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PROMOTING OPEN AND COMPETITIVE MARKETS

In Road Freight and Logistics Services

The World Bank Group's Markets and Competition Policy Assessment Tool applied in Peru, The Philippines and Vietnam





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December 2018

CONTENTS

Abbreviations	i
Acknowledgements	iii
Executive Summary	v
I. The importance of competition and effective regulation in road freight transport and logistics services sectors	1
II. A framework for identifying market and government factors that affect competition in transport and logistics: results for Peru, the Philippines, and Vietnam	5
A. Overview of the road transport and logistics industries: the supply chain	6
B. Market features that shape competition dynamics	13
Factor 1: Market structure varies significantly along each segment of the chain, with road cargo transport being the most atomized	14
Factor 2: Infrastructure as a scarce resource and bottleneck in multimodal transport—the case of ports	19
Factor 3: Logistics operators have significant incentives to establish vertical relationships—ownership integration and long-term contracts	20
Factor 4: Associations play a role in road cargo transport and maritime services	22
Factor 5: Government is directly involved in certain economic activities	23
Factor 6: Demand characteristics and contracting practices vary with the shipper’s size	24
C. Government interventions that may act as obstacles to competition	26
C.1. Input supply	34
C.2. Wholesale	40
C.3. Retail	44
D. Market outcomes and competition policy enforcement	45
D.1. Anticompetitive behavior detected and sanctioned	46
D.2. Mergers and acquisitions and the tendency toward market concentration	49
D.3. Competition agencies and enforcement capacity in Peru, the Philippines, and Vietnam	50
III. Policy recommendations	53
References	59
Annexes	65

LIST OF FIGURES

Figure 1: Logistics performance index and global competitiveness index	vi
Figure 2: Bottlenecks considered to be affecting the operation and growth of organizations in APEC economies	vi
Figure 3: Overview of factors that characterize market fundamentals in the road cargo and logistics sector	ix
Figure 4: Classification of regulations that restrict competition observed in selected APEC economies	x
Figure 5: A summary of potential competition issues to monitor in the road freight logistics services supply chain	xiii
Figure 6: Sectoral composition of Asia-Pacific infrastructure investment 2012-2025	2
Figure 7: Logistics Performance Index, infrastructure subcomponent	2
Figure 8: Regulatory restrictiveness of network sector regulation in telecoms, electricity, gas, post, rail, air and road transport	4
Figure 9: Factors that determine the type of transport service required	7
Figure 10: Main exported products by country	7

Figure 11: Road freight and logistics services value chain segmentation	8
Figure 12: Possible commercial contracts along the chain	9
Figure 13: Activities and actors in the road freight and logistics services value chain	10
Figure 14: Spectrum of types of markets failures and forms of government interventions to address them—an application to road freight and logistics services	11
Figure 15: Overview of factors that characterize the road freight and logistics services sector.....	13
Figure 16: Distribution of road freight transport companies by fleet size in Peru in 2015.....	14
Figure 17: Existing contractual links between shipping lines, maritime agents, and customs warehouses in Peru.....	15
Figure 18: The three largest ocean alliances	16
Figure 19: Number of companies involved in the provision of logistics services in Callao Port, Peru	17
Figure 20: Examples of common market failures and justifiable interventions in the freight and logistics services sectors ...	26
Figure 21: Contribution of “entry barriers” to the restrictiveness of non-manufacturing regulation subindicator on “road transport”	29
Figure 22: Classification of regulations that restrict competition observed in selected APEC economies.....	30
Figure 23: Regulations when establishing a business in national road freight services is subject to obtaining a concession or license	32
Figure 24: Common rules and regulations that typically hinder competition in the sector, by segment	33
Figure 25: Government restrictions affecting road cargo transport in Jordan	34
Figure 26: Rules and regulations that are likely to hinder competition in the input segment—issues identified in Peru, the Philippines, and Vietnam	35
Figure 27: Common rules and regulations that typically hinder competition in the wholesale segment—issues identified in Peru, the Philippines, and Vietnam	40
Figure 28: Pricing guidelines for road transport	42
Figure 29: Rules and regulations that are likely to hinder competition in the retail segment—issues identified in Peru, the Philippines, and Vietnam.....	45
Figure 30: Recent cartels investigated or sanctioned among shipping lines.....	47
Figure 31: A summary of potential competition issues to monitor in the road freight and logistics services supply chain....	53
Figure 32: OECD PMR Indicator.....	73
Figure 33: OECD NMR Indicators Energy, Transport, and Communication Sectors	74

LIST OF TABLES

Table 1: Reform experiences—the power of competition	4
Table 2: Summary of main features of approaches to assess transport and logistics markets.....	6
Table 3: Vehicle regulation in Peru, the Philippines, and Vietnam	27
Table 4: Vehicle regulation in the European Union and United States	28
Table 5: Driver regulation	28
Table 6: Entry regulation	31
Table 7: Port access	35
Table 8: State-owned enterprises and state aid in the wholesale segment.....	44
Table 9: Competition agencies and enforcement capacity.....	51
Table 10: Main recommendations for Peru.....	55
Table 11: Main recommendations for Philippines.....	56
Table 12: Main recommendations for Vietnam	57
Table 13: Surveyed companies	75

LIST OF BOXES

Box 1:	Main approaches and methodologies for assessing the status of regulations in transport and logistics	5
Box 2:	Examples of government interventions and associated market outcomes.....	12
Box 3:	Freight platforms.....	18
Box 4:	Vietnam National Shipping Lines (Vinalines).....	23
Box 5:	Mober aiming to be the Uber of logistics in the Philippines	25
Box 6:	Regulatory constraints on road freight in Jordan.....	33
Box 7:	Essential facilities and essential services subject to REMA in Peru.....	36
Box 8:	Status quo in port slot-booking practices worldwide	37
Box 9:	Terminal Appointment Booking System in Philippines	39
Box 10:	Cartel investigations in maritime shipping.....	46
Box 11:	Cartel activity in road transport in Peru	48
Box 12:	Integration between logistics company and online freight-booking platform	49
Box 13:	Reform experience in road transport.....	58
Box 14:	Surveyed companies in Peru, the Philippines, and Vietnam.....	75

ABBREVIATIONS

APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
ATI	Asian Terminals, Inc.
CAL	Cosmos Agencia Marítima S.A.C.
CMIT	Cai Met International Terminal
CICT	Cai Lan International Container Terminal
CPLG	Competition Policy and Law Group (APEC)
DP World	Dubai Ports World
ENAPU	Empresa Nacional de Puertos (Peru's national port company)
ETCR	Electricity, Transport, and Communication Regulation
EU	European Union
GDP	Gross Domestic Product
INDECOPI	Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (Peruvian Competition Authority)
IRC	Investment Registration Certificate (Vietnam)
LPI	Logistics Performance Index
LTFRB	Land Transportation Franchising and Regulatory Board
MCPAT	Markets and Competition Policy Assessment Tool
MTI	Macroeconomics, Trade, and Investment Global Practice, World Bank Group
OECD	Organisation for Economic Co-operation and Development
PEN	Peruvian Nuevo Sol (currency)
PHP	Philippine Peso (currency)
PMR	Product Market Regulation
PPA	Philippines Ports Authority
QuARTA	Quantitative Analysis of Road Transport Agreements
REMA	Reglamento Marco de Acceso a la Infraestructura de Transporte (Regulatory Framework for Access to Transport Infrastructure, Peru)
SMEs	Small and Medium Size Enterprises
SP-PSA	SP-PSA International Port
SSIT	SP-SSA International Terminal
SOE	State-Owned Enterprise
SOM	Senior Official's Meeting
STRI	Services Trade Restrictiveness Index
TABS	Terminal Appointment Booking System

TEU	Twenty Foot Equivalent Unit Container
TUPA	Texto Único de Procedimientos Administrativos de la Dirección General de Transporte Terrestre del MTC
UIT	Unidad Impositiva Tributaria
US	United States
USAID	United States Agency for International Development
USITC	United States International Trade Commission
Vinalines	Vietnam National Shipping Lines
VND	Vietnamese Dong (currency)
WBG	World Bank Group
WTO	World Trade Organization

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International evidence suggests that enhanced competition in cargo transport services leads to more competitive prices and can translate into more trade in goods



EXECUTIVE SUMMARY

The importance of competition and effective regulation in road freight and logistics service sectors

Efficient transport and logistics services promote market integration and can enhance a country's competitiveness. Nordås and Grosso (2006) find that the time it takes to export has a direct impact on the probability of doing so and on trade volumes. Hummels (2001) finds that a one-day increase in shipping time reduces the probability that a country will export manufactured goods to the United States by 1.5 percent and that each day saved in shipping time is worth 0.8 percent ad valorem for manufactured goods. Freight logistics is, in turn, critical for trade facilitation, as shown by studies in Latin America and the Caribbean (Barbero 2010; Guerrero, Lucenti, and Galarza 2010; Guasch 2011). According to the United Nations Economic and Social Commission for Asia and the Pacific (2015), the direct cost of moving goods between factory and ship deck is found to account for around 1 percent of the variation in trade costs related to nontariff barriers. Because products at different stages are imported and reexported multiple times in many manufacturing value chains, this amplifies inefficiencies and costs. These cost burdens can cancel out other competitive advantages, such as lower labor costs.

Road transport is essential for an efficient logistics chain overall and is particularly relevant for poverty reduction, since a high percentage of food products are transported via roads. On a value basis, 38 percent of all food imports into South America are handled using road transport (Guasch 2011). High post-harvest losses in the region can be attributed largely to the poor state of road networks, especially secondary and access roads, and to the lack of cooling capacity and services. Likewise, the poor quality of the road network and subnational rules that increase transit costs potentially result in overcharges for food as well as other essential products. This affects lower-income households disproportionately, as basic goods often represent a greater share of their consumption baskets. In selected Asia-Pacific Economic Cooperation (APEC) economies, it is estimated that more than 50 percent of cargo is transported via roads, bringing goods to the port for export or import. In Vietnam, for example, up to 77 percent of cargo is transported on roads.¹

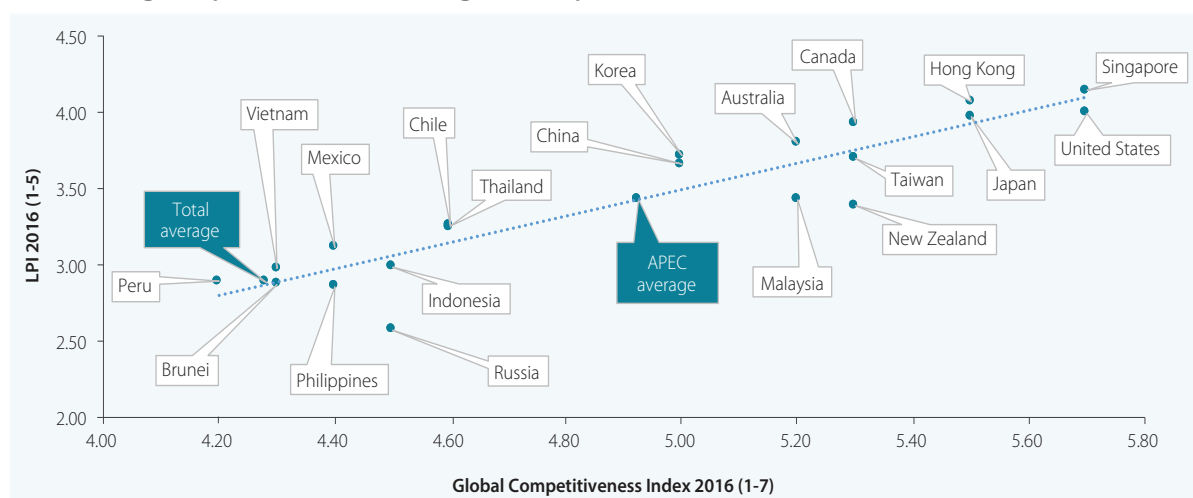
International evidence suggests that enhanced competition in cargo transport services leads to more competitive prices and can translate into more trade in goods. Teravaninthorn and Raballand (2008) show that, after the removal of price controls and limits on the number of entrants, prices in Rwanda and Mexico declined by 75 percent and 23 percent, respectively, in real terms. Likewise, freight rates fell by 20 to 30 percent when quotas on cross-border freight licenses were removed between Thailand and Laos in 2004. Gains from competition may be greater than gains from upgrades in technology and infrastructure. Osborne, Pachón, and Araya (2014) assessed prices for road freight transport in Central America and found that, whereas improved cost efficiencies could reduce prices by 3 cents (out of 17 cents) per ton-kilometer, increased competition on national routes would reduce prices by at least 5.95 cents (or 35 percent). More competitive prices, in turn, boost trade. Hummels (2009) finds that reducing market power in shipping could boost trade volumes by 6 percent for the United States and 15 percent for Latin America. Competition

¹ According to World Bank country transport questionnaires (April 2017).

in food and agribusiness supply chains and more competitive prices are critical for poor people. In Mexico, market power in seven commodity markets was associated with consumer welfare loss for the lowest income decile that was 19.8 percent higher in urban areas (22.7 percent higher in rural areas) than for the highest income decile (Urzúa 2013). In Kenya, allowing sugar prices to fall by 20 percent was estimated to lead to welfare gains for all income deciles, but gains as a share of income would be 4.4 times higher for the poorest income decile than for the highest (Argent and Begazo 2015).

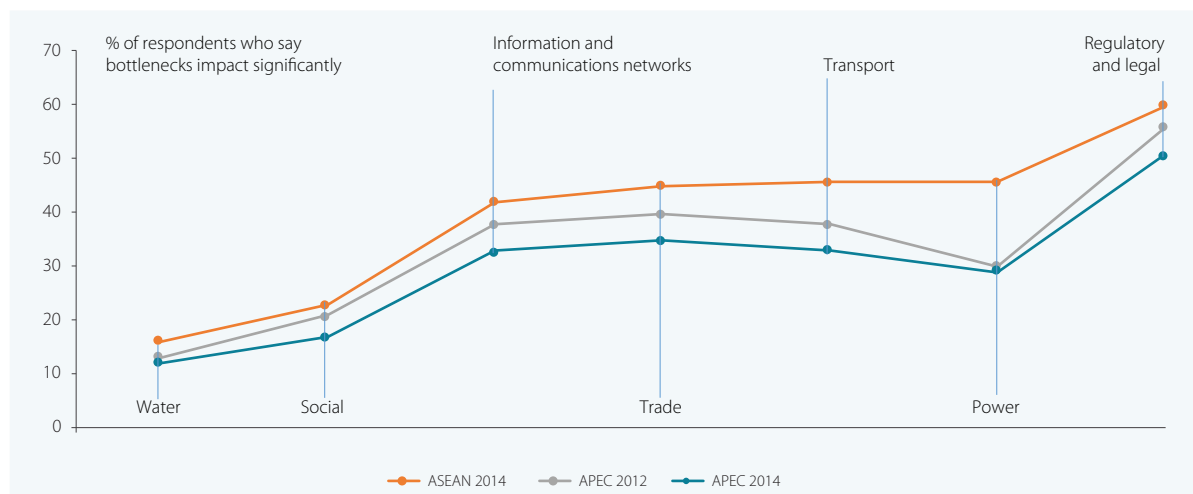
Evidence suggests that logistics performance is key for integration among APEC countries, as a means to eliminate chokepoints and support supply chain connectivity. Although APEC economies generally score above the world average on logistics performance and global competitiveness indices (Figure 1), over 30 percent of companies in APEC still consider transport and regulatory frameworks to be bottlenecks for growth in the region (Figure 2).

FIGURE 1: Logistics performance index and global competitiveness index



Notes: LPI: 5=best performance; sample=160 countries. GCI: 7=best performance; sample=132 countries. Source: WBG, Logistics Performance Index (LPI) 2016; WEF, Global Competitiveness Index (GCI) 2016-2017.

FIGURE 2: Bottlenecks considered to be affecting the operation and growth of organizations in APEC economies



Q: To what degree are bottlenecks in the following categories directly impacting the operation and growth of your organization in APEC economies? Base: 607 (APEC 2014); 166 (ASEAN 2014); 333-361 (APEC 2012). ASEAN economies represented: Brunei Darussalam, Indonesia, Malaysia, The Philippines, Singapore, Thailand, Vietnam. Source: PwC (2014), based on PwC 2014 APEC CEO Survey, PwC 2012 APEC CEO Survey.

Improving road transport and logistics performance in APEC countries can contribute to achieving APEC’s mission of creating new dynamism and fostering a shared future. APEC has been making strides in improving supply chain logistics and in reducing barriers at and behind the border to achieve long-term growth in all APEC economies. An APEC assessment of structural reforms suggests that domestic policies and institutions—namely, domestic regulatory and competition frameworks and governance structures—impede the development of well-functioning markets and the incentives and capacity of businesses to operate efficiently (APEC 2007). This report supports capacity building efforts to achieve these goals, as reinforced recently in the Leaders’ Declaration for the 25th APEC Economic Leaders’ Meeting in November 2017.

A framework to identify market and government factors that affect competition in transport and logistics services

Overall, the aim of this study is to show how the World Bank Group’s Markets and Competition Policy Assessment Tool (MCPAT) can help APEC economies identify reform areas that would make government interventions in APEC economies more conducive to competition and allow for better performance of road freight and logistics services. The MCPAT framework provides a comprehensive methodology to: (i) understand what stifles effective competition dynamics in specific markets, including how government interventions shape incentives for firms to compete and invest; (ii) design more effective competition policies; and (iii) assess the expected effects of competition policy interventions in order to prioritize reforms and provide evidence to overcome political economy constraints. Application of this framework can contribute directly to APEC’s efforts to identify potential high-impact items for their structural reform action plan under the Renewed APEC Agenda for Structural Reform.²

The focus will be on sector regulations and broader public policies that shape market outcomes in transport and logistics. MCPAT and this study build on an understanding that competition policy goes beyond antitrust law and enforcement to include the alignment of government interventions in markets with competition principles, including regulations and state participation.³ In the case of transport and logistics services, while effective antitrust enforcement is important, sector regulations and broader public policies are critical in determining market outcomes. In this regard, the objective of this report is to identify those rules and government interventions that could be restricting competition and to focus recommendations on those that are not conducive to addressing market failures but instead increase the likelihood of noncompetitive market outcomes. It is worth noting that this framework can be applied to the analysis of less developed markets and that the findings and recommendations will emphasize different areas of concern depending on the degree of government intervention in and the economic characteristics of the markets.

The reform options presented can serve as an entry point for multiple stakeholders to advocate for reforms. Among all reform opportunities identified, this report highlights those that are likely, based on available data, to improve market outcomes and to ensure alignment with international practices. This is meant to serve as an entry point for competition authorities, sector regulators, and other stakeholders in the selected economies to lead reforms in the road freight and logistics services sectors, after further

² See the final statement of the 2015 Structural Reform Ministerial Meeting, available at https://www.apec.org/Meeting-Papers/Sectoral-Ministerial-Meetings/Structural-Reform/2015_structural.

³ Motta (2004) defines competition policy as a “set of policies and laws that ensure competition in the marketplace is not restricted in such a way as to reduce economic welfare.”

analyzing the feasibility and potential impact of issues highlighted in the recommendations section. In particular, competition authorities can develop advocacy strategies to improve competition dynamics in the sector (Goodwin and Martinez Licetti 2016).

Road transport services are often just one input into a comprehensive offer to deliver goods from door to door around the world, linked closely with other services. As a result of production unbundling—and the emergence of trade in parts, global value chains, and e-commerce—individual or business customers typically demand integrated services that ship goods across several transport modes, handle all logistics, and may even include light manufacturing or packaging services. Given that road transport has become an input service to freight forwarding, the Freight Transport and Logistics Module of the MCPAT captures the entire value chain of transport and logistics services.

The Freight Transport and Logistics Module of the MCPAT has been applied to Peru, the Philippines, and Vietnam to illustrate its value in identifying specific areas for behind-the-border reforms. Given the nature of products traded in APEC and the geographic location of APEC countries, the analysis focuses on containerized cargo and assessment of multimodal transport links between road and maritime transportation. This report builds on primary data collection with multiple public and private stakeholders through novel questionnaires tailored specifically for this report.

Main findings

While road cargo transport is typically considered an atomized market, markets for services that are closely related and often integrated with cargo transport show varying degrees of economies of scale and concentration. While the number of registered trucking companies often lies in the tens of thousands—even up to 100,000 in Peru—a very small percentage of these companies are large. Only around 2,800 companies in Peru have more than 10 trucks. In Vietnam, a large majority of companies are single-truck operations. The last few years, however, have seen the emergence of a few global mega-carriers that offer integrated transport and logistics services. The number of container terminals is limited to only a few in each country, and in some countries—such as Peru and the Philippines—one terminal concentrates over 50 percent of national cargo. In warehousing and logistics services, there are typically a few dozen competitors in a country. One country can feature hundreds of freight forwarders but only some are integrated into global logistics chains.

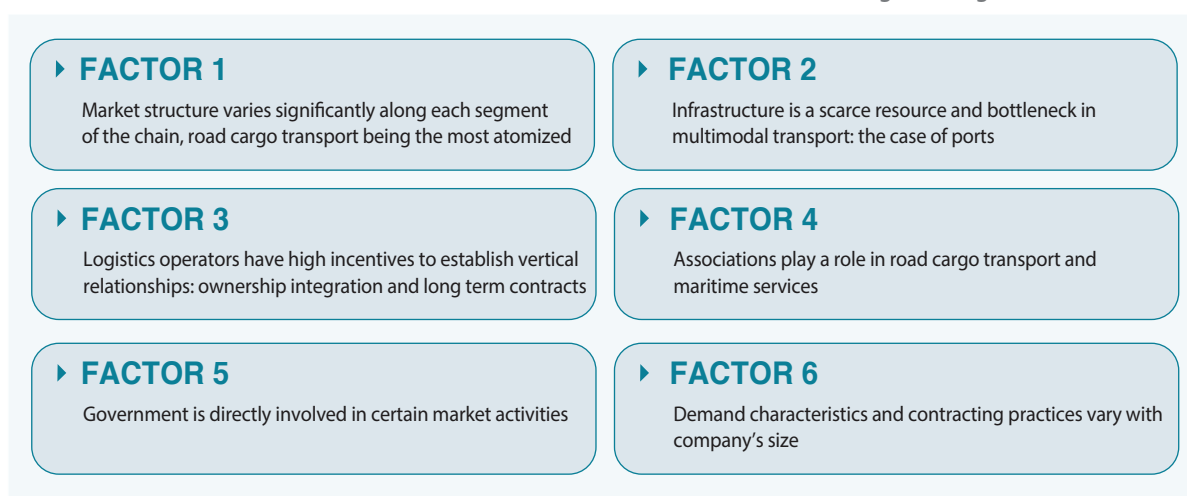
Just as concentration varies across segments, each of these segments features specific characteristics that can shape market dynamics and competition. These characteristics include the degree of vertical integration, the presence of associations and state-owned enterprises (SOEs), and highly differentiated demand (Figure 3).

- Where the use of capital-intensive infrastructure exceeds its capacity, and congestion intensifies, its operators can exercise market power. In the Philippines and Peru, port infrastructure is scarce and congested. This presents a bottleneck for multimodal transport. The ability of truckers, logistics providers, and freight forwarders to access port infrastructure, together with the associated cost of doing so, can shape their ability to compete.
- Given that transport is a *network industry* with the above-mentioned economies of scale in some segments, there are incentives for firms to coordinate and integrate. *Vertical integration* is a common

strategy to take advantage of economies of scale and scope. In the Philippines, for example, 2Go Group holds not only the largest infrastructure, with over 400,000 TEU capacity, but also 16 passage and freight vessels, 15,000 containers, 35 warehouses nationwide, and 550 trucks. In early 2018, DP World (one of the two main port operators in Callao port in Peru) announced the acquisition of a company that provides logistics services at sea and on land, which will allow the container terminal to offer integrated services for shipping lines and cargo holders along the chain.⁴ Associations and alliances among actual or potential competitors are common and have historically evolved, but have been shown to increase the risk of collusive agreements. Trucking association agreements and shipping line alliances are under increased scrutiny by antitrust agencies. For firms that are not integrated or coordinated with large alliances, the network industry characteristic poses challenges in growing and gaining market share.

- SOEs not only operate ports, but—especially in Vietnam—offer integrated services in other markets such as trucking and warehousing, raising concerns about the degree of competitive neutrality. Demand for transport and logistics services is heterogeneous and allows for a *high degree of specialization* by operators, increasing market power for the provision of certain services.

FIGURE 3: Overview of factors that characterize market fundamentals in the road cargo and logistics sector



Source: Author's own elaboration.

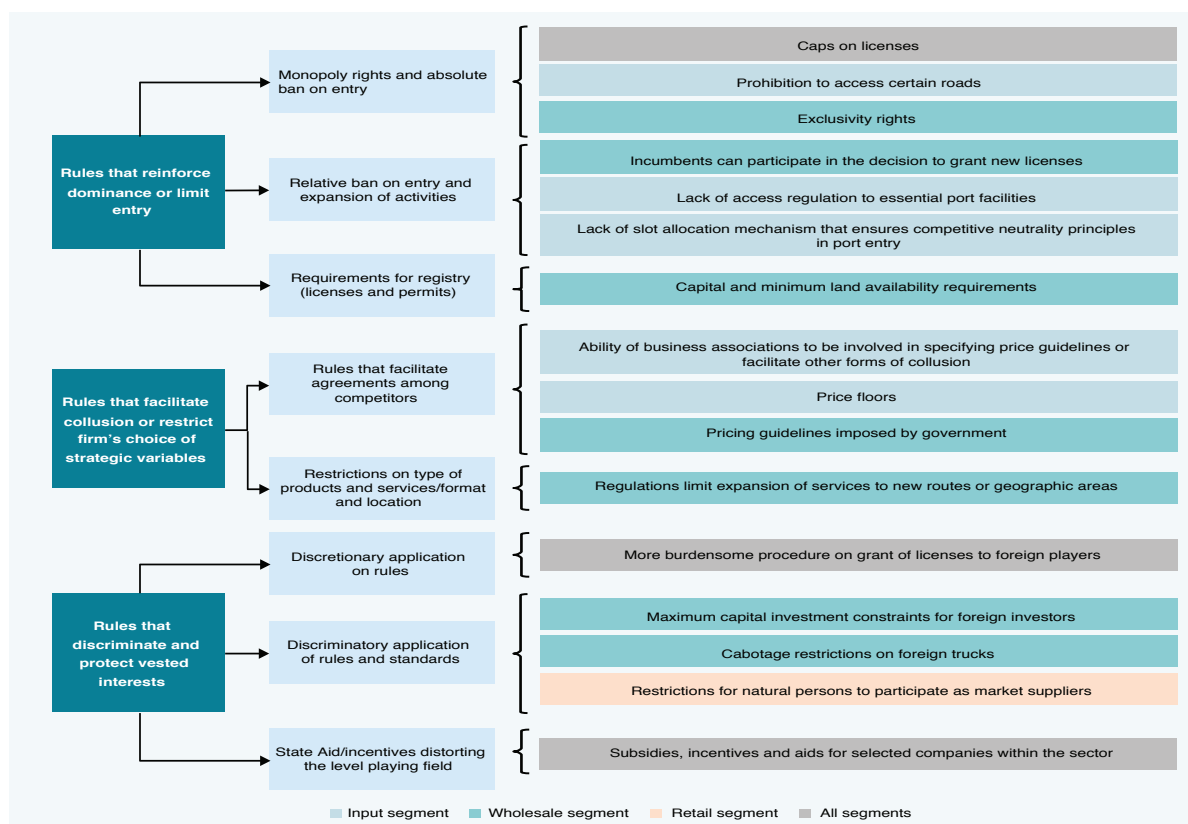
Government interventions in the transport and logistics sector are frequently justified on the basis of not only addressing the risk of abuse of significant market power, but also of addressing other market failures. Given the market features, multimodal nodes of transport such as ports and airports can hold significant market power, and regulators typically mandate access and regulated charges when there is insufficient inter- or intra-port competition. Besides market power, common market failures in the sector include negative externalities, such as pollution or safety risks. Governments can intervene by setting standards for vehicles and drivers. Some failures may be overcome by the private sector over time; understanding the entire logistics chain requires experience in the sector, and contract conditions vary, are individually negotiated, and are visible only to contract parties. Therefore, most clients rely on operators under conditions of asymmetric information that can result in pricing power. Private initiatives such as freight exchange platforms increase the transparency of offers and can reduce information asymmetry.

⁴ See *Semana Económica* (2018) for further details.

Anticompetitive practices are common in transport and logistics markets and may explain the persistence of poor market outcomes such as high cost and low productivity. Oligopolistic market structures, excess capacity, and alliances among large carriers may raise the risk of collusive agreements and require the detection and deterrence of anticartel enforcement programs. At least 11 countries have initiated cartel investigations in the shipping sector, and at least 28 transport sector cartels have been detected in Mexico, Chile, and Peru since 1996.⁵ These collusive agreements often involve many global players. In 2012, the European Commission fined 14 freight forwarding companies for four different price fixing schemes that lasted from 2002 to 2007. The freight forwarders coordinated four different surcharges.⁶

This report identifies specific government interventions (or the absence thereof) that are not conducive to addressing market failures but instead increase the likelihood of noncompetitive market outcomes. Government interventions can exacerbate the negative effects of inherent market features, resulting in adverse effects on incentives for firms to operate efficiently as well as deteriorated market outcomes (Figure 4).

FIGURE 4: Classification of regulations that restrict competition observed in selected APEC economies



Source: Author's own elaboration.

Note: This diagram maps each regulation to its direct effect (principal association), but it is important to note that secondary effects can also derive from some of these regulations.⁷

⁵ This includes passenger transport services.

⁶ The following surcharges were introduced: (i) electronic declaration for exports: surcharge for reporting service; (ii) advanced manifest system: surcharge for processing the electronic transmission to United States customs authorities of information on goods to be shipped into the country; (iii) currency adjustment factor; and (iv) peak season surcharge, introduced during the peak season transport period in the run up to Christmas.

⁷ For cases in which regulations can lead to more than one type of competition restriction, this analysis specifies the nature of the regulation and identifies the principal association, meaning the direct effect on an outcome (for example, limits on the number of licenses have the effect of restricting entry). This study then chooses that principal association over any secondary associations or indirect effects (for example, limits on the number of licenses could also facilitate collusion due to fewer players in the market).

Some government interventions in the input, wholesale, and retail segments play a critical role across the countries surveyed for this report. Cargo transport services are provided with *inputs* such as public infrastructure (roads and ports), trucks, and auto parts, as well as licensed drivers and service providers in multimodal nodes (such as stevedoring and towing in ports). Based on these, *wholesale services* are provided by carriers and logistics operators in charge of transporting, storing, or providing value-added services to the cargo in transit, while freight forwarders and agents at the *retail level* typically hold the direct contract relationship with the cargo owner.

- **In the input sector, scarcity of infrastructure makes rules that can ensure its efficient use particularly important to increase trucking productivity.** In the Philippines and Peru, access to some of these inputs is critical, as the major ports run above the optimal rate of 70 percent and up to 90 percent of their yard capacity. In Peru, a truck spends, on average, six hours in and around the major port, but only 30 minutes at the actual terminal. At the competing terminal, trucks face queues of 350 to 400 trucks at the terminal gates. In the Philippines, in 2014, a temporary ban on trucks on Manila's roads during peak hours for port operations raised the time containers spent in the port from six to 20 days and induced truckers to charge over 60 percent more, according to the port operator (Oxford Business Group n.d.).⁸ Both countries have introduced slot booking systems in some ports, but their design can be improved to maximize efficient use of slots and strengthen competition on quality and productivity among trucking operators.
- **At the wholesale and retail level, a history of price regulation in trucking services implies that restrictions to entry and obligatory association membership may raise the risk of collusive behavior and make anticartel enforcement critical to avoid anticompetitive overcharges.** All three countries in this study had in place either a regulation or a practice that created price reference guides for trucking services. In Peru, this was never enforced. In the Philippines, the practice ceased when the competition law was enacted. In Vietnam, local governments still issue reference prices for public procurement contracts. In the latter case, there are specific prices for each province, six different types of roads, distance traveled, materials transported, and so on. Associations and alliances across all transport and logistics services are common proponents or enforcers of reference prices. The risk of stable collusive agreements is aggravated when membership is mandatory. In Peru, the stevedoring union has exclusivity rights in one of the terminals in Callao Port. Membership in this union is based on a quota system that gives incumbent workers priority over new ones and allows union members to either sell or transfer their membership rights to other stevedores or to bequeath these rights to a family member.

At the same time, this report identifies individual interactions between specific market features, government interventions, and firm behavior in each country that may lead to noncompetitive outcomes.

- **In Vietnam, the widespread presence of public enterprises along the value chain, and the use of public financial and nonfinancial aid, may stifle competition and distort the level playing field.** SOEs are vertically integrated and important market players in the Vietnamese cargo transport sector. The Saigon Newport Corporation, for example, combines port operation, handling, and container transshipment and accounts for 89 percent of the container market in Ho Chi Minh City and more than half of the container market in the country as a whole. Similarly, Vinalines is a national shipping

⁸ See <https://oxfordbusinessgroup.com/analysis/removal-limitations-truck-traffic-eases-port-congestion-philippines>.

company that also operates ports and offers maritime services, trucking services, freight forwarding, and warehousing. Lack of competitive neutrality could provide these SOEs with undue competitive advantages. In 2013, Vinalines owed Vietinbank, a state-owned commercial bank, over \$200 million⁹ and the government eased this debt burden via a debt-for-equity swap with a state-owned bank and transfer of some of its debt to the Debt and Asset Trading Corporation, an SOE. As of 2017, Vinalines accounted for 30 percent of the country's total pier length and covered road transport with 100 trucks in its fleet.

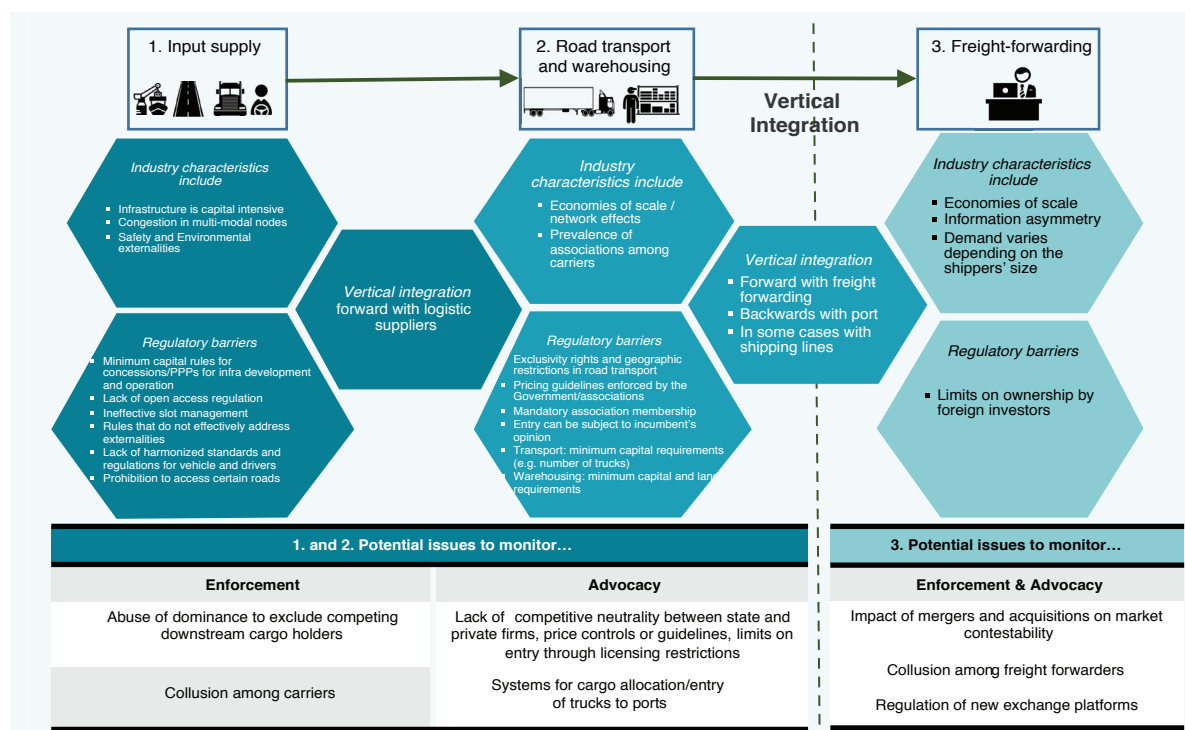
- **In the Philippines, the combination of government interventions in trucking markets may stifle competition.** While individual trucking rules may not be perceived as overly restrictive, the combination of multiple restrictions—including at the subnational level—may reinforce dominance on specific routes. Truckers must obtain local road passage permits for each route. Each permit can cost between \$40 and \$120. Intraregional licenses are assigned for specific regions, and providing services in other regions requires a separate license. Each municipality decides on the hours during which trucks may drive on its roads, and these time frames are not coordinated. Even if a competitor obtains the passage permit, the license, and the right time frame in which to compete, its entry can still be preempted by incumbents at the issuance of the Certificate of Public Convenience. This may explain in part why—despite the over 19,000 license applications received by the Land Transportation Franchising and Regulatory Board (LTFRB)—one single operator, 2Go Group, manages 50 percent of domestic Philippine freight with its 550 trucks.
- **In Peru, the scarcity of land around the main port, combined with minimum requirements for warehouse licenses and the lack of public dry ports so far, may explain the relatively few players in the warehouse segment.** The land around the main port is scarce and expensive for the purpose of large warehouses. At the same time, licenses for some types of warehouses (temporary deposits) require a minimum of 10,000 square meters in storage space. The combination of these conditions may pose a substantial barrier to entry for new players. In fact, eight of the major shipping lines work with only two large customs large warehouse operators.

Policy recommendations

This study identifies potential competition issues to monitor and makes specific recommendations by country and topic. Potential competition issues include abuse of dominance through exclusionary or discriminatory practices, predominantly in access to multimodal infrastructure and slot allocation along the chain, as well as potential collusive practices in the wholesale segment (for example, among carriers) and in highly specialized services, such as pilotage and towing in port terminals (Figure 5). Furthermore, given the tendency toward (horizontal and vertical) mergers and acquisitions in freight forwarding, it will be important to continue evaluating changes in market structure and the potential impact of these changes on market contestability. Specific recommendations by country can be found in the recommendations section of this report.

⁹ See <http://vneconomicstimes.com/article/banking-finance/vietinbank-seeks-debt-equity-swap-with-vinalines> and note that the correct conversion of the VND figure into USD yields \$238 million, instead of billion.

FIGURE 5: A summary of potential competition issues to monitor in the road freight logistics services supply chain



Source: Author's own elaboration.

More generally, and beyond individual anticompetitive regulation, competition authorities can direct advocacy efforts at associations and subnational governments to raise awareness about the risks of issuing pricing guidelines. This is particularly relevant for Vietnam, where price declarations are still issued and serve as guidelines for public procurement in transport. Since these guidelines are publicly available, private carriers can also use them as a reference, which could facilitate collusive agreements. In the Philippines, associations represent an important share of market players and, even though pricing guidelines appear to no longer be enforced, it is considered advisable to provide additional guidance in terms of what type of information should and should not be shared among members.

Embedding competitive neutrality principles in public policy can yield efficiency gains and support private sector development. Discriminatory treatment of firms has been observed in the three focus economies, particularly regarding requirements and issuance of permits and authorizations. Embedding competitive neutrality principles in public policy is especially important in Vietnam, given the significant presence of SOEs that are vertically integrated along the transport and logistics value chain and represent a large share of the market. It is important to ensure that these companies are not putting competitors at disadvantage, either by engaging in exclusionary practices or by receiving favorable state aid.

Private sector initiatives like the development of freight platforms could help improve market dynamics by addressing an inherent market failure: information asymmetry. Freight platforms are online or application-supported systems that serve as two-sided platforms under which shippers can allocate cargo more efficiently and compete to offer the best price to haul cargoes. In addition, value-added services can be provided, such as payment services, credibility checks, insurance, tracking (location or alert systems), ratings systems, and warehouse space matching services. These platforms generate efficiencies and make trade more accessible for smaller players.

It will be important for competition agencies to monitor or even anticipate the design in some countries of regulatory frameworks for these application-based providers, particularly with regard to licensing and monitoring of cargo limits. Some governments have expressed concerns about these application-based platforms and are considering the enactment of regulatory frameworks. It will be crucial to assess that these regulations yield market efficiencies and procompetitive outcomes for all market players.

Generally, however, the three selected economies do not exhibit some of the most restrictive regulations found in other countries. Subnational governments in Mexico, for example, assign unions with exclusivity rights for transport of construction material for each individual municipality, which has been associated with freight rate overcharges of up to 60 percent. Furthermore, truck drivers' associations in countries like Colombia and Argentina still issue and enforce pricing guidelines for different types of cargo, and freight allocation agreements are still observed in the Dominican Republic and Western Africa, where cargo holders cannot freely hire a driver but are designated a competitor based on a list of authorized drivers that sign up and wait for their turn. In many countries, port regulators have commercial functions as operators and no access regulation has been put in place.

In sum, governments in APEC economies can play an important role in continuing to encourage competition along several segments of the transport and logistics value chain, improve market outcomes, and ultimately eliminate chokepoints to support supply chain connectivity. Recommended areas of focus include strengthening anticartel enforcement and implementing procompetition regulatory frameworks that can transform the road transport and logistics sectors and generate positive welfare distribution effects. Competition authorities play an essential role in these efforts and are well-positioned to become champions of these reforms. Placing competition policy at the center of the microeconomic reform agenda will enhance the benefits of other government policies targeted at sustaining economic growth and shared prosperity.

The objective of this report is to apply the World Bank Group's MCPAT in three APEC economies to identify key reform areas that can make government interventions in APEC economies more conducive to competition and allow for better performance of road freight and logistics. The first of three chapters introduces empirical evidence on the role of competition in fostering efficient road cargo transport and logistics, and its importance for countries' overall competitiveness. The second chapter introduces the analytical framework of the Transport and Logistics Module of the MCPAT. It presents the individual segments of the overall supply chain of transport and logistics services and identifies specific: (i) market features, (ii) government interventions, and (iii) market outcomes and competitive dynamics in each segment. For each of these three components of the MCPAT analysis, this chapter provides an overview of findings at the international level based on the World Bank Group's operational experience and the relevant literature. It then identifies specific issues for the three countries of focus in this report, based on surveys conducted specifically for this report. Finally, the third chapter distills the main policy recommendations from the previous chapters, taking into account reform feasibility and impact. It further suggests how to boost the institutional effectiveness of enforcement and advocacy initiatives by competition authorities in the transport sector. Details regarding the survey methodology, questionnaire, and respondent characteristics can be found in the Annex.

THE IMPORTANCE OF COMPETITION AND EFFECTIVE REGULATION IN ROAD FREIGHT TRANSPORT AND LOGISTICS SERVICES SECTORS

Road freight and logistics services are an essential element of modern supply chains. They connect production, distribution, and consumption through the flexibility and capability to provide door-to-door services. These can connect all supply chain actors at the local, national, regional, and global levels, according to World Bank and IRU (2014). In selected Asia-Pacific Economic Cooperation (APEC) economies, it is estimated that more than 50 percent of cargo is transported via roads, bringing goods to the port for (export) import. In Vietnam, for example, up to 77 percent of cargo is transported on roads.¹⁰

The literature offers substantial evidence linking improvements in transport and logistics directly to enhanced export performance, through lower trade costs. Comparing sales by manufacturers of similar products, Hummels (1999) estimates that exporters with 1 percent lower shipping costs will enjoy a 5-8 percent higher market share.¹¹ Furthermore, as shown by WTO/OECD (2015), stronger trade logistics performance, as measured by scores on the World Bank Group's (WBG's) Logistics Performance Index (LPI), have found to be associated with lower trade costs.

Infrastructure is critical for the proper provision of road freight and logistics services, but countries face challenges in addressing large infrastructure gaps due to fiscal constraints, limited implementation capacity, and weak regulatory frameworks that dampen private sector investment. Limao and Venables (2001) estimate that differences in infrastructure quality account for 40 percent of the variation in transport costs for coastal countries and up to 60 percent for landlocked countries. The WBG has estimated that, up to 2006, developing economies invested, on average, about 3-4 percent of their GDP on infrastructure annually, while actual spending needs amounted to about 7-9 percent for new infrastructure investment projects and maintenance of existing infrastructure.¹² This financing gap is representative for Latin America; the region spent, on average, less than 2 percent of GDP on infrastructure each year up to 2006, as compared to the 3-6 percent of GDP that is required, according to Omura (2006) and Fay and Morrison (2007).¹³ It is estimated that Asia alone will require about \$8 trillion in investment through 2020 to meet the region's infrastructure needs.¹⁴

APEC countries have taken steps to crowd in private sector financing to bridge this gap. In 2015, investment promotion officials from the 21 APEC members introduced a single all-in-one guide for executing public-private partnerships. The guide describes each of their relevant frameworks and process requirements, facilitating the setup of joint infrastructure projects ranging from new highways, ports, and airports, to improvements in power grids and telecommunications services.

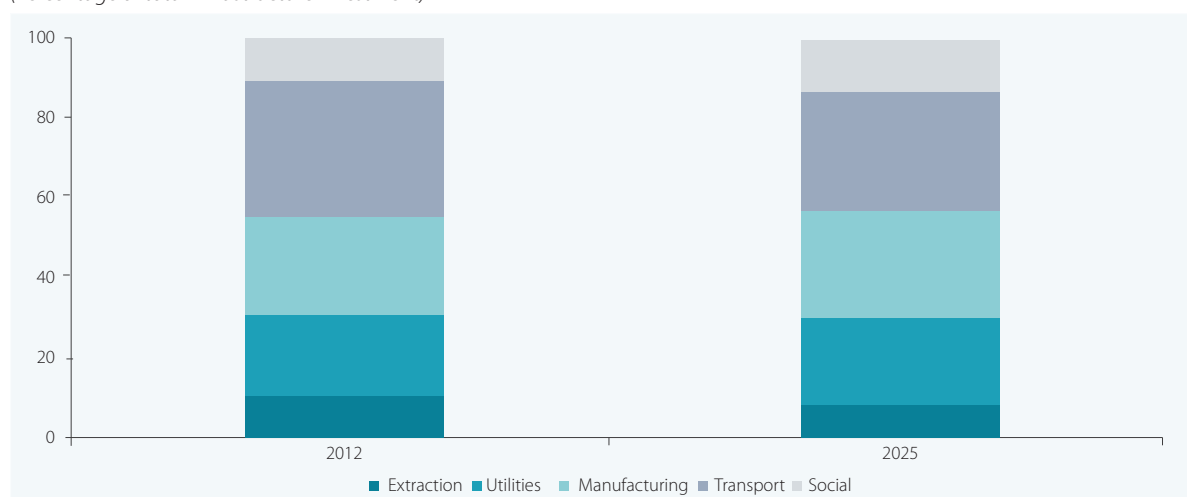
¹⁰ World Bank country transport questionnaires (April 2017).

¹¹ Carruthers, Bajpai, and Hummels (2004).

¹² World Bank (2008b); Fay and Morrison (2007).

¹³ APEC Secretariat (2011).

¹⁴ APEC Investment Experts' Group (2015).

FIGURE 6: Sectoral composition of Asia-Pacific infrastructure investment 2012-2025*(Percentage of total infrastructure investment)*

Source: PwC (2014).

FIGURE 7: Logistics Performance Index, infrastructure subcomponent*(Score and ranking in APEC economies, 2016)*

Source: WBG.

In light of fiscal constraints to closing infrastructure gaps and complementary to the mobilization of private sector finance, countries can improve market outcomes in transport and logistics by promoting effective competition through reforms that are fiscally neutral. Transport and logistics costs have been estimated to be as high as 25 percent of GDP in some countries, as per the World Bank (2014). Reducing them requires addressing both hard infrastructure (investments such as roads, ports, cargo-handling facilities, and information and communications technology systems) and soft infrastructure (reengineering of systems and procedures, reducing red tape, improving the competitiveness of transport and logistics markets) of trade facilitation and logistics. However, while the “hard” issues tend more often to draw the attention of policy makers, the costs associated with a lack of “soft” trade facilitation infrastructure are substantial.¹⁵

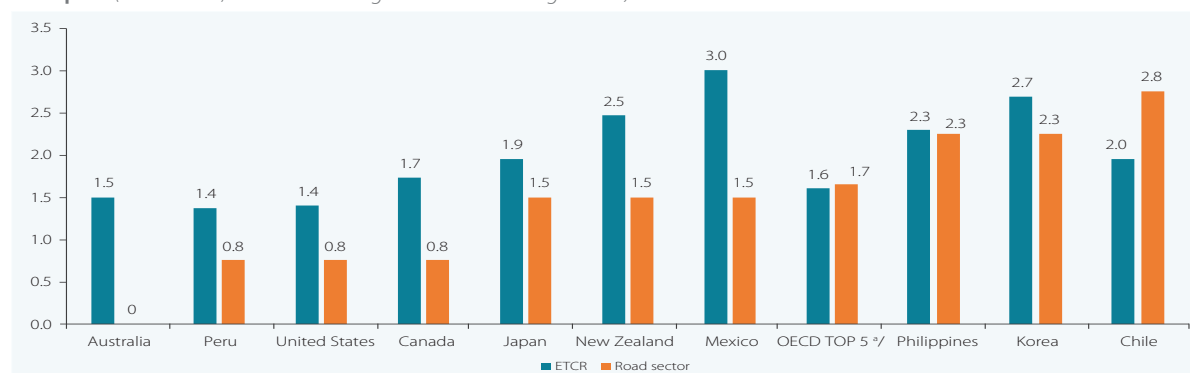
¹⁵ Ferrantino (2013).

Weak competition—reflected in the exercise of significant market power by certain players—can lead to considerable price increases. Osborne, Pachón, and Araya (2014) assessed prices for road freight transport in Central America and found that, whereas improved cost efficiencies could reduce prices by 3 cents (out of 17 cents) per ton-kilometer, increased competition on national routes would reduce prices by significantly more. The paper shows empirically that imperfect competition accounts for at least 35 percent of mean prices on national routes. Likewise, as stated by the World Bank (2017), monopolistic freight transport services may end up capturing an important share of the potential rent created by additional physical infrastructure, reducing demand and potentially nullifying the gain from the investments.

Procompetition regulation and anticartel enforcement can lead to better market outcomes. In a recent study on competition in the road freight sector in Malawi, Tanzania, and Zambia, Vilakazi, Ncube, and Roberts (2015) found that implementation of procompetitive regulation would affect both the price and quality of service. Procompetitive regulation can mitigate market failures to ensure that players can compete on a level playing field, whereas competition policy enforcement deters potential collusive agreements that lead to price overcharges. Fink *et al.* (2001) estimate that liberalizing the provision of port services and regulating the exercise of market power in shipping could reduce shipping costs by nearly a third.¹⁶

Restrictive regulation can limit competition and lead to higher costs for intermediate consumers. Regulation plays an important role in addressing market failures, such as negative externalities in the transport sector, by regulating safety, quality, and environmental standards. However, rules and regulation can have unintended negative effects on market outcomes. Regulation can either promote or reduce competition depending on how restrictive it is in terms of: (i) market entry; (ii) players' capacity to decide on market variables (such as price or quantity); and (iii) conditions of competition among operators. Data collected jointly by the Organisation for Economic Co-operation and Development (OECD) and WBG¹⁷ suggests that the Philippines has one of the most restrictive regulatory frameworks in network sectors among APEC economies, particularly in road transport; whereas Peru has one of the least restrictive frameworks (Figure 8). In road transport, the score is driven by entry regulation, which will be analyzed further in Section C of this report. For more information on the product market regulation (PMR) indicator, please refer to Annex III.

FIGURE 8: Regulatory restrictiveness of network sector regulation in telecoms, electricity, gas, post, rail, air and road transport (From 0 to 6, with 6 indicating more restrictive regulation)



Note: No data were available for the rest of APEC economies.

¹⁷ OECD top 5 is the average score among Austria, Denmark, Netherlands, New Zealand, and the United Kingdom.

Source: OECD Product Market Regulation database, and OECD-World Bank Group Product Market Regulation database for non-OECD countries 2013, as of March 2018.

¹⁶ Carruthers, Bajpai, and Hummels (2004).

¹⁷ The OECD-WBG PMR data are part of the WBG's Markets and Competition Policy Database.

TABLE 1: Reform experiences—the power of competition

Country	Reform period	Reform	Impact
Mexico	1989-1993	<ul style="list-style-type: none"> · Removal of limit on number of entrants. · Removal of incumbent's decision power over entry and expansion. · Removal of price regulation. · Removal of backhauling restrictions. 	<ul style="list-style-type: none"> · Between 1987 and 1994, nationwide trucking prices declined by 23% in real terms. · Entry of many new operators. · Trucking services improved frequency, access, and speed of delivery.
Indonesia	1985	<ul style="list-style-type: none"> · Removal of price regulation. · Introduction of free entry. · Banning trucking associations from setting minimum rates. 	<ul style="list-style-type: none"> · Increase in number of truck operators.
Hungary Poland Czech Republic	1988 1988 1990	<ul style="list-style-type: none"> · Granted free entry to the trucking market. · Elimination of rate and route control. 	<ul style="list-style-type: none"> · Competitive prices. · Service improved: faster delivery time, less breakage of cargo.
Rwanda	1994	<ul style="list-style-type: none"> · Removal of price setting by monopoly parastatal company. 	<ul style="list-style-type: none"> · Prices fell by 75 percent in real terms · Rapid recovery of locally owned fleet.
United States	1980	<ul style="list-style-type: none"> · Removal of collective interstate rates set by transport bureaus. · End of broad antitrust immunity. 	<ul style="list-style-type: none"> · Trucking regulation increased freight rates by one-third to one-half and increased the freight bill to United States industries by \$5.5 to \$7.3 billion per year (1988). · For-hire trucking operations became roughly 25 percent less expensive than private carriage.

Sources: Teravaninthorn and Raballand (2008), FTC (2007).

Country-specific reform evidence shows that procompetition reforms bring large gains. Removal of price controls and removal of limits on the number of entrants have resulted in price decreases of up to 75 percent and 23 percent, respectively, in Rwanda and Mexico (Table 1). Likewise, freight rates fell by 20 to 30 percent when quotas on cross-border freight licenses were removed between Thailand and Laos in 2004.¹⁸ Furthermore, consumers benefit from reforms that introduce competition, as they obtain access to a broader range of goods at lower prices, and firms—in particular, small and medium enterprises (SMEs)—benefit as they can export their goods at lower costs, with better quality, and more quickly (for example, in manufacturing and agribusiness).¹⁹

In sum, empirical evidence and experience show that competition in markets along the transport and logistics chain—resulting from procompetition regulatory frameworks, market dynamics, and competition law enforcement—are an important factor in reducing trade costs and enhancing competitiveness.

¹⁸ APEC (2011).

¹⁹ “High transportation and related costs” (Barrier 4) were identified as one of nine major barriers for SMEs engaging in international trade in the 2011 Joint Meeting of the Trade and SME Ministers.

A FRAMEWORK FOR IDENTIFYING MARKET AND GOVERNMENT FACTORS THAT AFFECT COMPETITION IN TRANSPORT AND LOGISTICS: RESULTS FOR PERU, THE PHILIPPINES, AND VIETNAM

This section presents a framework for assessing the inherent market characteristics and government interventions that shape competition dynamics and ultimately market outcomes in road cargo transport and logistics services. The framework is applied in three APEC economies—Peru, the Philippines, and Vietnam—to identify government interventions or lack of procompetition measures that are likely to hinder the performance of road cargo transport and logistics.

The analysis here follows an application of the WBG's MCPAT. This novel tool provides practical guidance and an adaptable framework that policy makers can apply to any sector to assess “red flags” for obstacles to competition and identify potential mitigating actions against these “red flags.” Box 1 summarizes additional tools that are useful in assessing the status of sector performance, and legal and regulatory frameworks in transport and logistics markets.

BOX 1: Main approaches and methodologies for assessing the status of regulations in transport and logistics

This box presents a summarized review of relevant methodologies characterizing the degree of restrictiveness of regulations governing transportation and logistics. For further detail regarding each of these methodologies, please refer to Annex I.

- **WBG Quantitative Analysis of Road Transport Agreements (QuARTA).** This methodology assesses the openness of 77 bilateral agreements in the international road sector based on a quantitative analysis of core provisions of bilateral agreements, including scope, permit management, transit rights, cabotage and other limitations, and routes. See Kunaka, Tanase, Latrille, and Krausz (2013).
- **WBG Logistics Performance Index (LPI).** By conducting surveys among operators (global freight forwarders and express carriers), this index measures and compiles data on different aspects of logistics across countries to build an aggregated dataset covering six core components: the efficiency of customs and border clearance, the quality of trade and transport infrastructure, the ease of arranging competitively priced shipments, the competence and quality of logistics services, the ability to track and trace consignments, and the frequency with which shipments reach consignees within scheduled or expected delivery times. See Arvis, et al. (2014).
- **WBG Port Reform Toolkit.** This toolkit provides a decision framework to guide policy makers in developing countries in designing institutional and regulatory port sector reforms, providing concepts, options, alternatives, and examples. It is composed of eight modules, including a section on areas where competition problems can arise. See World Bank (2016).
- **OECD Services Trade Restrictiveness Index (STRI).** This index provides a snapshot of services trade barriers (restrictions on foreign entry, movement of people, discriminatory measures, barriers to competition, regulatory transparency) in 22 sectors across 44 countries, including road, maritime transport, warehousing, and freight forwarding. It offers a benchmark of global best practices, and reform options for policy makers; clarifies restrictions for trade negotiators; and informs businesses of trade requirements before entering foreign markets. See OECD (2015).
- **United States International Trade Commission (USITC) Logistics Services Assessment.** This 2006 report assesses the global logistics services industry, providing an overview of the industry, examining trade and investment in selected markets (as well as impediments), and potential effects of removing those impediments in the logistics services industry for trade and economic welfare. See: USITC (2005).
- **OECD Product Market Regulation (PMR) indicators.** OECD's PMR methodology assesses product market regulations to analyze the extent to which national rules encourage competition. It is based on economy-wide and sector-specific indicators in 34 OECD countries and more than 20 non-OECD countries (some of which are covered in collaboration with WBG). Indicators cover transportation. See OECD (2013).

TABLE 2: Summary of main features of approaches to assess transport and logistics markets

	Economy-wide and sector-specific	Objective (rather than perception-/survey-based)	Scoring based on norms rather than (market) outcomes	Conditions for foreign and domestic competitors	Coverage
WBG Quantitative Analysis of Road Transport Agreements	No	Yes	Yes	No	77 bilateral agreements (mostly Europe and Central Asia)
WBG Logistics Performance Index	No	No	No	Yes	160 developed and developing countries
WBG Port Reform Toolkit	No	No	No	No	Selected country examples
OECD Services Trade Restrictiveness Index	Yes	Yes	Yes	No	22 sectors across 44 countries (mostly OECD)
USITC Logistic Services Assessment	No	No	No	No	52 countries (relevant to trade with US)
OECD and OECD-WBG PMR Database	Yes	Yes	Yes	Yes	34 OECD countries and 22 non-OECD countries

Source: Author's own elaboration.

A. Overview of the road transport and logistics industries: the supply chain

This report's framework of analysis focuses on road freight transport but covers other key related services. It covers logistics services (such as warehousing, freight forwarding²⁰, and services to allow for multimodal transport of goods) that are essential for the transport of goods from one point to another, particularly for road and maritime transportation. Maritime transportation and port infrastructure are covered to the extent that their operation and regulation can distort the level playing field along the supply chain.

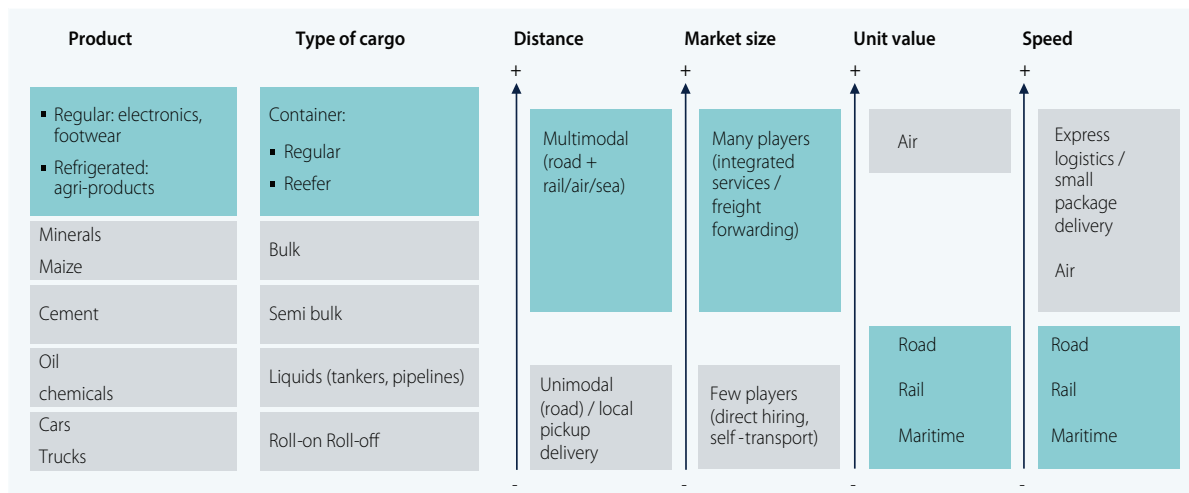
Depending on the type of cargo, its destination, and other factors, different sector segments²¹ can be defined within the road freight transport supply chain (Figure 9). The identification of distinct segments of the transport sector for the purpose of analyzing market and competition dynamics depends on a wide array of variables. For example, the products that need to be transported determine the specific cargo requirements, such as refrigerated containers in the case of certain agricultural products or roll-on/roll-off vessels for vehicles, and the modes of transport depend on how far the cargo needs to be transported. If distances are short, transport tends to be unimodal, but larger distances

²⁰ Freight forwarders are individuals or companies that organize shipments for other firms either as agents or carriers. Their role is facilitating the movement of freight along the logistics chain and ensuring that transport links are reliable, tailored to the product, and timely. This includes booking space, dispatching cargo and delivering it to the end user, completing all relevant documentation, and serving as intermediaries in the payment for shipments and any other additional duties for services required along the logistics chain.

²¹ A more detailed definition of "relevant markets" would be necessary to conduct a narrow analysis of potential anticompetitive practices or the exact extent of contestability. In antitrust and industrial organization, the definition of relevant market comprises defining a relevant product and a relevant geographic dimension/market, where the relevant product market refers to *all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use, as per European Commission (2012), and the relevant geographic market can be determined as the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighboring areas because the conditions of competition are appreciably different in those areas, as per European Commission (2012)*. Relevant markets, as defined in Peruvian antitrust cases of abuse of dominance have comprised: (i) passenger transport services along the Aguas Calientes–Puente Ruinas–Ciudadela Inca de Machupicchu route (INDECOPi (2007)); and (ii) local road transport of cement from and to Callejón de Huaylas (INDECOPi (2011)). Empirical analysis in the relevant industrial organization literature typically focuses on market and competition dynamics within a particular transport route (for example, Goolsbee, Austan, and Syverson (2008)).

typically require multimodal transport involving either road, rail, sea, or air transport. The decision among the latter options depends on the route and the country's geography, existing infrastructure, the value of the cargo (usually only highly valuable cargo is transported by air), and the cargo holder's speed requirements, among others.

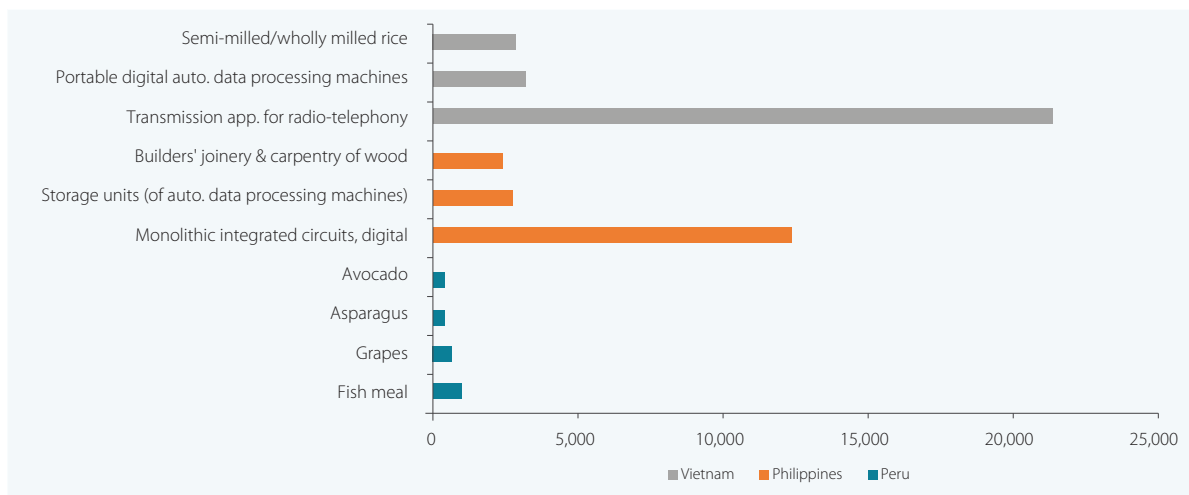
FIGURE 9: Factors that determine the type of transport service required



Note: Products mentioned are meant to serve as examples; this mapping is not exhaustive.
Source: Author's own elaboration.

Given the nature of products traded in APEC and the geographic location of APEC countries, the analysis focuses on containerized cargo and the assessment of multimodal transport covers the intersection of road and maritime transportation. As discussed above, in selected APEC economies, road cargo is particularly important. Maritime transportation is considered the main mode of multimodal transport, as around 90 percent of world trade is carried by the international shipping industry, as per International Chamber of Shipping (2017). Finally, the assessment focuses on container cargo because the main exported products (apart from commodities) in the selected APEC economies belong to the retail and agribusiness sectors and are transported mainly in containers (Figure 10).

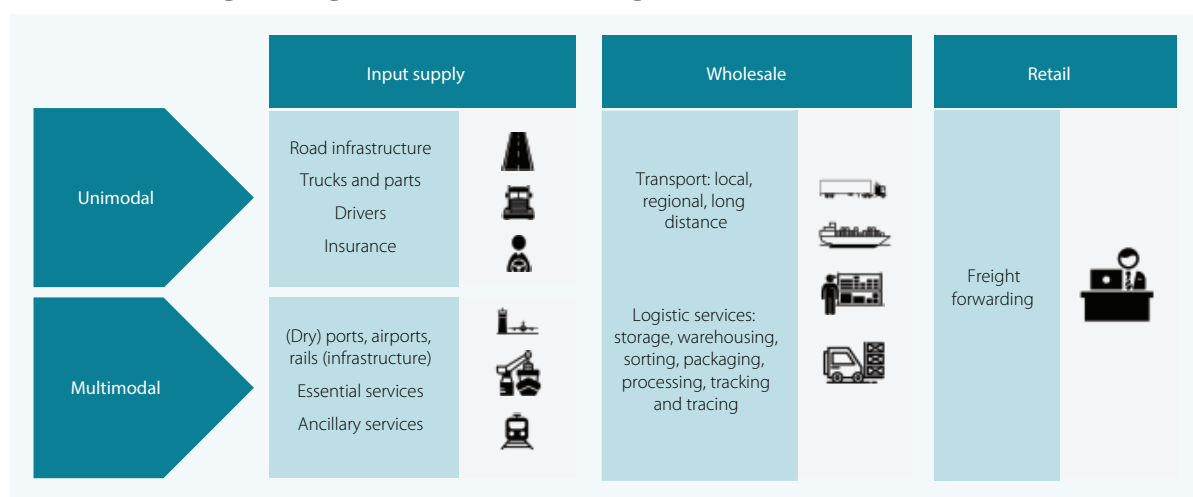
FIGURE 10: Main exported products by country (\$ millions free-on-board, 2015)



Note: Mineral and oil products were excluded.
Source: UN Comtrade Database.

The structure of the road transport and logistics supply chain can be divided into three different segments: **input, wholesale, and retail**. Each of these segments encompasses diverse services provided by various actors that interact among each other. The input segment is composed of actors that carry out different functions: providers of infrastructure—typically considered a public good, especially in the case of roads and ports—and relevant inputs, such as trucks and auto parts producers, importers, and infrastructure operators; as well as licensed drivers and service providers in multimodal nodes (such as stevedoring and towing in ports). Carriers and logistics operators in charge of transporting, storing, or providing value-added services to the cargo while it is in transit from a specific point to another constitute the wholesale segment. Finally, the retail segment, which typically has direct contract relationships with consumers, is comprised of freight forwarders or agents that manage the logistics chain operation according to client's specific needs (Figure 11).

FIGURE 11: Road freight and logistics services value chain segmentation



Note: As explained above, this report focuses on multimodal services provided via maritime and road transport. Insurance is an auxiliary service that will not be treated in detail here. Finally, the retail segment is not always involved in the transaction; individuals and companies may well hire carriers at the wholesale level directly.
Source: Author's own elaboration.

Under the retail segment, freight forwarders are individuals or companies that organize shipments for other firms, as either agents or carriers. They may service large companies that move several containers or smaller shippers selling into export markets. Freight forwarders have the capacity to consolidate freight from various sources into larger shipments, decreasing smaller shippers' cost to trade. Their role is to facilitate the movement of freight along the logistics chain and ensure that transport links are reliable, tailored to the product, and timely. This includes booking space, dispatching cargo and delivering it to the end user, completing all relevant documentation, serving as intermediaries in the payment for shipments, and any other duties for services required along the logistics chain. Figure 12 shows the different types of commercial contracts that exist along the chain and those that might potentially fall within the purview of the freight forwarder in each case.

FIGURE 12: Possible commercial contracts along the chain

What services are needed to bring goods in/out of country?		Road transport	Packaging/ warehousing/ customs clearance	Other mode of transport (ocean, air)
Who provides the services? Provided by exporter /importer (own) Provided at retail level (directly to exporter /importer) Provided at wholesale level (to intermediary)	Option 0: The Exporter/Importer hires each service individually	Road transport	Third-party provider	Other transport operator
	Option 1: The exporter/importer hires a freight forwarder and provides for transport on his own	Importer/Exporter	Freight forwarder	
	Option 2: The exporter/importer hires a road transport operator and a freight forwarder separately	Road transport operator	Freight forwarder	
	Option 3: The exporter/importer hires only the freight forwarder and the freight forwarder hires the road transport operator	Road transport operator	Freight forwarder	
Option 4: The exporter/importer hires only the freight forwarder and the freight forwarder provides all of the services with his own assets		Freight forwarder		

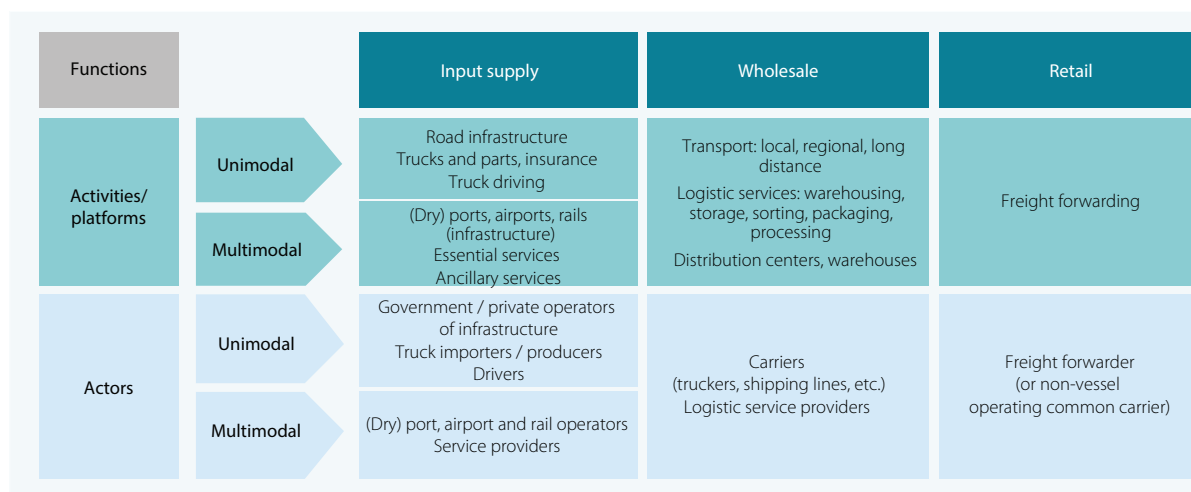
Note: Many other options and combinations of services and contracting are possible, but these are the ones relevant for competition in the road transport segment. Source: Author's own elaboration.

The extent of a freight forwarder's liability for loss/damage to goods depends on whether it is acting as an "agent" or as a carrier or "principal," and this has implications with regard to the public policy objective intended by regulatory requirements for freight forwarders. Acting as an "agent," freight forwarders incur no liability in the event of loss or damage to the goods, and are instead liable only for their personal faults or breaches (that is, professional liability). Acting as "principal," however, the forwarder can perform the carriage of goods (as a "performing carrier") or can procure the carriage of goods (through another "contracting carrier" who is actually shipping the goods). A freight forwarder acting as principal bears full liability concerning the carriage of goods, regardless of whether the forwarder is acting as a performing carrier or contracting carrier (Watanuki, 2015). Given the different nature of the service, the potential regulatory rationale also differs. The heightened degree of liability in the case of a carrier or "principal" justifies a stricter regulatory review by the government.

Under the wholesale segment, transport services are provided by carriers, individuals, or companies that move freight by any means of conveyance for a charge. There are two types of carriers: common carriers, which are registered operators that are in the transport business and sell services to third parties; and private carriers, which provide the service for own transport of goods or for third parties in a specific moment. In some countries, these two types of carriers are distinguished with different plate colors (in the Philippines, for example, privately owned trucks are issued white license plates while common carrier trucks (called "public utility trucks") are issued yellow license plates) and face different registration requirements. Carriers (at the wholesale level) sell not only to freight forwarders (at the retail level), but also to individuals and companies directly.

The choice of transport services for inputs and products is particularly affected by the distances involved. The major activities, and typical arrangements, are: local pickup/delivery (mainly road transport); regional transport (mainly road or rail transport); and long-distance transport (road, rail, air, or sea transport, with the major mode varying in response to factors such as cargo characteristics (including unit values and tonnages) and route (for example, domestic or overseas)).²² Regardless of these modalities, the movement of goods from door to door always involves road transport. Depending on the mode, additional services include warehousing, storage, and other logistics services. **Freight**

²² Bureau of Transport Economics (2001).

FIGURE 13: Activities and actors in the road freight and logistics services value chain

Source: Author's own elaboration.

forwarding and transport service providers rely on logistics infrastructure and services for their activities. Warehouses or temporary deposits are used for storage and as a platform to perform light manufacturing or value-added services on the cargo (such as packaging and labelling) and also serve as distribution centers. In many cases, cargo is consolidated in warehouses before being transported to port and—when temporary deposits have the authorization—customs clearance can be performed there instead of in the port. The latter is particularly relevant when there are capacity constraints at ports. Dry ports are also an important element of logistics infrastructure for multimodal transport. They are inland logistics centers “connected to one or more modes of transport for the handling, storage and regulatory inspection of goods moving in international trade and the execution of applicable customs control and formalities.”²³ The use of dry ports and warehouses potentially diminishes the risk of damaging the cargo (in agricultural products, for example, the cold chain can be affected during customs clearance, especially if the port does not have the necessary infrastructure to keep reefer containers connected to consistent power).

Access to high-quality and well-priced infrastructure services is essential for multimodal transportation. Because most internationally traded cargo either enters or leaves countries via ports, the scarcity of this type of infrastructure is a common problem. In countries like the Philippines or Peru, one port can concentrate over 50 percent of the national maritime cargo. The quality of the services offered, prices charged, and port access conditions have a direct impact on traders’ capacity to be competitive in international markets, on one hand, and on domestic prices of imported goods, on the other hand. The proper construction and operation of ports (as well as airports and railways), and the regulation of: (i) access to essential infrastructure facilities that allow for competition in ancillary services, and (ii) cargo services offered under monopoly conditions, are crucial to enable supply chain connectivity and competitive domestic markets.

Finally, other market inputs such as trucks, insurance, and licensed drivers, enable the provision of transport and logistics services. Minimum standards and regulations are common in some of these markets, since they are often associated with negative externalities, like pollution or safety risks, that

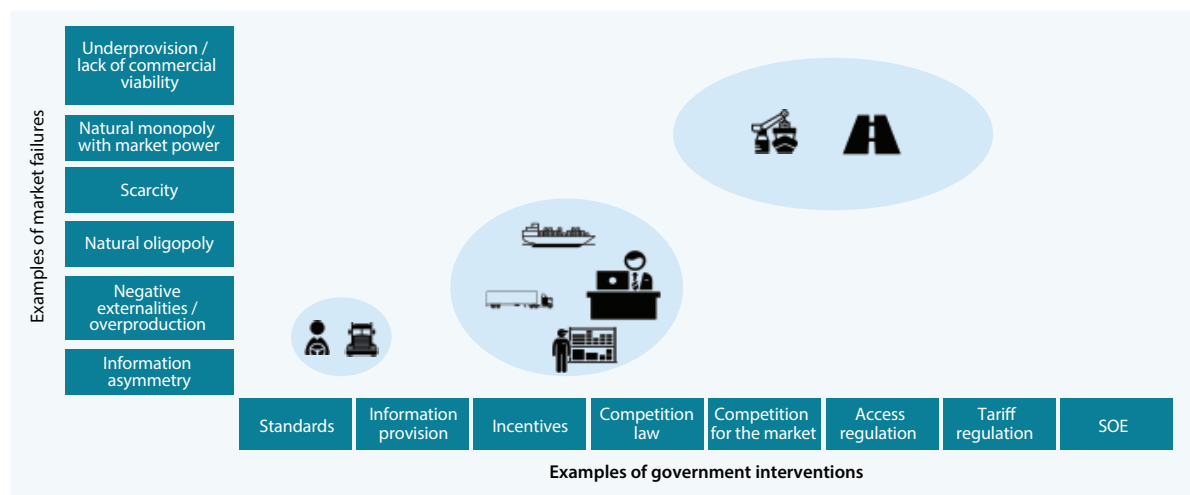
²³ UN ESCAP (2013).

governments address through the enforcement of appropriate rules. This assessment considers how port infrastructure, roads, and vehicle availability can affect competition dynamics in the provision of road transport and logistics services, but competition in these particular input markets is not assessed.

Government interventions in the transport and logistics sector are frequently justified not only to address abuse of significant market power, but also to address other market failures. Given the market features, multimodal nodes of transport such as ports and airports can hold significant market power, and regulators typically mandate access and regulated charges when there is insufficient inter- or intra-port competition. Besides market power, common market failures in the sector include negative externalities, such as pollution or safety risks. Governments can intervene by setting standards for vehicles and drivers. Some failures may also be overcome by the private sector over time. Understanding the entire logistics chain requires experience in the sector, and contract conditions vary, are individually negotiated, and are only visible to contract parties. Therefore, most clients rely on operators in a condition of asymmetric information that can result in pricing power. Private initiatives such as freight exchange platforms increase the transparency of offers and can reduce information asymmetry. Additionally, oligopolistic market structures, excess capacity, and alliances among large carriers may raise the risk of collusive agreements and require the detection and deterrence of anticartel enforcement programs.

Given the varying nature of the market failures involved, interventions should be tailored to each segment. For example, risks of collusion in retail and wholesale segments can be addressed most effectively through anticartel enforcement, but countries often consider it necessary to implement ex ante regulation in multimodal nodes of transport to mitigate the high risk of abusive practices on the part of operators with significant market power. Meanwhile, as noted by Boulaud and Nicoletti (2001), negative externalities in several input markets are best addressed through safety standards, rules on weights and measures, rules on traffic and driving conditions, rules on vehicle emissions, regulations on the transport of hazardous substances, and some form of direct/indirect user charging for the use of road transport infrastructure.

FIGURE 14: Spectrum of types of markets failures and forms of government interventions to address them— an application to road freight and logistics services



*Note: This is not an exhaustive list of market failures and government interventions.
Source: Author’s own elaboration.*

It is important to ensure that these interventions are properly designed and do not entail anticompetitive effects (either individually or jointly). Government interventions can unintentionally dampen competition. Common competition concerns raised in several road freight transport markets include quantitative limits on permits, exclusivity rights at the subnational level, price controls or guidelines that could facilitate cartels, freight allocation mechanisms that shield operators from competition, and preferential conditions available to state-owned enterprises (SOEs). Furthermore, in a context of weak antitrust enforcement, these government obstacles to competition can increase the likelihood of anticompetitive business practices, such as cartels and vertical restraints by dominant operators leading to exclusionary practices. Box 2 shows some examples of government interventions (or the lack thereof) that, through interaction with certain market characteristics, lead to distortionary (unintended) market effects.

BOX 2: Examples of government interventions and associated market outcomes

Local road passage permits, intraregional licenses, and disconnected traffic hours between municipalities, along with Certificates of Public Convenience, in the Philippines. In the Philippines, truckers must obtain local road passage permits for each route. Each permit can cost between \$40 and \$120. Intraregional licenses are assigned for specific regions, and providing services in other regions requires a separate license. Each municipality decides on the hours during which trucks may drive on its roads, and these time frames are not coordinated. Even if a competitor obtains the passage permit, the license, and the right time frame in which to compete, its entry can still be preempted by incumbents at the issuance of the Certificate of Public Convenience. This may explain in part why, despite the over 19,000 license applications received by the Land Transportation Franchising and Regulatory Board (LTFRB), one single operator—2Go Group—manages 50 percent of domestic Philippine freight with its 550 trucks.

Scarcity of land and minimum requirements for warehouse licenses in Peru.²⁴ The land around the main port is scarce and expensive for the purpose of large warehouses. At the same time, licenses for some types of warehouses (temporary deposits) require a minimum of 10,000 square meters in storage space. In fact, eight of the major shipping lines work with only two large warehouse operators licensed to undertake customs procedures.

Widespread presence of public enterprises and use of public financial and nonfinancial aid in Vietnam. The Saigon Newport Corporation combines port operation, handling, and container transshipment and accounts for 89 percent of Ho Chi Minh City's and more than half of the entire country's container market. Vinalines is a national shipping company that also operates ports, offers maritime and trucking services, and conducts forwarding and warehousing. In 2013, it owed Vietinbank, a state-owned commercial bank, over \$200 million.²⁵ The government eased this debt burden via a debt-for-equity swap with a state-owned bank and transfer of some of its debt to the Debt and Asset Trading Corporation (an SOE). As of 2017, Vinalines accounted for 30 percent of the country's total pier length and covered road transport with a fleet of 100 trucks.

Source: World Bank country transport questionnaires, as of April 2017.

²⁴ These types of requirements are typically motivated by a public policy objective. According to the *Reglamento de la Ley General de Aduanas* (Customs Act) in Peru, it appears that the applicable requirements aim at ensuring functionality, hygiene, and safety. Usually, in international experience (see, for example, OECD (2014)), the objective of such minimum surface provisions is to protect customers, to ensure a high quality of service, to facilitate the viability of the investment, and to achieve specific policy goals. In the case of logistics centers, in particular, the focus was on ensuring the sustainability of the investment. However, these types of provisions raise operational costs for companies, act as an entry barrier for small and medium players and, in the case of logistics centers, potentially raise transport costs. Should economies of scale be present in these markets that make it optimal for a few firms to operate large warehouses or outlets, firms will be able to acquire existing smaller outlets over time. OECD's recommendation regarding minimum surface areas for logistics centers in the case of Greece was that each company should be allowed to decide its minimum storage capacity according to its financial size and the volume of cargo it trades.

²⁵ See <http://vneconomicstimes.com/article/banking-finance/vietinbank-seeks-debt-equity-swap-with-vinalines> and note that the correct conversion of the VND figure into USD yields \$238 million, instead of billion.

The remainder of this report will lay out the inherent market characteristics observable in the studied countries, existing government interventions, and their effects on market outcomes, with a focus on road freight transport touching upon maritime infrastructure and transport to the extent that they affect the road transport supply chain. This review will shed light on what could be leading to the reiterative anticompetitive practices and poor market outcomes that have been observed in different markets, and derive policy recommendations to enhance the way these markets work.

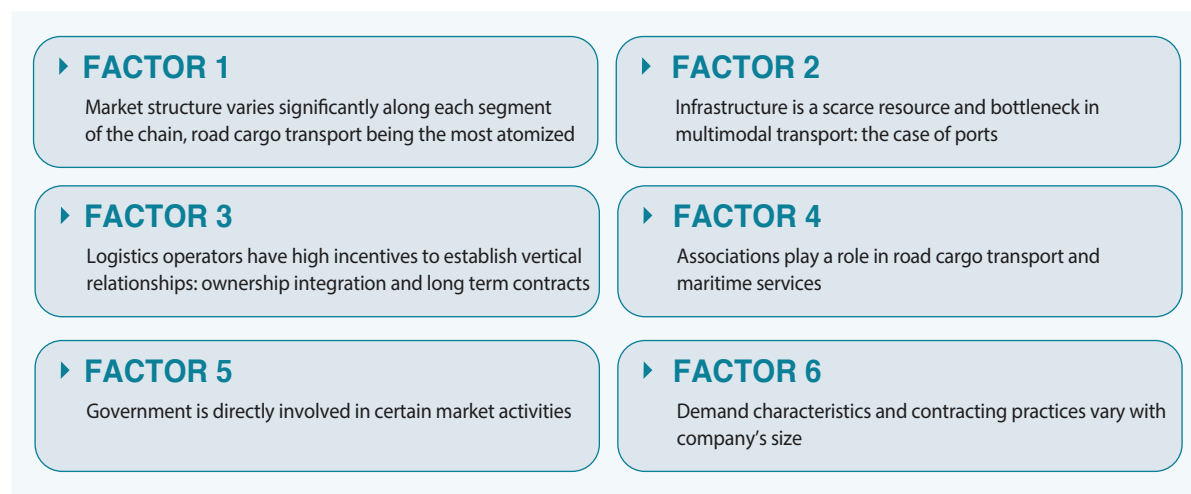
B. Market features that shape competition dynamics

The road cargo and logistics industries are broadly characterized by economies of scale. More volume results in lower average costs for transporters and logistics operators, as well as more countervailing power when it comes to negotiating with other actors in the chain. One strategy for gaining volume is to integrate vertically along the chain, through ownership or commercial agreements, to offer services in the form of a one-stop shop. Network and agglomeration effects are also present, as demand (which values reliability) is driven by recommendations and most logistics companies tend to cluster around multimodal nodes.

Capacity is a key determinant of competition dynamics in the sector. Scarcity of infrastructure in multimodal transport is a common feature, especially during high commercial seasons. This increases the risks of abusive practices or market foreclosure when there is lack of access regulation. In contrast, excess capacity among big carriers and freight forwarders can deter entry. During periods of low demand, however, the excess of supply can encourage collusive practices among market players to keep prices from falling to “harmful” levels.

More specific market features vary by segment. Whereas infrastructure input markets have large capital investment requirements (including roads, ports, railways, and airports—typically granted in concession or owned by the state) and feature very few players or even natural monopolies, wholesale and retail markets are highly dynamic and support a larger number of players that interact frequently.

FIGURE 15: Overview of factors that characterize the road freight and logistics services sector



Source: Author's own elaboration.

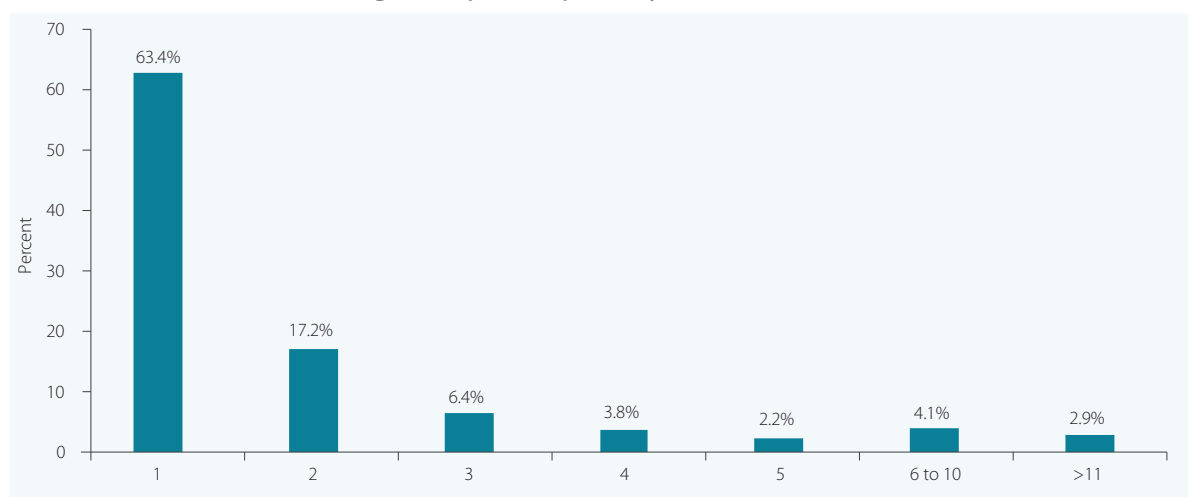
The following six factors focus on road freight transport, touching upon maritime infrastructure and transport to the extent they affect the road transport supply chain. As explained earlier in the report, given the nature of products traded in APEC and the geographic location of APEC countries, the analysis focuses on containerized cargo.

FACTOR 1: Market structure varies significantly along each segment of the chain, with road cargo transport being the most atomized

In all three countries reviewed in this report, trucking companies are mainly single-truck operators or SMEs with a fleet of fewer than three vehicles, on average. Single-truck operators are solo drivers who own or rent one truck and provide common carrier services with it, whereas SMEs are companies that usually have fewer than 10 trucks and also provide services to third parties. While these market players tend to provide only basic transport services, larger players with larger fleets can be found in the market. The latter typically have foreign capital investment and are vertically integrated with a logistics provider. In Vietnam, for example, the trucking industry is fragmented, with fewer than 10 large trucking companies and about 100 SMEs; most of the carriers are single-truck operations.

Each of the surveyed countries has thousands of registered companies in road freight transport, reflecting relative low levels of natural barriers to entry. In Peru, according to the Ministry of Transport, there were 95,469 registered transport companies in 2015, of which 63.4 percent had one truck and just 2.9 percent had 11 or more (Figure 16). Likewise, in the Philippines between September 2014 and October 2016, the LTFRB reviewed a total of 19,251 interregional transport applications. In Vietnam, in Ho Chi Minh alone, there are 1,370 registered companies that offer road transport services.

FIGURE 16: Distribution of road freight transport companies by fleet size in Peru in 2015



Source: World Bank (2016).

The freight forwarding sector is less fragmented because players face higher entry requirements and service provision involves sector-specific knowledge. In Vietnam, for example, the number of small and medium-sized logistics service providers account for 72 percent of all market players (1,300 logistics companies in the country, according to the Vietnam Logistics Business Association), while the remainder are large enterprises with charter capital of more than \$890,000 and estimated joint market

share of around 70 percent. The number of enterprises hiring integrated logistics services providers or a third-party logistics provider has grown over recent years, accounting for 15 to 20 percent in the country, as per GSL Logistics (2017).

Integrated logistics service providers manage most of the cargo from large clients, such as shipping lines or retail companies operating in the domestic market. In Peru, for example, every shipping line operates through a maritime agent in the country and has a commercial agreement with a customs warehouse (that offers integrated services along the chain) located near or in the port area.²⁶ The warehouse is set as a default option in case the shipping line's client does not indicate where the container should go when arriving to port. Likewise, as per APOYO Consultoría (2015), large retail companies have long-term contracts (for one to three years) with specific warehouses that manage all their cargo for the agreed period. Figure 17 shows some of the existing contractual links between shipping lines, maritime agents, and customs warehouses in Peru.

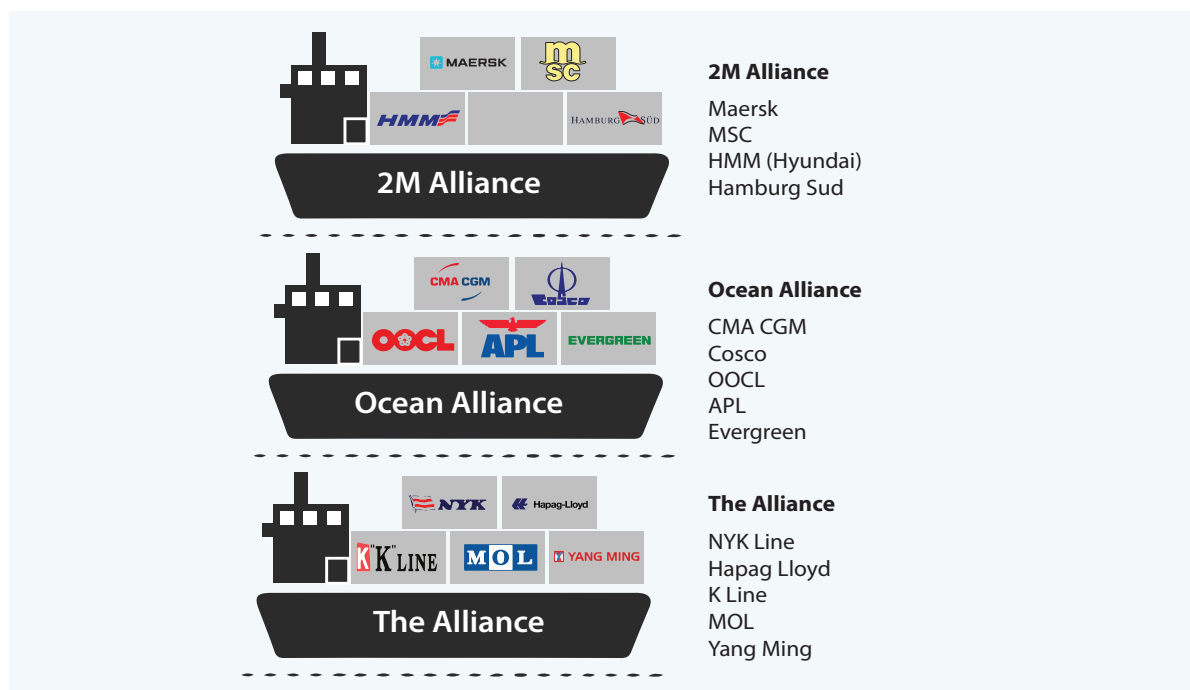
FIGURE 17: Existing contractual links between shipping lines, maritime agents, and customs warehouses in Peru

Shipping line	Maritime agent	Customs warehouse
Hamburg Sud	Cosmos	Neptunia
Hapag Lloyd	Cosmos	Neptunia
Mitsui	Tecnapo	Neptunia
Seabord	Nautilus	Neptunia
China Shipping	Broom Peru	Neptunia
LiKe	Kawasaki	Imupesa
APL	Amerandes	Imupesa
Evergreen	Amerandes	Imupesa
Maersk Peru	Maersk Peru	Alconsa
MSC	MSC	Licsa
CMA CGM	Broom Peru	Unimar
NYK	Transmeridian	Contrans

Note: This is not an exhaustive list. Alconsa is a customs warehouse owned by APM Terminals, one of Callao's port operators. The warehouse is inside the port area. Source: (Aduana, 2017).

The potential benefits of handling more volume and reaping network effects generates incentives to concentrate. Mergers and acquisitions have been common among carriers and freight forwarders. In 2016 alone, three mergers were approved in the maritime shipping industry (CMA and NOL, USAC and Hapag Lloyd, COSCO and China Shipping). The same number of mergers took place among international freight forwarders in 2015 (Fedex and TNT, Japan Post and Toll Holding, SNCF Geodis and OHL). Alliances are also a recurrent business practice, allowing carriers to rely on the vessels of others when needed. This allows shipping lines to sell more services with fewer own vessels. The three largest ocean alliances, comprising 14 companies, move roughly 90 percent of ocean freight in a market with over 100 players worldwide (Figure 18). According to Notteboom et al. (2017), their rationale lies in "achieving critical mass in the scale of operation, exploring new markets, enhancing global reach, improving fleet deployment, and spreading risks associated with investments in large container vessels."

²⁶ DP World's concession period finalizes in 2036 and APM Terminal's in 2041.

FIGURE 18: The three largest ocean alliances (as of April 2017)

Source: Shipit (2017).

Potential entrants in the warehousing market, including container freight stations (temporary deposits), may face a lack of available land, particularly around logistics hubs and port locations. In countries where there is limited terminal capacity at ports, certified warehouses (container freight stations) are a legal extension of the port for customs inspection. These facilities are generally close to the port and, depending on the density of the areas surrounding the port, they may face space restrictions. In Peru, Callao port serves around 50 percent of the country's total trade and is operated by two private concessionaires: DP World, a terminal specialized in container cargo with a total projected capacity of 1.8 million TEU by 2040 (as of writing, capacity was 1.25 million TEU), and APM Terminals Callao, a multipurpose port with a total projected capacity of around 3 million TEU by 2040 (as of writing, capacity was 1 million TEU), according to investment announcements and mandatory investment requirements based on demand triggers established in concession contracts.²⁷ This port is close to high-density residential and industrial areas where there is limited space to build warehouses and land is expensive. Potential entrants now need to assess the feasibility of building warehouses in logistics areas outside the city—facing additional transport costs due to longer distances and traffic congestion, but also gaining potential advantages as inland distribution/collection hubs. DP World Callao recently finished building a dry port facility in Lurin, a developing industrial area 53 km south of its container port terminal (where the operator also has an intra-port deposit). The total investment amount was \$14 million, as per Gestión (2016).

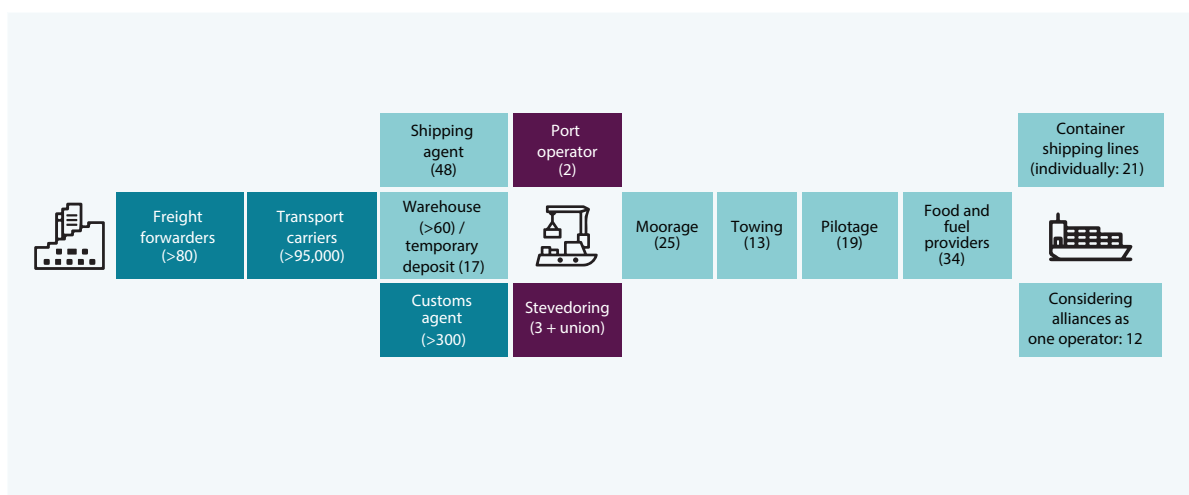
Overall, port operation is usually a natural monopoly segment given its large capital investment requirements, but intra-port or inter-port competition is feasible under certain conditions. International evidence shows that this segment is characterized by subadditivity of costs and the efficient outcome is often one or few operators. Depending on the size and characteristics of demand,

²⁷ DP World's concession period finalizes in 2036 and APM Terminal's in 2041.

intra-port competition between terminals can be possible and overlapping hinterland of ports can result in inter-port competition. Peru and the Philippines have one main port in their capital cities, which moves a significant share of the total international trade. In Peru, the main port hosts two private operators, generating some intra-port competition. In the Philippines, few of the ports are able to receive large container vessels, and inter-port competition is considered low. The Port of Manila has retained its countrywide dominant position for years, as shown by Dang and Tae (2017). While some intra-port competition exists between Manila North Harbor, Manila South Harbor, and the Manila International Container Terminal in container transport, the latter is the busiest, at the time of writing this report. Intra-port competition dynamics in Manila could change in the future, when Manila North Harbor finishes modernizing its facilities. In Vietnam, government policies to increase the number of port operators and cargo terminal capacity have resulted in underutilization and need for state subsidies to avoid the ports' bankruptcy. A clear example of this is the Cai Mep Port, where a cluster of seven terminals operate. Even though most of Vietnam's international trade is conducted through Cai Mep, the Ministry of Transport saw the need to introduce minimum guaranteed port tariffs (floor rates) in 2014 to help recoup some of the operators' investment in cargo terminal infrastructure, given that there were terminals running at 30 percent of capacity.

In sum, the number of players and market concentration varies along the supply chain. Generally, the road transport segment has thousands of participants; the number of freight forwarders, shipping agents, and customs agents is lower but ranging widely from dozens to hundreds; and the port terminal operators are one or few. Services to the cargo and vessels at the port are generally offered by various service providers. Nonetheless, vertical integration (FACTOR 3: Logistics operators have significant incentives to establish vertical relationships—ownership integration and long-term contracts) must be considered in assessing the relative importance of operators along the chain. As an example, Figure 19 maps the approximate number of players in the transport and logistics supply chain involving port services in the Peruvian market.

FIGURE 19: Number of companies involved in the provision of logistics services in Callao Port, Peru



Source: Author's own elaboration on the basis of data from Port Authority, Ministry of Transport (2015), APM Terminals Peru, World Port Source.

Finally, it is worth noting that new technologies have the potential to change the market structure, particularly for trucking services, by allowing small or new competitors to find customers easily and compete on better offers. Freight platforms are private initiatives that could potentially reshape market dynamics. These are two-sided platforms (online or application-supported systems) under which shippers compete to offer the best price for hauling cargoes and clients get to know who has the capacity to supply their specific needs, generating efficiencies by facilitating coordination and reducing information gaps in the road cargo transport and logistics markets. These platforms already exist in many countries (Box 3).

BOX 3: Freight platforms

Freight platforms are online or application-supported systems that serve as two sided platforms under which shippers can allocate cargo more efficiently and compete to offer the best price to haul cargoes. Additionally, value-added services can be provided, such as payment services, credibility checks, insurance, tracking (location, alert system), rating systems, and additional matching services—for warehouse space, for example. Such platforms already exist and co-exist in many countries, reaching relatively high levels of differentiation:

- **uShip (United States):** Shippers are allowed to upload their requirements, offering an immediate cost estimate based on past deals. Afterwards, shippers choose between starting competitive bids or setting concrete prices. In addition to offering a standard guarantee, uShip provides insurance services for an extra fee. In particular, if customers follow safe procedures such as verifying the transporter’s credentials and executing a written contract, they may have access to reimbursements if services are not rendered or items are damaged, lost, or stolen. uShip has positioned itself strongly in Latin America, operating in Chile, Argentina, Brazil, Venezuela, Guatemala, Mexico, and Cuba.
- **Hamber (Argentina):** Shippers upload their requirements, making concrete specifications on the type of cargo, geolocalization, and payment provision. They receive replies from transport enterprises or independent transporters. The initiative was launched during mid-2016, and in five months it registered more than 3,500 users in the network. Hamber focuses on the transportation of grains, for which they provide free insurance.
- **Efetex (Peru):** This virtual and mobile platform offers smart allocation of cargo loads among transporters and customers. It provides access to a network in which demands are matched to offers on the basis of an algorithm that considers geographical position and vehicle availability. At the time of writing, more than half of Efetex shipments are outside of Lima, Peru’s political capital. In addition, 72 percent of transport requests receive at least three transport service offers. The network already covers over 1,650 independent transporters.
- **Euro Freight Exchange (European Union):** This online platform, used mainly by freight forwarders, haulers, and trade and manufacturing companies, provides opportunities for exchange of cargo and vehicles all over Europe and beyond. Its website features regular routes, transport rates, a radius search, and a tracking system.
- **Drive4Schenker (European Union):** This is a web-based freight brokerage platform and a marketplace for full and part loads.

FACTOR 2: Infrastructure as a scarce resource and bottleneck in multimodal transport—the case of ports

Given the economic characteristics of ports and the need for large investments, there is usually a **limited number of ports or port terminals**. In Peru and the Philippines, there is one main port that moves over 50 percent and 80 percent of national maritime cargo, respectively. In Callao Port in Peru, APM Terminals (a multipurpose terminal) and DP World (a container terminal) move around 50 percent of the country's cargo, reaching yard utilization rates that exceed the optimal rate of 70 percent, defined in the United Nations Conference on Trade and Development's manual for port development (APOYO Consultoria, 2015). Manila ports in the Philippines, composed of the Manila South Harbor and the Manila International Container Terminal, move about 80 percent of the country's international trade (Reuters, 2014). The Manila truck ban that started in 2014 led to yard utilization rates of over 90 percent in 2014 and early 2015 (Magtulis, 2016), also above optimal rates. A mismatch between port capacity and demand can result in congestion that affects the entire logistics chain.

Existing port capacity and limited infrastructure for accessing terminals are some of the main causes of bottlenecks and high congestion levels. In Peru, the total truck turnaround time from Callao to the port and back averages six hours, within which only 30 minutes are spent at the terminal. As per OECD (2016), APM Terminals typically experiences queues of 350 to 400 trucks at the terminal gates, which stretch back over 1 km along the two lanes available to trucks. This bottleneck is due, in large part, to inefficient traffic management, lack of infrastructure for truck parking around the port, and construction work inside the APM terminal as part of its modernization project to increase port capacity. Contrary to Callao port, where there are only two lanes to access the port, Manila ports have six lanes and four gates. However, a daytime truck ban imposed in February 2014 to reduce traffic snarls in metro Manila resulted in severe port congestion, as the ban effectively prevented trucks from leaving or entering the country's busiest port for 16 hours a day (Reuters, 2014) and caused mismatches with vessel arrival times. As discussed in Section C, government interventions such as poor traffic management and transit restrictions can exacerbate the negative effects of market conditions such as a lack of infrastructure.

Congestion leads to higher logistics costs, negative externalities on safety and the environment, and potentially pass-through effects on retail prices. Drivers and other logistics providers tend to increase their fees because they know cargo movement will take longer; for example, truckers in the Philippines hiked their rates up by an average of 50 percent as result of the truck ban imposed by the city government of Manila.²⁸ The implementation of port anti-congestion measures in the Philippines resulted in a decrease in storage fees of about 39.6 percent, as per Mooney (2016), since demand for storage decreased as access to the port was eased. Furthermore, traders face the risk of penalties at ports for delays in picking up or dropping off cargo. Trucks stuck on roads surrounding the port are vulnerable to theft, burdening cargo owners, trucking companies, and employees with additional risk. In the Philippines, according to Reuters (2014), congestion led to historic hikes on retail prices and alleged fiscal losses caused by the decrease in corporate profits. Inflation went from an average of 3.1 percent in 2012–13 to 4.1 percent in 2014²⁹ and, as per PortCalls Asia (2014), estimates from Citigroup

²⁸ According to the Philippine Daily Inquirer (2014), the Confederation of Truckers Associations of the Philippines issued the following guidelines: the fee for transporting a 20-foot container from the Manila International Container Terminal to Manila (Port Area, Intramuros, Binondo, and Tondo) went up to P10,500 from P7,000, and for a 40-footer, to P12,450 from P8,300. Shipments to Ermita, Malate, Santa Cruz, and Quiapo went up to P11,400 from P7,600 for 20-footers and to P13,050 from P8,700 for 40-footers. The trucking fee to Santa Mesa, Santa Ana, Sampaloc, and other points within Manila went up to P13,050 from P8,700 for 20-footers and to P14,700 from P9,800 for 40-footers.

²⁹ According to data published by the Philippine Statistics Authority, available at: http://www.bsp.gov.ph/statistics/spei_new/tab34_inf.htm

Philippines indicated a potential 5 percent cut in the country's GDP in the same year. In addition to reducing the port's competitiveness on turnaround times, truck congestion around the port's gates is responsible for the degradation of the urban environment, as it generates pollution, noise, and visual disturbance and obstructs passenger mobility, as acknowledged by the OECD (2016).

Finally, it is worth noting that in a context of insufficient infrastructure, the windows during which cargo is moved or handled within the port and onto ships can be characterized as essential facilities (similar to landing/take-off slots in airport), which increases the relevance of having a proper cargo allocation mechanism. Each of the selected countries employs either queues, direct negotiation and contracts between market participants, or centralized allocation on a first-come/first-served basis at ports. This leaves room for commercial departments in port terminals to give preferential access and conditions within the port to freight forwarders or customers that move more cargo or have vertical relationships with the terminal, which could ultimately affect the relative position of port users.

FACTOR 3: Logistics operators have significant incentives to establish vertical relationships—ownership integration and long-term contracts

Logistics operators have significant incentives to move toward vertical integration because it results in efficiency gains and provides customers with highly valued service reliability. Vertical integration can occur through either ownership links or commercial agreements. For example, 2Go Group is an integrated logistics and transport provider that has the largest infrastructure in the Philippines, with capacity of over 400,000 TEU (approximately 50 percent market share of domestic Philippine freight), 16 passage and freight vessels, 15,000 containers, 35 warehouses nationwide, 550 trucks, and 7,000 employees. In other cases, freight forwarders prefer to outsource transport and logistics services through commercial agreements and long-term contracts to operate as one-stop shops, offering service bundles to improve profitability (from sea transfer to land transfer and even warehousing). This is a common practice among shipping lines, especially in countries where logistics services are not yet developed, as they need to provide service reliability to customers and do so by outsourcing to trustworthy trucking companies.

Whereas vertical integration is desirable for efficiency purposes, in the logistics sector it also serves as a strategy to gain volume. There is a tendency toward one-stop-shop service provision, since it attracts clients that prefer to pay more to avoid risks associated with information asymmetry (a relevant market failure in logistics), and to keep their cargo traceable and insured along the different business lines involved in the supply chain. Some freight forwarders provide supply chain management services, such as warehousing operations or international courier services. The larger freight forwarders also reserve space with a shipping company or airline and act as wholesalers, subcontracting space to other forwarders. In the Philippines, international shipping lines provide one-stop-shop offerings to clients by outsourcing the services and equipment of road cargo operators, who tend to involve themselves in these kinds of arrangements with shipping companies during off-peak periods. For the truckers, the profit is just enough to sustain operational overhead expenses during the lean months.

Vertical integration throughout the sector may have implications for competition, however, particularly because vertically integrated firms that control scarce infrastructure could potentially exclude competitors from the market. Vertical integration does not consist of a potential barrier to

entry or rivalry, per se. Oftentimes, a potential competitor can enter various segments of the vertical chain simultaneously. This is the case of several freight forwarding firms that offer integrated supply chain services. Vertical integration can also increase efficiency. However, *the degree of vertical integration could pose a risk of exclusionary practices when a vertically integrated supplier has substantial market power in the upstream segment, and an incentive to foreclose downstream non-vertically-integrated firms.* For example, a port operator that is vertically integrated with transport carriers, through either property links or exclusivity contracts, could raise access charges for port services for competing transport carriers (or limit their access to the port during peak hours on a discretionary basis) and thereby potentially drive these carriers out of the market.

There is a relatively high degree of vertical integration between container shipping and operation of port terminals. Port calls and the allocation of cargo (particularly containers) among terminals, when there is more than one terminal operator at a port, depend on the vertical relationships between shipping lines and port terminals. A study of European ports shows that ports have a much higher probability of receiving calls of a shipping alliance when the alliance members have an equity stake in a port terminal.³⁰

In each of the three studied APEC countries, at least one port operator participates in other markets of the logistics chain. In Peru, APM Terminals Callao is owned by the Maersk Group, which means it serves — among others — its own shipping line (Peru's largest market player). APM also competes in the warehousing market, with DPW Callao and the rest of the warehouses located in the extra-port area. In Vietnam, the SOE Saigon Newport Corporation is vertically integrated along every market in the logistics chain, in land and sea, and is also involved in other services (including information technology solutions, construction and repair, and marine and logistics education).

Investment announcements from early 2018 indicate that the degree of vertical integration between infrastructure operators (such as ports and airports) and logistics services providers will increase in Peru and the Philippines. In March 2018, DP World in Peru announced the acquisition for \$315.7 million of Cosmos Agencia Marítima S.A.C., a company that provides integrated logistics services at sea and on land in the country through two subsidiaries, Neptunia S.A. and Triton Transport S.A. This acquisition will allow the container terminal to offer end-to-end solutions to shipping lines and cargo holders. Furthermore, Cosmos owns 50 percent of shares in Terminales Peruanos Euroandinos, the main port operator in the northern region of the country.³¹ Likewise, the Philippine supply chain company Chelsea Logistics Holding Corporation has announced its aim to invest in infrastructure such as airport and port facilities.³² Given the risks of abuse of dominance and market foreclosure that may increase with these changes in market structure and the market power that the mentioned firms have, the role of competition agencies and regulators in ensuring competitive market outcomes will become even more important.

³⁰ Study for Northwest European ports of call and liner services on Europe-Far East trade (Notteboom, Parola, Satta, & Pallis, 2017).

³¹ *Semana Económica* (2018); Dupin (2018).

³² As per PortCalls Asia (2018), Chelsea Logistics Holdings Corp. "intends to participate in the development of the infrastructure facilities and systems in the country, which includes but is not limited to airport and port development and operations and other related facilities."

FACTOR 4: Associations play a role in road cargo transport and maritime services

Business associations can play an important role in informing their members, but they can also be used to restrict competition. Most associations serve the legitimate purpose of informing their members about legislative requirements, procedures, and new ordinances; providing advisory services; and offering training workshops. However, the existence of tight business associations that allow for the collection and sharing of detailed commercial information, publication of guidelines and pricing benchmarks, and punishment of members for noncompliance with association agreements can facilitate cartels. Depending on the countries' legal framework, coordination practices within associations could legally be considered anticompetitive *per se*, and therefore be subject to sanctions. This depends on whether the competition law applies to business associations and whether there is a special law that supersedes the competition law and allows business associations to engage in this conduct.³³ In the three focus countries, membership in a private association is not required to become a licensed provider of any of the services discussed in this report. New entrants can therefore compete outside the association. Risks of collusion may arise from pricing guidelines, however. According to at least one interviewee, Vietnam's Logistics Business Association may provide benchmarks for pricing among association's members.

Industry associations can potentially influence government interventions to reduce the level of competition. In the transport sector, members of voluntary industry associations often sit on government committees to represent the industry and argue in favor of regulatory changes, as referred to by Watanuki (2015). In many cases, these associations represent an important share of the market. In the Philippines, for example, the Inland Haulers and Truckers Association, one of the leading industry associations for truckers and haulers, accounts for approximately 1,000 member firms, which range from start-up corporations and even sole proprietors to firms in existence for at least 30 years.

Labor unions and syndicates can carry out actions that end up restricting entry and distorting the level playing field. In Peru, licensed stevedoring companies can only serve one of the main port operators, DP World, since its competitor, APM Terminals, is obliged by its concession to work with the union. This has meant significant costs for the multipurpose terminal, given the tendency of the union to strike for higher wages and its alleged links to criminal activities in Callao port.³⁴ Service quality competition among union members is low, as, according to APOYO Consultoria (2015), membership in this union is based on a quota system that gives older workers priority over newer ones and allows union members to either sell or transfer their membership rights to other stevedores or bequeath these rights to a family member. In the Philippines, an informal "syndicate" runs transactions at Batangas Port. It has been claimed that if a trucker is part of the syndicate and prepared to make facilitation payments, then this trucker is granted unauthorized privileges such as prioritization in queuing and entry into the premises. Allegedly, truckers outside the syndicate have difficulties entering the port at all. In other markets for ancillary port services, associations can also facilitate coordination of prices and market allocation (Section D).

More recently, port operators have begun discussions to form an alliance. According to Hutchins (2016), APM Terminals Management B.V., DP World Limited, Hutchinson Port Holdings Limited, Port of Rotterdam Authority, PSA International Pte. Ltd., and Shanghai International Port (Group) Co. Ltd.

³³ For example, an agreement in the Honduras basic grains market that involved the business association was not considered illegal because the Executive Power implemented the agreement in coordination with firms. However, in many jurisdictions, such as the European Union, United States, Mexico, and Peru, agreements within associations are subject to antitrust sanctions.

³⁴ See JOC (2015); Seatrade Maritime News (2015).

have requested permission from the United States authorities to discuss, exchange information, and coordinate on issues affecting the efficiency and effectiveness of the container port industry. The agreement is still subject to competition law but can serve as a way to increase bargaining power vis-à-vis shipping alliances.

FACTOR 5: Government is directly involved in certain economic activities

The presence SOEs in infrastructure sectors is not unusual in many countries, especially in sectors that involve capital-intensive activities. However, although the degree of state involvement in markets varies across countries and economic policy models, many governments have opted to limit state involvement to the extent needed to address market failures.

The experience of many countries shows that SOEs do not always operate in a manner that is competitively neutral vis-à-vis the private sector, and as a result, often end up crowding out efficient private investment. SOEs sometimes enjoy competitive advantages in terms of lower taxes, less regulatory scrutiny, and greater access to cheaper finance and subsidies, which can have the effect of decreasing the market share of private providers. As discussed in the next chapter, rules and mechanisms to ensure competitive neutrality are essential when public and private firms compete.

In Vietnam, SOEs are involved in the road freight and logistics sectors. There are two state-controlled companies operating in the road freight transport or logistics services sectors: Saigon Newport Corporation (a port terminal operator involved in cargo handling and container transshipment) and Vinalines (the national shipping company, which is involved in port operations, maritime services, trucking, forwarding, and warehousing services) (Box 4). Survey respondents (Annex IV) suggested that, in the past, these SOEs were granted infrastructure from the state free of charge and received favorable treatment in leasing warehouses and land. The Saigon Newport Corporation has 23 terminals (feeder, barge, and deep water) and handles over 89 percent of Ho Chi Minh City's container market, approximately 52 percent of the entire country's container market, 70 percent of the domestic barging market, and 50 percent of the barging market to Cambodia.

BOX 4: Vietnam National Shipping Lines (Vinalines)

Vinalines owns a shipping fleet with a total load capacity of over two million tons, accounting for around 25 percent of Vietnam's national shipping fleet. The company owns a wide network of warehouses and modern inland container depots in many cities and along the country's influential seaports.

Vinalines operates 15 seaports with a total handling capacity of 75 million tons a year, making up 23.5 percent of the country's total number of piers and 30.4 percent of the country's total length of piers. Vinalines' seaports are located in strategically important locations for goods trading as well as regional economic development. Vinalines has four foreign joint-venture ports, including CMIT, SP-PSA, SSIT, and CICT. In 2016, Vinalines reported an improvement in business performance, earning a pretax profit of VND923 billion (\$41.95 million) in port operations and VND1.139 trillion (\$51.77 million) in maritime services.

Vinastarlines, a subsidiary of Vinalines operating in transportation and logistics, has over 100 trucks in its fleet. It provides multimodal transport services (land transportation, ocean and river transportation, and air freight) and logistics and cargo clearing services.

Source: Vietnam Breaking News (2017c).

In Peru and the Philippines, the government operates only some port facilities in the country, while the main ports for international cargo are operated by private firms under concession schemes. In the Philippines, the Manila North Harbor Port operator won a 25-year contract to operate and expand Manila North Harbor in 2010. In Peru, the four main port terminals have 30-year contracts, granted between 1999 and 2011, while the other coastal ports remain under the National Port Company (ENAPU, by its acronym in Spanish). An independent transport sector regulator is in charge of supervising and determining regulated tariffs for both the ports under concession contracts and ENAPU. In the Philippines, however, the Philippines Port Authority (PPA) has the authority to provide cargo handling and other port-related services, whether on its own or by contract, and also regulates port tariffs. PPA is a direct beneficiary of increases in those rates, receiving a 10 percent and 20 percent share of the domestic and foreign cargo handling rates collected, respectively. This creates a conflict of interest for PPA.

FACTOR 6: Demand characteristics and contracting practices vary with the shipper's size

Demand for transportation services is highly heterogeneous, ranging from lower-quality, on-the-spot demand to a demand for more predictable services and more reliable quality, to high-end/high-volume demand. Each type employs a different means of contracting. On-the-spot demand usually occurs for small-scale local transport in primary products that do not require special conditions (such as reefer containers). This is common in rural areas, where products must be transported from agricultural lands to collection centers, and in cities, where small SMEs need to distribute their products. Commercial conditions in this case tend to be direct and informal. On the other hand, medium- to large-scale businesses tend to prefer reliability and frequency over price, given that they face higher opportunity costs linked to delays and potential damages to the cargo being transported.

Large companies tend to negotiate one- to three-year contracts through bidding processes and tenders, and typically obtain better commercial conditions based on the amount of cargo they move. In the transport and logistics markets, price discrimination based on volume is common, such that large companies in retail, mining, and other highly tradable product markets enjoy preferential rates and conditions (such as more time to return empty containers, to pick up cargo, and to store cargo in warehouses).

Many large companies follow a dual scheme in which they own a fleet for local use and also outsource logistics services, particularly when cargo is for international trade. Logistics operators add value based on information management and operation “know-how,” which is essential for international trade. Together, these factors reduce transaction costs and double marginalization, given the characteristic asymmetry of information and lack of transparency along the value chain.

In recent years, on-the-spot services are becoming more formal and available in urban areas in the Philippines due to the development of transportation network companies. These new logistics companies are using underutilized, privately owned vans and/or trucks to facilitate growth in their logistics businesses. As in the case of freight exchange platforms (Box 3), clients of on-demand logistics providers use mobile apps to schedule and book freight transport services (Box 5). Transportation network companies provide different kinds of vehicles that are tailored to varying cargo sizes and types and mainly provide pickup and delivery services. Most of the clientele size ranges from small to medium. As of now, the regulation of transportation network companies on the carriage of goods and/or cargoes in the Philippines have yet to be defined legally.

Other relevant decision variables that potential clients consider in contracting with providers include time flexibility and the availability of specialized equipment. Some industries and products are highly time-sensitive, such that large international suppliers often need providers with the capacity to serve their requirements on a specific schedule. Likewise, some products require special transport and handling equipment (or infrastructure) to maintain product quality or avoid additional costs caused by leakages. Therefore, multipurpose port terminals have different infrastructure for each type of cargo (such as bulk, break bulk, containers, and liquids), and logistics providers need to have certain equipment or infrastructure conditions in place that may be fundamental for clients—such as having a room with adequately distributed plugs for reefer container storage—if they are to serve exporters or importers of agricultural or fish products. Market dynamics and competition can therefore vary substantially among more specialized products.

BOX 5: Mober aiming to be the Uber of logistics in the Philippines

Mober is a Philippines-based, on-demand application (“app”) that offers delivery services around metropolitan Manila. It commenced operations in December 2015. The app was produced by Singaporean developers but is maintained by a local developer group. Mober’s vans and trucks can easily be booked by businesses for their product deliveries, by restaurants to distribute food items to their branches or commissaries, by consumers who want their large purchases delivered straight from furniture shops or department stores on the day of purchase, or by pet owners who need to take their pets to the vet.

Mober offers several kinds of vehicles catering to different cargo needs. It has in-house vans and third-party vehicles. In 2016, Mober had 50 third-party vehicles and aimed to have 500 by the end of the year. Its services are divided into three categories: Van, which includes a vehicle with a maximum 800 kg capacity and a driver; Van Plus, which includes helpers, convenient for heavy and bulk deliveries; and Lorry, which includes four- and six-wheeler trucks that can carry up to 25 tons of cargo.

Mober has an accreditation process in place to make sure that drivers and vehicles meet quality and service expectations. For the safety of the public and drivers, Mober refuses deliveries of guns and flammable objects, as drivers are not qualified to handle and transport dangerous cargo. To ensure cargo safety, Mober offers an insurance amount of approximately \$1,000 (PHP 50,000) in case of damage or loss, free of charge.

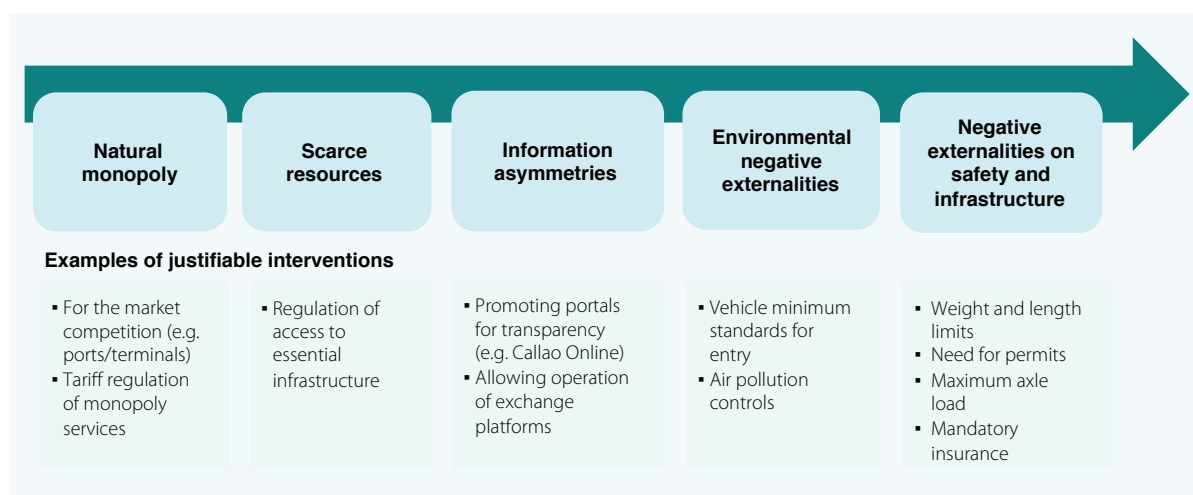
Source: Philippine Daily Inquirer (2016).

In all countries, the number of suppliers diminishes as logistics demands become more specialized, forcing client companies to incur higher costs or, in some cases, to decide between substituting production and moving their plant to a different country. In the Philippines, for example, interviewees referred to the underdevelopment of local infrastructure as a choke point. Automation is at a minimum, forcing Yara Fertilizers Philippines—a large-scale mineral fertilizer company headquartered in Oslo, Norway, with operations in the Philippines, that outsources all its required transport and logistics services—to avail itself of manual labor for hazardous tasks related to the import and distribution of urea and highly specialized variants. This lack of infrastructure is aggravated by exclusive arrangements involving handlers and clients. Particularly for specialized quayside bagging machines, there are exclusive dealings present that can cause delays for companies that are not party to the agreements. Furthermore, for specialized products like fertilizers, coal, and cement, there is only one authorized portside handler per product, limited by available infrastructure, at the time of this writing. This effectively eliminates the bargaining power of the user and forces it to cope with service and equipment at substandard levels.

C. Government interventions that may act as obstacles to competition

The road transport and logistics sectors involve inherent market failures that governments commonly work to address for valid public policy objectives (Figure 20). Multimodal nodes of transport, like ports and airports, tend to be natural monopolies and should be regulated to avoid abusive practices from operators. Because this type of transport infrastructure is scarce, putting in place access regulation can prevent exclusionary practices. As discussed above, understanding the logistics chain and all the procedures involved in trade typically requires experience in the sector. Because contract conditions vary, are individually negotiated, and are visible only to contract parties, most clients rely on operators in a condition of asymmetric information that can result in pricing power. Private initiatives such as freight exchange platforms increase the transparency of offers and can reduce information asymmetry. What is not clear yet is whether governments will allow such initiatives and, if so, whether these platforms will eventually be regulated.

FIGURE 20: Examples of common market failures and justifiable interventions in the freight and logistics services sectors



Source: Author's own elaboration.

Most regulations in the road freight and logistics services sectors focus on addressing **negative externalities**. As acknowledged by Boulaud (2000), these sectors generate several negative externalities that are related to accidents, noise pollution, air pollution, traffic congestion, and damage to road transport infrastructure (such as roads, highways, bridges, and tunnels) from overloaded vehicles. According to Boulaud and Nicoletti (2001), these legitimate social, environmental, and economic concerns are usually addressed through road safety standards, rules on weights and measures, rules on traffic and driving conditions, rules on vehicle emissions, regulations on the transport of hazardous substances, and some form of direct/indirect user charging for the use of road transport infrastructure.

The main rationales for regulation in the focus countries relate to **road safety and prevention of road damage**. In all three countries, regulations governing vehicle weight and dimension limits are in place to improve road safety and prevent of road damage (Table 3). Overloaded axles cause severe damage to roads and bridges, which in turn increases the risk of accidents, limits road life, and raises infrastructure maintenance costs. For safety reasons, Peru and Vietnam require that trucks be installed with monitoring and control systems that transmit location and speed information to the supervising authority.

All three countries also have environmental standards for vehicle exhaust emissions to prevent air pollution. The Philippines limits vehicle age to 10 years, although these limits do not appear to be vigorously enforced, given that around 80 percent of the 300,000 trucks in operation are at least 15 years old, according to the country questionnaire implemented in April 2017. In Vietnam, the maximum age permitted for road freight transport vehicles is 25 years (Table 3). Peru does not have a maximum age limit for trucks, but the *Centro de Inspección Técnica Vehicular* conducts regular vehicle inspections every three years (technical accreditation) to ensure that standards are being met. In general, there are multiple opportunities to align vehicle regulation with international good practices.

TABLE 3: Vehicle regulation in Peru, the Philippines, and Vietnam

	Peru	Philippines	Vietnam
Weight (and dimension) limits	✓ No load shall exceed 48 tons, maximum axle load 25 tons	✓ No axle load shall exceed 13.5 tons	✓ An overweight load is a non-divisible load heavier than 32 tons
Environmental standards	✓ Reglamento Nacional Vehicular	✓ Clean Air Act	✓ Euro 4
Monitoring and control systems	✓ Wireless monitoring and control system	✗	✓ GPS route monitoring equipment
Vehicle age limits	✗ (annual requirement for vehicle inspection instead)	✓ 10 years old, but the LTFRB may allow older trucks to be in service subject to limitations on franchise length	✓ 25 years old

Source: World Bank country transport questionnaires, as of April 2017.

All three countries have some form of driver regulation aimed at ensuring that drivers have the necessary skills and competencies to safely carry out their tasks (Table 5). Only Peru and Vietnam, however, have regulations that stipulate the required balance between working hours and rest for truck drivers as well as maximum driving hours per day so that fatigue is managed appropriately. In these countries, the accumulated duration of driving hours shall not exceed 10 hours in a period of 24 hours, counted from the start time. In the Philippines, truck drivers, like other workers, are required only to follow the rules outlined in the Philippine Labor Code.

Municipalities in all three countries implement truck bans on certain routes based on the truck's weight or during peak hours for road safety and traffic management purposes. In Vietnam, certain centrally run cities and provinces have set up a time-bound truck ban based on the total tonnage of loaded trucks. In Ho Chi Minh City, for example, light trucks (less than five tons) are only allowed to circulate in certain areas from 6:00 AM to 8:00 AM in the morning and from 4:00 PM to 8:00 PM in the evening. On the other hand, heavy trucks (more than five tons) are not allowed to circulate from 6:00 AM to 12:00 midnight in the same areas. The City of Manila has also implemented a time-bound truck ban on trucks weighing more than 4.5 tons during certain times of the day and night on the streets of Manila. This ban is now being administered by the Metropolitan Manila Development Authority, a national government agency.

TABLE 4: Vehicle regulation in the European Union and United States

	EU	US
Weight (and dimension) limits	Varies by member state, most frequent weights allowed: <ul style="list-style-type: none"> • 1 axle: 11.5 tons • 2 axles: 18 tons • 3 axles: 26 tons • 4 axles: 36 tons • 5 axles: 44 tons • 6 axles: 56 tons • 7 axles: 60 tons 	800,000 pounds (363 tons) gross vehicle weight, 20,000 pounds (9 tons) on a single axle, and 34,000 pounds (15.4 tons) on a tandem axle group
Environmental standards *	Euro 6	Clean Air Act and Air Pollution
Monitoring and control systems		
The EU is to introduce a mandatory system requiring EU member states to monitor and report the CO2 emissions and fuel consumption of all new "heavy-duty vehicles," including freight vehicles of more than 3.5 tons.		
	<ul style="list-style-type: none"> • Electronic Logging Devices • On Board Diagnostics Systems: emission control • Electronic Stability Control Systems: designed to reduce untripped rollovers 	
Vehicle age limits	(vehicle testing and surveillance instead)	(vehicle testing and surveillance instead)

*Whereas the US standards depend on a vehicle's footprint, EU standards depend on weight; heavier vehicles are subject to a higher CO2 emissions requirement (and lower fuel economy).

Reviewed sources: ITF (N/A), DOT (2015), Klier and Linn (2016), FMCSA (2015), Waters (2017), European Union (2016).

TABLE 5: Driver regulation

	Peru	Philippines	Vietnam
Special truck driver training	✓	✓	✓
Working hours and rest	✓5 hours during the day and 4 hours at night before a mandatory rest break	✗	✓4 hours with a rest break of at least 60 minutes during the day and 105 minutes at night
Maximum driving hours per day (24 hours)	✓10 hours	✗ (*)	✓10 hours

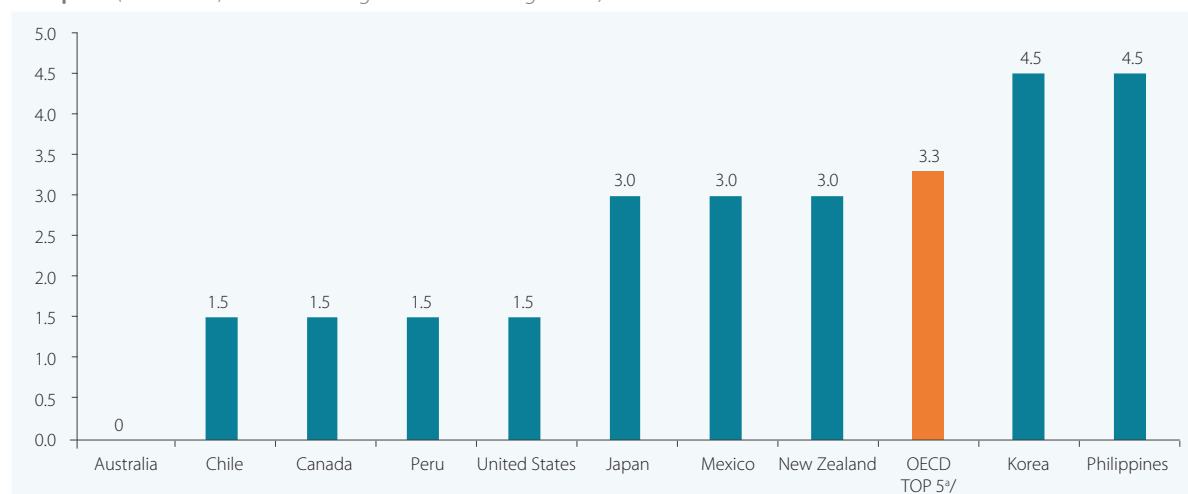
Note: (*) In early 2017, the LTFRB limited passenger bus drivers' daily driving time to six hours.

Source: World Bank country questionnaires as of April 2017.

However, certain regulations that are intended to meet public policy objectives can turn out to restrict market competition when not properly designed. Excessive or burdensome entry requirements, for example, could limit competition by restricting entry of equally or more efficient players. Truck bans imposed during certain hours to avoid traffic jams in cities could restrict the capacity of some market players to provide services on a given route. Distinctions between national and foreign citizens or investors could lead to discriminatory outcomes that deter foreign investment and entry. Regulatory impact assessments could be useful in determining whether the requirements are proportional and conducive to the intended market outcome and whether they are generating unintended negative effects, for example on competition. Based on available PMR indicators on the

extent to which entry barriers restrict competition in road transport (Figure 21), the Philippines shows a higher level of restrictiveness than Peru. Miralles and Galang (2017) find that this result is driven by: (i) the administrative burden and duplicity of effort required to obtain the necessary trucking license (which involves interactions with eight different government agencies); (ii) Filipino citizenship and hauling contracts as entry requirements; and (iii) prohibition of trucking cabotage and limits to foreign firm participation in tenders for government transport.³⁵

FIGURE 21: Contribution of “entry barriers” to the restrictiveness of non-manufacturing regulation subindicator on “road transport” (From 0 to 6, with 6 indicating more restrictive regulation)



Note: No data available for the rest of APEC economies. Information as of 2013 or latest available.

* / OECD top 5 is the average score among Austria, Denmark, Netherlands, New Zealand, and the United Kingdom.

Source: OECD Product Market Regulation database, and OECD-World Bank Group Product Market Regulation database for non-OECD countries 2013, as of March 2018.

Regulations that restrict firms’ incentives to compete, expand, and grow can be classified into three groups. First, regulations that restrict entry and protect incumbents have the effect of reinforcing dominance. Second, regulations that are conducive to collusive outcomes or restrict firms’ choice of strategic variables prevent firms from competing strongly or reduce their incentive to do so. Third, regulations that discriminate and protect vested interests have the effect of distorting the level playing field and preventing firms from competing on their merits. Figure 22 classifies some of the regulations that have been observed in Peru, the Philippines, and Vietnam.

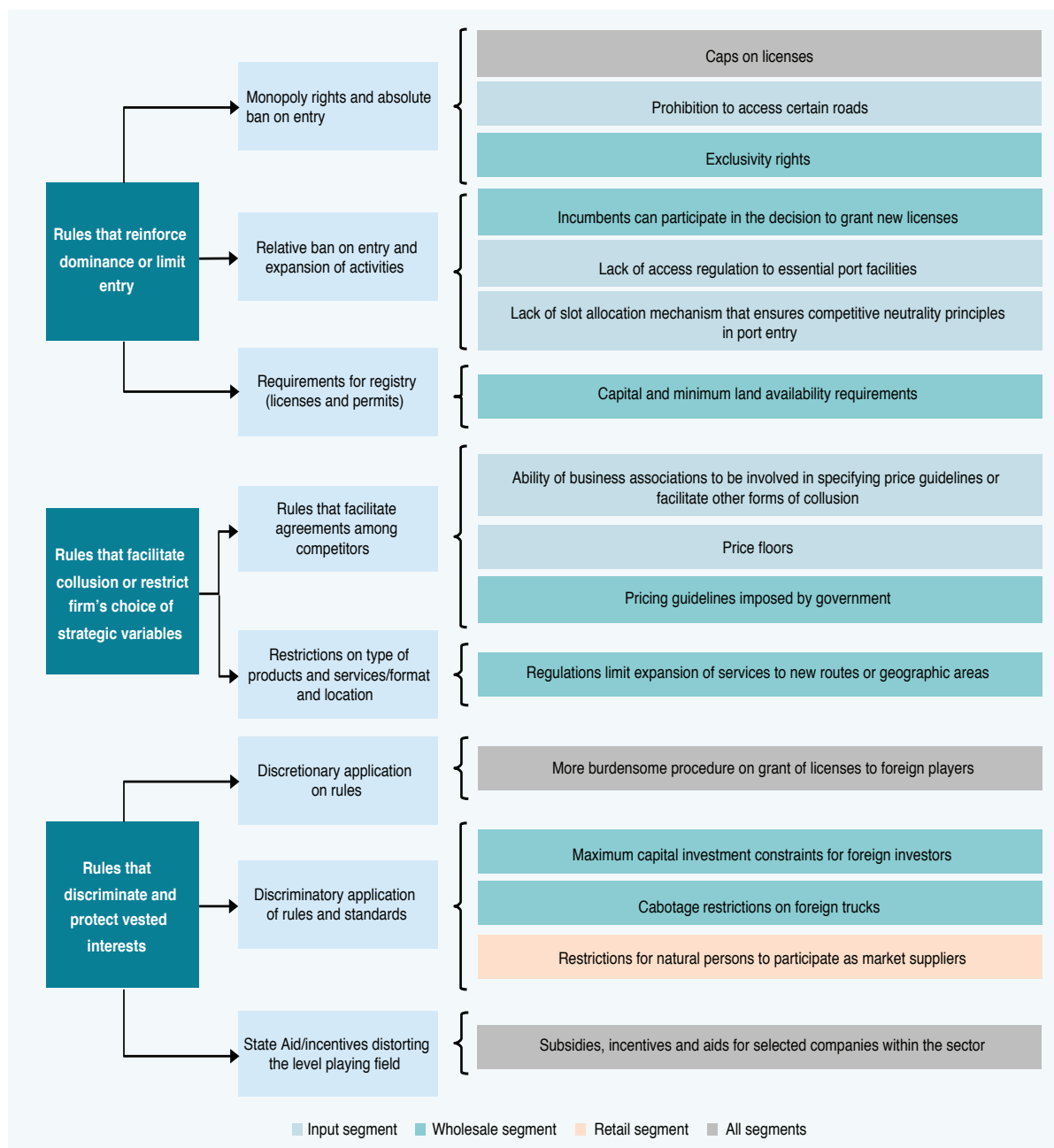
Vietnam recently increased entry requirements for commercial carriers to reduce atomization. Since July 2017, a trucking license will only be issued if the transportation business unit (commercial carrier) has a sufficient number of vehicles, as stipulated in the approved business plan. Specifically, enterprises and cooperatives transporting goods in containers and using trailers or semi-trailer tractors and trucks to transport goods for 300 km or more must have a minimum number of vehicles.³⁶

³⁵ Foreign bidders are only eligible to participate in order to prevent a restraint of trade when: (a) a treaty or executive agreement allows; (b) reciprocity rights exist; and (c) goods are not available locally.

³⁶ Requirement for licensing:

- for a unit whose head office is located in centrally run cities: from 10 vehicles or more;
- for a unit whose head office is located at remaining localities: from 5 vehicles or more; and
- for a unit whose head office is located in poor districts as prescribed by the government: from 3 vehicles or more.

FIGURE 22: Classification of regulations that restrict competition observed in selected APEC economies



Note: This diagram maps each regulation to its direct effect (principal association), but it is important to note that secondary effects can also derive from some of these regulations.

Source: Author's own elaboration.

In the Philippines, trucks face difficulties in transiting through the country due to inconsistent traffic bans between municipalities. Each municipality decides on the hours in which trucks may drive on its roads; because these time frames are not coordinated, trucks can often become stuck between two municipalities for a period of time, thus limiting the efficiency of service.

In Vietnam, there is no distinction between private and commercial carriers, which has an unintended adverse impact on some foreign joint ventures. If a warehouse operator has its own fleet of trucks for internal use, it must still acquire the same registration certificate, license, and badges as a commercial carrier. An unintended consequence of these requirements is that it has become more challenging for some foreign-invested enterprises to carry out transport-related operations using their own fleets in their own businesses. This is because Vietnamese law prohibits joint ventures with over 51 percent capital contribution from engaging in the trucking business. These joint ventures—for example, a 60 percent foreign-invested warehouse—cannot obtain a trucking license and therefore must cease to use their own fleet or risk prosecution. While a temporary solution has been put in place,³⁷ a more permanent and complete solution is required to fully remove this restriction for foreign-invested enterprises.

In some countries, criteria other than technical requirements are still taken into consideration in deciding on the entry of new operators. In Peru and Vietnam, financial and public safety requirements are also in place. In the Philippines, additional criteria (such as economic need tests and government discretion) are used by authorities to restrict the issue of licenses/permits or limit industry capacity for cargo carriers and freight forwarders (Table 6).

TABLE 6: Entry regulation

	Peru	Philippines	Vietnam
Need to obtain a license/permit	✓	✓	✓
Cost of license/permit	\$ 7.50 (PEN 24.5)	\$ 6.00 (PEN 300)	\$ 9.00 (PEN 200,000)
Duration of license/permit	10 years	5 years	7 years
Registration required	✓	✓	✓
Conditions other than technical and public safety: financial fitness, economic need, government discretion	✗	✓	✗
Statutory time periods for approval	✗ Automatic	✓ 21-45 days	✓ 5 days
Minimum number of vehicle requirements	✗	✗	✓ 3, 5, or 10 vehicles depending on head office location
Permit procedures	✓ 8 requirements	✓ 8 requirements	✓ 4 requirements

Note: Regulations that could have mixed effects and restrict market competition are highlighted in orange.

Source: World Bank country questionnaires as of April 2017.

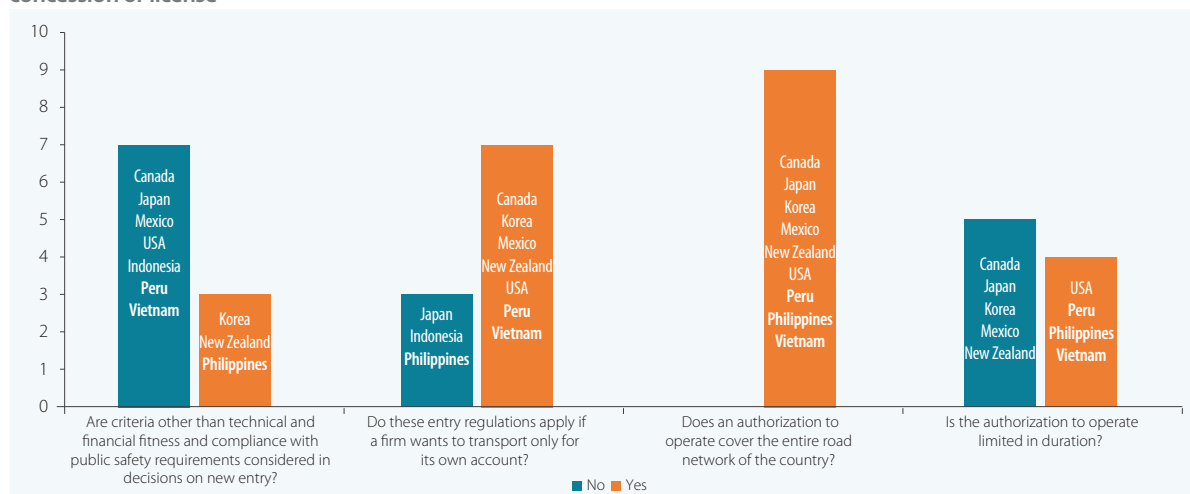
Some countries provide automatic approval for permits, whereas others have established maximum statutory time periods for issuing licenses. In Peru, there is no formal schedule or timeline for approval because it is “automatic,” although the Peruvian transport providers interviewed for this study suggested that it can take between 30 and 45 days to physically receive a permit even though they can commence operations in the interim. In the Philippines, there is a maximum statutory time period of 45 days for road transport carriers and 21 days for freight forwarders.³⁸ In Vietnam, there is a maximum statutory time period for issuing licenses, but actual timelines are usually prolonged, particularly for foreign companies. During consultations for this study, some local providers indicated two to four working days for road transport services and seven to 15 days for bonded warehouse services.

³⁷ A “circumstantial adjustment” (temporary solution) in March 2016 specified that foreign-invested enterprises with over 49 percent foreign capital contribution could be granted the authority to carry out transport tasks for the purpose of their main business activities.

³⁸ Freight forwarders receive their permits from a different government agency.

A benchmark on market entry regulation in road transport based on PMR data shows that while similar rules exist among APEC economies, their application varies by country groups (Figure 23). In the available country sample developed jointly by the WBG and OECD, some countries use different criteria for granting a license, and regulations can vary in terms of license duration and the regulatory distinction between private and commercial carriers. However, licenses issued in every sampled country cover the entire road network. In this regard, as discussed below, the Philippines also has intraregional permits, under which permit holders can drive only on intraregional routes.

FIGURE 23: Regulations when establishing a business in national road freight services is subject to obtaining a concession or license



Note: No PMR data available for the rest of APEC economies. Information as of 2013 or latest available.

Source: OECD Product Market Regulation database, and OECD-World Bank Group Product Market Regulation database for non-OECD countries 2013, as of March 2018.

International experience in the road transport and logistics sectors shows that there are common regulations that could be hindering competition along the value chain. This effect could occur by either limiting entry, facilitating collusion, restricting choice in strategic variables, or distorting the playing field. Figure 24 maps some of the existing restrictions by segment in the value chain, based on this assessment's findings and on findings from additional studies performed in other countries and regions. Some restrictions worth noting based on their frequency are exclusivity rights or limits on the number of licenses issued along certain routes, lack of access regulation in ports or other transport nodes, subnational ordinances requiring road permits, price guidelines published by associations or local governments, caps on foreign investment, and more burdensome permit procedures for foreigners. Jordan, for example, regulations have been imposed on road cargo transportation services with the intention to boost the functioning of the market and generate benefits for individual truckers, but on the contrary, rules are limiting market forces and harming the industry's potential (Box 6).

FIGURE 24: Common rules and regulations that typically hinder competition in the sector, by segment

	Input supply	Wholesale	Retail
Road infrastructure Trucks and parts Drivers	<ul style="list-style-type: none"> Subnational ordinances requiring road permits or prohibiting access in roads Tariff and nontariff barriers for trucks and parts imports Caps on licenses for drivers Bid rigging in public procurement for road construction/public-private partnership contracts Driver's associations publish and enforce price guidelines Discriminatory requirements for license issuance (against foreigners) Differential treatment of privately-owned and common carrier trucks 	<ul style="list-style-type: none"> Government grants exclusivity rights or limits the number of players in regions, on routes, and in products Regulations limit expansion of services to new routes or geographic areas (e.g. interregional transport in the Philippines) Incumbents comment on the need for entry (e.g. Certificate of Public Convenience in the Philippines) Quotas in international routes Excessively burdensome permit procedures demanding approval by several different agencies/officials Mandatory price guidelines for public procurement in road cargo transport Pricing and cargo allocation rules imposed by transport associations Restrictions/burdensome regulations on foreign investment (equity) Subsidies and other state aid to firms 	<ul style="list-style-type: none"> Laws or regulations restrict the number of competitors Relatively high minimum capital investment for issuing a permit Restrictions on filling in documents and performing customs formalities by others than the owner of goods or the carrier Restrictions on providers consolidating goods from different warehouses into one container in Philippines Public pricing guidelines An association of freight forwarders collectively decide which company will provide services for each client Mandatory membership in association Minimum shares of national capital (51% in all selected APEC economies) Subsidies and other state aid for selected companies within the sector
(Dry) Ports Port-related services	<ul style="list-style-type: none"> Exclusivity rights Lack of access regulation to essential facilities Pricing rules imposed by associations Regulatory and commercial function of state-owned port operators are integrated Cargo allocation rules by ports 	<ul style="list-style-type: none"> Transport: local, regional, long distance Logistic services: storage, sorting, packaging, processing, cargo tracking 	<ul style="list-style-type: none"> Freight forwarding
	<ul style="list-style-type: none"> Rules that reinforce dominance or limit entry 	<ul style="list-style-type: none"> Rules that are conducive to collusion or increase costs to compete 	<ul style="list-style-type: none"> Rules that discriminate, distort the level playing field and protect vested interests

Note: Rules and regulations include self-regulation and rules that affect interactions among players along the chain as well. This list is not comprehensive, but instead maps the most common restrictions.

Source: Author's own elaboration.

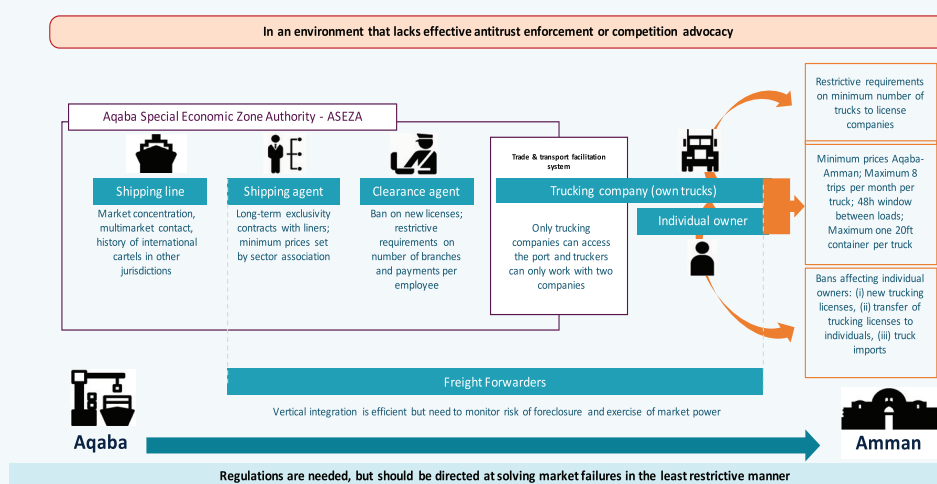
BOX 6: Regulatory constraints on road freight in Jordan

Since 2018, several government rules and instructions intended to address oversupply caused by the abrupt closure of borders with neighboring countries have led to unintended negative effects on transport services in Jordan, restricting investment, productivity, and competition. Figure 25 illustrates how these restrictive interventions affect all segments of the country's transport value chain. In the trucking sector, various rules have negative effects on market performance:

- (i) **Several regulations have negative effects on efficiency.** Prohibitions against transporting two 20-foot containers on a truck, performing more than one trip per 48 hours, and conducting more than eight trips per truck per month reduce efficiency, have negative environmental consequences, increase transport costs (by doubling the cost of transporting two 20-foot containers), and affect the competitiveness of Jordanian products. These measures spread out the demand across truckers, artificially raise individual demand for transport (particularly for individual truckers), and reduce incentives to reallocate resources to other more profitable activities.
- (ii) **The imposition of minimum prices facilitates collusion and prevents more efficient players from competing on price.** Minimum prices for transport services for containers and general cargo on the Aqaba-Amman route do not reflect market conditions and are therefore ineffective in practice, given truckers' willingness to supply the service at lower prices. Nonetheless, minimum prices can provide a focal point that could facilitate collusive outcomes.
- (iii) Discriminatory treatment between current and potential competitors favor incumbents, prevent entry, and reduce incentives to be productive:
 - a. **Restrictions on companies regarding access to the trade and transport facilitation system for picking up and delivering cargo at the Aqaba port, together with the rule that individual truckers can have contracts with only one or two transport companies,** give registered trucking companies market power that reduces compensation for individual truckers.

BOX 6: Regulatory constraints on road freight in Jordan (contd.)

- b. The suspension of registration for heavy trucks weighing more than 21 tons in the name of individuals, and the imposition of a minimum number of owned/leased trucks as a requirement for obtaining a license as a company, restrict the ability of more efficient and reliable players to expand their number of units and creates incentives for informality.
- c. The prohibition against transferring truck ownership from companies to individuals and from individuals to individuals, and the absence of a buy-back program. Limit the possibility of selling off trucks and exiting the market.
- d. The incentive scheme for fleet renewal, which allows for imports of trailer heads that are less than five years old in return for scrapping or re-exporting older ones, had a limited impact and has not focused on the individual truckers, who own approximately 80% of the trucks that are 19 or more years old.

FIGURE 25: Government restrictions affecting road cargo transport in Jordan

Source: WBG Markets and Competition Policy Team. Information as of November 2018.

The remainder of this section will present a mapping of rules and regulations, including self-regulation, that can mitigate or exacerbate the inherent market features described above and shape the interactions among market players by segment along the road transport and logistics chain in Peru, the Philippines, and Vietnam.

C.1. Input supply

Figure 26 maps some of the rules and regulations identified in this segment of the chain that could be hindering competition. The input segment of the logistics value chain—composed mainly of transport infrastructure, trucks, drivers, and other service providers in transport terminals—is particularly prone to regulations or lack of regulations that end up restricting market entry or access to essential facilities in multimodal transport. Furthermore, rules often distort competitive conditions among players because governments act as market players and regulators or because rules are more burdensome for foreigners.

FIGURE 26: Rules and regulations that are likely to hinder competition in the input segment—issues identified in Peru, the Philippines, and Vietnam

	Input supply	Restricting entry	Facilitating collusion / restricting choice	Unlevel playing field
Unimodal	Road infrastructure Trucks and parts Drivers	<ul style="list-style-type: none"> Philippines: Subnational ordinances requiring road permits or prohibiting access in roads 	<ul style="list-style-type: none"> Drivers' associations publish and enforce price guidelines: Philippines and Vietnam 	<ul style="list-style-type: none"> Discriminatory requirements for license issuance (e.g. against foreigners): Peru, Philippines, and Vietnam
Multimodal	(Dry) ports Essential services Ancillary services	<ul style="list-style-type: none"> Lack of access regulation to essential port facilities: Philippines and Vietnam Lack of a slot allocation mechanism that ensures competitive neutrality principles: Peru, Philippines, and Vietnam 	<ul style="list-style-type: none"> Professional associations for ancillary services: Peru Minimum guaranteed port tariffs: Vietnam 	<ul style="list-style-type: none"> Port Authority regulates the charges that are levied by cargo handling operators, but it is also a commercial beneficiary of increases in those rates: Philippines

Note: Rules and regulations include self-regulation and rules that affect interactions among players along the chain as well.
Source: Author's own elaboration.

Rules that reinforce dominance or limit entry

Road passage permits in the Philippines increase the cost of carriers to compete. Local government units are vested with the power to enact ordinances that can affect local businesses and road management. These powers are set out in the Philippine Constitution and the Local Government Code. At the time of this writing, local government approval must be obtained for a truck garage and a local road passage permit. There is no standard list of requirements, and the fees can vary depending on the locality. The passage permit fee varies from PHP 2,000–6,000 (\$40 to \$120) depending on the type of truck and the locality.

TABLE 7: Port access

	Peru	Philippines	Vietnam
Open access regime for ports	✓	✗	✗
Slot allocation for cargo pickup and drop-off that safeguards a level playing field along the chain	✗	✗	✗

Source: World Bank country questionnaires as of April, 2017.

Only Peru has an open access regime for essential port facilities and services. Access to essential facilities and services in transport infrastructure, such as ports, railways, and airports, is regulated by the Regulatory Framework for Access to Transport Infrastructure known as REMA (Box 7). Under REMA, it is the right of every intermediate user³⁹ to access (use) an essential facility to provide services that are necessary to complete the logistics chain (essential services). REMA establishes a process by which the essential facility operator must negotiate the terms of access to a facility with the essential service provider. Where there are more requests to access the infrastructure than capacity in the essential facility, then the infrastructure operator must implement an auction process for granting access to essential service providers.⁴⁰ Where the essential facility operator does not reach an access agreement with the essential service provider(s), the regulator can mandate access and establish the access terms,

³⁹ Intermediate users are companies that utilize public transport infrastructure to provide transportation services (for planes, ships, trains, trucks) while end users are passengers or cargo owners.

⁴⁰ This includes access price, licenses, insurance, pledges, technical security or logistical requirements, rules of conduct, work schedules, environmental requirements, and so on.

including a regulated access price. In Peru, application of REMA in ports depends on individual access agreements between the regulator and the port operator, where the port's essential services and facilities are identified based on the degree of restrictiveness in service availability for use. In the case of APM Terminals and DP World in Callao ports, as well as in the port of Paita, the only services considered essential by contract are pilotage and towing. Overall, it is important to note that road freight transport is not considered an "essential service" and is therefore not subject to REMA in any port. Slot cargo allocation is the responsibility of each port operator.

BOX 7: Essential facilities and essential services subject to REMA in Peru

An essential facility is a public transportation facility that is:

- a) provided by a limited number of suppliers and essential for the provision of essential services, and
- b) not feasible to duplicate either technically or economically to provide the essential service.

The following are essential facilities subject to REMA regulation.

Ports: port signage, works of protection or defense, maneuver areas and internal roads, docks, moorings, internal transit routes and areas, areas for passenger and luggage processing, fuel plant, storage and distribution network, equipment parking areas.

Railways: railway line, railyards and their corresponding deviations, detours, railway stations for loading and unloading goods and passengers.

Airports: ramp, equipment parking areas, maneuver areas on land, internal transit routes and areas, passenger and luggage processing areas, fuel, plant, storage and distribution network.

An essential service is a public transportation service that is:

- a) necessary to complete the logistics chain of the transport of cargo and passengers, and
- b) to be provided requires the necessary use of an essential facility.

The following are essential services subject to REMA regulation.

Ports: loading and unloading of cargo (stevedoring), pilotage, mooring, stowage, towage, transfer of cargo, fueling.

Railways: use of railroad tracks, loading and unloading of cargo and passengers, provision of fuel, rental of operating areas to handle passenger and luggage traffic.

Airports: transfer of cargo, ramp or ground assistance, fuel supply, passenger and luggage transfer, aircraft maintenance in hangars.

Not all transport infrastructure is considered an essential facility, and not all of the services provided using essential facilities are considered essential services. In particular, in the case of ports, REMA only applies to "public use" ports, or those whose main purpose is to attend cargo of nonrelated parties. Under the law, if less than 75 percent of the total cargo corresponds to nonrelated third parties (that is, public use), then the port is defined as private use and therefore not subject to REMA.

The lack of market-based and transparent slot allocation mechanisms in ports affects productivity in the logistics chain and potentially leads to preferential access among companies with higher market power. International experience shows that limited access to slots due to hoarding and insufficient slots released by container terminals is a key issue affecting trucking productivity. This can aggravate other challenges, such as a mismatch in operating hours along the chain, peak hours, and a large number of carriers. Vehicle booking systems can address such problems (Box 8).

BOX 8: Status quo in port slot-booking practices worldwide

Slot-booking systems are digital platforms designed to book slots in advance to gain efficiency in handling container deliveries and collections by truck. So far, these systems have been implemented in the main ports in the United States and in a few terminals in Europe, Australia, New Zealand, and Southeast Asia. In November 2017, Hamburg was the first seaport to introduce a slot-booking system in Germany, as per Asia Cargo News (2017). Slot-booking systems have a direct influence on the way transport operators manage their businesses, including fleet scheduling, use of staging, and mitigation measures for delays.

Definitions:

- Time slot: specific time booked at container terminal for container receipt or delivery by road.
- Vehicle booking systems: the system operated by container terminals to grant specific time slots for road transport operators to pick up or deliver a container to/from a container terminal.

Common characteristics of slot-booking systems:

- Each time slot lasts one hour.
- If a carrier does not arrive at the scheduled time, it misses the slot and is fined.
- Allocation mechanisms are mostly first come/first served.

Common issues:

- Limited availability of slots (including due to limited container terminal operating hours).
- Coordination problems with other logistics operators (such as container deposits) can lead to delays.
- Hoarding of slots by brokers.

Common features of design and management of vehicle booking systems considered good practices:

- Give carriers that meet certain performance criteria (such as a certain percentage of movements at off-peak times, volume per day/week, and on-time arrival rates) a selection of slots across the day to enable efficient fleet scheduling.
- Make advanced bookings available to those that can organize themselves several days ahead.
- Facilitate better access to coordinated bookings to allow transport operators to achieve good fleet utilization over extended periods of operation.
- Monitor on-time arrival data and follow up with carriers that are significantly early/late for notifications or those that hoard slots.
- Proactively manage slot releases (for example, make cancelled slots available for reuse, monitor capacity and release additional slots when suitable).
- Enforce carrier compliance with slots (for example, by turning around vehicles that arrive excessively early during periods of congestion and introducing slot restrictions for those that do not display appropriate behaviors).

Trends:

- Volume growth may influence truck-loading capacity, creating the need to move toward 24/7 operations for all major facilities along the entire supply chain.

Sources: Freemantle Ports (2014), Asia Cargo News (2017).

Questionnaires applied by the WBG as part of this study, together with relevant international experience, suggest that the lack of market-based, transparent slot allocation mechanisms may give room for discriminatory access provisions in ports (especially during peak seasons), and provide undue competitive advantages to incumbents or vertically integrated operators. Each of the study countries employs either queues, direct negotiation and contracts between market participants, or centralized allocation on a first-come/first-served basis at ports:⁴¹

- a) At Callao Port, the main seaport of Peru:
 - In the case of DP World (container terminal), the scheduling of truck pickup/drop-off is done through a computerized appointment system. To do this, the logistics provider informs DP World about the type of cargo and commercial arrangement (shipping line, destination, and so on) and the type of gear/equipment necessary to load or unload the merchandise, then DP World uploads information on possible trip schedules. Both parties negotiate until they agree, and then the carrier is informed of the scheduled time of appointment by the port operator.
 - In the case of APM Terminals (multipurpose terminal, including containers), the scheduling of operations does not yet have a computerized system for the coordination of appointments. Programming is coordinated directly between the port terminal operator and the carriers via email, without a publicly visible allocation mechanism.⁴² To streamline the flow of trucks, the APM Terminal has two entry doors, one for containers and another for general cargo. In this case, it is possible for carriers to park outside the port terminal while waiting for demand to arise for a cargo transport service.
- b) In Vietnam, stakeholders alleged that during peak season, the port terminal operator (in this case, Saigon Newport Corporation) prioritizes cargo allocation for its customers over others' cargo.
- c) In the Philippines, the cargo slot allocation system⁴³ in place at the major international seaport in Manila (Box 9) incorporates a payment mechanism based on points, which could favor large traders. Under this system, the price for a particular slot is determined on the basis of high-demand and low-demand time zones. Transactions are charged with points that increase or decrease as brokers conduct more and more business transactions, such that brokers moving more cargo generate more points and have less costly access to port facilities. In the long run, this may give incumbents an advantage and raise the barriers to entry for new competitors. While rewarding efficient brokers or carriers with access to better slots can be considered best practice, this is best organized on the basis of performance (such as punctuality, greater utilization, or higher productivity) rather than purely on volume.

Peru is the only one of the three study countries for which evidence of preferential access or slot hoarding was not been brought up as an issue in the questionnaires. However, based on international experience and the fact that a market-based and transparent slot allocation mechanism is not yet in place in Peru, it is recommended that access conditions at Callao port be monitored and that a full-fledged electronic and automatic booking system be implemented eventually.

⁴¹ Based on interviews with relevant stakeholders in the country and on publicly available information. This report does not attribute individual statements to individual survey respondents.

⁴² According to "Entry procedure for freight transport companies," available at: <http://www.apmterminals-callao.com.pe/images/reglamentos/PROCEDIMIENTO-DE-INGRESO-EMPRESAS-TRANSPORTE-DE-CARGA---EMBARQUE-DIRECTO-CONTENEDORES.pdf> (In Spanish)

⁴³ For further detail, refer to: <http://1-stop.com.ph/>

BOX 9: Terminal Appointment Booking System in Philippines

The Terminal Appointment Booking System (TABS) was launched in October 2015 as a collaborative solution between the local government in Manila and supply-chain stakeholders to resolve an increase in port congestion that arose in response to the truck ban and road policies introduced in 2014 to combat road congestion in Manila. It is an electronic platform designed to book slots in advance to gain efficiency in handling container deliveries and collections by truck in the major international ports of Manila. TABS aims to reduce port traffic congestion by matching the availability of port facilities to demand. The system can be accessed by logistics chain operators and cargo owners. It is based on a first-come/first-served system, opens at noon with 12 slots for the subsequent working day, and does not allow for *official* secondary trading. Through TABS, entities are required to register to gain access to the booking portal. Bookings are updated in real time via the Internet and can be accessed using a mobile device. Without a booking, port users are not allowed to enter the port to either drop off or pick up cargo.

TABS has been successful in reducing pickup and drop-off times at the Manila port, but there persists an informal and preferential secondary market. According to the Philippines Ports Authority, prior to TABS, the average daily gate-out at the Manila ports stood at 4,500 to 5,000 TEUs, compared to 7,000 to 7,500 TEUs in the post-TABS era, as reported by PortCalls Asia (2016). In practice, however, trucking firms have complained that brokers hoard slots, that they frequently find all slots booked shortly after noon, and that there is informal secondary trading. Instances have been reported in which trucking and forwarding companies were required to pay for a day or more of storage because containers had to be unloaded from the vessel but there were no slots available for entering the port. Delays in vessel arrivals cause substantial logistics problems, given the lack of flexibility in the slot-booking system.

Sources: 1-Stop Connections website, interviews.

Rules that are conducive to collusion or increase costs to compete

Vietnam's Ministry of Transport introduced minimum port tariffs—so-called floor rates—for services in which competition among terminal operators would be viable. This policy is aimed to help private and state operators recoup some of their heavy investment in cargo terminal infrastructure at Cai Mep Port, where overcapacity is putting operator's sustainability at risk. Most of Vietnam's international trade is conducted through the Cai Mep cluster of terminals near the southern metropolis of Ho Chi Minh City. Government-owned companies have a controlling stake in five of the seven terminals in the cluster. In August 2014, following a steep decline in prices, Vietnam's Ministry of Transport set a mandatory two-year minimum handling rate of \$46 per 20-foot loaded container to prevent prices from spiraling even lower, according to Bloomberg News (2014). While this measure limits the potential fiscal implications of losses incurred by state-run operators, it reduces competitive pressure among port operators and could harm competitiveness over the long term.

Self-regulation in professional associations for ancillary services in ports have served as a platform to coordinate prices and contract conditions in the past. Typically, the number of ancillary service providers in ports is limited, as entry requires a high degree of specialization. Particularly in the case of towing and pilotage services, most service providers are former members of the national navy. Given the low number of competitors, associations can facilitate collusive agreements among competitors. As developed further in Section D, Peru's competition agency sanctioned a cartel agreement among pilotage service providers in 2002, organized through the association. Advocacy and compliance programs can help ensure that associations' self-regulation is less conducive to collusive behavior.

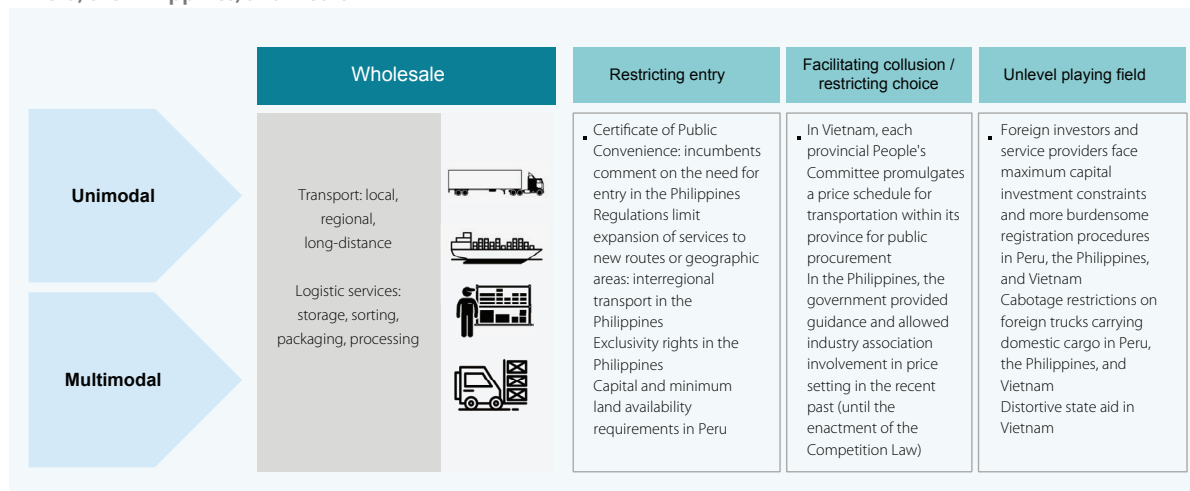
Rules that discriminate, distort the level playing field, and protect certain interests

In the Philippines, the Ports Authority has commercial functions as a port operator. The PPA has the authority to “provide the cargo-handling and other port-related services, whether on its own, by contract or otherwise.”⁴⁴ Additionally, it receives a 10 percent and a 20 percent share, respectively, of the collected domestic and foreign cargo handling rates that it regulates, according to the WBG (2014).⁴⁵ Vietnam does not have a port authority; it has a Maritime Law that serves as the basis for self-regulation. The main ports are owned and operated by the government. According to Khiem (2017), however, there have been initiatives to incorporate the concept of a port authority into the national legislation, which is a subject of public policy discussion. In Peru, although the government operates ports through ENAPU—a corporation that forms part of the government investment holding, FONAFE—there is an independent regulator that supervises both the SOE and private port operators. The existence of a common regulator, separate from the ministry as policy-making authority, together with the absence of ownership linkages between the regulator and the operators, facilitates the existence of a level playing field.

C.2 Wholesale

Figure 27 maps some of the rules and regulations identified in this segment of the chain that could be hindering competition. In the wholesale segment, composed of carriers and logistics service providers, the issuance of pricing guidelines or other price control mechanisms is common for transport provision. Additionally, high entry requirements, discriminatory conditions for foreigners, and potentially distortional state aid have been identified.

FIGURE 27: Common rules and regulations that typically hinder competition in the wholesale segment—issues identified in Peru, the Philippines, and Vietnam



Note: Rules and regulations include self-regulation and rules that affect interactions among players along the chain as well.
Source: Author's own elaboration.

Rules that reinforce dominance or limit entry

Entry of new operators is subject to consent by incumbents in the Philippines. Entry in the road transport and logistics services markets is based on the granting of certificates of public convenience, which are subject to the opinion of incumbent operators. Applicants must attend a public hearing and

⁴⁴ Letter of Instruction 1005-A, signed by President Marcos in 1980.

⁴⁵ Regulators typically charge a fixed or percentage fee for their regulatory role, which is meant to cover the costs derived from monitoring the market and regulating it. A conflict of interest may arise, however, if the regulator depends significantly on the collection of fees in order to operate.

demonstrate financial capability and existing demand for the service, typically through a valid contract. Incumbent operators and the relevant authorities involved in the issuance of the license can participate and object in this hearing. Jurisprudentially established legal standards preclude the granting of certificates of public convenience when this could cause “ruinous competition,” the definition for which is determined on a case-by-case basis.

Route classification restrictions in the Philippines prevent intraregional franchise holders from competing in interregional markets. “Common carrier” trucks are classified by routes, either interregional or intraregional. “Common carrier” trucks that receive an interregional franchise may supply any route within the Philippines. However, “Common carrier” trucks that receive an intraregional franchise are bound to operate only within the region specified in the franchise. This prevents intraregional franchise holders from competing in interregional markets, unnecessarily constraining firms from adapting to changing client demands and market conditions by expanding into more extensive networks.

Individual survey respondents point to apparent “exclusivity rights” among road transport providers in the Philippines. A respondent from the Philippines reported that a fellow trucking competitor had an exclusive right to operate in a certain locality in metropolitan Manila. Other respondents claimed that some road transport providers enjoyed exclusive rights to either handle specific types of goods or operate in certain geographic areas or on determined routes. While these exclusivity rights do not appear to be established in the regulatory framework, route-specific licensing and local permit rules may limit the number of operators to a few or only one.

Capital and minimum scale requirements could be hindering entry in the market of warehouses and temporary deposits in Peru. The General Customs Law imposes financial guarantees in the form of a letter of bank guarantee or escrow policy for the amount provided by the regulation (minimum of \$80,000 and maximum of \$1,400,000) for those providers seeking authorization. There are also infrastructure requirements that depend on the type of service to be provided (maritime, land, air) and the type of warehouse (temporary or customs). Specifically: (i) temporary warehouses need to have a minimum of 10,000 square meters if they store maritime cargo, or 2,000 square meters for land or air cargo; and (ii) customs warehouses need to have at least 3,000 square meters if they are public or 1,000 square meters if they are private. Peru is the only country (of the selected economies) that specifies prescriptive technical standards for warehouses.⁴⁶

Rules that are conducive to collusion or increase costs to compete

In Vietnam, each provincial People’s Committee promulgates a price schedule for transportation within its province for public procurement purposes. This price is set based on the average price plans submitted by the providers. Additionally, from time to time, the Ministry of Finance issues guidelines⁴⁷ with a general method to determine prices, and the People’s Committee relies on these guidelines to determine the transportation price. For example, to determine the price for transporting gravel in Quang Binh territory, the People’s Committee will provide a table of base prices per ton per kilometer. The base prices vary depending on: (i) the types of road (from 1–6, as per Ministry of Transport

⁴⁶ With respect to minimum outlet size requirements, see footnote 31.

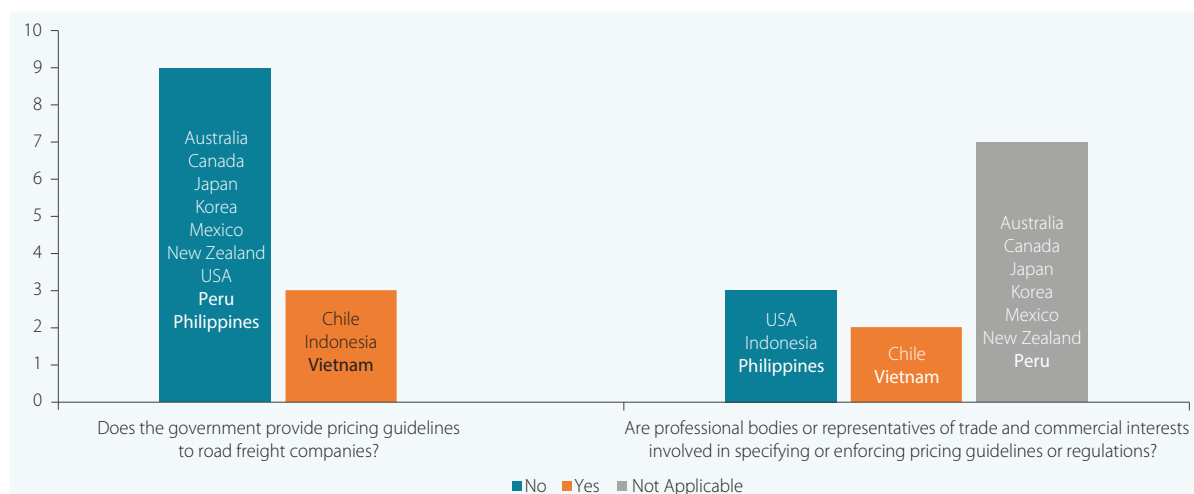
⁴⁷ Such as Circular 25/2014/TT-BTC dated 17 Feb 2014.

regulation); and (ii) the distance of transport (Thu Vien Phap Luat, 2016). The final price is determined by adding a certain percentage on top of the base price, depending on the principle set out by the People's Committee. Therefore, if the gravel is transported in highland areas that require three-wheeled cars running on fuel, the price will be 30 percent above the base price. The extent to which the price set for public procurement influences transportation prices in other segments of the market depends on supply substitutability.

In the Philippines, until the introduction of the Competition Act in 2015, the government had provided guidance and allowed industry association involvement in price setting. The Inland Haulers and Truckers Association used to be an active influencer of pricing movements among association members. Reference rates were issued regularly and circulated among members. These reference rates could adapt and answer to the demands of emergency fluctuations brought about by extraordinary situations. The association tolerated a price range that was either 10 percent lower or higher than the price indicated in its Resolution. Compliance with the Resolution was monitored through informal member reports. Member firms that went below or beyond the tolerated range were brought before its grievance committee. Although its internal settlement processes were not highly adversarial in nature, member firms respected its rulings mainly to prevent tension within the association. It has been shown in other markets that a history of price control or reference pricing can facilitate collusive agreements after controls are lifted. This risk could be elevated in the Philippines due to the detailed pricing guidelines issued for public procurement of transport services.

In most APEC economies, however, the government is not involved in providing pricing guidelines to road freight companies, nor are professional bodies involved in specifying or enforcing these guidelines (Figure 28).

FIGURE 28: Pricing guidelines for road transport



Note: No PMR data were available for the rest of APEC economies. Information as of 2013 or latest available.

Source: OECD Product Market Regulation database, and OECD-World Bank Group Product Market Regulation database for non-OECD countries 2013, as of March 2018.

Rules that discriminate, distort the level playing field, and protect certain interests

In all study countries, foreign investors face maximum capital investment constraints. In the Philippines, for trucking services, individual applicants for a Certificate of Public Convenience must be Filipino citizens. If the applicant is a corporation, its capital must be at least 60 percent owned by Filipino citizens. In Vietnam, the foreign capital contribution limit is 51 percent in road transportation services. In Peru, in international freight transportation, more than half of the social capital and effective control of the company must be in the hands of Peruvian citizens.

Registration procedures are more burdensome for potential foreign investors and service providers in Vietnam. In Vietnam, foreign investors—independently of the service they intend to provide—are required to obtain an investment registration certificate (IRC), which extends the time required to establish an enterprise as compared to local investors who are not subject to IRC application. In practice, the timeline for obtaining an IRC varies from three months to several months. Likewise, all transport carriers are required to obtain a sub-license called a “business license for operating in goods transportation by cars.” In practice, it takes foreign investors one or two months longer to obtain this license than it takes local investors.

Cabotage restrictions in all three countries limit the ability of foreign trucks to carry domestic cargo. In Vietnam, for example, while foreign carriers can obtain permits to carry out cross-border transport services (for example, between Vietnam, Laos, and Cambodia), they are not permitted to provide domestic transport services unless they establish a firm, comply with the foreign ownership limit, and obtain a license for operating in goods transportation with vehicles.

While all countries can grant state aid and subsidies, it appears that they are more likely to distort the level playing field in Vietnam, given the significant participation of state-owned competitors in the market. Vietnam’s national and subnational governments can grant state aid to freight transport sectors as long as this aid does not contravene Vietnam’s commitments under the World Trade Organization (WTO). In 2013, for example, the Ministry of Transport requested that the Vietnamese government support Vinalines (a state-owned shipping company) by directing government agencies to use the Vinalines fleet to import/export goods. However, the Ministry of Planning and Investment advised the Vietnamese government that this action would contravene its WTO commitments. Instead, the government provided support to Vinalines by reducing its debt burden via a debt-for-equity swap with a major bank creditor (Vietinbank, a state-owned commercial bank) and transferring some of its debt to the Debt and Asset Trading Corporation (an SOE).⁴⁸ Furthermore, two SOEs in Vietnam’s postal transport service, Viettel Post and Saigon Post, can provide services at a lower price and with a faster delivery times because, unlike foreign companies, they are not limited by a minimum price. Reportedly, SOE postal packages may be benefitting from faster and lighter inspection procedures.

Peru and the Philippines provide little or no state aid or subsidies. In both countries, national and subnational governments can grant financial and nonfinancial aid to the road freight and logistics services sectors, but there is no policy in place to provide subsidies in these sectors. In Peru, the only assistance that the sector receives is an exemption from sales tax for services to/from Peru. It is available to all participants in the market rather than being directed only to certain favored players.

⁴⁸ Based on Vietnam News (2014), Vietnam News (2015), Thanh Nien News (2016).

TABLE 8: State-owned enterprises and state aid in the wholesale segment

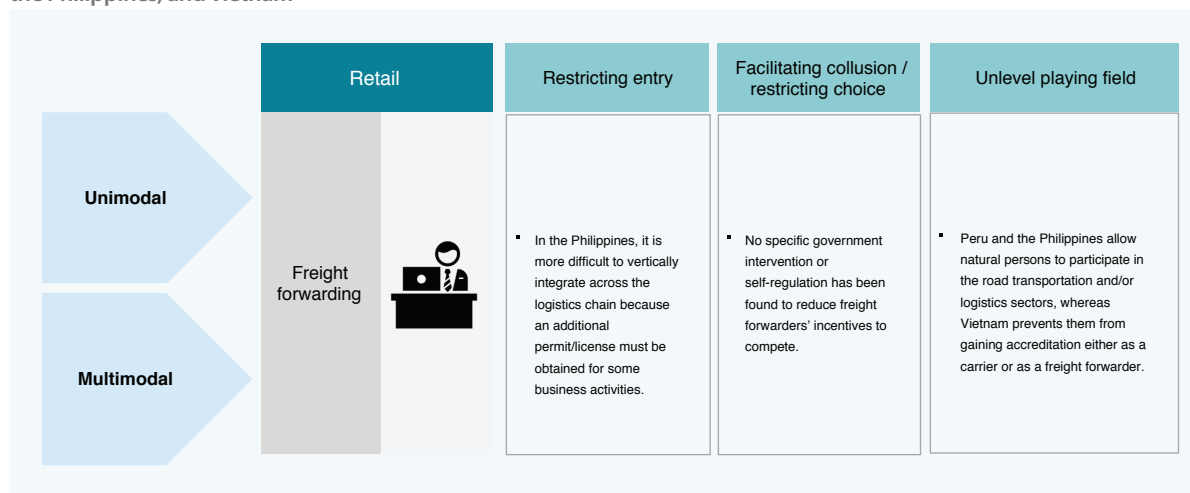
	Peru	Philippines	Vietnam
SOE involvement	x	x	✓
Reported subsidies and aid for selected companies within a sector	x	x	✓
Transparent reporting processes for aid and subsidies	x	x	x

Source: World Bank country transport questionnaires, as of April 2017.

C.3. Retail

Figure 29 maps some of the rules and regulations identified in this segment of the chain that could be hindering competition. The retail segment, composed mainly of freight forwarders, faces regulatory restrictions similar to those encountered by carriers and other logistics service providers. In this segment, however, it is particularly important to assess whether it is excessively burdensome to obtain permits to provide additional services, as logistics service providers tend to act as one-stop shops.

FIGURE 29: Rules and regulations that are likely to hinder competition in the retail segment—issues identified in Peru, the Philippines, and Vietnam



Note: Rules and regulations include self-regulation and rules that affect interactions among players along the chain as well.
Source: Author's own elaboration.

Rules that reinforce dominance or limit entry

In the Philippines, it is more difficult to integrate vertically across the logistics chain because an additional permit/license must be obtained for some business activities. For example:

- for loading/unloading/transshipment, a company must secure the necessary permit from the Marine Industry Authority;
- for storage services, a company must secure the necessary warehouse permit from the Bureau of Customs; and
- for filing documents and performing customs formalities on behalf of the shipper, a company must secure the necessary customs brokerage license from the Professional Regulation Commission.

In Vietnam and Peru, it is not required to obtain additional permits for various logistics services, but any new business lines must be added to the business registration certificate with the appropriate authority. In Peru, freight transport services are free to offer logistics-related services without obtaining additional licenses as long as the main activity is the transport service.

Rules that discriminate, distort the level playing field, and protect vested interests

Peru and the Philippines allow natural persons to participate in the road transportation and/or logistics sectors, while Vietnam prevents them from gaining accreditation either as a carrier or a freight forwarder. In Peru, a natural person, sole proprietor, or private corporation can obtain an operating license as a carrier or freight forwarder. In Philippines, a natural person can gain accreditation as a carrier but not as a freight forwarder (to be accredited, a freight forwarder must be a corporation, partnership, or sole proprietorship). In Vietnam, however, a natural person cannot gain accreditation either as a carrier or a freight forwarder.

D. Market outcomes and competition policy enforcement

The interaction between market characteristics (Section B) and government regulations (Section C) influences the behavior of market participants and ultimately market outcomes (Section D). Prices, quality of services, investment, and productivity, among many other variables, are the outcome not only of how companies decide individually and independently, but predominantly of how they interact strategically in the market given the underlying market features and the rules set by the government (or not). As seen in previous sections, some features and government interventions are more (or less) conducive to providing firms with incentives to operate efficiently and compete vigorously with other market players. This report has highlighted that—worldwide, and in the three countries surveyed—there are several instances in the transport sector where companies have incentives not to behave competitively.

In the road cargo transport and logistics sectors, particularly among carriers and freight forwarders, collusive agreements (cartels) and mergers and acquisitions are increasingly observed in markets globally. Economies of scale, network effects, overcapacity, and multimarket contact are some of the main market characteristics that generate incentives for companies to collude or merge. Weak antitrust enforcement and merger control, along with supranational agreements—such as international shipping conferences⁴⁹ (Annex II) and alliances—could be undermining rules to prevent and stop anticompetitive mergers or agreements among competitors.

D.1 Anticompetitive behavior detected and sanctioned

At least 10 countries have opened antitrust investigations and sanctioned maritime shipping lines since 2011, in different products and routes, but with a recurrence in international shipments of cars. APEC countries such as the United States, Australia, Japan, Chile, Mexico, and Peru; the EU; and other developing countries such as China, Brazil, and Honduras have targeted this sector for antitrust investigations. The cartel activity confirmed so far has involved different types of cargo, such as containers and roll-on/roll-off cargo, and has affected vehicles, cars, and construction equipment. In 2016, Peru opened one investigation for alleged collusion among 17 container shipping lines operating on the route between Asia and the west coast of South America. The case was closed after reaching a settlement agreement in 2017. Because China is a key trade partner for the country, a large proportion

⁴⁹ An international shipping conference is defined as “a group of vessel-operating carriers which provides international liner services for the carriage of cargo on a particular route or routes within specified geographical limits and which has an agreement or arrangement, whatever its nature, within the framework of which they operate *under uniform or common freight rates and any other agreed conditions with respect to the provision of liner services*” (United Nations, 1975). Typically, conferences include agreements on the conditions for the provision of the service, prices for chartering vessels, use of space, joint use of terminals and containers, coordination of navigation services, regulation of capacity and allocation of shipments, and revenues.

of Peruvian international trade would allegedly have been affected by this cartel from 2009 to 2013. Moreover, in 2018 the Peruvian Competition Agency sanctioned a second cartel case involving roll-on/roll-off cargo imported to/exported from the country between 2001 and 2012. These investigated cartels have involved agreements on general rate increases or additional surcharges, as well as market sharing (Box 10).

BOX 10: Cartel investigations in maritime shipping

Australia: Following an extensive investigation by the Australian Competition and Consumer Commission, the Commonwealth Director of Public Prosecutions charged the shipping line NYK with giving effect to cartel provisions in an arrangement or understanding with other shipping lines between 2009 and 2012. The cartel operated since at least February 1997 and affected motor vehicles transported to Australia by NYK and other shipping lines from locations in Asia, the United States, and Europe on behalf of major car manufacturers including Nissan, Suzuki, Honda, Toyota, and Mazda. See ACCC (2017).

Brazil: In 2016, Brazil's competition authority, CADE, started an investigation into an alleged international cartel among nine operators in the transport of finished vehicles by sea. Each shipping line was assigned its own clients with the aim of not only maintaining the initial marketing position it reached with its main customers, but also retaining or even boosting prices, while acting in concert to oppose any requests to reduce transport costs. The cartel appeared to be running from 2000 to 2012. See Cross (2016).

Chile: Six shipping lines were sanctioned in 2015 for colluding in multiple tender processes for providing maritime transport services to manufacturers and consignees of various car brands imported to Chile beginning in 2000. The cartel allowed each shipping line to keep their key accounts, even though their contractors wanted to switch providers. Total sanctions added up to \$95 million. Two of the companies applied for leniency, receiving full and partial sanction exemptions, respectively. See FNE (2015).

Costa Rica: In June 2001, the National Chamber of Coffee Exporters filed a complaint against Becker Brammer and other shipping companies for alleged collusive pricing. The competition agency found reasonable indications of the agreements but did not have the legal basis to investigate and sanction the companies involved, as per COPROCOM (2001). Two business associations later complained about possible anticompetitive practices related to empty container fees, belonging to the shipping lines, but both complaints were discarded. See COPROCOM (2007).

Mexico: COFECE, the Mexican competition authority, recently sanctioned seven shipping lines for engaging in nine collusive agreements, segmenting the car transport market into different routes between 2009 and 2012. Some of the sanctioned firms are also involved in the Chilean and Peruvian investigations. See Forbes (2017).

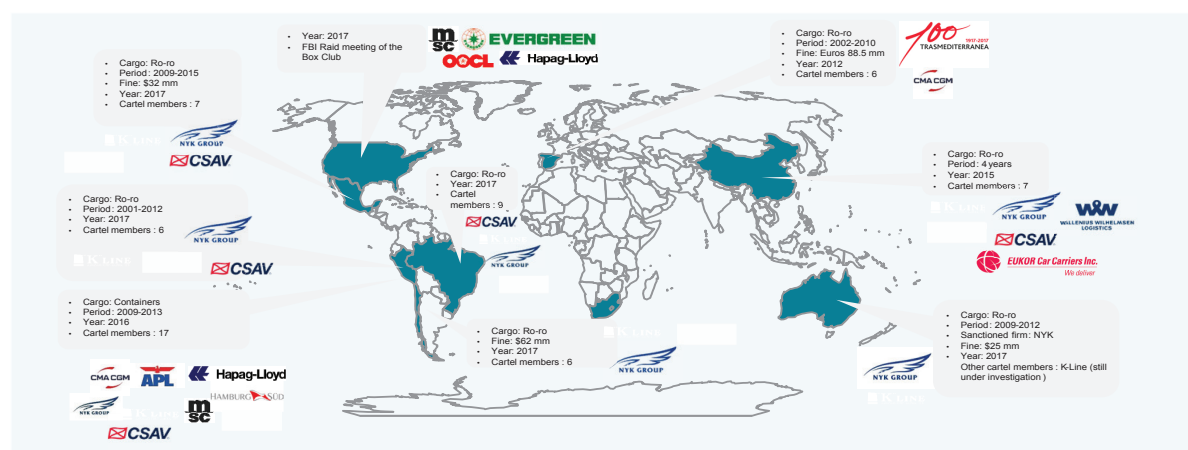
Peru: INDECOPI opened two investigations in international shipping, involving containers and roll-on/roll-off cargo. The first case was initiated in early 2016 and settled in 2017. It involved 17 shipping lines that allegedly agreed on freights and surcharges for container shipping under the Asia West Coast South America Conference. The second investigation was opened in 2017 and sanctioned in 2018. It resembles the Chilean case, involving the same companies. See INDECOPI (2017a), INDECOPI (2017b) and INDECOPI (2018).

The Antitrust Division of the United States Department of Justice, the European Commission, and Japanese antitrust authorities have begun to investigate the liner shipping market. In March 2017, the Antitrust Division of the United States Department of Justice subpoenaed several top executives from some of the world's largest container shipping lines in relation to a price-fixing probe. According to Handy Shipping Guide (2017), the Federal Bureau of Investigation raided a meeting of the International Council of Containership Operators, also known as the Box Club and comprising a top representative from each carrier member.⁵⁰ Alliances and other such groups are being observed closely, as it is believed that they are serving as platforms to facilitate agreements and share market information.

⁵⁰ Members as of November 2016: AP Moller-Maersk, CMA CGM, China COSCO Shipping, Crowley Maritime, Evergreen Marine, Hamburg-Süd, Hapag-Lloyd and Hapag-Lloyd USA, HMM, K Line, MSC, MOL, NYK, OOCL, Pacific International Lines, United Arab Shipping Company, Wan Hai Lines, Yang Ming, and Zim Integrated Shipping Services.

Recent investigations involve the same world players engaging in the same anticompetitive practices. Figure 30 maps cases that have either started or been sanctioned mainly between 2016 and 2017. Most of them involved price fixing and market sharing for roll-on/roll-off cargo transport, lasted for four to ten years, and involved at least six members (except for Australia, where only two company names have been disclosed). The cases in Latin America involve the same type of cargo and maritime route (from Latin America to Asia), whereas the investigation in China involved routes between China and North America, Latin America, and Europe. It is possible, therefore, that the same agreements have been sanctioned by multiple jurisdictions. In fact, some of these agreements were sanctioned in Europe five years ago, particularly an agreement involving roll-on/roll-off cargo in the Spanish peninsula.

FIGURE 30: Recent cartels investigated or sanctioned among shipping lines



Note: This mapping is not exhaustive.

Source: Author's own elaboration.

Freight forwarders have engaged in cartel agreements with shipping lines in some of the roll-on/roll-off cargo cases, and among themselves on several occasions. The aforementioned cartel cases in China and Brazil involved companies like Wallenius Wilhelmsen Logistics, a company that provides global shipping and logistics solutions for manufacturers of cars, trucks, heavy equipment, and specialized cargo. In 2012, the European Commission fined 14 freight forwarding companies for participating in four price fixing cartels between 2002 and 2007. The four mega carriers—DHL Global Forwarding, Schenker, UPS, and Kuehne + Nagel—were among the participating companies. DHL was granted full immunity based on the leniency program (EC, 2012). Likewise, in 2010, six Japanese freight forwarders agreed to plead guilty to criminal price fixing charges in the United States (DoJ, 2010). In general, investigations have often involved the same international players on many occasions (for example, DHL, Kuehne Nagel, Schenker, K-Line logistics, and Nippon Express), various of which are present in APEC countries.

Among the APEC economies covered in this report, Peru is the only one in which cartel agreements have been sanctioned in road cargo transport and investigated in international maritime shipping. The two most important cases are the recent cartel investigations in maritime shipping of container and roll-on/roll-off cargo, both of which started after the successful implementation of the leniency program. Before that, the Peruvian Competition Authority (INDECOPI), had sanctioned collusive agreements among road cargo truckers at the subnational level (Box 11)—namely, collusion among

stevedores in Salaverry port in 2012, who had agreed to restrict entry of new competitors, and abuse of dominance among pilotage services providers in Callao port in 2009. The latter was opened as a case of collusion in 2001, as 36 pilotage service providers had begun to work for the same company and used it as a platform to fix prices for their services. The Competition Commission decided to close the case, which was reopened and sanctioned as abuse of dominance years later. Other countries in South America, like Argentina, have also sanctioned anticompetitive practices in the pilotage industry.

Awareness of competition concerns in the sector is increasing in the Philippines. According to Rappler (2014), the Office of Competition in the Philippines Department of Justice and the PPA worked on a joint study to assess competition issues in the movement of cargo and goods in the ports of entry. The report identified important competition-related issues in pilotage services—including monopolization due to exclusive privileges granted to the harbor pilots' association, a lack of transparency in transactions, and noncompliance with prescribed rates and services—and recommended the liberalization of the pilotage industry. In 2016, various bills regarding the maritime industry were filed in the 17th Philippine Congress, as per PortCalls Asia (2016). Among them, regulations were filed to push for the creation of a harbor pilotage body to regulate the industry. According to PortCalls Asia (2017), this initiative and the liberalization of harbor pilotage were still being supported by industry stakeholders as of 2017, but had not yet been implemented.

BOX 11: Cartel activity in road transport in Peru

In 2010, INDECOPI decided on a case involving ABA, a freight and passenger transportation company, and the trucking union (*Unión de Transportistas de Carga*). The union, comprising a significant number of freight transport companies in the city of Huaraz, had structured a scheme to allocate transport demand for construction materials among its members on routes to the Callejon de Huaylas region.

ABA, a new entrant to this market, applied for union membership. Members of the union disagreed with the inclusion of ABA as a member, however, as it had too many trucks in comparison to existing members. In a union meeting it was decided that ABA could become a union member only if it limited the number of its vehicles, under the argument that:

- ABA was not an original company from Huaraz; and
- The provision of services with all its trucks (22 units) would deprive local carriers of job opportunities.

The union also requested that ABA raise its freight charges to match those of union members. Other illegal practices by union members followed, such as threats to ABA to preclude its operations.

On the basis of this evidence, the Peruvian Competition Authority issued sanctions to 71 truckers (approximately \$250 each), six individuals (approximately \$1,150 each), and the union (a written warning, but no monetary fine).

Source: INDECOPI (2011).

Lessons from Peru's recent experience in transport sector cartel enforcement can help other APEC authorities increase their likelihood of detecting cartels. First, as the competition agency gains expertise and increases its enforcement capacity, the cases it can tackle tend to evolve in complexity (it is harder to detect them) and in geographical scope. Second, associations or conferences (in the case of shipping lines) act as platforms that can facilitate collusion, but incentives (and feasibility) to

collude can be particularly significant if the number of service providers is low and entry barriers are high (as was the case of pilots). Third, as observed in other markets, cartels tend to form after periods of downward pressure in prices. In the case of pilotage in Callao port, the cartel was organized after a port reform in the port caused prices to decline. Likewise, cartels among shipping lines occurred after the financial crisis and the resulting decline in international trade volumes.

D.2 Mergers and acquisitions and the tendency toward market concentration

Over the last five years, there has been an increase in merger activity in the transport and logistics sectors, leading to the emergence of mega-carriers. In the case of freight forwarding, some of the largest transactions include: UPS's attempted acquisition of TNT Express in 2013 (\$6.8 billion), FedEx's acquisition of TNT Express in 2016 (\$5 billion), and Japan Post's acquisition of Australia's Toll Group in 2015 (\$5.1 billion). The expansion strategy behind such acquisitions can be explained by a variety of factors, such as:

- **The e-commerce boom and the associated need for faster, more reliable, and cheaper deliveries: Consumer trends in the express-package market are changing.** End consumers and global firms now demand faster and more reliable deliveries at low or no delivery cost, as well as a wider and more complex range of services. This has increased the desire to offer one-stop solutions to customers and the need to rely on technology that integrates platforms for efficiency gains.
- **Entrants with new technology:** Incumbents face intense competition from new entrants in the industry leveraging digital technology and "sharing" business models, particularly freight platforms, such as uShip, that do not have asset-heavy balance sheets or cumbersome existing systems weighing them down (PwC, 2016) (Box 12).
- **Need for scale and geographical expansion:** The current market leaders compete for a better market position by acquiring smaller players, achieving scale through consolidation, and innovating through the acquisition of smaller entrepreneurial start-ups (PwC, 2016). Additionally, logistics companies are interested in expanding their geographic reach to increase their long-term growth, also based on the growing consumer base in Asia.

BOX 12: Integration between logistics company and online freight-booking platform

DB Schenker, a global logistics company owned by Deutsche Bahn AG, hired uShip to pair shippers with truckers across Europe in an exclusive agreement during the summer of 2016. In early 2017, the German firm bought its minority stake worth \$25 million, with DB Schenker also receiving a seat on uShip's board.

In the last two years, large logistics companies have taken stakes in start-ups, or acquired them. UPS bought Coyote Logistics for \$1.8 billion in 2015, and participated in a \$30 million funding round with Optoro, Inc., a software firm that specializes in retail returns. That same year, the largest trucking freight broker by revenue, C.H. Robinson Worldwide, Inc., bought Freightquote.com, Inc. for \$365 million.

Source: WSJ (2017).

Among this report's focus economies, only Vietnam and the Philippines have merger control mechanisms applicable to all sectors of the economy,⁵¹ but none of the transport mergers conducted in these countries over the past five years appears to have raised concerns from competition authorities.

⁵¹ Peru only has merger control provisions in the energy sector.

Most mergers benefit consumers and the wider economy by encouraging innovation and allowing companies to become more efficient through economies of scale and scope. In some cases, however, there are mergers that have a high probability of generating a harmful impact on competition and consumers because of a substantial increase in market power. High concentration among mega-carriers or third-party logistics firms—such as DHL Supply Chain, DHL Global Forwarding, Kuehne + Nagel, and Nippon Express⁵²—has been of concern for competition authorities and regulators in other regions.

D.3. Competition agencies and enforcement capacity in Peru, the Philippines, and Vietnam

Effective competition policy can address harmful private anticompetitive behavior through antitrust rules and enforcement. To accomplish this, competition authorities need to have the mandate and institutional capacity to monitor the market, investigate, and sanction anticompetitive practices such as cartel agreements and abuse of dominance. As a complement, a merger control policy allows agencies to have an *ex ante* control over market structure and prevent the decrease in contestability of certain markets where mergers and acquisitions of firms with relatively high market power occur.

Competition policy, through advocacy efforts, can help prevent public (government-imposed) barriers to competition in key markets. Successful competition agencies can develop advocacy initiatives to embed competition principles in broader public policies—for example, competitive neutrality principles in state aid provision.⁵³ Agencies can also help to prevent or eliminate regulatory restrictions that might distort competition, and can provide inputs for advocacy dissemination and prioritization, taking advantage of their capacities and resources to perform economic analysis of market dynamics.

Peru, the Philippines, and Vietnam have all implemented a competition law, but the degree of enforcement capacity varies. In Vietnam, the law establishes two authorities—the Competition Council and the Competition Authority—under the Ministry of Industry and Trade. Its institutional setup and lack of autonomy increases the likelihood that it will be subject to potential pressure by interest groups and conflicting public policy objectives when opening markets to competition, breaking up cartels, or assessing mergers. The competition authority in the Philippines is expanding quickly in size and expertise, even though the country's Antitrust Law was introduced only in 2015. Interviews performed as part of this study suggest that the mere introduction of the law had an immediate deterrent effect on the issuance and enforcement of pricing guidelines in the transport sector. Finally, Peru has the most mature competition agency among these three countries and is the only one that has effectively sanctioned cartels with regional reach (for example, a toilet paper cartel that was also sanctioned in Chile and Colombia) and investigated alleged cartel agreements in international shipping.

In Vietnam, a new Competition Law was passed in 2018 and will take effect July 1, 2019. Among various key changes introduced in the new law, several can prove to be particularly beneficial for antitrust enforcement: The new law requires assessment of anti-competitive effects in instances where the previous law relied upon artificial thresholds of market share. For example, the 2018 Competition Law

⁵² Logistics Management (2017).

⁵³ For further details, see Goodwin & Martinez Licetti (2016).

prohibits anti-competitive agreements regardless of the market share of the parties to the agreement. Furthermore, mergers are no longer prohibited without regard to effect on competition in instances where the combined market share of the merging firms exceeds 50%. The 2018 Competition Law also features a new leniency program, which promises to streamline enforcement against cartels.

In the Philippines, a mandatory merger control regime was introduced only in 2015, following the establishment of the Competition Act. If the competition regulator, the Philippines Competition Commission, finds that a merger will substantially lessen competition, it may: (i) prohibit the agreement; (ii) require modification or amendments to the agreement; or (iii) require legally binding commitments (remedies) from the parties. As per OECD (2016), the commission may also approve a merger that would otherwise be prohibited for substantially lessening competition where it is likely to result in inefficiencies that are greater than its anticompetitive effects or to avoid a failing firm exiting the market.

Vietnam has a merger control regime but has not rejected a merger in over ten years. Since it was created in 2005, and up to 2017, the Vietnam Competition Authority had not rejected any proposal for economic concentration that has been notified in any industry. This is particularly remarkable in light of the applicable regulatory framework during that period, which required notification of even minor transactions and could therefore result in a major obstacle to efficiency-enhancing consolidation in dynamic markets. Transactions had to be notified if they resulted in a market share of larger than only 30 percent,⁵⁵ and concentrations that achieve a joint market share of more than 50 percent were entirely prohibited.⁵⁶ According to the authority's annual reports, it has dealt with an average of three to four notifications per year since 2011, as per Vietnam Law Insight (2015). The new law no longer prohibits mergers without regard to effect on competition in instances where the combined market share of the merging firms exceeds 50%.

TABLE 9: Competition agencies and enforcement capacity

	Peru	Philippines	Vietnam
Competition authority	✓ (1992)	✓ (2015)	✓ (2004)
Independence of competition authority	✓	✓	✗
Transport/logistics sectors excluded from competition law	✗	✗	✗
Ongoing and/or closed investigations of anticompetitive conduct in transport/logistics	✓	✗	✗
Previous sanctions for anticompetitive conduct in transport/logistics	✓	✗	✗
Incidence of mergers among transport/logistics companies in the last 5 years ⁵⁴	✓	✓	✓
Merger control	✗	✓	✓

Source: Author's own elaboration based on World Bank country transport questionnaires, as of April 2017.

⁵⁴ This indicator is meant to assess whether, in the five years preceding the team's analysis, any mergers occurred in or affected the national markets of the respective economies. Given that many global freight forwarders and shipping lines with operations in Peru, the Philippines, and Vietnam have merged in recent years, the answer is positive for all.

⁵⁵ Vietnam Competition Law, Art. 20.

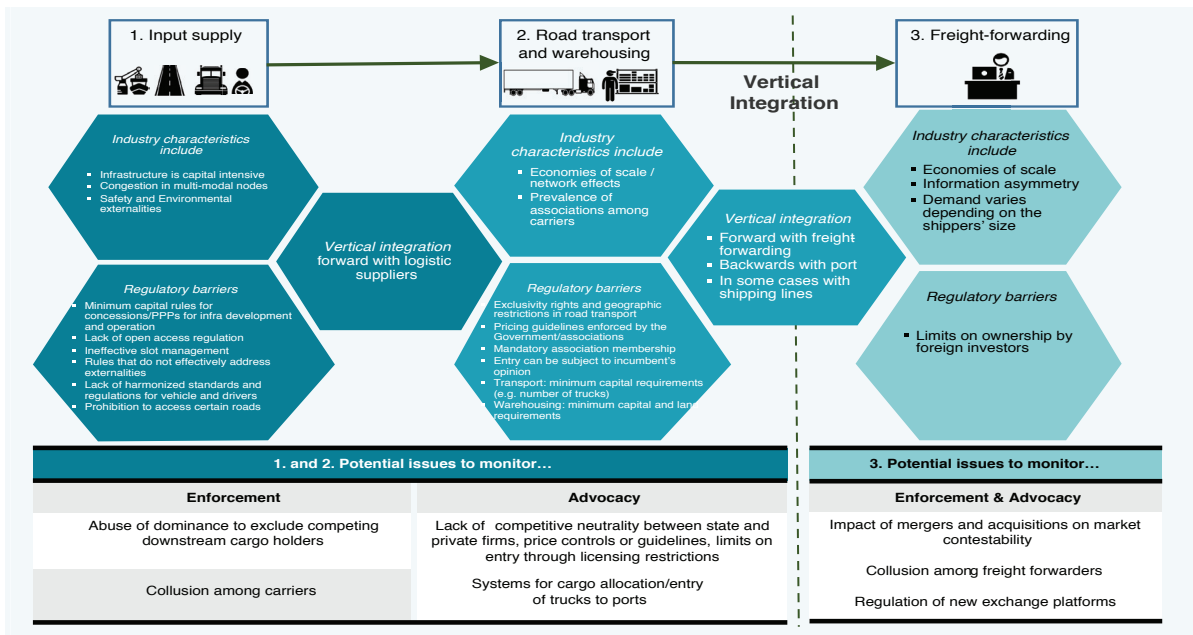
⁵⁶ Vietnam Competition Law, Art. 18.

POLICY RECOMMENDATIONS

Governments in APEC economies can play an important role in continuing to encourage competition in the transport and logistics sector to support supply-chain connectivity. Recommended areas of focus include strengthening anticartel enforcement and implementing procompetition regulatory frameworks, as these reforms can transform the road transport and logistics sectors, fostering lower prices and better quality of services (including through increased flexibility and reliability) while generating positive welfare distribution effects. Competition authorities play an essential role in these efforts and are well-positioned to become champions of these reforms. Placing competition policy at the center of the microeconomic reform agenda will enhance the benefits of other government policies that aim to sustain economic growth and promote shared prosperity.

As shown by the sectoral analysis in the three APEC economies reviewed in this study, national and subnational governments are imposing rules and regulations that may be restricting entry, facilitating collusion, and distorting the level playing field along the road cargo and logistics supply chain (Figure 31). Potential competition issues to monitor include abuse of dominance through exclusionary or discriminatory practices, predominantly in access to multimodal infrastructure and slot allocation along the chain, as well as potential collusive practices in the wholesale segment (among carriers, for example) and in highly specialized services (such as pilotage and towing in port terminals). Furthermore, given the tendency toward (horizontal and vertical) mergers and acquisitions in freight forwarding, it will be important to continue monitoring market structures and the potential impact of structural changes on market contestability.

FIGURE 31: A summary of potential competition issues to monitor in the road freight and logistics services supply chain



Source: Author's own elaboration.

To promote and enforce competition policy, competition agencies must have a proper mandate and the institutional capacity to implement it. All three countries have a competition law and agency in place, and their legal framework allows them to tackle some of the potential issues identified in this report. As one of the youngest competition authorities in the world, however, the Philippine Competition Commission needs to build up the capacity to uncover and prosecute cartels. Vietnam's authority would benefit from more technical and functional independence, in particular to tackle anticompetitive practices in sectors, such as transport, where SOEs are important market players. At the time of writing, Peru's competition authority could only review and place conditions on mergers and acquisitions in the energy sector. In this context, all three authorities would benefit from prioritizing the allocation of existing resources with a view to preventing the most harmful anticompetitive practices and using available powers and tools more effectively.

Competition agencies can focus on advocacy vis-à-vis associations and subnational governments to raise awareness about the risks of issuing pricing guidelines. This is particularly relevant for Vietnam, where price declarations are still issued and could be facilitating collusive agreements. In the Philippines and Peru, associations represent an important share of market players, and the competition authorities could usefully provide guidance regarding the type of information that should and should not be shared among members.⁵⁷

Advocacy to embed competitive neutrality principles in public policy can yield efficiency gains in various transport sectors and support private sector development. Discriminatory treatment of firms has been observed in the three focus economies, particularly regarding requirements and issuance of permits and authorizations. Embedding competitive neutrality principles in public policy is especially important in the case of Vietnam, given the large presence of SOEs in the country, which are vertically integrated along the transport and logistics value chain and represent a large share of the market.

The following tables highlight those rules and government interventions that are not conducive to addressing market failures but instead increase the likelihood of noncompetitive market outcomes, and provide specific policy recommendations, by country. The focus is on sector-regulations and broader public policies that shape market outcomes in transport and logistics. MCPAT and this study build on an understanding that competition policy goes beyond antitrust law and enforcement to cover the alignment of government interventions in markets with competition principles, including regulations and state participation.⁵⁸ In the case of transport and logistics, while effective antitrust enforcement is important, sector regulations and broader public policies are critical in determining market outcomes.

⁵⁷ The WBG's Competition Policy Team assessed the Honduran Competition Agency in the development of a Guideline for Associations, which can be revised in the following link: https://www.cdpc.hn/sites/default/files/Privado/Comunicados%20de%20Prensa/2016/GUIA_ASOCIACIONES_WEB.pdf

⁵⁸ Motta (2004) defines competition policy as a "set of policies and laws that ensure competition in the marketplace is not restricted in such a way as to reduce economic welfare."

TABLE 10: Main recommendations for Peru

	Issues	➔	Recommendations
Rules that reinforce dominance	Lack of market-based and transparent slot-allocation mechanism		Public, open, and electronic booking system that allows competitors to access slots for pickup and drop-off at ports In a context of high congestion, introduce reward mechanism for efficient carriers to maximize the use of resources
	Capital and minimum land requirements could be hindering entry in the market of warehouses and temporary deposits		Revise minimum storage area thresholds for warehousing
	Lack of harmonized technical standards		Ensure that environmental standards for trucking are homogenous with international practice, in particular in neighboring countries
Rules that facilitate collusion	Self-regulation in professional associations for ancillary services in ports, and mandatory membership in association, have served in the past as a platform for coordinating prices and determining contract conditions (towing and pilotage services in Callao, trucking in Huaraz)		Develop an advocacy program in the transport sector targeted at associations
Rules that distort the level playing field	In international freight transportation, more than half of the social capital and effective control of the company must be in the hands of Peruvian citizens		Evaluate the effects and rationale of restrictions on foreign ownership

Source: Author's own elaboration.

The reform options presented can serve as an entry point for multiple stakeholders to advocate for reform. Among all reform opportunities identified, this report highlights those that are likely to improve market outcomes based on available data and to ensure alignment with international practices. This is meant to serve as an entry point for competition authorities, sector regulators, and other stakeholders in the selected economies to lead reforms in the road freight and logistics services sectors, after further analyzing the feasibility and potential impact of issues highlighted in the country recommendations (Tables 10–12). In particular, competition authorities can develop advocacy strategies to improve competition dynamics in the sector.⁵⁹

It will be important for competition agencies to monitor and even anticipate regulatory frameworks for new services. Private sector initiatives like the development of freight platforms could help improve market dynamics by addressing an inherent market failure: information asymmetry. Freight platforms are online or application-supported systems that serve as two-sided platforms under which shippers can allocate cargo more efficiently and compete to offer the best price for hauling cargoes. Additionally, value-added services can be provided, such as payment services, credibility checks, insurance, tracking (location, alert-system), rating systems, and matching services for services such as warehouse space. These platforms are generating efficiencies and making trade more accessible to smaller players. Some governments have voiced concerns about these application-based platforms and are considering the enactment of regulatory frameworks. It will be crucial to assess whether these regulations yield market efficiencies and procompetitive outcomes for all market players.

⁵⁹ See: Goodwin and Martinez Licetti (2016).

TABLE 11: Main recommendations for Philippines

	Issues	➔	Recommendations
Rules that reinforce dominance	Entry of new operators is subject to consent by incumbents.		Eliminate prior operation rule and economic needs test.
	Ports Authority acts as the port regulator and has commercial functions.		Separate commercial from regulatory obligations under the transport authorities (for example, the regulation of cargo handling rates) to ensure competitive neutrality.
	Lack of effective open access regulation to intermodal infrastructure.		Implement open access regime for essential port infrastructure.
	Existing slot allocation mechanism (TABS) could be benefiting large cargo holders through its points-based payment system.		Revise payment conditions in TABS. Consider additional rules to ensure optimal use of infrastructure, such as rewards to efficient operators and differentiated charges for peak-hour slots.
	Local government approval must be obtained for a truck garage and a local road passage permit. ⁶¹		Eliminate geographical restrictions for service provision within the Philippines.
	Route classification restrictions prevent intraregional franchise holders from competing in interregional markets.		
	Exclusivity rights can be found among road transport providers.		
	There is no standard list of entry requirements, there are limits on truck traffic during the day, and fees can vary depending on the local government.		Promote consistency across subnational government regulations in the sector.
Rules that facilitate collusion	History of government involvement in price setting by trucking associations.		Conduct advocacy initiatives with industry associations on anticompetitive practices.
Rules that distort the level playing field	For trucking services, individual applicants for a Certificate of Public Convenience must be Filipino citizens; if the applicant is a corporation, its capital must be at least 60 percent owned by Filipino citizens.		Evaluate the effects and rationale of restrictions on foreign ownership.

Source: Author's own elaboration.

TABLE 12: Main recommendations for Vietnam

	Issues	➔ Recommendations
Rules that reinforce dominance	Lack of open access regulation to intermodal infrastructure.	Implement open access regime for essential port infrastructure.
	Inconsistent interpretation, implementation, and enforcement of government regulation across provinces and among government officials.	Promote consistency across government regulations in the sector.
Rules that facilitate collusion	Minimum port tariffs.	Assess need for price regulation given the intra- and inter-port competition, and replace minimum tariffs with maximum tariffs to allow for competitive pressure among port operators.
	Each provincial People's Committee promulgates a price schedule for transportation within its province for public procurement.	Refrain from publishing price guidelines and price declarations. Require price declarations only for informational purposes, if needed. Consider substituting with entirely voluntary (and confidential) price declarations to minimize the risk of price signaling and collusion.
Rules that distort the level playing field	State aid and subsidies appear to be distorting the level playing field.	Review state aid to the extent that it favors one competitor over another.
	Vertically integrated SOEs could be engaging in exclusionary practices during peak periods	Introduce competitive neutrality rules for SOEs, especially in transport segments in which they compete with private enterprises.
	Vietnamese law prohibits joint ventures with over 51 percent foreign capital contribution from engaging in the trucking business. This, along with the lack of distinction between private and commercial carriers, imposes a barrier to foreign joint ventures moving their own cargo.	Evaluate the effects and rationale of restrictions on foreign ownership.
	Foreign capital contribution limit is 51 percent in road transportation services. Foreign investors are required to obtain an IRC, which extends the time required to establish an enterprise compared to local investors who are not subject to IRC application.	Review IRC application in the sector.

Source: Author's own elaboration.

Overall, APEC can play an important role in knowledge creation and exchange for the design and implementation of reforms in the region. APEC could add to the existing knowledge base of successful procompetition reforms in transport (Box 13). Countries with an incipient competition culture could benefit from reviewing the experiences of other countries in the region, which show that competition matters for the effectiveness of government policies. APEC could be a useful forum for exchanging this type of information on valuable enforcement and advocacy experiences, as well as studies that quantify the benefits of competition. Moreover, given the importance of encouraging research on competition in the region and the limited availability of systematized information on competition across countries, member countries could help to collate and disseminate relevant information. Even outside the region, country experiences can inform advocacy to address harmful rules such as temporary entry bans and price controls that affect smaller economies.

BOX 13: Reform experience in road transport

South Korea

This sector was identified as in need of reform in the early 1990s. Regulations controlling territories were violated, yet still left low-profit routes underserved. At that time, reforms included steps to improve the system of approvals and to relax the criteria for introducing or changing routes (Lee, 1998, pp. 32–33). In mid-1999, more fundamental reforms were implemented. The widespread reliance on private trucking was an indication of how inefficient and noncompetitive the for-hire system had become. Regulation of rates and routes was eliminated. Control over entry was relaxed to eliminate economic tests, and entry is now based only on fitness. Scale requirements are being eliminated. At the outset, the minimum number of trucks a firm must have to provide national route service was 25. By the end of 1999, that number was reduced to five, with the aim of reducing it eventually to one.

Source: OECD (2000).

Australia

In 1998, through the Australian Transport Council, governments endorsed a reform package encompassing a nationally consistent regulatory framework for heavy vehicle registration, driver licensing, heavy vehicle mass and loading restrictions, commercial driver fatigue management, and the national exchange of vehicle and driver information. The centrepiece of this national compliance and enforcement reform package is the model Road Transport Reform (Compliance and Enforcement) Bill, approved unanimously by Australian transport ministers in November 2003. This C&E Bill, as it was known, introduced the Chain of Responsibility concept—that is, that all those with responsibility for activities that affect compliance with road transport laws should be held legally accountable if they do not meet their responsibility. Chain of Responsibility provisions in the Bill impose obligations on all parties in the transport chain and all individuals in the corporate chain of command. Those parties are required to either take reasonable steps to prevent a contravention of the road transport laws, or to not encourage or coerce others to contravene those laws. The Chain of Responsibility approach has now been extended to model laws dealing with fatigue, transportation of dangerous goods, and heavy vehicle speeding.

Sources: Australian National Competition Council (2017); World Bank and IRU (2014).

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ANNEXES

Annex I: Methodologies for assessing logistics services and transport frameworks

WBG Quantitative Analysis of Road Transport Agreements (QuARTA). This methodology assesses the openness of 77 bilateral agreements, the main instrument used to regulate international road transport services, based on a quantitative analysis of these legal texts from countries worldwide, mostly from Europe and Central Asia. The rationale for the analysis stems from the fact that bilateral agreements in the international road sector are usually cumbersome and difficult to access and understand for their intended users, cross-border trucking services providers, thereby inhibiting freight transport companies and other services providers from understanding and complying with them, and resulting in inefficiency and increased costs. The analysis presents general patterns of bilateral agreements and specific recommendations about their content and coverage to help countries reform the road transport sector. In the case of model agreements, for example, the analysis finds that the Southern African Development Community model for integrating regional road freight transport has led to bilateral agreements that are missing key elements and this has resulted in low degrees of openness. QuARTA's methodology carries out a quantitative analysis of legal texts setting a comparable set of 11 agreement features ("model agreement"), assigning a maximum score for each of these features. All those features are specific to the international road sector. Because the analysis evaluates the openness of bilateral agreements, it is aimed at international competitors. The methodology assesses current practices and makes recommendations for a flexible, but consistent, model rather than for reforms (2013).

WBG Logistics Performance Index. This index measures and compiles different aspects of logistics across countries to build an aggregated dataset to measure the "friendliness" of logistics from the point of view of time, cost, and qualitative elements. The dataset evaluates a country's logistics performance according to six core components: customs, infrastructure, international shipments, logistics competence, tracking and tracing, and timeliness. The analysis provides quantitative and qualitative assessments in a survey of over 1,000 logistics professionals (global freight forwarders and express carriers) in 160 countries, from outside the country and working inside the country. The survey is composed of an international LPI dataset and a domestic one. The international part includes 16 questions in which each respondent is asked to rate eight overseas market on the six core logistics features. The domestic part is composed of 17 questions in which respondents are asked to rate key elements of logistics according to five performance categories (for example, they can evaluate port charges as "very high," "high," "average," "low," or "very low"). The methodology considers foreign and domestic competitors, and all questions are specific to the logistics sector. The index is based on a survey and, although it includes quantitative data about the performance of key components, respondents' feedback is of a qualitative nature. The index can be qualified as a catalyzer of reforms (2014).

WBG Port Reform Toolkit. The Port Reform Toolkit provides a decision framework to guide policymakers in developing countries in designing and implementing institutional port sector reforms, providing concepts, options, alternatives, and examples. It is composed of eight modules and a financial model.

- Module 1: Framework
- Module 2: The Evolution of Ports in a Competitive World
- Module 3: Alternative Port Management Structures and Ownership Models
- Module 4: Legal Tools for Port Reform

- Module 5: Financial Implications of Port Reform
- Module 6: Port Regulation
- Module 7: Labor Reform and Related Social Issues
- Module 8: Practical Advice on Implementation of Port Reforms.

The toolkit takes both an economy-wide and sector-specific approach to port reform, and combines qualitative and quantitative tools. Competition is addressed from a general and descriptive angle. For example, the subsection on assessing port competition (under Module 6) presents a conceptual framework, indicating “conditions where anticompetitive behavior may occur.” Finally, the Port Reform Toolkit is meant to be a catalyzer of reforms (World Bank (2016)).

OECD Services Trade Restrictiveness Index (STRI). This index provides a snapshot of services trade barriers in 22 sectors across 44 countries. It offers a benchmark of global best practices, and reform options for policymakers; clarifies restrictions for trade negotiators; and informs businesses of trade requirements before entering foreign markets. It is composed of a regulatory database; composite indices quantifying restrictions on foreign entry and movement of people, barriers to competition, and regulatory transparency, among others; empirical analysis assessing the impact of services trade policies on economic performance and trade costs; and online tools such as data visualizations and a policy simulator. STRI composite indices quantify qualitative information (such as certain regulatory features) as binary scores (with 1 indicating complete openness to trade and investment and 0 signifying total market closure to foreign services providers). It tackles economy-wide (such as the assignment of contracts for universal services obligations on a competitive basis) and sector-specific questions (for example, the exemption of certain technical agreements from competition law). It covers not only transport services (such as air, maritime, road freight, and rail freight), but also logistics services (including cargo handling, storage and warehouse, freight forwarding, and custom brokerage) (OECD (2015)).

USITC Logistics Services Assessment. This 2006 report assesses the global logistics services industry, providing an overview of the industry, examining trade and investment in selected markets (as well as impediments), and the potential effects of removing those impediments on trade and economic welfare. The methodology is based on a questionnaire to global suppliers and information from government agencies, logistics-related trade associations, and other interested parties. Industry participants come from China, Europe, Hong Kong, Singapore, and the United States. Complementary information such as cross-border trade and industry growth are obtained from United States government sources and a United States consulting firm. Information related to trade and investment impediments is obtained from 52 countries, based on their importance as United States trading partners (air and waterborne trade) (USITC (2005))

OECD Product Market Regulation (PMR) Methodology. The OECD PMR methodology assesses product market regulations based on economy-wide and sector-specific indicators in 34 OECD countries and 22 non-OECD countries (2013). It is an objective methodology, based on the following indicators: economy-wide regulation, which summarizes a wide array of regulatory provisions in a given country, such as the state’s direct participation in markets, price controls, rules for starting a business, and treatment of foreigners, among others; and sector regulation, including professional services, retail distribution, and network sectors (including telecommunications, electricity, gas, post, rail, air passenger transport, and roads). The PMR

dataset provides valuable information for domestic and foreign competitors. It assesses formal regulation such as state control of business enterprises, legal and administrative barriers to entrepreneurship, and barriers to international trade and investment, and identifies policies that promote or inhibit competition in areas of the product market where competition is viable. Jointly with the WBG, this dataset has been expanded to include around 20 additional countries outside the OECD (OECD (2013)).

Annex II: Investigations of anticompetitive practices in maritime shipping in countries that are signatories to the Code of Conduct for Liner Conferences

The Code of Conduct for Liner Conferences

The United Nations Conference of Plenipotentiaries on a Code of Conduct for Liner Conferences was convened at the United Nations Office in Geneva between 1973 and 1974. Its main objective was to protect and support the expansion of shipping lines and trade in developing countries, given the existing scheme of conferences, dominated by shipping lines in developed economies.

The Code of Conduct defines a conference as “a group of two or more vessel-operating carriers which provides international liner services for the carriage of cargo on a particular route or routes within specified geographical limits and which has an agreement or arrangement, whatever its nature, within the framework of which they operate *under uniform or common freight rates and any other agreed conditions with respect to the provision of liner services,*” as per United Nations (1975).

Typically, conferences include agreements on the conditions for service provision, prices for chartering vessels, use of space, joint use of terminals and containers, coordination of navigation services, regulation of capacity and allocation of shipments, and revenues. In other words, the maritime conference constitutes what would otherwise be considered a cartel agreement that organizes activities, allocates business volumes, establishes tariffs, and manages routes.

Ninety-two state members of the United Nations Conference on Trade and Development participated in the Conference. APEC countries that signed the Final Act include: Australia, Canada, Chile, China, Indonesia, Japan, Republic of Korea, Malaysia, Mexico, Vietnam, New Zealand, Peru, the Philippines, Singapore, Russia (former USSR), Thailand, and the United States.

Application of antitrust law in liner conferences

Historically, liner conferences have been exempt from antitrust laws in several jurisdictions, as referenced in American Bar Association (2012). These exemptions, however, have been reviewed over time.

A turning point in this process occurred in 2002, when the OECD issued a report that severely criticized antitrust exemptions favoring liner conferences. This report examines the impact of price fixing in this sector and the justifications normally invoked in support of the exemptions, and analyzes whether these exemptions are justified. The report concludes that the exemption initially conferred on conferences does not serve the purpose for which it was created, and has instead served to distort the functioning of the market. The report invited member countries to consider removing the conferences’ authorization of to set prices and holding discussions on the subject (OECD, 2002).

The application of antitrust law in liner conferences varies across countries. Broadly, four trends can be identified:

1. **Legal exemptions to the Code of Conduct to allow for the application of antitrust law.** In 2006, the European Union repealed Regulation No 4056/86, which exempted liner conferences from competition rules at level of the European Community. After that, a two-year period was granted to shipping lines as a transition time to comply with antitrust law, and many countries—including the United Kingdom, Germany, Denmark, Bulgaria, and the Netherlands—have presented complaints against the Code of Conduct.

In 1995, Block Exemption 870/95 was adopted. The regulation allows shipping lines with a combined market share of below 30 percent to enter into cooperation agreements to provide joint cargo transport services (so-called "consortia"). Regulation allows agreements on the indispensable elements for the joint rendering of services, such as coordination of schedules and routes, exchange of spaces, sharing ships, and others, but without reaching agreements that may restrict competition, such as freight and output restrictions. Such agreements usually allow liner shipping carriers to rationalize their activities and achieve economies of scale. The first block exemption regulation for consortia was adopted in 1995 and extended several times. The last extension was approved in 2014 and is valid until April 2020.

2. **Antitrust law exemption for liner conferences, accompanied with strong regulation.** This is the case in the United States, where the Federal Maritime Commission must assess the legality of every conference agreement and has the authority to reject them when freight increases or changes in other commercial conditions are considered unreasonable or unjustified. In addition, local laws promote and facilitate direct agreements between conference members, making it easier for them to divert from conferences' freights through confidential agreements. This makes it more difficult for the conferences to monitor and impose their agreed tariffs, indirectly introducing competition into this exempted activity.

In 2009, Canada adopted a similar regulation, considering that a full elimination of the exemption would divert ships to neighboring United States ports, where the exemption still exists. However, as in the United States, Canada allows confidential direct negotiations and requires registration and control by the authority, according to Transport Canada Policy Group (1999).

3. **Antitrust law exemption for liner conferences, with or without limits, depending on the national interpretation of the law.** In Chile (Tribunal de Defensa de la Competencia de Chile, 2013), the Code of Conduct is restricted. Shipping conferences are allowed as a way to enhance efficiency in shipping line services, but do not justify or exempt anticompetitive practices. According to the Chilean Antitrust Tribunal, the competition authority or corresponding regulatory agency maintains the mandate to analyze and sanction potential anticompetitive practices.

In Costa Rica, however, since the Code of Conduct derives from an international agreement, it is considered to supersede any national law. In 2004, the constitutionality of conferences was questioned on the basis of Article 46 of the Constitution, which prohibits monopolies and anticompetitive practices. The claim was rejected because the Constitutional Chamber of the Court considered that, while the Constitution establishes a general principle against them, it does not define what "monopolistic practices" are; this term is instead further elaborated by regular law. Therefore, since conferences' Code of Conduct ranks above regular laws, the latter may not be invoked against them. Also, the Court considered that the conferences do not establish any exclusion from the market, nor a monopoly right on specific liners (Constitutional Chamber of the Supreme Court of Justice of Costa Rica, 2004).

4. Application of antitrust law to liner conferences. According to the argument developed by the Peruvian Competition Authority to open a recent case in maritime container shipping,⁶⁰ Peru's internal norms have always rejected the existence of exemptions or privileges for specific sectors or economic agents and prevailed over the Code of Conduct, which has not been broadly applied. Although the country ratified the Code of Conduct in 1978, no legislation was developed to apply exemptions in favor of shipping lines or other economic agents in the sector that would be capable of breaching the competition law.

Investigations of anticompetitive practices in APEC economies

Australia: The Federal Court convicted in August 2017 a Japanese shipper for participating in a cartel agreement related to the transportation of motor vehicles to Australia between 2009 and 2012. The fine imposed was AUS\$25 million, the second largest in the history of Australia's competition prosecution (ACCC (2017)).

Chile: Six shipping lines were sanctioned in 2015 for colluding in multiple tender processes for providing maritime transport services to manufacturers and consignees of different car brands that had been imported to Chile since 2000. The cartel allowed each shipping line to keep their key accounts, even though their contractors wanted to switch providers. Total sanctions added up to \$95 million. Two of the companies applied for leniency; one received a full exemption and the other a partial exemptions (FNE (2015)).

South Korea: The Korea Fair Trade Commission announced in August 2017 that it had imposed a combined \$37.8 million in fines on nine global auto shipping companies for bid rigging and price fixing. These nine companies allegedly colluded to participate in auctions arranged by carmakers between 2002 and 2012 (Korea JoongAng Daily (2017)).

Mexico: COFECE, the Mexican competition authority, recently sanctioned seven shipping lines for engaging in nine collusive agreements, segmenting the car transport into assigned routes between 2009 and 2012. Some of the sanctioned firms are also involved in the Chilean and Peruvian investigations regarding this market (Forbes (2017)).

Peru: INDECOPI opened two investigations in international shipping, involving containers and roll-on/roll-off cargo. The closed case was initiated in early 2016 and settled in 2017. It involved 17 shipping lines that allegedly agreed on freights and surcharges for container shipping under the Asia West Coast South America Conference. The second investigation was opened in 2017 and sanctioned in 2018. It resembles the Chilean case, involving the same companies (INDECOPI (2017a), INDECOPI (2017b), INDECOPI (2018)).

United States: In September 2017, a Norwegian company pleaded guilty and agreed to pay a \$21 million criminal fine for participating in an agreement involving the allocation of customers and routes, bid rigging, and price fixing in the sale of international ocean shipments of roll-on/roll-off cargo, according to Reuters (2017). This is the fifth company to plead guilty in a Federal Bureau of Investigation review of the case, bringing total criminal fines to over \$255 million.

⁶⁰ See INDECOPI (2015) for further detail.

Investigations of anticompetitive practices in other countries

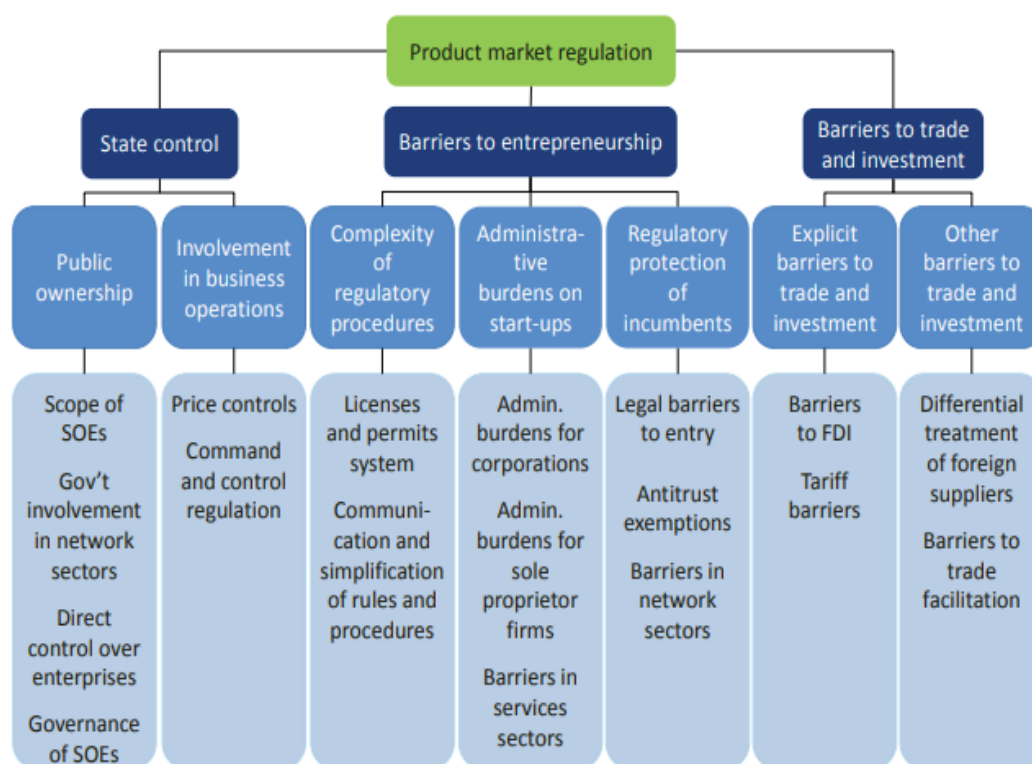
South Africa: An investigation against shipping companies has been deferred to the South African Competition Tribunal for prosecution on seven charges relating to collusive tendering, price fixing, and market division. The accusation by the Competition Commission culminated in an investigation initiated in 2009, for activities carried out beginning around 1997. This case involved some of the companies that were indicted and sentenced in the United States investigation discussed above, as per Competition Policy International (2017). Under that investigation, one company admitted in 2015 to collusive conduct and agreed to pay a fine of \$8.56 million, according to Competition Policy International (2015).

Costa Rica: In June 2001, the National Chamber of Coffee Exporters filed a complaint against Becker Brammer and other shipping companies for alleged collusive pricing. The Competition Agency found reasonable indications of the existence of anticompetitive agreements, but concluded that it did not have the legal basis to investigate and sanction the companies involved, as the agreements were expressly authorized by the conferences, as per COPROCOM (2001). After this, two business associations complained about possible anticompetitive practices related to empty container fees, belonging to the shipping lines, but both complaints were discarded for other reasons, as stated by COPROCOM (2007). The authority has taken the approach that only agreements expressly mentioned in the Code of Conduct are exempted from antitrust laws.

Annex III: The OECD PMR Methodology

Economy-wide and sectoral product market regulation (PMR) indicators measure regulatory restrictiveness with regard to competition. While the economy-wide PMR is a single indicator that summarizes information by regulatory domain, the latter indicators do so by sector. The economy-wide indicator is calculated using a bottom-up approach in which data on regulatory structures and policies are used to assign numeric values to 18 low-level regulatory domains. These values, or low-level indicators, are then aggregated “up the tree” (Figure 32) to derive seven mid-level indicators, which are in turn aggregated to derive three high-level indicators—state control, barriers to entrepreneurship, and barriers to trade and investment. Finally, these three indicators are aggregated to yield the economy-wide PMR.

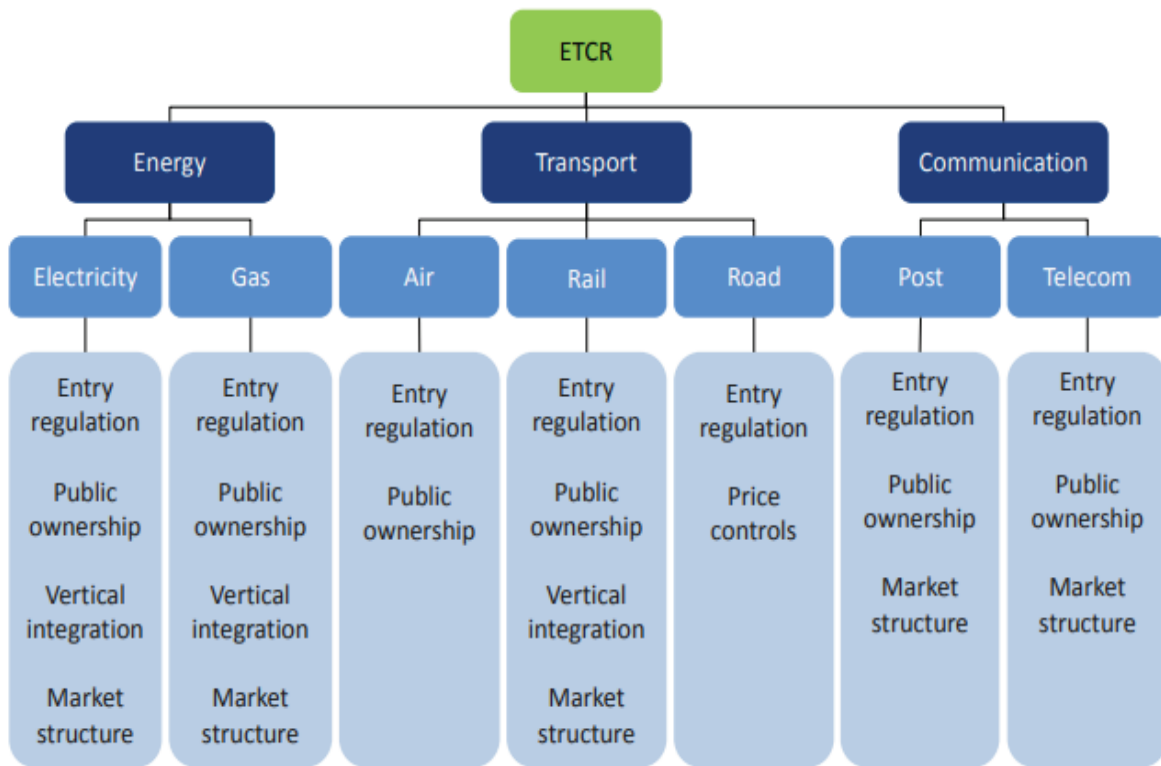
FIGURE 32: OECD PMR Indicator



Source: Koske, et al. (2015), p. 10.

Sectoral indicators aggregate information by sector. They are based on the same underlying dataset as the economy-wide PMR indicator, and their calculation utilizes a similar bottom-up approach, but the tree structure aggregates numeric values to derive sector-specific indicators.⁶¹ There are three sectoral indicators, corresponding to three sector groups: (1) electricity, transport, and communication regulation (ETCR), (2) professional services, and (3) retail distribution. For each group, computing the corresponding sectoral PMR indicator aggregates lower-level scores into an indicator for each sector in the group. For example, in computing the ETCR, we obtain indicators for the electricity, transport, and communication sectors. These are aggregated to obtain the ETCR indicator (Figure 33).

⁶¹ For example, data on requirement of membership in a professional organization enter the calculation of the economy-wide PMR indicator via the “barriers in services sectors” subcategory within the “administrative burdens on start-ups” category. However, the same data enter the calculation of the professional services PMR indicator via the “compulsory chamber membership” subcategories within the “entry regulation” categories for each of the four professional services.

FIGURE 33: OECD NMR Indicators Energy, Transport, and Communication Sectors

Source: Koske, et al. (2015), p. 14.

The specific questions, scores, and weights for PMR indicators can be found at <http://www.oecd.org/eco/reform/indicatorsofproductmarketregulationhomepage.htm>. For further details, see Koske et al. (2015).

Annex IV: WBG Transport and Logistics Services Questionnaire for APEC

BOX 14: Surveyed companies in Peru, the Philippines, and Vietnam

In each of the focus economies, the study team interviewed between six and nine companies. To capture representative views about market dynamics, the teams selected a pool of large, medium, and small companies, of national and international origin, which hire or provide logistics services and participate in different sectors of the economy.

TABLE 13: Surveyed companies

Company	Size	Sector/Industry	Type
Peru			
Company 1	Large	Retail	Client
Company 2	Large	Mining	Client
Company 3	Large	Agribusiness	Client
Company 4	Large	Transport and logistics	Provider
Company 5	Medium	Transport	Provider
Company 6	Small	Transport	Provider
Philippines			
Company 1	Large	Fertilizer	Client
Company 2	Medium/Large	Semiconductor industry	Client
Company 3	Medium	Wellness products	Client
Company 4	Medium	Bakery chain	Client
Company 5	Large	Transport	Provider
Company 6	Large	Transport	Provider
Company 7	App based	Transport	Provider
Company 8	Small	Transport	Provider
Vietnam⁶²			
Company 1	Large	Aluminum production	Client
Company 2	Large	Plastic production	Client
Company 3	Large	Transport and Logistics	Provider
Company 4	Large	Transport and Logistics	Provider
Company 5	Large	Transport and Logistics	Provider
Company 6	Large	Transport and Logistics	Provider
Company 7	Medium	Transport	Provider
Company 8	Medium	Transport and Logistics	Provider
Company 9	Medium	Transport and Logistics	Provider

When possible, the team interviewed all relevant government authorities and business associations. For example, in the Philippines, three government agencies were interviewed: (i) the Competitiveness Bureau, (ii) the Business Licensing and Accreditation Department, (iii) the LTFRB; and (iv) the Inland Haulers and Truckers Association.

⁶² Small companies were also contacted in Vietnam, but only medium and large companies were available for the interview.

Entry regulation							
		YES	NO	YES	NO	Comments	Information source
		<i>Definition according to national law (including legal references)</i>				<i>List of license/permits/registrations required for providing the service</i>	
0	How does the national legislation define the operator of the following services:						
	a) road transport services with trucks? (e.g. truckers)						
	b) services relating to the carriage/transport, consolidation, storage, handling, packing or distribution; customs and fiscal matters - by his own means OR procures carriage and other services in his name and on own account (e.g. Freight Forwarders; Non-Vessel operating common carriers; multi-modal transport operators)						
	c) services relating to the carriage/transport, consolidation, storage, handling, packing or distribution; customs and fiscal matters - as an agent on behalf of the principal without carrier's liability (e.g. agent, broker)						

		<i>Transport carrier (trucking) (a)</i>				<i>Freight forwarder/ logistics provider (b and/or c)</i>	
1	Do national, state or provincial laws or other regulations restrict the number of competitors allowed to operate in the services market using:						
	a) full bans (periods in which mandatory permits are not issued, suspension of the process to get permission to officially enter the market)						
	b) maximum number of licenses/permits per route or type of cargo						
	c) other mechanisms to restrict the number of competitors						
	Can private parties freely apply for licenses/permits (or they only occur by initiative of the government)						
	Are there specific regulations/guidelines that state the criteria used to issue licenses/permits? If Yes, what are the criteria used by the government to issue licenses/permits? (check all that apply)						
	a) financial fitness						
	b) compliance with public safety requirements (may include environment, driver's regulation, vehicle technical standards - please specify)						
	c) compliance with driver's and vehicle's standards						
	d) economic need tests						
e) government discretion							
f) other (please specify)							

		YES	NO	YES	NO	Comments	Information source
2	Does the provision of private carriage demand licenses/permits?						
	If yes, are these requirements identical of those applied to commercial carriage? (If no, please describe the differences)						
3	Are there specific and mandatory permits for the provision of intermodal operations (in addition to permits allowing for regular provision of road transportation services)?						
	If there are special intermodal operation licenses/permits, are they limited in number?						
4	Who can obtain a permit/license? (mark all that apply)						
	a) natural persons						
	b) sole proprietorships						
	c) private corporations						
5	Does the issuance of permits/licenses follow a formal schedule or timeline?						
	IF YES, is there a maximum period/deadline for the conclusion of the process or a "silence is consent" rule?						
6	Are professional bodies, business associations or representatives of trade and commercial interests involved in specifying or enforcing entry regulations? If yes, how does it occur?						
	a) opinions on government decisions						
	b) participation in public councils or commissions						
	c) it is a self-regulatory systems (please describe)						
7	d) other (please specify)						
	Is membership to a private association required to become a licensed provider? If yes:						
	a) Is the number of members restricted						
	b) are there other rules in place that restrict the access to the association? Please specify						
8	Are there routes, products or means of transportation that enjoy license/permit exemptions (absence of licenses in a context of licensing regime)? If yes, please specify						

		YES	NO	YES	NO	Comments	Information source
9	Are there licenses/permits that allow for general provision of services (any route and any product)? If NOT: (please mark all that apply)						
	a) some routes demand specific licensing (please specify)						
	b) some products demand specific licensing (please specify)						
	If you marked a), b) or both, are these licenses restricted in number?						

10	Does the government grant exclusive rights to: (If yes for any option, please specify in which form and how often does it occur)						
	a) handle specific goods						
	b) handle specific type of goods						
	c) operate in certain geographic regions						
	d) operate in determined routes						

Controls on prices and other business variables

Government rules		Transport carrier (trucking)		Freight forwarder/logistics provider			
11	Are prices regulated by the government?						

12	Does the government provide pricing guidelines for the provision of services?						
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13	If Yes for either of the two previous questions, are there mechanisms in place to enforce or oversee the application of price regulations and guidelines?						
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Self-Regulation							
14	Are professional bodies, business associations or representatives of trade and commercial interests legally allowed to be involved in specifying or enforcing pricing guidelines?						
	If yes, are there mechanisms in place to facilitate or promote monitoring and compliance with the guidelines?						

15	Are price agreements among competitors facilitated or promoted by the government (e.g. ministries, regulators, subnational government)? If Yes, please describe						
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Other Restrictions on business variables								
		YES	NO	YES	NO	Comments	Information source	
		<i>Transport carrier (trucking)</i>				<i>Freight forwarder/ logistics provider</i>		
16	Are professional bodies, business associations or representatives of trade and commercial interests legally allowed to be involved with the allocation of cargo among service providers?							
	If yes, are there mechanisms in place to facilitate or promote monitoring and compliance with cargo allocation rules?							
17	Do regulations prevent or constrain backhauling in domestic routes (i.e. picking up freight on the return leg)							
18	Do regulations prevent or constrain transport between subnational regions/provinces? If yes, constraints are related to: (mark all that apply)							
	a) rules for axle load and weight limits							
	b) insurance requirements							
	c) drivers' licenses and regulations							
	d) place of business or incorporation of the provider							
	e) other (please specify)							
19	Are service providers free to use multimodal possibilities such as ROLA ("truck-on-train") and RORO ("truck-on-ship"). If NOT, please describe							
	Are companies free to offer logistics related services? If Yes, mark all that apply:							
	a) assembling							
	b) labeling							
	c) packaging							
	d) light/final fabrication							
	e) loading/unloading/trans-shipment							
f) storage services, stow and secure								
	g) filing in documents and performing customs formalities on behalf of the shipper							
20	Are providers obliged to own the entirety or part of their fleet - restrictions on financial decisions about fleet investment and ownership?							

		YES	NO	YES	NO	Comments	Information source
21	Do regulations prevent or constrain contract carriage (direct contractual relation between an independent provider/sender/receiver and one shipper)? If yes, why?						
	a) mandatory presence of associations						
	b) mandatory presence of brokers						
	c) queuing systems						
	d) other (please specify)						
22	Can providers consolidate goods stored in different warehouses into one "to be exported" container? (As opposed to an obligation that containers that will be exported are filled up with products originally stored at the same place)						
23	Can service providers finance their customers? (loans, grace periods, others)						
24	Are there legal restrictions for transferring permits/licenses between companies? (If yes, please describe)						
25	Are service providers obliged to contract some type of insurance (third party liability, cargo, etc)? If yes, please specify						
International							
Discrimination							
		<i>Transport carrier (trucking)</i>				<i>Freight forwarder/ logistics provider</i>	
26	Are there ownership barriers on foreign acquisition of equity in firms providing road transportation or freight forwarding? If yes, what is the maximum equity investment allowed (in voting shares)?						
	a) more than 25%						
	b) less than 25%						
	c) zero						
27	Is national citizenship required from individual service providers?						
28	Is the Licensing and permit procedures more burdensome for foreigners? (If yes, please describe)						

		YES	NO	YES	NO	Comments	Information source
29	Are there are cabotage restrictions? If yes, mark all that apply:						
	a) complete ban						
	b) a limited number of providers are allowed to provide the service						
	c) some routes or products suffer limitation (please specify)						
	d) there is a limited amount of services that a provider can undertake after entering the country (i.e. three load/unloads, after that the truck has to leave the country)						
	e) other (please specify)						
30	Do regulations prevent or constrain backhauling for international providers (i.e. picking up freight on the return leg)?						
31	Can the government prescribe specific routes and border entries for import/export? (If yes, please describe)						
32	Are there restrictions on goods in transit? If yes, mark all that apply:						
	a) complete ban						
	b) quotas/limited number of licenses						
	c) lack of more expeditious customs procedures compared to goods coming into and going from the country						
	d) other (please specify)						
Market Structure							
	<i>For all the questions addressing the "road cargo market", consider national services of road freight for bulk (construction and grains) and containers</i>						
Market Shares							
33	There is one (at least one) private player that accounts for ___ of the services provided in the main national route						
	a) > 65%						
	b) > 50%						
	c) > 25%						
	d) > 10%						
	d) > 10%						
	e) n/a						

		YES	NO	YES	NO	Comments	Information source
34	There is one business association that accounts for ___ of the transportation services in the main national route						
	a) > 65%						
	b) > 50%						
	c) > 25%						
	d) > 10%						
	e) n/a						
35	Were there market entrants in the previous 2 years (Jan 2014 to Dec 2015)?						
36	Private carriage accounts for ___ of the road transportation fleet						
	a) > 65%						
	b) > 50%						
	c) > 25%						
	d) > 10%						
	e) n/a						
37	Private carriage accounts for ___ of the value of the products transported by road						
	a) > 65%						
	b) > 50%						
	c) > 25%						
	d) > 10%						
	e) n/a						
Market figures							
38	What was the average price practiced in the period Jan-Dec 2015 (or the most recent yearly estimate) in the main national route of the country (local currency per ton-kilometer)?						
	a) for dry bulk						
	b) for 40 feet container						
39	Please provide the following information:						
	a) average age of the fleet (total)						
	b) number of registered companies in the sector						
	c) average ratio of trucks per operator (for both private and commercial carriage)						
	d) average kilometrage per year of the fleet (total)						
	e) average distance of a road freight in the country						
	f) estimated percentage of empty trips in the main national route						

		YES	NO	YES	NO	Comments	Information source
40	Carriers with up to 10 trucks account for _____ of the carriers						
	a) 80%						
	b) 50%						
	c) 25%						
	d) 10%						
	e) < 10%						

41	Do the largest port users (owners of private vessels, cruise ships, ferries and shipping lines) also provide road cargo transportation services?						
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42	Do the largest operators of port terminal services (loading/unloading, cargo handling, storage) also provide road cargo transportation services?						
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43	If Yes for either of the two previous questions, is access regulated in line with efficiency and non-discrimination principles?						
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44	Is there vertical integration between (ownership, long term contracts, exclusivity contracts):						
	a) road cargo carriers						
	b) freight forwarders						
	c) logistics providers						
	d) warehousing						
	e) brokers						

State Control

		SOEs					
45	Are there firms controlled by the government providing services? If yes, its market share in the main domestic route (main port to main consumption center; route between two main cities) is:						
	a) > 65%						
	b) > 50%						
	c) > 25%						
	d) > 10%						
	e) n/a						
	If yes, its market share in the main international route is:						
	a) > 65%						
	b) > 50%						
	c) > 25%						
d) > 10%							
	e) n/a						

		YES	NO	YES	NO	Comments	Information source
46	Are there legal or constitutional constraints to the sale of the stakes held by government in firms?						

47	Do strategic choices of government-controlled firms must be reviewed and/or cleared in advance by national, state, or provincial executive or legislative powers?						
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Subsidies and Aid							
48	Do federal or sub-national governments grant state aid to private firms? If yes:						
	a) state aid is available to all participants in the market instead of being directed only to certain players						
	b) there is a specific notification procedure for granting state aid						
	c) there are guidelines or regulations for granting state aid and subsidies which consider their impacts on private investments and market dynamics						
	d) there is a state aid inventory available to the public						

Transaction Costs, Regulatory Institutions and Enforcement							
Antitrust							
49	If there a specialized antitrust agency with economy-wide mandate, when did it start operations?						

50	Is one of the following markets excluded from competition law? (mark all that apply)						
	a) road transport						
	b) other modes of transport - rail, air, maritime, waterway (please specify)						
	c) warehousing						
	d) freight forwarding						
	e) cargo brokerage						
	f) logistics services						

		YES	NO	YES	NO	Comments	Information source
51	Are there exemptions to hardcore cartels (collusive allocation of goods, routes or prices among competitors) in the following sectors? (mark all that apply)						
	a) road transport						
	b) other modes of transport - rail, air, maritime, waterway (please specify)						
	c) warehousing						
	d) freight Forwarding						
	e) cargo brokerage						
	f) logistics services						
52	Are there any firms controlled by the government in these sectors subject to exclusion or exemption from competition law? (please specify firms' names and service they provide)						
53	Is any private firm in a transportation/logistics market currently under investigation for anticompetitive behavior?						
54	Has any private firm in a transportation/logistics market been sanctioned for anticompetitive behavior?						
55	Is a SOE in a transportation/logistics market currently under investigation for anticompetitive behavior?						
56	Has a SOE in a transportation/logistics market been sanctioned for anticompetitive behavior?						
57	Were there mergers involving providers of transportation/logistics services in the past 5 years (Jan 2011 to Dec 2015)?						
Regulatory Agencies							
58	Is there a regulator for the respective services? If yes:						
	a) there are several regulators (national and regional) with concurrent competence in the transportation sector						
	b) there are mechanisms to ensure articulation of policies and actions by authorities (e.g. joint plans, common policy)						
	c) regulators are independent (have fixed mandates for head and/or board members, have their own budget and provide final administrative decisions)						

		YES	NO	YES	NO	Comments	Information source
59	Is there concurrent competence between sector regulators and antitrust agency about antitrust issues in the transportation/logistics market?						
	If yes, are there are coordination mechanisms between sector regulator and antitrust agency on matters related to competition?						
60	Are there published, specific procedures to:						
	a) report offenses to sector regulation						
	b) file appeals and argue against licenses and permits refusals, suspensions or revocations						
Other Topics							
61	Do spatial planning regulations in urban and rural areas account for the potential development of logistic zones?						
	a) height, noise and traffic limitations						
	b) flexible technical standards for warehouses providing for optimal design of layouts						
62	Is there one warehousing provider that accounts for more than 30% of services at the main port of the country?						
63	Is there regulation providing for equal access to monopolized or essential rail and port services/ infrastructures?						
64	How do ports, dry ports, air ports and railroads allocate slots for cargo pickups and drop-offs? (Please specify for each)						
	a) no allocation (queueing)						
	b) direct negotiation and contract between different players in the transport chain						
	c) centralized allocation system on a first-come-first-served basis						
	d) centralized allocation system with competitive allocation						

		YES	NO	YES	NO	Comments	Information source
65	Please mark all that apply:						
	a) driver's licensing system requires special truck driving training						
	b) there are working hours and rest regulations for drivers						
	c) there are regulations governing the use of GPS units in trucks						
	d) there are regulations governing the truck weight limits						
	e) there are regulations governing environmental specifications of trucks (emissions)						
	f) there are bans or limitations on the importation of used trucks (please describe)						
	h) there are regulations establishing maximum distances for carrying goods by road freight						
66	Are cargo weight limits incompatible with container traffic (limits are too low for container transportation)?						
67	Are there fast track procedures for issuance of visas to professional drivers?						
68	Is there a balance between cargo demand for both directions of the main country's route? (there is product to bring back, differently from not being allowed to bring back)						
69	What is the share of exports by each means of transportation (% in both weight and value) for the two main exported products (please inform which are they)?						
	a) road						
	b) rail						
	c) air						
	d) see/river						
70	What is the share of national cargo movement by each means of transportation (% in weight and value)?						
	a) road						
	b) rail						
	c) air						
	d) see/river						

		YES	NO	YES	NO	Comments	Information source
71	What is the proportion of international road cargo as to national road cargo (in tons and in value - local currency)?						
72	Please provide the following information about the procedural steps needed to receive a license/permit						
	a) number and nature of governmental agencies involved						
	b) number of application forms						
	c) time required to complete each phase (if terms are stipulated by law or regulation)						
	d) fees charged by authority competent to issue the license						
e) other relevant information							

