	0
	Computer reservation system										
	1	0	0	0	0	1	0	0	0	0	0.2
B. Restrictions on cross-border trade (mode 1)											
3	Are there restrictions on cross-border supply by foreign service providers in non-scheduled (charter) market?										
	International air passenger (non-scheduled charter services)										
	0	0	1	0	0	0	1	0	1	0	0.3
	Domestic air transport (non-scheduled charter services)										
	na	0	1	0	1	0	1	na	0	0	0.38
5	Has the country ratified the ASEAN Multilateral Agreement on Air Services?										
	1	1	1	1	1	1	1	0	0	1	0.8
C. Restrictions on the movt of intra-corporate transferees of foreign-invested companies (mode 4)											
7	Are there residency or nationality requirements or quotas for personnel employed by locally established foreign airline companies?										
	1	1	1	1	1	0	1	0	1	1	0.8
8	Are there categories of intra-corporate transferees whose entry and stay is subject to labour market tests?										
	1	0	1	0	1	1	0	0	0	0	0.4
D. Ownership											
9	Is private ownership in the provision of services through commercial establishment allowed?										
	Existing operators										
	International air passenger transport (scheduled services)										
	0.75	0.75	0.75	0.75	0.75	0	0	0	0	1	0.48
	International air passenger (non-scheduled charter services)										
	0.75	0.75	0.75	0.75	0.75	0	0	0	0	1	0.48
	International air freight (all-cargo carriers, express delivery)										
	0.75	0.75	0.75	0.75	0.75	0	0	0	0	1	0.48
	Domestic air transport (scheduled services)										
	na	0.75	0.75	1	0.75	0	0	0	0	0.75	0.44
	Domestic air transport (non-scheduled charter services)										
	na	0.75	0.75	1	1	0	0	0	0	0.75	0.47
	Domestic air freight (all-cargo carriers, express delivery)										
	na	0.75	0.75	1	1	0	0	0	0	0.75	0.47
	Provision of fuel										
	0.5	0.75	0.75	0.75	0.75	1	0	0	0	1	0.55
	Luggage and freight loading and unloading										
	0.75	0.75	0.75	0.75	0.75	0	0	0	0	0.75	0.45
	Aircraft repair and maintenance										
	0.75	0.75	0.75	0.75	0.75	0	0	0	0	1	0.48

Table 1 (Continued): Restrictions on Trade in Air Transport Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
Selling and marketing of air transport services	0.75	0.75	0.75	0	0.75	0	0	0	0	0.75	0.38
Computer reservation system	0.75	0.75	0.75	0	0.75	1	0	0	0	0.75	0.48
New entrants											
International air passenger transport (scheduled services)	0.75	0.75	0	0.75	0.75	0	0	0	0	0.75	0.38
International air passenger (non-scheduled charter services)	0.75	0.75	0	0.75	0.75	0	0	0	0	0.75	0.38
International air freight (all-cargo carriers, express delivery)	0.75	0.75	0	0.75	0.75	0	0	0	0	0.75	0.38
Domestic air transport (scheduled services)	na	0.75	0	1	0.75	0	0	0	0	0.75	0.36
Domestic air transport (non-scheduled charter services)	na	0.75	0	1	1	0	0	0	0	0.75	0.39
Domestic air freight (all-cargo carriers, express delivery)	na	0.75	0	1	1	0	0	0	0	0.75	0.39
Provision of fuel	0.5	0.75	0	0.75	0.75	1	0	0	0	0.75	0.45
Luggage and freight loading and unloading	0.75	0.75	0	0.75	0.75	0	0	0	0	0.75	0.38
Aircraft repair and maintenance	0.75	0.75	0	0.75	0.75	0	0	0	0	0.75	0.38
Selling and marketing of air transport services	0.75	0.75	0	0	0.75	0	0	0	0	0.75	0.3
Computer reservation system	0.75	0.75	0	0	0.75	1	0	0	0	0.75	0.4
10 Is foreign ownership in the provision of services through commercial establishment allowed?											
Existing operators											
International air passenger transport (scheduled services)	0.75	0.75	0.51	0.75	0.55	0.51	0.6	0	0.51	0.75	0.57
International air passenger (non-scheduled charter services)	0.75	0.75	0.51	0.75	0.51	0.51	0.6	0	0.51	0.75	0.56
International air freight (all-cargo carriers, express delivery)	0.75	0.75	0.51	0.75	0.51	0.51	0.6	0	0.51	0.75	0.56
Domestic air transport (scheduled services)	na	0.75	0.51	1	0.51	0.51	0.6	na	0.51	1	0.67
Domestic air transport (non-scheduled charter services)	na	0.75	0.51	1	1	0.51	0.6	na	0.51	1	0.74
Domestic air freight (all-cargo carriers, express delivery)	na	0.75	0.51	1	1	0.51	0.6	na	0.51	1	0.74
Provision of fuel	0.5	0.75	0.51	0.51	0.51	1	0.6	0	0.51	1	0.59
Luggage and freight loading and unloading	0.75	0.75	0.51	0.51	1	1	0.6	0	0.51	0.75	0.64
Aircraft repair and maintenance	0.75	0.75	0.51	0.75	0.51	0.75	0.6	0	0.51	0.49	0.56
Selling and marketing of air transport services	0.75	0.75	0.51	0	0.51	0.75	0	0	0.51	0.75	0.45
Computer reservation system	0.75	0.75	0.51	0	0.51	1	0	0	0.51	0.75	0.48
New entrants											
International air passenger transport (scheduled services)	0.75	0.75	0.51	0.75	0.55	0.51	0.6	0	0.51	0.75	0.57
International air passenger (non-scheduled charter services)	0.75	0.75	0.51	0.75	0.51	0.51	0.6	0	0.51	0.75	0.56
International air freight (all-cargo carriers, express delivery)	0.75	0.75	0.51	0.75	0.51	0.51	0.6	0	0.51	0.75	0.56
Domestic air transport (scheduled services)	na	0.75	0.51	1	0.51	0.51	0.6	na	0.51	1	0.67
Domestic air transport (non-scheduled charter services)	na	0.75	0.51	1	1	0.51	0.6	na	0.51	1	0.74
Domestic air freight (all-cargo carriers, express delivery)	na	0.75	0.51	1	1	0.51	0.6	na	0.51	1	0.74
Provision of fuel	0.5	0.75	0.51	0.51	0.51	1	0.6	0	0.51	1	0.59
Luggage and freight loading and unloading	0.75	0.75	0.51	0.51	1	1	0.6	0	0.51	0.75	0.64
Aircraft repair and maintenance	0.75	0.75	0.51	0.75	0.51	0.75	0.6	0	0.51	0.49	0.56
Selling and marketing of air transport services	0.75	0.75	0.51	0	0.51	0.75	0	0	0.51	0.75	0.45
Computer reservation system	0.75	0.75	0.51	0	0.51	1	0	0	0.51	0.75	0.48
11 Does the government have a special government voting right in the airlines?	1	0	0	1	1	0	0	0	0	0	0.3
12 Ownership structure for up to the 5 most important international airports in terms of traffic (average)	1	0.7	1	1	0.5	1	1	0.75	0	1	0.8
<hr/>											
E. Regulation											
14 How are flight slots allocated in airports?	1	0	1	0.5	1	1	1	0.5	1	0.5	0.75
15 How are gate slots allocated in airports?	0.5	0	1	0.5	1	1	1	0.5	1	0.5	0.7
17 Price regulation											
a. Does the govt regulate airfares? - on domestic routes	na	1	0	1	0	0	1	na	1	1	0.63
- on international routes	0	1	0	0	0	0	1	0	1	0	0.3
If yes to a), is fare discounting allowed? - on domestic routes	0	0	0	0	0	0	0	na	0	0	0
- on international routes	0	0	0	0	0	0	0	0	0	0	0

Table 1 (Continued): Restrictions on Trade in Air Transport Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
19 Do the licence conditions for foreign-invested providers who establish locally differ from those above?											
International air passenger transport (scheduled services)	0	0	0	0	0	0	0	0	0	1	0.1
International air passenger (non-scheduled charter services)	0	0	0	0	0	0	0	0	0	1	0.1
International air freight (all-cargo carriers, express delivery)	0	0	0	0	0	0	0	0	0	1	0.1
Domestic air transport (scheduled services)	na	0	0	0	0	0	0	na	0	1	0.13
Domestic air transport (non-scheduled charter services)	na	0	0	1	0	0	0	na	0	1	0.25
Domestic air freight (all-cargo carriers, express delivery)	na	0	0	1	0	0	0	na	0	1	0.25
Provision of fuel	1	1	na	0	0	1	0	0	0	1	0.44
Luggage and freight loading and unloading	0	0	0	0	0	1	0	0	0	1	0.2
Aircraft repair and maintenance	0	0	0	0	0	1	0	0	0	1	0.2
Selling and marketing of air transport services	0	0	0	0	0	1	0	0	0	1	0.2
Computer reservation system	0	0	0	0	0	1	0	0	0	1	0.2
20 Does the government subsidize domestic airlines?	1	0	1	1	1	0	0	0	0	0	0.4
21 Has the government covered operational losses of airlines in the past ten years	1	0	1	1	0	0	0	0	0	0	0.3

To obtain a restrictiveness score for a broad restriction category, such as a score for all the restrictions affecting a particular mode of service delivery, the zero-one scores for each of the restrictions affecting that mode have been simply added together. This means that each of the different restrictions affecting that mode have been given equal weight — no attempt has been made to make an assessment of the relative severity of the different restrictions. Accordingly, the overall restrictiveness scores for broad categories of restrictions reflect the frequency, but not necessarily the severity, of individual restrictions. To normalize the scores for a group, they have then been divided by the maximum possible restrictiveness score for that group. This gives a final restrictiveness score expressed as a percentage, where a score of 75 per cent means that three-quarters of the restrictions that could potentially apply to that category of trade do in fact apply.

Table 2: Restrictions on Trade in Air Transport Services - Prevalence (%)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
A. Commercial presence (mode 3) [question 1]	18	9	0	55	32	27	0	18	0	18	18
B. Cross-border trade (Mode 1) [questions 3-5]	33	33	100	33	67	33	100	0	33	33	47
C. Movement of persons (mode 4) – intra-corp. transferees [questions 7-8]	100	50	100	50	100	50	50	0	50	50	60
E. Ownership [questions 9-12]	54	73	45	67	72	44	26	2	24	80	49
F. Regulation [questions 14-21]	24	16	21	32	16	37	21	5	21	68	26
TOTAL	40	44	32	55	51	38	22	6	19	61	37

Turning to the explicit targets of the ASEAN Economic Community Blueprint, it has been difficult to assess the full extent of barriers to trade in cross-border (mode 1) services, primarily because of the difficulty of getting full information on the provisions of current air services agreements. The information in Tables 1 and 2 reflects only the presence of restrictions on international and domestic charter flights, as well as whether a country has ratified the ASEAN Multilateral Agreements on Air Services. As noted above, only two countries have so far ratified the agreement — Singapore and Thailand. Two countries also retain restrictions on international and domestic charter flights — Indonesia and the Philippines — although with the development of low cost carriers, charter flights are not as important a source of competitive pressures as they used to be.

Restrictions on the consumption of air transport services abroad are virtually non-existent, other than through restrictions on the outward movement of consumers themselves. Hence they have not been canvassed in this study.

Turning next to the various types of restrictions on commercial presence (mode 3), ownership restrictions are the most prevalent, and other kinds of regulatory restrictions on entry less so. According to the survey responses, only one country — Singapore — explicitly meets the Blueprint target of allowing at least 70 per cent foreign ownership in domestically established air services companies by 2010. But note that if Singapore were actually to achieve 70 per cent foreign ownership of its international airline, it could well be prevented from supplying international air services to other ASEAN countries, even if they had ratified the ASEAN Multilateral Agreements on Air Services. This is because that agreement allows them to retain withholding clauses that would require Singapore to have ‘substantial ownership and effective control’ of Singapore Airlines by Singaporean entities in order to be a designated airline. Effective liberalization of mode 3 trade in air services not only requires the reform of investment laws, it also requires the reform of withholding clauses in air services agreements, so that at minimum, they allow substantial ownership by an ASEAN community of interests.

Many ASEAN countries also retain other types of regulatory restrictions on domestic and/or foreign entry into various air services, although these restrictions are more common for domestic air transport and ground-based services than they are for

international air services. Lao PDR has the most extensive regulatory restrictions, followed by Malaysia (which has regulatory restrictions on foreign entry into a range of services), and Myanmar (which restricts commercial entry into provision of fuel, luggage handling and computer reservation systems).

As in many other services sectors, restrictions on the movement of people remain one of the most prevalent of all types of trade restrictions. Brunei, Indonesia and Malaysia retain both nationality requirements and labour market tests for various categories of managers and/or employees of foreign-invested firms. Only Singapore has a relatively liberal treatment of intra-corporate transferees.

Looking beyond trade barriers (strictly defined) to look at domestic regulatory regimes that could also be anti-competitive, most ASEAN countries appear relatively liberal. This is mainly because few retain strict government controls on air fares, and most do not impose discriminatory licensing conditions on foreign services suppliers (a notable exception here being Vietnam). Nevertheless, in most ASEAN countries (except Cambodia), the allocation of flight and gate slots is still done in ways that could potentially be anti-competitive. This is becoming an increasingly important barrier to effective competition. Furthermore, government subsidization of domestic airlines is still common, not just in small countries (Brunei, Lao PDR), but also in larger ones (Indonesia, Malaysia).

3. Maritime

3.1. Key features of the regulatory regime for maritime services

Shipping is another sector that is subject to a web of restrictive regulations that impose considerable costs, but have so far proved largely immune to bilateral or multilateral trade agreements. Donovan (undated) describes the historical development of government regulation of shipping in the United States, which has one of the most restrictive regulatory regimes in the world. PDP Australia and Meyrick and Associates (2005) give a detailed description of the development of shipping regulation in ASEAN. They note that by comparison to other regions, the

policy environment in which intra-ASEAN shipping operates is relatively liberal, although cabotage restrictions remain a key market distortion.

McGuire, Schuele and Smith (2000) survey the maritime policy regimes in a number of APEC, Latin American and European countries. They describe the key restrictions affecting shipping services as follows.

- **Right to fly the national flag.** This requires ships to be registered or licensed to provide maritime services on domestic and international routes. The conditions on registration may include legitimate requirements such as meeting seaworthiness and safety requirements, but also include restrictions such as having a commercial presence in the domestic economy, and the ship being built and/or owned domestically.
- **Cabotage restrictions.** These restrict shipping services on domestic and coastal routes to vessels that meet certain conditions. Shipping services between domestic ports may be required to be carried out by domestically owned, operated, built and/or crewed ships.
- **Conferences.** These are private sector arrangements between shippers that are supposed to facilitate the planning and coordination of shipping traffic, but typically also include anti-competitive provisions. They can be open or closed. Open conferences set freight rates, but allow unrestricted entry and exit. Closed conferences set freight rates, allocate cargo and restrict membership. Governments that have enacted general competition laws usually permit the existence of conferences through exemptions from the price setting and collusion provisions of their domestic competition legislation.
- **UN Convention on a Code of Conduct for Liner Conferences (UN Liner Code).** This stipulates that conference trade between two economies can allocate cargo according to the 40:40:20 rule, whereby 40 per cent of tonnage is reserved for the national flag lines of each economy and 20 per cent is allocated to liner ships from a third country.
- **Cargo sharing.** These are other types of arrangements that stipulate the allocation of cargo on particular routes between parties to bilateral and multilateral agreements.

- **Bilateral agreements.** These are agreements between two economies that primarily restrict the supply of shipping services and the allocation of cargo. Some bilateral agreements also restrict the use of port facilities.

Few ASEAN countries have general competition law or any legislative framework for regulating the behaviour of shipping conferences. However, in recent times conferences have been subjected to increasing competition. They no longer dominate shipping routes, and are no longer regarded as the impediments to maritime performance that they once were. PDP Australia and Meyrick and Associates (2005) note that within ASEAN, cargo reservation measures have been very significantly reduced and in many cases completely abandoned. Similarly, a growing number of ASEAN economies have 'open' ship registries, which means that local ship registration is no longer tightly tied to local ownership of the shipping company. This leaves cabotage restrictions, along with inadequate and aging infrastructure, as the main impediments to economic performance in shipping services.

These regulatory restrictions on shipping services have been shown to be costly, particularly to developing countries. Kang (2000) found that the maritime restrictions imposed by goods exporting countries appear to have a much greater impact on bilateral shipping margins (as measured by cif/fob ratios) than those imposed by importing countries. He also found that in exporting countries, lowering restrictions such as cabotage and port services restrictions had a greater effect on margins than reducing restrictions on the commercial presence of foreign suppliers. In several applications of these findings, the sum total of restrictions on shipping and port services was found to have inflated shipping costs by around 30 per cent in Morocco (Dee 2006), and by around 26 per cent in Indonesia (Dee 2008).

Regulatory restrictions on port services can also inflate the cost of maritime shipping. Juhel (1999) describes the ways in which contestability is typically introduced into port services, and the way this interacts with the ownership of port assets. The coastal land and sea-land interface areas required by ports are typically retained in government ownership, so as to facilitate long-term planning and to optimize the use of coastal areas from an economic, social and environmental perspective. The basic infrastructure assets established on public land, such as breakwaters, channels, docks and inland transport connections, are also likely to be

in public ownership. On the other hand, all other operational infrastructure, including berths, could be privately owned. Given that these are located on public land, there needs to be adequate leasing or concessioning arrangements, with contractual periods appropriate for the financial depreciation of the private assets. All superstructure, such as buildings, cranes and other pieces of equipment, can also be privately owned.

Contestability can be introduced into port operations by the way in which portions of the port area are allocated to private superstructure operators for specific periods of time, whether or not they plan to build their own facilities. If port traffic is enough to warrant it, several operators with equivalent handling capacity can be allowed to set up and compete for port traffic *in* the market. Where traffic only warrants a single operator, there can still be competition *for* the market, by having competition for the right to hold the concession to operate. However, if there is effective competition between ports, or between a single port and other modes of transport, this may be sufficient to prevent abuses of monopoly power in port operations.

Thus there are typically three different models of port operation, which allow increasing levels of contestability and harnessing of private sector investment potential:

- **Services port.** Here the Port Authority owns all assets and supplies services by directly hiring employees.
- **Tool port.** Here the Port Authority owns the infrastructure and superstructure, and private firms provide services by renting port assets through concessions and licenses.
- **Landlord port.** Here the Port Authority owns and manages the infrastructure, private firms are able to own superstructure and provide services, as well as renting port assets by concessions or licences.

Note that when reforms aim to convert a service port to a tool or landlord port, provision needs to be made to allow new private sector entrants access to the facilities once owned and operated by the incumbent port operator.

Restrictive port operating conditions can also impose costs on shippers. One method of inflating costs is by the mandatory provision of, and charging for, services (pilotage, towing, tug assistance, navigation aids, berthing, waste disposal, anchorage,

casting off), whether or not they are strictly needed. Another is by restrictions on access to ports, or restrictions on the cargoes that particular ports can handle.

As noted, regulatory restrictions on port operations have been shown to be costly. Clark, Dollar and Micco (2004) showed first that port efficiency is an important determinant of shipping costs — improving port efficiency from the 25th to the 75th percentile would reduce shipping costs by 12 per cent. They then showed that port inefficiency was linked to excessive regulation, as well as to the prevalence of organized crime and the general condition of a country's infrastructure.

3.2. Scorecard for maritime services

The questionnaire covering actual barriers to trade in maritime services likewise asks about a range of regulatory policies, whether or not they would be seen as formal barriers to trade in services. The questionnaire was completed for all ASEAN countries except Lao PDR, which is landlocked, and Brunei, which did not provide consistent answers.

Under commercial presence, the questionnaire asks whether there are restrictions on the entry of new service providers wanting to establish commercially, whether they are domestically-owned, foreign-invested or both. The question covers a variety of maritime services separately — international shipping, cabotage (the provision of coastal shipping services), internal waterways, port superstructure, cargo handling services, storage and warehousing, freight forwarding, pilotage, towing and tying, and the maintenance and repair of vessels. The questionnaire also asks questions about restrictions on the legal forms of establishment, which are recognized by the GATS as restrictions on market access.

Under cross-border trade in shipping services (mode 1), the questionnaire asks about the presence of cargo sharing arrangements, whether the country imposes reciprocity requirements on the other countries providing cross-border services, and whether there are other selective restrictions imposed by government for retaliatory purposes. Few countries have completely liberalized cabotage restrictions, but a growing number of countries are gradually reducing the severity of the restrictions by granting exemptions on a case-by-case basis. So the questionnaire also asks whether such exemptions are available. Finally, this section of the questionnaire asks

about the mandatory provision of port services, and restricted access to ports, as these restrictions can adversely affect cross-border shipping.

Under mode 4, the questionnaire asks about limitations on the movement of intra-corporate transferees (ie the employees of foreign-invested shipping companies), which might take the form of nationality or residency requirements on certain classes of directors, executives, managers or employees. It also asks about the permitted length of short- or long-term stay for such transferees, an aspect of the regulatory regime that is typically set horizontally by immigration departments, rather than by maritime regulation.

Under ownership restrictions, the questionnaire asks whether there are maximum limits on the equity participation of either private domestic or foreign shareholders in locally established maritime companies. This question covers the full variety of maritime services separately. It also asks whether the five most important ports follow a service port, tool port or landlord port model.

In the final section, the questionnaire asks about potentially anti-competitive aspects of the domestic regulatory regime. It asks what conditions are required to fly the national flag, whether an 'open' registry system is in place, and whether goods exporters and importers receive concessional treatment if they use national flagged vessels. It asks about the regulatory treatment of liner shipping conferences. It asks about whether terminal handling charges are regulated by government, and whether there are restrictions on port activities. It asks about the presence of discriminatory licensing requirements for foreign providers, whether cross-border provision requires the appointment of a domestic shipping agent, whether there are restrictions on who can carry non-commercial (eg government) cargoes, and whether governments have subsidized or covered the operating losses of local shipping companies.

3.3. Scorecard results for maritime services

As with air transport services, the qualitative information about trade restrictions and regulatory regimes has been coded in a zero-one fashion, where for each question, a score of 1 has been assigned if the restriction applies, and 0 if it does not. These detailed results are shown in Table 3.

Table 3: Restrictions on Trade in Maritime Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Laos PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
A. Commercial presence - restrictions on entry											
1	Are there policy restrictions to new entry (via commercial establishment)?										
	By any firm?										
	nc	0	0	na	0	0	0	0	0	0	0.0
	International shipping										
	nc	0	0	na	0	1	0	na	0	0	0.1
	Cabotage										
	nc	0	1	na	0	1	0	na	0	0	0.3
	Internal waterways										
	nc	1	0	na	0	1	1	1	0	0	0.5
	Port superstructure										
	nc	0	0	na	0	0	1	0	0	0	0.1
	Cargo handling services										
	nc	0	0	na	0	0	0	1	0	0	0.1
	Storage and warehousing										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Freight forwarding										
	nc	1	1	na	0	1	0	1	0	1	0.6
	Pilotage, towing and tying										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Maintenance and repair of vessels										
	Firms with foreign participation										
	nc	0	0	na	0	0	0	0	0	1	0.1
	International shipping										
	nc	0	0	na	0	1	1	na	0	1	0.4
	Cabotage										
	nc	0	1	na	0	1	1	na	0	1	0.6
	Internal waterways										
	nc	1	0	na	0	1	1	1	0	1	0.6
	Port superstructure										
	nc	0	0	na	0	0	1	0	0	1	0.3
	Cargo handling services										
	nc	0	0	na	0	0	0	1	0	1	0.3
	Storage and warehousing										
	nc	0	0	na	0	0	1	0	0	1	0.3
	Freight forwarding										
	nc	1	1	na	0	1	1	1	0	1	0.8
	Pilotage, towing and tying										
	nc	0	0	na	0	0	0	0	0	1	0.1
	Maintenance and repair of vessels										
3	Are foreign maritime companies <i>prohibited</i> from establishing in a joint venture with local firms?										
	nc	0	0	na	0	0	0	0	0	0	0.0
	International shipping										
	nc	0	0	na	0	1	1	na	0	0	0.3
	Cabotage										
	nc	0	1	na	0	1	1	na	0	0	0.4
	Internal waterways										
	nc	0	0	na	0	1	0	1	0	0	0.3
	Port superstructure										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Cargo handling services										
	nc	0	0	na	0	0	0	1	0	0	0.1
	Storage and warehousing										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Freight forwarding										
	nc	1	1	na	0	1	0	1	0	1	0.6
	Pilotage, towing and tying										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Maintenance and repair of vessels										
	Are they <i>required</i> to establish in a JV?										
	nc	0	0	na	0	1	0	0	1	1	0.4
	International shipping										
	nc	0	1	na	0	0	0	na	1	1	0.4
	Cabotage										
	nc	0	0	na	0	0	0	na	1	1	0.3
	Internal waterways										
	nc	0	1	na	0	1	1	0	1	1	0.6
	Port superstructure										
	nc	0	1	na	0	1	0	0	1	1	0.5
	Cargo handling services										
	nc	0	1	na	0	1	0	0	1	1	0.5
	Storage and warehousing										
	nc	0	1	na	0	1	1	0	1	1	0.6
	Freight forwarding										
	nc	0	0	na	0	0	1	0	1	1	0.4
	Pilotage, towing and tying										
	nc	0	1	na	0	1	0	0	1	1	0.5
	Maintenance and repair of vessels										
4	Which of the following legal forms of establishment are allowed for foreign maritime transport companies?										
	Subsidiaries										
	nc	0	0	na	0	0	0	0	0	0	0.0
	International shipping										
	nc	0	0	na	0	1	0	na	0	0	0.1
	Cabotage										
	nc	0	0	na	0	1	0	na	0	0	0.1
	Internal waterways										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Port superstructure										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Cargo handling services										
	nc	0	0	na	0	0	0	0	0	0	0.0

Source: Survey responses.

Table 3 (Continued): Restrictions on Trade in Maritime Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
Storage and warehousing	nc	0	0	na	0	0	0	0	0	0	0.0
Freight forwarding	nc	0	0	na	0	0	0	0	0	0	0.0
Pilotage, towing and tying	nc	1	0	na	0	1	0	0	0	0	0.3
Maintenance and repair of vessels	nc	0	0	na	0	0	0	0	0	0	0.0
Branches											
International shipping	nc	0	0	na	0	0	0	0	0	0	0.0
Cabotage	nc	0	0	na	0	1	0	na	0	0	0.1
Internal waterways	nc	0	0	na	0	1	0	na	0	0	0.1
Port superstructure	nc	0	0	na	0	1	0	0	0	0	0.1
Cargo handling services	nc	0	0	na	0	0	0	0	0	0	0.0
Storage and warehousing	nc	0	0	na	0	0	0	0	0	0	0.0
Freight forwarding	nc	0	0	na	0	0	0	0	0	0	0.0
Pilotage, towing and tying	nc	1	0	na	0	1	0	0	0	0	0.3
Maintenance and repair of vessels	nc	0	0	na	0	0	0	0	0	0	0.0
Representative offices											
International shipping	nc	0	0	na	0	0	0	0	0	0	0.0
Cabotage	nc	0	0	na	0	1	0	na	0	0	0.1
Internal waterways	nc	0	0	na	0	1	0	na	0	0	0.1
Port superstructure	nc	0	0	na	0	1	0	0	0	0	0.1
Cargo handling services	nc	0	0	na	0	0	0	0	0	0	0.0
Storage and warehousing	nc	0	0	na	0	0	0	0	0	0	0.0
Freight forwarding	nc	0	0	na	0	0	0	0	0	0	0.0
Pilotage, towing and tying	nc	1	0	na	0	1	0	0	0	0	0.3
Maintenance and repair of vessels	nc	0	0	na	0	0	0	0	0	0	0.0
B. Restrictions on cross-border trade (mode 1)											
5 Describe restrictions on cross-border supply imposed on foreign shipping companies:											
International Shipping											
Application of principle of reciprocity	nc	0	0	na	1	0	0	0	0	1	0.3
Restrictions on the number of foreign suppliers	nc	0	0	na	0	0	0	0	0	1	0.1
Are exemptions from cabotage restrictions available?	nc	na	na	na	na	na	na	na	na	na	na
Party to UN Liner Code, but Article 2 not applied	nc	1	0	na	0	0	0	0	0	1	0.3
UN Liner Code applied, including Article 2	nc	0	0	na	1	0	0	0	0	1	0.3
Bilateral agreements including cargo-sharing clauses	nc	0	0	na	0	0	0	0	0	1	0.1
Cargo reservation if different from the application of UN Liner Code and bilateral agreements	nc	1	0	na	0	0	1	0	1	1	0.5
Selective restrictions imposed by government for retaliatory purposes	nc	1	0	na	0	0	0	0	0	1	0.3
Cabotage											
Application of principle of reciprocity	nc	0	0	na	1	na	na	na	0	1	0.4
Restrictions on the number of foreign suppliers	nc	0	1	na	0	na	na	na	0	1	0.4
Are exemptions from cabotage restrictions available?	nc	0	0	na	1	1	1	na	0	1	0.6
Party to UN Liner Code, but Article 2 not applied	nc	1	0	na	0	na	na	na	0	1	0.4
UN Liner Code applied, including Article 2	nc	0	0	na	1	na	na	na	0	1	0.4
Bilateral agreements including cargo-sharing clauses	nc	0	0	na	0	na	na	na	0	1	0.2
Cargo reservation if different from the application of UN Liner Code and bilateral agreements	nc	1	0	na	0	na	na	na	1	1	0.6
Selective restrictions imposed by government for retaliatory purposes	nc	1	0	na	0	na	na	na	0	1	0.4
7 Are the following services mandatory for ships entering the port (main port only)?											
Pilotage	nc	1	1	na	0	1	1	0	1	1	0.8
Towing	nc	0	1	na	0	1	1	0	1	1	0.6

Source: Survey responses.

Table 3 (Continued): Restrictions on Trade in Maritime Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
Tug assistance	nc	1	0	na	0	1	1	0	1	1	0.6
Navigation aids	nc	1	1	na	0	1	1	0	1	1	0.8
Berthing	nc	1	1	na	0	1	1	0	1	1	0.8
Waste disposal	nc	1	0	na	0	1	1	0	1	1	0.6
Anchorage	nc	1	1	na	0	1	1	0	1	1	0.8
Casting off	nc	1	1	na	0	1	1	0	1	1	0.8
Is access to service discriminatory for foreign carriers as opposed to domestic ones?											
Pilotage	nc	0	0	na	0	0	0	0	0	0	0.0
Towing	nc	0	0	na	0	0	0	0	0	0	0.0
Tug assistance	nc	0	0	na	0	0	0	0	0	0	0.0
Navigation aids	nc	0	0	na	0	0	0	0	0	0	0.0
Berthing	nc	0	0	na	0	0	0	0	0	0	0.0
Waste disposal	nc	0	0	na	0	0	0	0	0	0	0.0
Anchorage	nc	0	0	na	0	0	0	0	0	0	0.0
Casting off	nc	0	0	na	0	0	0	0	0	0	0.0
Are there restrictions on domestic ships getting access to ports?	nc	0	0	na	0	0	1	0	0	0	0.1
Are there restrictions on foreign ships getting access to ports?											
C. Restrictions on movement of intra-corporate transferees (mode 4)											
8 Are there residency or nationality requirements or quotas for any categories of personnel employed by locally established foreign maritime transport services companies?	nc	1	1	na	1	1	1	0	1	1	0.9
9 The permitted length of short-term visit (in days) for foreign personnel (eg shipping agents), and the permitted length of long-term stay (in years) of foreign intra-corporate transferees.											
Short-term	nc	0.75	0	na	0.25	0.25	0.75	0.75	0.25	0.25	0.4
Long-term	nc	0.4	0	na	0.6	0.8	0	0.6	0.8	0.4	0.5
D. Ownership											
10 Is private ownership in the provision of services through commercial establishment allowed?											
Existing operators											
International shipping	nc	0	0	na	0	0	0	0	0	0	0.0
Cabotage	nc	0	0	na	0	0	0	na	0	0	0.0
Internal waterways	nc	0	0	na	0	0	0	na	0	0	0.0
Port superstructure	nc	0	0	na	0	0	0	1	0	0	0.1
Cargo handling services	nc	0	0	na	0	0	0	0	0	0	0.0
Storage and warehousing	nc	0	0	na	0	0	0	1	0	0	0.1
Freight forwarding	nc	0	0	na	0	0	0	0	0	0	0.0
Pilotage, towing and tying	nc	1	0	na	0	1	0	1	0	1	0.5
Maintenance and repair of vessels	nc	0	0	na	0	0	0	0	0	0	0.0
New entrants											
International shipping	nc	0	0	na	0	0	0	0	0	0	0.0
Cabotage	nc	0	0	na	0	0	0	na	0	0	0.0
Internal waterways	nc	0	0	na	0	0	0	na	0	0	0.0
Port superstructure	nc	1	0	na	0	0	0	1	0	0	0.3
Cargo handling services	nc	0	0	na	0	0	0	0	0	0	0.0
Storage and warehousing	nc	0	0	na	0	0	0	1	0	0	0.1
Freight forwarding	nc	0	0	na	0	0	0	0	0	0	0.0
Pilotage, towing and tying	nc	1	0	na	0	1	0	1	0	1	0.5
Maintenance and repair of vessels	nc	0	0	na	0	0	0	0	0	0	0.0

Source: Survey responses.

Table 3 (Continued): Restrictions on Trade in Maritime Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
11	Is foreign ownership in the provision of services through commercial establishment allowed?										
	Existing operators										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	1	0.4
	International shipping										
	nc	0	0.51	na	0.7	1	1	na	0.7	1	0.7
	Cabotage										
	nc	0	1	na	0.7	1	1	na	0.7	1	0.8
	Internal waterways										
	nc	1	0.51	na	0.7	1	0.6	1	0.51	1	0.8
	Port superstructure										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	1	0.4
	Cargo handling services										
	nc	0	0.51	na	0.7	0	0.6	1	0.51	1	0.5
	Storage and warehousing										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	1	0.4
	Freight forwarding										
	nc	1	1	na	0.7	1	0.6	1	0.51	1	0.9
	Pilotage, towing and tying										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	1	0.4
	Maintenance and repair of vessels										
	New entrants										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	0.49	0.4
	International shipping										
	nc	0	0.51	na	0.7	1	1	na	0.7	0.49	0.6
	Cabotage										
	nc	0	1	na	0.7	1	1	na	0.7	0.51	0.7
	Internal waterways										
	nc	1	0.51	na	0.7	1	0.6	1	0.51	0.51	0.7
	Port superstructure										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	0.51	0.4
	Cargo handling services										
	nc	0	0.51	na	0.7	0	0.6	1	0.51	0.51	0.5
	Storage and warehousing										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	0.51	0.4
	Freight forwarding										
	nc	1	1	na	0.7	1	0.6	1	0.51	1	0.9
	Pilotage, towing and tying										
	nc	0	0.51	na	0.7	0	0.6	0	0.51	0.51	0.4
	Maintenance and repair of vessels										
12	Please indicate ownership and port type (landlord, tool or service port) for the 5 most important international ports										
	nc	1	1	na	1	1	1	1	1	1	1.0
	Port 1: Ownership?										
	nc	1	1	na	1	0	1	na	1	1	0.9
	Port 2: Ownership?										
	nc	0	1	na	1	0	1	na	1	1	0.7
	Port 3: Ownership?										
	nc	1	1	na	1	0	1	na	0	na	0.7
	Port 4: Ownership?										
	nc	na	1	na	1	0	1	na	0	na	0.6
	Port 5: Ownership?										
	nc	1	0.5	na	0	0	0	1	0.25	1	0.5
	Port 1: Port type?										
	nc	1	0.5	na	0	0.5	0	na	0	1	0.4
	Port 2: Port type?										
	nc	0	1	na	0	0.5	0	na	0	1	0.4
	Port 3: Port type?										
	nc	1	1	na	0	0.5	0	na	0	na	0.4
	Port 4: Port type?										
	nc	na	1	na	0	0.5	0	na	0	na	0.3
	Port 5: Port type?										
E. Regulation											
14	What are the conditions that a vessel or fleet must fulfill in order to fly the national flag?										
	nc	0	1	na	1	0	1	1	1	1	0.8
	Commercial presence required?										
	nc	0	1	na	1	0	1	0	1	0	0.5
	At least 50% equity participation must be domestic?										
	nc	0	1	na	1	1	1	0	1	0	0.6
	At least 50% of crew required to be domestic?										
	nc	0	1	na	0	1	0	0	1	0	0.4
	Open registry system in place?										
	nc	0	0	na	0	0	1	0	0	0	0.1
	Do exporters or importers receive concessional treatment of any sort if they use national flagged vessels?										
15	Regulation of carrier agreements										
	nc	0	0	na	0	0	0	0	0	0	0.0
	What types of conference agreements are allowed?										
	nc	1	0	na	0	0	0	0	0	1	0.3
	Does the government enforce tariffs agreed upon within carrier agreements?										
	nc	0	0	na	0	0	0	0	0	0	0.0
	Is fare discounting allowed?										
	nc	1	1	na	1	0	1	0	1	0	0.6
	Does the regulatory agency monitor conferences' activities?										

Source: Survey responses.

Table 3 (Continued): Restrictions on Trade in Maritime Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
16	Regulation of port services										
	nc	1	1	na	0	1	1	1	0	1	0.8
	Are terminal handling costs regulated by government?										
	nc	1	1	na	0	1	1	1	0	1	0.8
	Are terminal handling costs non-negotiable?										
	nc	0	1	na	0	1	1	0	0	0	0.4
	Are terminals restricted in the activities they can undertake (eg only container operations)?										
	nc	1	1	na	0.5	0.5	1	0	0	0.5	0.6
	Are private ports prohibited from handling general cargo, or able to handle general cargo on payment of a fee?										
18	Do the licence conditions for foreign-invested providers who establish locally differ from those for local providers?										
	nc	0	1	na	0	1	0	0	0	0	0.3
	International shipping										
	nc	0	1	na	1	1	1	na	0	0	0.6
	Cabotage										
	nc	0	1	na	0	1	1	na	0	0	0.4
	Internal waterways										
	nc	0	0	na	0	1	0	1	0	0	0.3
	Port superstructure										
	nc	0	0	na	0	1	0	0	0	0	0.1
	Cargo handling services										
	nc	0	0	na	0	1	0	1	0	0	0.3
	Storage and warehousing										
	nc	0	0	na	0	1	0	0	0	0	0.1
	Freight forwarding										
	nc	1	1	na	0	1	0	1	0	0	0.5
	Pilotage, towing and tying										
	nc	0	0	na	0	1	1	0	0	0	0.3
	Maintenance and repair of vessels										
19	Do the licence conditions for foreign cross-border providers differ from those for local providers?										
	nc	0	1	na	0	1	0	0	0	1	0.4
	International shipping										
	nc	0	1	na	1	1	1	na	1	1	0.9
	Cabotage										
	nc	0	1	na	0	1	1	na	1	1	0.7
	Internal waterways										
20	Does the provision of shipping services by domestic or foreign providers require the appointment of a domestic shipping agent?										
	Domestic providers										
	nc	0	0	na	1	1	0	0	1	0	0.4
	International shipping										
	nc	0	0	na	1	1	0	na	1	0	0.4
	Cabotage										
	nc	0	0	na	1	1	0	na	1	0	0.4
	Internal waterways										
	Foreign providers										
	nc	0	1	na	1	0	1	0	1	0	0.5
	International shipping										
	nc	0	1	na	1	0	0	na	1	0	0.4
	Cabotage										
	nc	0	1	na	1	0	0	na	1	0	0.4
	Internal waterways										
21	Restrictions on the transportation of non-commercial (eg government, defence) cargoes.										
	nc	0	0	na	0	1	0.5	0	1	0.5	0.4
22	Does the government subsidise domestic shipping companies?										
	nc	0	1	na	0	0	0	0	0	0	0.1
23	Has the government covered operational losses of shipping companies in the past ten years?										
	nc	0	0	na	0	0	0	0	0	0	0.0

Source: Survey responses.

Sometimes an intermediate score is assigned for intermediate stages of restrictiveness. In the case of maritime services, partial scores have been assigned as follows. For private and foreign equity restrictions, the partial scoring system is the same as in air transport. For the permitted short-term stay of foreign personnel, a score of 0.75 denotes a stay of 30 days or less, a score of 0.5 denotes a stay of 60

days or less, and a score of 0.25 denotes a stay of 90 days or less. For the permitted long-term stay of intra-corporate transferees, a score of 0.8 denotes a stay of 1 year or less, a score of 0.6 denotes a stay of 2 years or less, and a score of 0.4 denotes a stay of 3 years or less, and a score of 0.2 denotes a stay of 4 years or less. When scoring the ownership and operation of ports, public ownership has been scored as 1 and private ownership as 0, while a service port has been scored as 1, a tool port as 0.5 and a landlord port as 0. The scores shown are the average scores across the top five ports. For restrictions on whether private ports can handle general cargo, an intermediate score of 0.5 denotes that payment of a fee is required. For restrictions on the carriage of non-commercial cargoes, an intermediate score of 0.5 denotes that limited restrictions apply.

Summary restrictiveness scores for broad categories of restrictions have also been obtained using the same methods as for air transport. The results are shown in Table 4. The summary scores have been compiled for each maritime service separately, because of the potentially wide variation in the degree of restrictiveness across different services.

Table 4: Restrictions on Trade in Maritime Services - Prevalence (%)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
C. Movement of intra-corporate transferees (mode 4)	nc	72	33	na	62	68	58	45	68	55	58
INTERNATIONAL SHIPPING (TOTAL)	nc 14.3	28.6	na	26.9	20	24.9	2.86	31.5	40	24	
A. Commercial presence (mode 3) [questions 1-4]	nc	0	0	na	0	14	0	0	14	29	7
B. Cross-border trade (mode 1) [question 5]	nc	38	0	na	25	0	13	0	13	88	22
D. Ownership [questions 10-11]	nc	0	26	na	35	0	30	0	26	37	19
E. Regulation [questions 14, 15, 18-23]	nc	13	56	na	38	38	41	6	50	22	33
CABOTAGE (TOTAL)	nc 13	26.2	na	36.5	52.2	30.4	na	27.8	54.3	34	
A. Commercial presence (mode 3) [questions 1-4]	nc	0	14	na	0	86	29	na	14	29	24
B. Cross-border trade (mode 1) [question 5]	nc	38	13	na	38	13	13	na	13	100	32
D. Ownership [questions 10-11]	nc	0	26	na	35	50	50	na	35	37	33
E. Regulation [questions 18-20]	nc	0	75	na	100	75	50	na	75	25	57
INTERNAL WATERWAYS (TOTAL)	nc 0	53	na	23	73	40	na	36	30	36	
A. Commercial presence (mode 3) [questions 1-4]	nc	0	43	na	0	86	29	na	14	29	29
B. Cross-border trade (mode 1)	nc	na	na	na	na	na	na	na	na	na	na
D. Ownership [questions 10-11]	nc	0	50	na	35	50	50	na	35	38	37
E. Regulation [question 18]	nc	0	75	na	50	75	50	na	75	25	50
PORT SUPERSTRUCTURE (TOTAL)	nc 42	17	na	12	75	35	67	17	29	37	
A. Commercial presence (mode 3) [questions 1-4]	nc	29	14	na	0	86	43	43	14	29	32
B. Cross-border trade (mode 1)	nc	na	na	na	na	na	na	na	na	na	na
D. Ownership [questions 10-11]	nc	75	26	na	35	50	30	100	26	38	47
E. Regulation [question 18]	nc	0	0	na	0	100	0	100	0	0	25
CARGO HANDLING (TOTAL)	nc 0	17	na	12	17	27	0	17	29	15	
A. Commercial presence (mode 3) [questions 1-4]	nc	0	14	na	0	14	29	0	14	29	13
B. Cross-border trade (mode 1)	nc	na	na	na	na	na	na	na	na	na	na
D. Ownership [questions 10-11]	nc	0	26	na	35	0	30	0	26	38	19
E. Regulation [question 18]	nc	0	0	na	0	100	0	0	0	0	13
STORAGE AND WAREHOUSING (TOTAL)	nc 0	17	na	12	17	10	67	17	29	21	
A. Commercial presence (mode 3) [questions 1-4]	nc	0	14	na	0	14	0	43	14	29	14
B. Cross-border trade (mode 1)	nc	na	na	na	na	na	na	na	na	na	na
D. Ownership [questions 10-11]	nc	0	26	na	35	0	30	100	26	38	32
E. Regulation [question 18]	nc	0	0	na	0	100	0	100	0	0	25
FREIGHT FORWARDING (TOTAL)	nc 0	17	na	12	17	27	0	17	29	15	
A. Commercial presence (mode 3) [questions 1-4]	nc	0	14	na	0	14	29	0	14	29	13
B. Cross-border trade (mode 1)	nc	na	na	na	na	na	na	na	na	na	na
D. Ownership [questions 10-11]	nc	0	26	na	35	0	30	0	26	38	19
E. Regulation [question 18]	nc	0	0	na	0	100	0	0	0	0	13
PILOTAGE, TOWING AND TYING (TOTAL)	nc 92	50	na	12	92	27	67	17	67	53	
A. Commercial presence (mode 3) [questions 1-4]	nc	86	43	na	0	86	29	43	14	57	45
B. Cross-border trade (mode 1)	nc	na	na	na	na	na	na	na	na	na	na
D. Ownership [questions 10-11]	nc	100	50	na	35	100	30	100	26	100	68
E. Regulation [question 18]	nc	100	100	na	0	100	0	100	0	0	50
MAINTENANCE AND REPAIR (TOTAL)	nc 0	17	na	12	17	18	0	17	29	14	
A. Commercial presence (mode 3) [questions 1-4]	nc	0	14	na	0	14	0	0	14	29	9
B. Cross-border trade (mode 1)	nc	na	na	na	na	na	na	na	na	na	na
D. Ownership [questions 10-11]	nc	0	26	na	35	0	30	0	26	38	19
E. Regulation [question 18]	nc	0	0	na	0	100	100	0	0	0	25
PORT OPERATION (TOTAL)	nc 48	49	na	6	50	58	17	36	52	40	
B. Affecting cross-border trade (mode 1) in shipping [Q. 7]	nc	39	33	na	0	44	50	0	44	44	32
D. Ownership [average of questions 12a and 12b]	nc	75	90	na	50	30	50	100	33	100	66
E. Regulation [question 16]	nc	75	100	na	13	88	100	50	0	63	61
TOTAL	nc 22	31	na	19	42	32	18	27	41	29	

Source: Survey responses.

Turning to the explicit targets of the ASEAN Economic Community Blueprint, the tables confirm the relatively liberal approach that most countries of the region have taken to cargo sharing arrangements, a restriction on mode 1 trade. However,

only three ASEAN countries — Cambodia, Indonesia and Thailand — have stated that they grant exemptions from cabotage restrictions, although Indonesia appears to be in the process of phasing the exemptions out. In addition, Vietnam does not allow cross-border provision of maritime services. Vietnam does not have a deep sea port, so most goods are transported to Singapore and Hong Kong before going to the end points. Foreign firms usually provide cross-border services via a Vietnamese (wholly domestic) agency, who does everything on behalf of foreign suppliers in Vietnam and earns a commission from the foreign partners.

Restrictions on the consumption of maritime transport services abroad are virtually non-existent, other than through restrictions on the outward movement of consumers themselves. Hence they have not been canvassed in this study.

Turning next to the various types of restrictions on commercial presence (mode 3), ownership restrictions are slightly more prevalent than other kinds of regulatory restrictions on entry. According to the survey responses, no ASEAN economy meets the Blueprint target of allowing at least 51 per cent foreign ownership by 2010 in all maritime services. However, some countries meet the target for at least some services, including Cambodia, Singapore, Vietnam and (in principle) Myanmar. In most countries, port operations are still government owned. But some countries have moved to a landlord port model for at least some ports, including Cambodia, Malaysia, the Philippines and Thailand. Regulatory restrictions on entry (other than equity limits) are most prevalent in port superstructure services and pilotage, towing and tying.

Looking beyond trade barriers (strictly defined) to look at domestic regulatory regimes that could also be anti-competitive, half of the ASEAN countries retain discriminatory licensing conditions on foreign suppliers (or prohibit foreign entry) for at least some services — these are Cambodia, Indonesia, Myanmar, the Philippines and Singapore. A majority of ASEAN countries require at least some types of shippers to be represented by a domestic shipping agent. A minority retain restrictions on the transportation of non-commercial cargoes. Fewer governments subsidize shipping companies than they do domestic airlines. However, most governments retain relatively heavy regulation of port services.

4. Telecommunications

4.1. Key features of the regulatory regime for telecommunications

One of the key rationales for regulatory intervention in fixed line telecommunications has been that, depending on the size of the market, at least some components of the network have had the characteristics of a so-called ‘natural monopoly’. This means that a single provider can serve the market at lower cost than two or more providers. But regulatory oversight is then required to ensure that a single provider does not abuse its monopoly power.

A second key rationale has been a concern for equity — to ensure that all individuals (or groups) have access to telecommunications services at reasonable cost (commensurate with their incomes, and irrespective of the cost of providing them with the service). This is the so-called universal service obligation of telecommunications carriers. In markets where penetration was low, this type of intervention also had an efficiency rationale. The value to subscribers of connecting to the network increases with the size of the network. Such ‘network externalities’ were also seen to justify some degree of subsidization of telecommunications services so as to increase the size of the network.

In the past, these twin objectives were often met by having all telecommunications services provided by a government department, often in conjunction with postal services.

As reflected in the WTO Reference Paper on telecommunications, the reforms of the 1990s recognized that not all elements of the network had natural monopoly characteristics, and that efficiency gains could be had by introducing competition into those components of the network that were not natural monopolies. However, competitors would still need access to the monopoly elements in order to provide a full retail service. So a regulatory access regime was required to ensure that the incumbent provider did not use its control over the ‘bottleneck’ or ‘essential’ facility to thwart competition in downstream markets. The access regime was to provide competitors with access to essential facilities at access charges that were cost-based and non-discriminatory. In many networks, the key natural monopoly element was the so-called ‘last mile’ — the twisted copper wire connecting each subscriber to the

network, although in small markets other components of the network could also be natural monopolies. The appropriate regulation of access charges is a complex issue, although sometimes made more complex than necessary when access charges (as a single policy instrument) are used to pursue multiple objectives (eg Dee and Findlay 2008).

A related requirement for promoting contestability was to ensure the general interconnectivity of the facilities of various competitors, whether or not they constituted essential facilities. This was required so the subscribers of one provider could make calls to subscribers of all other providers, irrespective of the ownership of the various network components involved. Various regulatory principles were also developed to ensure that interconnection charges were not used by the incumbent to preserve network dominance (eg Economides, Lopomo and Woroch 1996, ITU 2000).

A further component of these reforms was ensuring number portability, so that retail subscribers could take their original phone number with them if they switched providers. This was necessary to reduce the cost of 'shopping around', and thus to increase the competitive pressures on providers.

A key supporting component of these pro-competitive reforms was to revise the ways in which universal service obligations were met. To that point, they had often been met by cross-subsidies built into the retail prices of telecommunications services. Typically, local call prices were kept too low (relative to costs) and no monthly subscriber access charge was imposed that would help to cover the fixed costs of the network. These pricing decisions, typically designed to help the poor, were at least partially funded by having prices of long distance and international calls that were too high (relative to costs). With the introduction of competition, these cross-subsidies provided competitors with a chance to cherry-pick the lucrative, long-distance parts of the market, and left incumbents with fewer options to cover their fixed costs. Their response was often to inflate the wholesale access prices charged to competitors for access to the essential facility. Of course, this worked to defeat the introduction of competition. A key reform component of the 1990s was therefore to 're-balance' retail prices to remove the cross-subsidies and to ensure that fixed costs were covered, and to find other ways to fund universal service obligations

— typically either directly from the government budget, or through an industry levy imposed on all service providers.

Since then, a number of technological advances have in some ways radically transformed the industry. The first key development has been the phenomenal growth of mobile telephony. This technology has few natural monopoly elements, so it has allowed extensive entry by new providers. The cost of mobile handsets has come down to such an extent that they are now within the reach of the very poorest. The availability of pre-paid phone cards means that it is now a low-risk business to provide such services to the very poorest. Data from the International Telecommunications Union (www.itu.int/ITU-D/icteye/Default.aspx) shows that the market penetration of mobile telephony (measured by the number of subscribers per 100 of the population) far exceeds that of fixed line telephony in virtually all markets. And in some countries, the penetration of fixed line telephony has actually fallen recently, as individuals have relinquished fixed lines in favour of mobile-only services.

To the extent that mobile services provide a close substitute to fixed line services, competition from this source can discipline the behaviour of fixed line service providers and reduce the need for regulatory intervention or oversight. The two services are close substitutes for individuals and perhaps even households. But businesses of any size typically also need fixed line connections to meet the sheer volume of their voice and data needs. Most governments have therefore retained the kind of regulatory structures described in the WTO Reference Paper.

A second key development has been the growth of internet, particularly broadband, services. These services, which combine developments in the size and nature of the ‘pipe’ with developments in switching and signal transmission technology, have made it technologically meaningless to distinguish voice from data traffic. This is the essence of ‘convergence’. So now there is an imperative for regulatory structures to acknowledge this convergence. The key way in which this is happening is in the move from ‘individual’ to ‘general’ or ‘class’ licensing, not just for carrier licences, but also for licences to access the spectrum required for mobile and fixed wireless technologies. Typically, individual licences were not only attached to a particular technology, they were also attached to a particular service.

General licenses are less tied to particular services, and will often allow both voice and data transmission, although most governments are not yet ready to include broadcasting services in the bundle.

There is also a growing choice of technologies for delivering broadband services. Somewhat against initial expectations, technological developments have greatly expanded the capacity of the twisted copper wire, so that within OECD countries (which have extensive conventional networks), the overwhelming majority of broadband services are delivered by DSL technology, a technology that still uses the 'last mile' (OECD 2008). Fibre optic cables offer the prospect of even higher speeds and capacity, but virtually the entire fibre optic network is likely have natural monopoly characteristics, at least for initial levels of usage. Finally, fixed wireless technologies can offer broadband services at a lower capital cost than wired technologies, though at slower speed and not necessarily at lower operating cost (ITU 2001). They are also subject to the same problem of spectrum congestion as mobile services, a problem that is becoming endemic in cities such as Jakarta.

This proliferation of delivery technologies has also provided an imperative for regulatory structures to be 'technology-neutral'. This is also facilitated by the move from 'individual' to 'general' or 'class' licensing, since general licenses are typically no longer tied to a particular technology.

But there are limits on the extent to which regulatory structures can be completely technology-neutral. This is because a key rationale for regulatory intervention remains dealing with 'natural monopoly' components of the network, and the nature and extent of the natural monopoly problem depends on the particular technology in question. Furthermore, as new technologies emerge, regulation must strike a balance between promoting static and dynamic efficiency. Static efficiency requires ensuring maximum use of existing facilities that have natural monopoly characteristics. Dynamic efficiency requires ensuring that providers have sufficient incentives to make risky investments in new capacity and new technologies, by receiving sufficient reward for taking such risks.

Services trade reform is one way of promoting the contestability of markets. The potential benefits have been shown to be significant. Mattoo, Rathindran and Subramanian (2001) estimated that countries with fully open telecommunications

and financial sectors grow up to 1.5 percentage points faster than other countries. The analysis of Warren (2000) suggests that in the ASEAN 5, the regulatory restrictions then affecting domestic new entrants would have raised the prices of their services by an average of over 10 per cent, while the additional discrimination (including foreign equity limits) against foreign-invested suppliers would have raised the cost of their services by more than 80 per cent.

However, in telecommunications services, there is no ‘one-size-fits-all’ best approach to regulation, given the rapid development and proliferation of technologies. The most recent ITU survey of trends in reform (ITU 2008) stresses the importance of ensuring interconnectivity across all technologies and all providers, to maximize the use that will be made of any particular facility. The report is subtitled ‘Six Degrees of Sharing’, and notes (p. 1):

“In a way, many regulatory practices can be viewed as sharing. What is new and innovative is their application to meet the needs of developing countries. What is the same is that they use time-tested, pro-competitive tools, such as the regulation of essential or bottleneck facilities, transparency, and the promotion of collocation and interconnection”.

Nevertheless, there is considerable current uncertainty about which technologies may become dominant in the future, and as noted, the scope of such regulation depends on the technology. Countries may not necessarily be sure to ‘pick the best winner’, but they can at least ensure that their regulatory regimes are internally consistent. For example, countries making a serious commitment to fibre optic technologies could need to put more regulatory effort into access regimes that countries relying more on mobile and fixed wireless technologies. But designing a regulatory framework may also depend on whether the national backbone provider competes with other service providers for end users (in which case they have an incentive to block competitors), or whether the backbone provider does not service end users (and therefore has an incentive to sell as much capacity as possible to those that do). There are many more such considerations to be taken into account.

In what follows, the scorecard for telecommunications monitors some of the regulatory settings that have been instrumental in promoting contestability in many

circumstances. However, it needs to be recognized that the best, or most internally consistent, regulatory regime may still vary significantly from country to country.

4.2. Scorecard for telecommunications services

The questionnaire covering actual barriers to trade in telecommunications services thus asks about a range of regulatory policies. Many of these have been recognized as being trade-promoting by the WTO Reference Paper on Telecommunications.

Under commercial presence, the questionnaire asks whether there are restrictions on the entry of new service providers wanting to establish commercially, whether they are domestically-owned, foreign-invested or both. The question covers a variety of telecommunications services separately — domestic fixed line services (local and long-distance), international services (wire/cable and satellite), mobile services using various technologies, data services (both fixed and wireless), leased lines, internet access services and VoIP (Voice over the Internet Protocol) telephony.

The questionnaire also asks these questions separately for facilities-based services, ie services offered by suppliers who own most or all of the transmission capacity used, and resale-based services, ie services offered by suppliers that lease transmission capacity from facilities-based operators and use those facilities (typically with their own switches and routers) to provide services to third parties. Some countries have encouraged resale-based services, particularly in the early stages of reform, in order to put competitive pressure on the pricing structures of incumbents. Other countries have wanted to promote facilities-based competition, and so have restricted or prohibited resale-based services.

This section also asks about restrictions on the ability of non-telecommunications businesses to lease lines or build private networks to meet their own internal communications needs. It also asks about whether such businesses are restricted from connecting their own internal networks to the outside world through the public switched telecommunications network.

Finally, this section asks about whether providers of some services (either facilities-based or resale-based) are restricted from offering services in other

segments of the market. It also asks about restrictions on the legal form of establishment, in particular whether these differ for foreign-invested companies.

It is generally difficult to trade telecommunications services cross-border, without a commercial presence. This is because phone calls are initiated at home, using home-based infrastructure. About the only way that cross-border (mode 1) trade can occur is via call-back. This is where a caller phones an overseas operator, who then calls the subscriber back and connects them to their intended party. In this way, the substantive call is initiated overseas (although the home subscriber can still be charged by the operator for the service). Call-back used to be an effective way to circumvent high international call charges, and perhaps for this reason, it was (and still is) banned in many countries. However, it is of far less relevance today. Firstly, technological advances in conventional telephony have allowed significantly more domestic competition, which has dramatically reduced international call charges. Secondly, much more effective competition is now being provided by VoIP telephony, which is a service requiring a domestic commercial presence. Nevertheless, for completeness, the questionnaire asks about restrictions on call-back services.

Under ownership restrictions, the questionnaire asks whether there are maximum limits on the equity participation of either private domestic or foreign shareholders in locally established telecommunications companies. This question covers the full variety of telecommunications services separately, and also covers facilities-based and resale-based services.

In the final policy section, the questionnaire asks about various aspects of the domestic regulatory regime. It asks whether carrier licences and spectrum licences are 'individual' or 'general'. It asks whether any licences grant exclusive (ie monopoly) rights, and whether separate licences are required for each state/province. It asks about the presence of discriminatory licensing requirements for foreign providers. It also asks about restrictions on the transfer of carrier licences, and whether spectrum trading occurs. Finally, this section has questions covering the regulation of network interconnection (such as whether these are regulated, and which pricing principles apply), the regulation of end-user tariffs (such as whether

tariffs have been rebalanced), and the regulation of universal service (such as which instruments are used).

Finally, unlike the questionnaires for other services, this questionnaire asks about market structures in telecommunications. As noted above, there is no one-size-fits-all regulatory structure, although there are some common elements that have proved to be pro-competitive in many circumstances. What matters as much as the individual regulatory elements is their overall coherence. There have been instances in the past where countries have been able to tick most of the boxes in terms of fulfilling the requirements of the WTO Reference Paper on Telecommunications, but incumbents have been able to retain a dominant position because of internal inconsistency, or because key pieces of the regulatory puzzle have been missing. The questionnaire requests a variety of information about market structure, but in practice only three pieces of information were able to be collected on a consistent basis — the market share of the dominant fixed line service provider, the market share of the dominant mobile service provider, and the number of providers of VoIP telephony.

4.3. Scorecard results for telecommunications services

As with previous services, the qualitative information about trade restrictions and regulatory regimes has been coded in a zero-one fashion, where for each question, a score of 1 has been assigned if the restriction applies, and 0 if it does not. These detailed results are shown in Table 5.

Table 5: Restrictions on Trade in Telecommunications Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
I. Policy Section											
A. Commercial presence - restrictions on entry											
a. Own-facilities basis											
1	Are there restrictions on new <i>facilities-based</i> suppliers of these services?										
	By any firm?										
	0	0	0	1	0	1	0	0	0	0	0.2
	Local (fixed) voice telephone services										
	0	0	0	1	0	1	0	0	0	0	0.2
	Domestic long distance (fixed) voice telephone services										
	0	1	0	1	0	1	0	0	0	0	0.3
	International (fixed) voice telephone services - wire/cable										
	0	1	0	1	0	1	0	0	0	0	0.3
	- satellite										
	0	1	0	1	0	1	0	0	0	0	0.3
	Mobile voice telephone - analog, digital										
	0	1	0	1	0	1	0	0	0	0	0.3
	- satellite										
	0	0	0	1	0	1	0	0	0	0	0.2
	Data communications - fixed										
	0	1	0	1	0	1	0	0	0	0	0.3
	- mobile										
	0	0	0	1	0	1	0	0	0	0	0.2
	Leased lines										
	0	0	0	1	0	1	0	0	0	0	0.2
	Internet access services - wire/cable										
	0	0	0	1	0	1	0	0	0	0	0.2
	- fixed wireless										
	0	0	0	1	0	1	0	0	0	0	0.2
	Other - VOIP										
	0	0	0	1	0	1	0	0	0	0	0.2
	Firms with foreign participation										
	0	0	0	1	0	1	0	0	0	0	0.2
	Local (fixed) voice telephone services										
	0	0	0	1	0	1	0	0	0	0	0.2
	Domestic long distance (fixed) voice telephone services										
	0	1	0	1	0	1	0	0	0	0	0.3
	International (fixed) voice telephone services - wire/cable										
	0	1	0	1	0	1	0	0	0	0	0.3
	- satellite										
	0	1	0	1	0	1	0	0	0	0	0.3
	Mobile voice telephone - analog, digital										
	0	0	0	1	0	1	0	0	0	0	0.2
	- satellite										
	0	0	0	1	0	1	0	0	0	0	0.2
	Data communications - fixed										
	0	1	0	1	0	1	0	0	0	0	0.3
	- mobile										
	0	0	0	1	0	1	0	0	0	0	0.2
	Leased lines										
	0	0	0	1	0	1	0	0	0	0	0.2
	Internet access services - wire/cable										
	0	0	0	1	0	1	0	0	0	0	0.2
	- fixed wireless										
	0	0	0	1	0	1	0	0	0	0	0.2
	Other - VOIP										
	0	0	0	0	0	0	0	0	0	0	0.0
3	Are there restrictions on <i>facilities-based</i> companies entering one market segment if they are operating in others?										
4	Are foreign <i>facilities-based</i> suppliers required to establish under legal forms not required for domestic operators?										
	1	0	1	1	1	1	0	0	1	1	0.7
b. Resale basis											
5	Are there restrictions on new <i>resale-based</i> suppliers of these services?										
	By any firm?										
	0	1	0	1	0	1	0	0	0	0	0.3
	Local (fixed) voice telephone services										
	0	1	0	1	0	1	0	0	0	0	0.3
	Domestic long distance (fixed) voice telephone services										
	0	1	0	1	0	1	0	0	0	0	0.3
	International (fixed) voice telephone services - wire/cable										
	0	1	0	1	0	1	0	0	0	0	0.3
	- satellite										
	0	1	0	1	0	1	0	0	0	0	0.3
	Mobile voice telephone - analog, digital										
	0	1	0	1	0	1	0	0	0	0	0.3
	- satellite										
	0	1	0	1	0	1	0	0	0	0	0.3
	Data communications - fixed										
	0	1	0	1	0	1	0	0	0	0	0.3
	- mobile										
	0	0	0	1	0	1	0	0	0	0	0.2
	Leased lines										
	0	0	0	1	0	1	0	0	0	0	0.2
	Internet access services - wire/cable										
	0	0	0	1	0	1	0	0	0	0	0.2
	- fixed wireless										
	0	0	0	1	0	1	0	0	0	0	0.2
	Other - VOIP										

**Table 5 (Continued): Restrictions on Trade in Telecommunications Services
(Index 0-1)**

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
Firms with foreign participation											
Local (fixed) voice telephone services	0	1	0	1	0	1	0	0	0	0	0.3
Domestic long distance (fixed) voice telephone services	0	1	0	1	0	1	0	0	0	0	0.3
International (fixed) voice telephone services - wire/cable	0	1	0	1	0	1	0	0	0	0	0.3
- satellite	0	1	0	1	0	1	0	0	0	0	0.3
Mobile voice telephone - analog, digital	0	1	0	1	0	1	0	0	0	0	0.3
- satellite	0	1	0	1	0	1	0	0	0	0	0.3
Data communications - fixed	0	1	0	1	0	1	0	0	0	0	0.3
- mobile	0	0	0	1	0	1	0	0	0	0	0.2
Leased lines	0	0	0	1	0	1	0	0	0	0	0.2
Internet access services - wire/cable	0	0	0	1	0	1	0	0	0	0	0.2
- fixed wireless	0	0	0	1	0	1	0	0	0	0	0.2
Other - VOIP	0	0	0	0	0	0	0	0	0	0	0.0
7 Are there restrictions on <i>resale-based</i> companies entering one market segment if they are operating in others?	0	0	0	0	0	0	0	0	0	0	0.0
8 Are foreign <i>resale-based</i> suppliers required to establish under legal forms not required for domestic operators?	1	0	1	1	1	1	0	0	1	1	0.7
<hr/>											
c. Leased lines and private networks											
9 Are companies permitted to operate private networks of <i>leased lines</i> between their various premises?	0	0	0	0	0	0	0	0	0	0	0.0
Is prior authorization required?	1	1	0	0	1	0	0	0	1	0	0.4
10 Are companies permitted to operate private networks of " <i>own facilities</i> " between their various premises?	0	0	0	1	0	0	0	0	0	0	0.1
Is prior authorization required?	1	1	0	0	1	1	0	1	1	0	0.6
11 What types of affiliated firms may be connected to the same private network?											
Parent/holding companies, subsidiaries and branches	0	0	0	0	0	0	0	0	0	0	0.0
As above plus affiliates with minority ownership	0	0	0	0	0	0	0	1	0	1	0.2
Close user groups regardless of ownership linkages	0	0	1	0	0	0	0	1	0	1	0.3
12 Is interconnection of these private networks to the public switched network permitted?											
At one end?	0	0	1	0	0	0	0	0	1	0	0.2
Both ends?	0	0	1	0	1	0	0	0	1	0	0.3
<hr/>											
B. Restrictions on cross-border trade (mode 1)											
a. Own-facilities basis											
13 Are there restrictions on the cross-border supply of facilities-based services, e.g., callback?	0	1	1	1	1	1	1	0	1	1	0.8
14 Are there routing restrictions (e.g., having to use the incumbent's international gateways)?	0	1	1	1	1	1	0	0	0	0	0.5
<hr/>											
a. Resale basis											
16 Are there restrictions on the cross-border supply of resale-based services, e.g., callback?	0	1	1	1	1	1	1	0	1	1	0.8
17 Are there routing restrictions (e.g., having to use the incumbent's international gateways)?	0	1	1	1	1	1	1	0	0	0	0.6
<hr/>											
C. Ownership											
20 Is private (ie non-government) ownership of <i>facilities-based</i> telecom service suppliers allowed?											
Existing operators											
Local (fixed) voice telephone services	0	0	0	0.75	0	0.4	0	0	0	0	0.1
Domestic long distance (fixed) voice telephone services	0	0	0	0.75	0	0.4	0	0	0	0	0.1
International (fixed) voice telephone services - wire/cable	0	0	0	1	0	0.4	0	0	0	0	0.1
- satellite	0	0	0	1	0	0.4	0	0	0	0	0.1
Mobile voice telephone - analog, digital	0	0	0	0.75	0	0.4	0	0	0	0	0.1
- satellite	0	0	0	1	0	0.4	0	0	0	0	0.1

**Table 5 (Continued): Restrictions on Trade in Telecommunications Services
(Index 0-1)**

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
Data communications - fixed	0	0	0	0.75	0	0.4	0	0	0	0	0.1
- mobile	0	0	0	0.75	0	0.4	0	0	0	0	0.1
Leased lines	0	0	0	0.75	0	0.4	0	0	0	0	0.1
Internet access services - wire/cable	0	0	0	0.75	0	0.4	0	0	0	0	0.1
- fixed wireless	0	0	0	0.75	0	0.4	0	0	0	0	0.1
Other - VOIP	0	0	0	1	0	0.4	0	0	0	0	0.1
New entrants											
Local (fixed) voice telephone services	0	0	0	1	0	1	0	0	0	0	0.2
Domestic long distance (fixed) voice telephone services	0	0	0	1	0	1	0	0	0	0	0.2
International (fixed) voice telephone services - wire/cable	0	1	0	1	0	1	0	0	0	0	0.3
- satellite	0	1	0	1	0	1	0	0	0	0	0.3
Mobile voice telephone - analog, digital	0	1	0	1	0	1	0	0	0	0	0.3
- satellite	0	1	0	1	0	1	0	0	0	0	0.3
Data communications - fixed	0	0	0	1	0	1	0	0	0	0	0.2
- mobile	0	0	0	1	0	1	0	0	0	0	0.2
Leased lines	0	0	0	1	0	1	0	0	0	0	0.2
Internet access services - wire/cable	0	0	0	1	0	1	0	0	0	0	0.2
- fixed wireless	0	0	0	1	0	1	0	0	0	0	0.2
Other - VOIP	0	0	0	1	0	1	0	0	0	0	0.2
21 Is foreign ownership of <i>facilities-based</i> telecom service suppliers allowed?											
Existing operators											
Local (fixed) voice telephone services	0.51	0	0.51	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
Domestic long distance (fixed) voice telephone services	0.51	0	0.51	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
International (fixed) voice telephone services - wire/cable	0.51	0	0.51	1	0.51	0.4	0.6	0	0.51	0.49	0.5
- satellite	0.51	0	0.51	1	0.51	0.4	0.6	0	0.51	0.49	0.5
Mobile voice telephone - analog, digital	0.51	0	0.35	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
- satellite	0.51	0	0.35	1	0.51	0.4	0.6	0	0.51	0.49	0.4
Data communications - fixed	0.51	0	0.05	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
- mobile	0.51	0	0.05	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
Leased lines	0.51	0	0.51	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
Internet access services - wire/cable	0.51	0	0.35	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
- fixed wireless	0.51	0	0.35	0.75	0.51	0.4	0.6	0	0.51	0.49	0.4
Other - VOIP	0.51	0	0.51	1	0.51	0.4	0.6	0	0.51	0.49	0.5
New entrants											
Local (fixed) voice telephone services	0.51	0	0.51	1	0.51	1	0.6	0	0.51	0.49	0.5
Domestic long distance (fixed) voice telephone services	0.51	0	0.51	1	0.51	1	0.6	0	0.51	0.49	0.5
International (fixed) voice telephone services - wire/cable	0.51	1	0.51	1	0.51	1	0.6	0	0.51	0.49	0.6
- satellite	0.51	1	0.51	1	0.51	1	0.6	0	0.51	0.49	0.6
Mobile voice telephone - analog, digital	0.51	1	0.35	1	0.51	1	0.6	0	0.51	0.49	0.6
- satellite	0.51	1	0.35	1	0.51	1	0.6	0	0.51	0.49	0.6
Data communications - fixed	0.51	0	0.05	1	0.51	1	0.6	0	0.51	0.49	0.5
- mobile	0.51	0	0.05	1	0.51	1	0.6	0	0.51	0.49	0.5
Leased lines	0.51	0	0.51	1	0.51	1	0.6	0	0.51	0.49	0.5
Internet access services - wire/cable	0.51	0	0.35	1	0.51	1	0.6	0	0.51	0.49	0.5
- fixed wireless	0.51	0	0.35	1	0.51	1	0.6	0	0.51	0.49	0.5
Other - VOIP	0.51	0	0.51	1	0.51	1	0.6	0	0.51	0.49	0.5
22 Is private (ie non-government) ownership of <i>resale-based</i> telecom service suppliers allowed?											
Existing operators											
Local (fixed) voice telephone services	0	0	0	1	0	1	0	0	0	0	0.2
Domestic long distance (fixed) voice telephone services	0	0	0	1	0	1	0	0	0	0	0.2

**Table 5 (Continued): Restrictions on Trade in Telecommunications Services
(Index 0-1)**

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
International (fixed) voice telephone services - wire/cable	0	0	0	1	0	1	0	0	0	0	0.2
- satellite	0	0	0	1	0	0.4	0	0	0	0	0.1
Mobile voice telephone - analog, digital	0	0	0	1	0	1	0	0	0	0	0.2
- satellite	0	0	0	1	0	0.4	0	0	0	0	0.1
Data communications - fixed	0	0	0	1	0	1	0	0	0	0	0.2
- mobile	0	0	0	1	0	0.4	0	0	0	0	0.1
Leased lines	0	0	0	1	0	1	0	0	0	0	0.2
Internet access services - wire/cable	0	0	0	1	0	1	0	0	0	0	0.2
- fixed wireless	0	0	0	1	0	1	0	0	0	0	0.2
Other - VOIP	0	0	0	1	0	0.4	0	0	0	0	0.1
New entrants											
Local (fixed) voice telephone services	0	1	0	1	0	1	0	0	0	0	0.3
Domestic long distance (fixed) voice telephone services	0	1	0	1	0	1	0	0	0	0	0.3
International (fixed) voice telephone services - wire/cable	0	1	0	1	0	1	0	0	0	0	0.3
- satellite	0	1	0	1	0	1	0	0	0	0	0.3
Mobile voice telephone - analog, digital	0	1	0	1	0	1	0	0	0	0	0.3
- satellite	0	1	0	1	0	1	0	0	0	0	0.3
Data communications - fixed	0	1	0	1	0	1	0	0	0	0	0.3
- mobile	0	1	0	1	0	1	0	0	0	0	0.3
Leased lines	0	0	0	1	0	1	0	0	0	0	0.2
Internet access services - wire/cable	0	0	0	1	0	1	0	0	0	0	0.2
- fixed wireless	0	0	0	1	0	1	0	0	0	0	0.2
Other - VOIP	0	0	0	1	0	1	0	0	0	0	0.2
²³ Is foreign ownership of <i>resale-based</i> telecom service suppliers allowed?											
Existing operators											
Local (fixed) voice telephone services	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5
Domestic long distance (fixed) voice telephone services	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5
International (fixed) voice telephone services - wire/cable	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5
- satellite	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5
Mobile voice telephone - analog, digital	0.51	0	0.35	1	0.51	1	0.6	0	0	0.49	0.4
- satellite	0.51	0	0.35	1	0.51	1	0.6	0	0	0.49	0.4
Data communications - fixed	0.51	0	0.05	1	0.51	1	0.6	0	0	0.49	0.4
- mobile	0.51	0	0.05	1	0.51	1	0.6	0	0	0.49	0.4
Leased lines	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5
Internet access services - wire/cable	0.51	0	0.35	1	0.51	1	0.6	0	0	0.49	0.4
- fixed wireless	0.51	0	0.35	1	0.51	1	0.6	0	0	0.49	0.4
Other - VOIP	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5
New entrants											
Local (fixed) voice telephone services	0.51	1	0.51	1	0.51	1	0.6	0	0	0.49	0.6
Domestic long distance (fixed) voice telephone services	0.51	1	0.51	1	0.51	1	0.6	0	0	0.49	0.6
International (fixed) voice telephone services - wire/cable	0.51	1	0.51	1	0.51	1	0.6	0	0	0.49	0.6
- satellite	0.51	1	0.51	1	0.51	1	0.6	0	0	0.49	0.6
Mobile voice telephone - analog, digital	0.51	1	0.35	1	0.51	1	0.6	0	0	0.49	0.5
- satellite	0.51	1	0.35	1	0.51	1	0.6	0	0	0.49	0.5
Data communications - fixed	0.51	1	0.05	1	0.51	1	0.6	0	0	0.49	0.5
- mobile	0.51	1	0.05	1	0.51	1	0.6	0	0	0.49	0.5
Leased lines	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5
Internet access services - wire/cable	0.51	0	0.35	1	0.51	1	0.6	0	0	0.49	0.4
- fixed wireless	0.51	0	0.35	1	0.51	1	0.6	0	0	0.49	0.4
Other - VOIP	0.51	0	0.51	1	0.51	1	0.6	0	0	0.49	0.5

**Table 5 (Continued): Restrictions on Trade in Telecommunications Services
(Index 0-1)**

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
D. Regulation											
b. Licensing											
25 a. Are individual or general/class <i>operating licenses</i> required for the provision of various services? Facilities-based	1	0.083	1	1	0	1	1	0	1	0	0.6
b. Are individual or general/class <i>operating licenses</i> required for the provision of various services? Resale-based	1	0.727	1	1	0	1	1	0.5	0	0	0.6
26 When <i>spectrum licenses</i> are required for the provision of services, are they individual or general/class use licenses.	1	0	1	1	0	1	1	0	1	0	0.6
27 Do any licences grant exclusive rights?	0	1	1	0	0	1	0	0	0	0	0.3
28 Are separate licenses required to establish branches in each state/province?	0	0	0	0	0	0	0	0	0	1	0.1
30 Are foreign-owned suppliers subject to different licensing conditions from domestic suppliers?	0	0	0	0	1	0	0	0	0	0	0.1
31 Once the licenses have been allocated, are there restrictions on firms' ability to sell or otherwise transfer these licenses?	1	0	1	1	0	1	0	1	1	1	0.7
Does spectrum trading occur?	1	1	1	1	1	1	1	0	1	0	0.8
c. Regulation of network interconnection											
32 How are interconnection agreements among service providers determined?											
Between fixed line service providers	0.5	0.5	0.5	1	0.5	1	0	0.5	0.5	0.5	0.6
Between mobile and fixed line carriers	0.5	0.5	0.5	1	0.5	1	0	0.5	0.5	0.5	0.6
Between mobile carriers	0.5	0.5	0.5	1	0.5	1	0	0.5	0.5	0.5	0.6
Between internet service providers	0.5	0.5	0.5	1	0.5	1	0	0.5	0	0.5	0.5
34 Which of the following interconnection pricing rules apply?											
Between fixed line service providers											
Reciprocal pricing	0	0	0	1	1	1	1	1	1	0	0.6
Unbundling	0	1	0	0	0	1	1	1	0	1	0.5
Imputation	0	1	0	1	1	1	1	0	1	1	0.7
Between mobile and fixed line carriers											
Reciprocal pricing	0	0	0	1	1	1	1	1	1	0	0.6
Unbundling	0	1	0	0	0	1	1	1	0	1	0.5
Imputation	0	1	0	1	1	1	1	0	1	1	0.7
Between mobile carriers											
Reciprocal pricing	0	0	0	1	1	1	1	1	1	0	0.6
Unbundling	0	1	0	0	0	1	1	1	0	1	0.5
Imputation	0	1	0	1	1	1	1	0	1	1	0.7
35 Other aspects of interconnection											
Are reference agreements publicly available?	1	1	0	0	1	1	1	0	0	1	0.6
Are mobile phone carriers allowed to charge for incoming mobile calls?	0	0	1	0	1	1	0	0	0	0	0.3
d. Regulation of end-user tariffs											
36 How are end used tariffs determined in your country?											
For fixed line calls	0.5	0	0	1	0.5	1	1	1	1	0	0.6
For mobile calls	0.5	0	0	1	0	1	1	1	1	0	0.6
37 Tariff rebalancing											
Are fixed line providers allowed to charge a subscriber access charge (eg per month) as well as a charge per call? Have tariffs been rebalanced, or are there plans to rebalance them?	0	0	0	0	0	1	1	0	0	0	0.2
	0	0	0	1	0	1	1	1	1	0	0.5
e. Universal Service											
39 What are the policy instruments used to pursue the universal service objective?	0.5	0	0	0	0.5	0	0.5	0	0.5	0	0.2

Table 5 (Continued): Restrictions on Trade in Telecommunications Services (Index 0-1)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
II. Market Structure											
41 Domestic fixed line - market share of incumbent	1	0.25	0.25	0	1	1	0.25	0	0	0.5	0.4
Mobile voice telephone services (analog/digital) - market share of largest provider	1	0	0	0	0	1	0	0	0	0	0.2
42 How many providers are offering telecommunications services through VOIP?	0.75	0	0	1	0	0.75	0	0	1	0	0.4

Source: Survey responses.

Sometimes an intermediate score is assigned for intermediate stages of restrictiveness. In the case of telecommunications services, partial scores have been assigned as follows. For private and foreign equity restrictions, the partial scoring system is the same as in air transport. The overall scores for licence types are an average across all services, where for each service an individual licence (or service not permitted) has been assigned a score of 1, and a general licence has been assigned a score of 0. For the regulatory regimes governing interconnection, end-user tariffs and universal service, light-handed regulation has been assigned a low score and heavy-handed regulation a high score. However, a normative interpretation should not be placed on these scores because, as noted previously, it is coherence rather than light-handedness per se that matters. For interconnection agreements, private negotiation has been assigned a score of 0, detailed regulation a score of 1, and intermediate types of regulation a score of 0.5. Similarly, for the setting of end-user tariffs, market forces have been assigned a score of 0, CPI-X price caps on groups of services have been assigned a score of 0.25, CPI-X price caps on individual services have been assigned a score of 0.5, and other options have been assigned a score of 1. For the delivery of universal service obligations, monopoly provision has been assigned a score of 1, rollout obligations a score of 0.5, and direct subsidies or vouchers a score of 0.

The overall coherence of regulatory regimes can ultimately be judged according to whether they have engendered a competitive market structure. When scoring the market share of the dominant fixed line and mobile service provider, a market share of more than 90 per cent has been scored as 1, a share of more than 80 per cent has

been scored as 0.75, a share of more than 70 per cent has been scored as 0.5, a share of more than 60 per cent has been scored as 0.25, and all smaller market shares have been scored as 0. When scoring the number of VoIP service providers, no providers has been scored as 1, a single provider has been scored as 0.75, less than 10 providers has been scored as 0.5, and 10 or more has been scored as 0.

Summary restrictiveness scores for broad categories of restrictions have also been obtained using the same methods as for air transport. The results are shown in Table 6.

Table 6: Restrictions on Trade in Telecommunications Services - Prevalence (%)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
FACILITIES-BASED SERVICES (TOTAL)	20	24	18	94	20	80	22	0	21	18	32
A. Commercial presence (mode 3) [questions 1-4]	4	35	4	96	4	96	0	0	4	4	25
B. Cross-border trade (mode 1) [questions 13-14]	0	100	100	100	100	100	50	0	50	50	65
C. Ownership [questions 20-21]	26	17	19	92	26	70	30	0	26	25	33
D. Regulation - licensing [questions 25a and 26]	100	4	100	100	0	100	100	0	100	0	60
RESALE-BASED SERVICES (TOTAL)	18	45	17	99	20	96	23	1	3	18	34
A. Commercial presence (mode 3) [questions 5-8]	4	62	4	96	4	96	0	0	4	4	27
B. Cross-border trade (mode 1) [questions 16-17]	0	100	100	100	100	100	100	0	50	50	70
C. Ownership [questions 22-23]	26	33	19	100	26	95	30	0	0	25	35
D. Regulation - licensing [question 25b]	100	73	100	100	0	100	100	50	0	0	62
LEASED LINES AND PRIVATE NETWORKS (TOTAL)	22	22	33	11	33	11	0	33	44	22	23
A. Commercial presence (mode 3) [questions 9-12]	22	22	33	11	33	11	0	33	44	22	23
GENERAL (TOTAL)	34	42	23	59	52	92	58	44	52	43	50
D. Regulation - licensing [questions 27-31]	50	50	75	50	50	75	25	25	50	50	50
D. Regulation - other [questions 32-39]	23	45	15	65	55	95	73	55	55	45	53
Market structure [questions 41-42]	92	8	8	33	33	92	8	0	33	17	33
TOTAL	21	35	19	87	25	85	26	8	19	21	35

Source: Survey responses.

Turning first to the ‘acid test’ of market structure, most ASEAN countries score relatively well. One exception is Brunei, but with a population of just over 300,000 in 2000, this is a very small market — probably too small to support more than one player. Another exception is Myanmar, where the service is in practice dominated by the government, though foreign investment in partnership with the government is allowed in principle. Although Lao PDR has more than one player, even in fixed line services, it has extensive restrictions on further new entry, as does Myanmar and to a lesser extent, Cambodia. A final exception is Malaysia, which still has a virtual monopoly in fixed line telecommunications.

Turning next to the other explicit targets of the ASEAN Economic Community Blueprint, a majority of countries score poorly on restrictions on cross-border (mode 1) trade in telecommunications services. However, as noted earlier, the relevant restriction to this mode of trade is by now a technical restriction that has very little real relevance. Similarly, restrictions on the consumption of telecommunications services abroad (mode 2) are non-existent (other than through restrictions on the outward movement of consumers themselves), so have not been canvassed in the questionnaire.

Table 5 shows the situation regarding foreign equity limits on investment in existing or new telecommunications service providers. Cambodia, Lao PDR and Myanmar have total bans on foreign investment in new provision of at least some telecommunications services. The Philippines limits foreign equity to 40 per cent in all services. Four more countries limit foreign investment in at least some services to 49 per cent, which is less than the 51 per cent target for 2010 prescribed in the Blueprint. These are Brunei, Indonesia, Malaysia and Thailand. Thus only two ASEAN countries — Singapore and Vietnam — currently meet the Blueprint's foreign equity targets in telecommunications, at least on an MFN basis. This is hard to understand, given the extent of existing competition in most countries, even in fixed line services.

As far as regulation is concerned, most countries are relatively even-handed in their regulation of facilities-based and resale-based services, and most have a relatively liberal treatment of leased lines and private networks. However, only a minority of ASEAN members have moved comprehensively to general rather than individual licensing of telecommunications providers — these are Cambodia, Malaysia, Singapore and Vietnam. Malaysia is the one ASEAN country that still applies discriminatory licensing requirements to foreign-invested suppliers.

In terms of general regulation, Indonesia, Brunei, and to a lesser extent Cambodia and Vietnam apply relatively light-handed regulation to telecommunications suppliers. However, as noted previously, no normative interpretation should necessarily be placed on this result. Instead, the very high market share of the incumbent fixed line service supplier in Malaysia is perhaps most indicative of a problem with general regulation.

5. Implementation of the ASEAN Single Window

5.1. Key features of the regulatory regime for customs clearance

Business surveys routinely identify high money and time costs of customs clearance procedures as key contributors to an inefficient logistics chain. Recent business surveys within ASEAN were summarized in Findlay (2009). This summary noted that border procedures continue to be pervasive and critically affect both goods and services business across ASEAN. The procedures themselves are numerous and still need to be reduced or rationalized or streamlined. “The ASEAN Single Window program illustrates this difficulty, since national Single Windows still need to be realized in all member countries. The national Single Window program is a priority.” (Findlay 2009, p. 103)

Blueprints for simplifying and harmonizing customs procedures have been available for decades. The Kyoto Convention entered into force in 1974, and was revised in 1999 as the blueprint for modern and efficient customs procedures in the 21st century. The revised Kyoto Convention entered into force in 2006, and elaborates several key governing principles, including:

- transparency and predictability of customs actions;
- standardization and simplification of the goods declaration and supporting documents;
- simplified procedures for authorized persons;
- maximum use of information technology;
- minimum necessary customs control to ensure compliance with regulations;
- use of risk management and audit based controls;
- coordinated interventions with other border agencies; and
- partnership with the trade.

Significant progress has been made in ASEAN over the years, including the harmonization of tariff nomenclature, customs valuation, establishment of post-audit clearance system in all member countries, implementation of a green lane for ASEAN trade, and common customs formalities for transit goods (CIE 2006).

In 2005, ASEAN agreed to establish the ASEAN Single Window to further expedite customs procedures within ASEAN. This was to involve setting up a single clearance channel for goods for the ASEAN 6 by 2008, and newer members by 2012.

The ASEAN Single Window presupposes the existence of national Single Windows that can be interconnected. National Single Windows are to allow:

- a single point of entry for submission of data and information;
- re-use of data and information to avoid repeated keying-in of data;
- single synchronous processing of data and information; and
- quick and easy release and clearance of cargo.

The National Single Windows are to coordinate the processing of information and data across six major areas:

- customs;
- permit issuing agencies/other government agencies;
- banking and insurance agencies;
- transport community;
- trading community; and
- ASEAN/International link.

5.2. Scorecard for customs clearance

The questionnaire covering customs clearance asks about implementation of National Single Windows, and cooperation to achieve an ASEAN Single Window. Information about the current state of play is available on the ASEAN Secretariat's website (see www.aseansec.org/Fact%20Sheet/AEC/2009-AEC-018.pdf). The current questionnaire adds value by not only asking about progress towards the above-stated goals of the National Single Window, but also whether this has facilitated achieving the broader aims of the revised Kyoto Convention. Key to these aims is maximising the use of information technology and minimizing the scope for bureaucratic intervention, not just to speed up customs clearance procedures, but also to reduce the opportunities for informal payments.

The first section of the questionnaire asks about implementation of National Single Windows, on either a pilot basis or at all points of entry, and what this has contributed to achieving the broader goals of the revised Kyoto Convention. It asks

about the extent to which information can be submitted electronically, and about the extent of multiple handling and/or multiple keying that might still take place 'behind' the single window. It then asks a series of questions about how clearance and release procedures might thereby have been streamlined and automated. Specifically it asks whether there is a time limit for the approval of declarations, whether performance is measured against target, whether there is a fast-lane procedure for regular importers with a good track record, and critically, whether duty can be paid via electronic funds transfer, and whether there is automatic release of goods once duty is paid. These key steps were identified in the survey by Findlay (2009). Finally, it asks a series of questions about the risk assessment methods employed. Specifically, it asks whether there are clearly identified risk assessment criteria for cargo inspection, whether pre-arrival information is used in risk assessment, whether selection for assessment is done electronically, based on risk criteria, whether X-ray equipment is used in examination, and whether manual inspection is subject to time limits. These steps were also identified in the survey by Findlay (2009)

The next section of the questionnaire asks about transparency and due process. There is a series of questions about the online availability of information about trade regulations, and the availability of feedback and appeals mechanisms for importers, freight forwarders and transport operators. Critically, this section also asks whether performance is measured *ex post*. Specifically, it asks whether customs clearance times are measured according to the World Customs Organization's (WCO) time-release methodology, and whether clearance times (however measured) are made public. As with telecommunications regulation, trade regulation involves a series of interconnected processes, and overall performance can remain poor if one component is missing. Therefore, it is critical not just to monitor the implementation of individual components, but also to measure overall performance, and to make this publicly available for scrutiny. According to the survey results, only half of ASEAN members measure clearance times according to WCO methodology, and even fewer make such data public.

In the final section, the questionnaire asks about a country's participation in regional cooperation efforts towards an ASEAN Single Window. This includes not only participating in pilot schemes, but also working towards streamlining and

harmonizing customs marking requirements, and working towards mutual recognition of conformance assessments.

5.3. Scorecard results for customs clearance

As with the previous services, the qualitative information about customs clearance procedures has been coded in a zero-one fashion. Contrary to previous services, a higher score denotes a ‘better’ rather than a ‘worse’ outcome. Thus a score of 1 has been assigned if a streamlining or improvement measure has been implemented, and 0 if it has not, so the index is an implementation index rather than a restriction index. The detailed results are shown in Table 7.

Table 7: Implementation of ASEAN Single Window

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
I. National Policy	(0=no implementation, 1=full implementation)										
A. National Single Window											
1 Is there a single point of entry for the submission of all data and information required to move goods across borders?	0.5	0.5	0.5	0.5	0.5	0	1	1	0.5	0.5	0.6
2 How must the data be submitted?	0.5	0.5	0.5	0	0.5	0	1	1	0.5	0.5	0.5
3 How is the data processed?	1	1	1	1	1	1	1	1	0.2	0.6	0.9
4 Clearance and release											
Is there a time limit for approval of declarations?	1	0	1	1	1	1	1	1	0	1	0.8
Is actual performance measured against target?	1	0	1	1	1	1	1	0	1	0	0.7
Fast-lane procedure for importers with good track record?	1	0	1	1	1	1	1	0	1	0	0.7
Can duty payment be made by electronic funds transfer?	1	0	0	0	1	0	1	1	1	0	0.5
Automatic release of goods once payment received?	1	1	0	0	1	0	1	1	1	0	0.6
5 Risk assessment											
Clearly identified risk assessment criteria for cargo inspection?	0.5	0.5	1	0.5	1	0.5	1	0	1	0.5	0.7
Pre-arrival information used in risk assessment?	0.5	0.5	0	0	0.5	0	1	1	1	1	0.6
Selection for examination electronic, based on risk criteria?	0.5	0	1	0	0.5	0	1	0	1	0	0.4
Is X-ray equipment used in examination?	0.5	1	1	0	0.5	1	1	1	1	1	0.8
Is manual inspection subject to time limits?	0.5	0	0.5	0.5	1	1	0	0	1	1	0.6
B. Transparency and due process											
6 Trade regulation											
Is trade regulation available online?	1	1	1	1	1	1	1	1	1	1	1.0
Is there provision for online feedback from importers etc?	1	1	1	0	1	0	1	1	1	0	0.7
Is there a telephone hotline for queries about procedures? participants?	1	1	1	0	1	0	1	1	1	0	0.7
Is there a system of appeals in Customs matters?	1	1	1	1	1	0	1	1	1	0	0.8
Is there a system of appeals in Customs matters?	1	0	1	0	1	1	1	0	1	1	0.7
7 Performance											
Clearance times measured according to WCO methodology?	0	0	1	0	1	0	1	0	1	1	0.5
Is the data made public?	0	0	1	1	0	1	0	0	0	0	0.3
II. Regional Cooperation											
8 Is your country participating in the ASEAN Single Window?	0.5	0.5	0.5	0.5	0.5	0	1	1	0.5	0.5	0.6
9 Is your country working towards streamlining and harmonising Customs marking requirements within ASEAN?											
Developing preferred approach at national level?	1	1	1	1	1	1	1	1	1	1	1.0
Participating in regional discussions?	1	1	1	1	1	1	1	1	1	1	1.0
10 Is your country working towards mutual recognition of conformance assessments within ASEAN?											
Developing preferred approach at national level?	1	1	1	1	1	1	1	1	1	1	1.0
Participating in regional discussions?	1	1	1	1	1	1	1	1	1	1	1.0

Source: Survey responses.

Sometimes an intermediate score is assigned for intermediate stages of implementation. In the case of customs clearance, a partial score of 0.5 has been assigned if a country has participated in a particular national or regional improvement activity on a pilot basis, rather than at all points of entry. A score of 0.5 has been assigned if data submission is only partially electronic. Finally, a score of 0.5 has been assigned if a particular risk assessment measure is undertaken only sometimes, rather than always.

Summary restrictiveness scores for broad categories of customs clearance improvement measures have been obtained using the same methods as for air transport. The results are shown in Table 8.

Table 8: Implementation of ASEAN Single Window - Prevalence (%)

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	Average
I. National Policy	73	45	78	43	83	48	90	60	81	46	64
<i>A. National Single Window [questions 1-5]</i>	73	38	65	42	81	50	92	62	78	47	63
<i>B. Transparency and due process [questions 6-7]</i>	71	57	100	43	86	43	86	57	86	43	67
II. Regional Cooperation [questions 8-10]	90	90	90	90	90	80	100	100	90	90	91
TOTAL	76	54	80	52	84	54	92	68	83	54	70

Source: Survey responses.

The two tables indicate, not surprisingly, that there is little apparent variation in countries' participation in formal ASEAN efforts to improve customs procedures. All countries are participating in regional cooperation efforts to simplify and harmonize customs documentation and to introduce mutual recognition of conformance assessments. Most countries are participating in efforts to introduce National Single Windows and integrate these into an ASEAN Single Window (the exception is Myanmar).

Differences arise in the extent to which this participation is translating into better customs procedures on the ground. There is little variation in the responses to the question about the number of times data is handled or keyed in 'behind' the window, indicating that this question was too simplistic to capture some of the issues involved. More revealing is the fact that only two countries have fully electronic filing of customs documentation — Singapore and the Philippines. Similarly, there is

considerable variation in the extent to which countries have set targets and used information technology to automate decision-making in their clearance and release procedures, although this variation partly reflects levels of development. Brunei, Malaysia and the Philippines do the best on this score. Singapore apparently does less well, though this may simply reflect the reticence of Singapore customs authorities to provide full information. Cambodia and Vietnam have made the least progress on setting targets and automating decision-making.

There is also considerable variation in the extent to which risk assessment is used in customs clearance. The Philippines and Thailand do well. Singapore's responses reflect the unwillingness of the Singapore customs authorities to reveal the existence and nature of any risk assessment criteria.

Most ASEAN countries are relatively transparent about their trade regulation. But very few are fully transparent about ex post performance, as measured by customs clearance times. Apparently only Indonesia measures these according to WCO methodology and makes the results public. Lao PDR and Myanmar are reported as making information public, though they do not use WCO methodology. By contrast, Malaysia, the Philippines, Thailand and Vietnam measure clearance times, but do not make the results public. As noted above, the publication of clearance times would provide the acid test as to whether ASEAN cooperation efforts were achieving their ultimate aims.

6. Summary and Conclusions

The key purpose of this paper has been to map the existing policy space in three key services sectors — air transport, maritime services (both shipping and port services), and telecommunications services — as well as to provide evidence on whether the implementation of the ASEAN Single Window is helping to achieve the broader objectives of the revised Kyoto Convention on customs procedures. The air transport sector is one of the priority sectors to be liberalized by 2010, while maritime and telecommunications services and customs clearance are key components of the logistics chain.

Air transport is regulated by bilateral and plurilateral air services agreements that have been negotiated largely outside of the normal disciplines of services trade agreements, and are typically far less liberal than such agreements, particularly in their ‘rules of origin’. The ownership provisions of air services agreements can significantly limit the ability of foreign service providers to offer international or domestic passenger and freight services, either cross-border or by commercial presence. The restrictions embodied in air services agreements have been shown to be costly.

According to the survey responses, only one country — Singapore — explicitly meets the Blueprint target of allowing at least 70 per cent foreign ownership in domestically established air services companies by 2010. But if Singapore were actually to achieve 70 per cent foreign ownership of its international airline, it could well be prevented from supplying international air services to other ASEAN countries, even if they had ratified the ASEAN Multilateral Agreements on Air Services. This is because that multilateral agreement allows them to retain withholding clauses in their air services agreements that would require Singapore to have ‘substantial ownership and effective control’ of Singapore Airlines by Singaporean entities in order to provide services.

Therefore, effective liberalization of mode 3 trade in air services not only requires the reform of investment laws, it also requires the reform of withholding clauses in air services agreements so that at minimum, they allow substantial ownership by an ASEAN community of interests. Currently, the secrecy surrounding the provisions of air services agreements makes it very difficult for outside observers to monitor such progress. ASEAN members should be working towards the further reform of their air services agreements, and should be demanding much greater transparency of their provisions.

As in many other services, restrictions on the movement of people remain one of the most prevalent of all types of trade restrictions. Looking beyond trade barriers (strictly defined) to look at domestic regulatory regimes, most ASEAN countries allocate flight and gate slots in ways that could potentially be anti-competitive. This is becoming an increasingly important barrier to effective competition.

In **maritime services**, most countries of the region have taken a relatively liberal approach to cargo sharing arrangements, a restriction on mode 1 trade. However, only three ASEAN countries — Cambodia, Indonesia and Thailand — have stated that they grant exemptions from cabotage restrictions, and Indonesia appears to be in the process of phasing the exemptions out. Nevertheless, cabotage restrictions have been shown to be costly, particularly for developing countries, and ASEAN members should be looking to expand the scope of exemptions on such restrictions.

According to the survey responses, no ASEAN economy meets the Blueprint target of allowing at least 51 per cent foreign ownership by 2010 in all maritime services. However, some countries meet the target for at least some services, including Cambodia, Singapore, Vietnam and (in principle) Myanmar. Some countries have moved to a relatively liberal landlord port model for at least some ports, including Cambodia, Malaysia, the Philippines and Thailand. Regulatory restrictions on entry (other than equity limits) are most prevalent in port superstructure services and pilotage, towing and tying.

In **telecommunications**, the ‘acid test’ of whether regulatory structures have promoted contestability is whether they have diluted the market shares of incumbent providers. Here most ASEAN countries score relatively well, except for Brunei (which has a very small market), Myanmar (where the service is in practice dominated by the government) and Malaysia (which still has a virtual monopoly in fixed line telecommunications).

Only two ASEAN countries — Singapore and Vietnam — currently meet the Blueprint’s foreign equity targets in all telecommunications services, at least on an MFN basis. The remaining restrictions on foreign equity limits are hard to understand, given the extent of existing competition in most countries, even in fixed line services, and should be phased out.

As far as regulation is concerned, most countries are relatively even-handed in their regulation of facilities-based and resale-based services. However, only a minority of ASEAN members have moved comprehensively to general rather than individual licensing of telecommunications, a move that can promote convergence and ensure the technological neutrality of regulation. Some countries apply relatively light-handed regulation to telecommunications suppliers, although no normative

interpretation should necessarily be placed on this result, since regulatory coherence is more important than light- or heavy-handedness per se. The persistence of very high market shares of incumbent service suppliers is perhaps most indicative of remaining problems with general regulation.

There is little apparent variation in countries' participation in formal ASEAN efforts to improve **customs clearance** procedures. Differences arise in the extent to which this participation is translating into better customs procedures on the ground. Only two countries report having fully electronic filing of customs documentation. Similarly, there is considerable variation in the extent to which countries have set targets and used information technology to automate decision-making in their clearance and release procedures, although this variation partly reflects levels of development. There is also considerable variation in the extent to which risk assessment is used in customs clearance.

Most ASEAN countries are relatively transparent about their trade regulation. But very few are fully transparent about ex post performance, as measured by customs clearance times. The publication of clearance times would provide the acid test as to whether ASEAN cooperation efforts were achieving their ultimate aims, and should be a priority for ASEAN members.

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