

Issues Screening and List of Actionable Recommendations

The report has so far described (1) the current state of Vietnam's economy and logistics system (chapter 2) and (2) the main challenges and opportunities to reducing logistics costs as perceived and identified by key freight stakeholders nationwide (chapter 3). The purpose of this chapter is to integrate these findings into a cohesive analytical framework where they can serve as a basis to produce actionable advice to the Government of Vietnam (GoV). While it is clear that Vietnam's logistics challenges and opportunities are numerous and span virtually all elements of the supply chain, taking action on these issues requires that they be prioritized and properly sequenced. To that end, this chapter synthesizes the issues and assesses them based on multicriteria analysis. This will help determine the most pressing, highest-priority challenges, for which a targeted intervention agenda will be proposed.

Freight Logistics Challenges

The most salient challenges identified in chapters 2 and 3 have been distilled in table 4.1; these are the 23 most significant challenges in Vietnamese logistics identified by this report. The challenges have been grouped into three categories: Infrastructure, Freight Operations, and Policy, as defined below:

- *Infrastructure*: Issues related to the physical assets of ports/marine terminals, inland waterways, highways, roads, and rail.
- *Freight Operations*: Issues related to freight-handling operations at Tan Son Nhat Airport (TSNA) and Noi Bai Airport (NBA), warehouses operated by logistics service providers (LSPs), and trucking company operations.
- *Policy*: Issues that arise from regulations, laws, and circulars issued by the GoV and the application, interpretation, and enforcement of these regulations, laws, and circulars by the General Department of Vietnam Customs (hereafter

Table 4.1 Most Significant Challenges Impacting Freight Logistics Costs in Vietnam

No.	Issue description	Impact for freight stakeholders
<i>Infrastructure issues</i>		
I-1	<p>Transportation infrastructure planning at the central and provincial government levels is not conducted using a macro-approach. Planning is done in modal silos without having a multimodal, integrated, holistic perspective. The multimodal transportation network is not viewed as a total system that is critical to freight stakeholders when moving raw materials and components to production locations and finished goods to point of consumption. There seems to be no clear conviction that an efficient, cost-effective multimodal transportation system is integral to facilitating international trade and economic development.</p> <p>Infrastructure projects are executed in a piecemeal manner without regard to the importance of establishing smooth links between the various modes of transport and addressing bottlenecks along entire strategic freight corridors.</p> <p>Funding is not always allocated to the projects that will deliver the greatest benefit to BCOs and other freight stakeholders.</p>	<p>Unnecessary cost and time is added to BCO supply chains.</p> <p>Vietnam's competitiveness relative to peer countries is diminished.</p> <p>Network bottlenecks remain in place longer than would otherwise be the case. Maintenance expenditures are not properly assessed and balanced relative to capital expenditures.</p> <p>Relatively low economic returns to scarce state budget resources invested in infrastructure projects.</p>
I-2	<p>The master plan for the development of seaports in Vietnam from 2010 to 2020, approved by the prime minister in December 2009, promoted the development of a regional transshipment hub at Van Phong in Central Vietnam despite the limited demand for such a port. After continuous delays to the planned schedule, the GoV formally suspended the Van Phong project in September 2012, even though construction work had already stopped in August 2011 after initial piling works were done by a Korean contractor at a cost of VND 146 billion (\$7.3 million).</p> <p>The suspension came at the request of the MoT, because of Vinalines's financial difficulties. Despite this, the GoV continues to emphasize the development of the port at Van Phong, with the MoT directing Vinamarine and local provincial authorities in Khanh Hoa to set up plans to call for domestic and foreign investments in the construction of the port.</p>	<p>Potential expenditure of infrastructure capital would be diverted from more critically needed projects that would better serve higher volume freight corridors.</p>
I-3	<p>The master plan has failed to match market demand to supply, with the excess supply in the greater HCMC area, including Cai Mep-Thi Vai, expected to last through 2020 due to the haphazard granting of new port operation licenses. New port developments continue to be approved in the Cat Lai and Hiep Phuoc areas, despite the current oversupply and the concurrent development of Cai Mep-Thi Vai.</p> <p>Left with small terminal footprints, MTOs are finding it difficult to attract sufficient containerized ocean carrier business to be profitable.</p>	<p>Cai Mep-Thi Vai MTOs' operating costs and return-on-investment have been negatively impacted.</p>
I-4	<p>The existing master plan provides for the ports at Cai Mep-Thi Vai to receive container ships of between 4,000 and 8,000 TEUs (60,000 and 100,000 DWT) although ships of 11,000–14,000 TEUs (130,000–160,000 DWT) have already successfully docked at the port. Foreign-owned ocean carriers are not receiving sufficient incentives to offset the relatively low container move counts at Cai Mep-Thi Vai currently (of 1,000–2,000 TEUs per call), tonnage and pilotage fees form a high percentage of their operating costs on a per TEU basis and are facing obstacles in getting approval to bring in larger ships over 80,000 DWT.</p>	<p>Restrictions on access to Cai Mep-Thi Vai terminals increase ocean carriers' operating costs, which eventually increases transportation costs for importers and exporters.</p>

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Table 4.1 Most Significant Challenges Impacting Freight Logistics Costs in Vietnam (continued)

No.	Issue description	Impact for freight stakeholders
I-5	The development of the port system at the key gateway ports of HCMC (including Cai Mep-Thi Vai) and Haiphong (including Cai Lan) remains highly fragmented. The country continues to favor the development of new terminals based on outdated berth designs (e.g., of 200–300 meters each when latest generation large containerships are 300–400 meters long) and relatively small terminal facilities compared to international standards.	Economies of scale have been difficult to achieve in the large gateway ports because cargo is dispersed. Ocean carriers select ports to call based on cargo demand. Funding spent on small ports and terminals has yielded little benefit for BCOs.
I-6	The potential for Cai Mep-Thi Vai to act as a transshipment hub for other Vietnamese ports has not been fully exploited. In 2013 foreign carriers will no longer be permitted to carry empty containers and international laden containers between Vietnamese ports on foreign-flagged ships because of cabotage restrictions. Unable to rely upon Vietnamese-flagged carriers to provide suitably reliable feeder services between Vietnamese ports, these international laden containers will be shipped to foreign ports for consolidation.	Cabotage restrictions increase operating costs for ocean carriers, resulting in higher transportation costs for BCOs.
I-7	The development of Lach Huyen Port continues to face delays and could miss the 2016 target for operations to commence. Haiphong could face a potential port congestion problem by 2016, with demand exceeding supply if Lach Huyen Port does not proceed as planned. Planners of the Lach Huyen port could repeat the same mistakes made in the development of Cai Mep-Thi Vai with the competing ports at Cai Lan and the potential development at South Do Son, which could result in the dispersion of cargo volumes and the inability to exploit the benefits of large-scale marine terminal operations.	Delays will result in a shortage of vessel capacity and longer wait times for available vessel space for BCOs.
I-8	Most Vietnamese highways intersect at traffic circles that are especially congested Monday through Saturday. Today there are few overpasses or flyovers that allow traffic from one highway system to merge with another highway system to keep traffic moving. HCMC does have plans to construct overpass bridges at two major traffic circles, Hang Xanh Crossroads and Thu Duc Crossroads, on the main highways to the industrial areas in Binh Thanh and Dong Nai and to NH 51 and the Cai Mep-Thi Vai terminals. Exits to major port terminal areas like Road 965 to Cai Mep-Thi Vai are controlled by signals as opposed to overpasses that allow through traffic to continue to flow. Besides creating congestion issues, poor highway safety is a major challenge. Highways are not constructed to handle truck weights connected with today's larger sized, 45-foot containers and/or heavier smaller containers.	Freight velocity and highway safety are compromised, resulting in increased fuel consumption, more air pollution, and higher personal liability and cargo insurance claims. BCOs need to add more buffer time when planning transportation, which increases inventory carrying costs. Weight restrictions, lower maximum highway speeds, and congestion combine to increase the cost of freight shipments in Vietnam compared to countries like China.

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Table 4.1 Most Significant Challenges Impacting Freight Logistics Costs in Vietnam (continued)

No.	Issue description	Impact for freight stakeholders
I-9	<p>The concept of logistics parks (a campus environment where many LSP-managed distribution and warehouse facilities are colocated) is not well-understood in Vietnam. Cargo-handling facilities are usually standalone near factories, ports, or airports. Vietnam lacks adequate logistics parks alongside major highways leading to the Haiphong ports and NH 51 to Cai Mep-Thi Vai.</p> <p>Ideally, logistics parks should be located next to inland waterways, major highways, and rail yards to accommodate multimodal freight options. Highway access to the parks would provide quick easy-on, easy-off access to the main highway or road adjacent to the park. Designating land for logistics parks along new expressways should be a requirement for highway investors. These logistics parks could be developed with FDI funds.</p>	<p>Exporters cannot benefit from later cutoff times because of the absence of logistics parks located along major highways.</p> <p>The absence of appropriately located logistics parks increases overall cargo-handling costs for both importers and exporters.</p> <p>The process for moving finished goods or raw materials and components out of or into Vietnam is not seamless.</p>
I-10	<p>Although some modern buildings exist, the quality of CFS warehouses and other cargo handling facilities is generally poor relative to other Asian countries such as China, Indonesia, Malaysia, and Thailand. Facilities are generally small in size and availability is limited. It is not uncommon to find buildings with floors made of packed dirt, especially in the Northern region, which is not conducive for handling and storing cargo, particularly high-value products.</p> <p>Some international and domestic LSPs have modern warehouse facilities supported with warehouse management systems, but this is not the norm across Vietnam.</p>	<p>It is a challenge for LSPs to locate quality facilities that enable cost-effective and efficient operations.</p> <p>More modern warehouses operated by international LSPs are often too expensive for domestic BCOs to use.</p>
<i>Freight operations</i>		
F-1	<p>TSNA has two terminal operators, TCS (operates facilities TCS1 and TCS2) and SCSC. TCS is partially owned and operated by Vietnam Airlines, the national flag carrier, which has pressured many air carriers to only serve TCS, even though BCOs and airfreight forwarders generally rate SCSC's service as superior.</p>	<p>Operations at TCS1 and TSC2 are less efficient than SCSC.</p> <p>Capacity at SCSC is underutilized.</p> <p>Airfreight rates are higher than they should be.</p>
F-2	<p>Airfreight forwarders cannot perform cargo consolidation at TSNA and NBA; consolidating cargo on build-up pallets is only done by ground handling agents. Airfreight forwarders are allowed to perform this function in most other Asian countries.</p>	<p>Airfreight rates for BCOs are higher than they might be if cargo consolidation by airfreight forwarders was unrestricted.</p>
F-3	<p>The trucking industry is fragmented, with fewer than 10 large trucking companies and about 100 midsized ones operating in Vietnam. There are no pan-Vietnam trucking companies. BCOs, ocean carriers, and LSPs must contract with numerous trucking companies to take care of demand. This increases operational costs of ocean carriers and LSPs because they have to manage many trucking contracts to be assured of service during peak shipping periods due to the limited number of trucks any one trucking company can commit to the ocean carrier or LSP.</p> <p>Truck tariff rates are low. In order to make a profit, trucking companies frequently overload trucks and avoid tolls roads. To minimize the risk of being stopped by local police, some trucking companies make special payment arrangements with the local police in exchange for "protection" at a particular road segment.</p>	<p>Although BCOs reported that trucking rates are generally lower than in peer countries, most are dissatisfied with the poor quality of service delivered by trucking companies and the lack of visibility of cargo when transiting in trucks.</p> <p>Low truck rates contribute to instability in the industry and delivery of substandard service.</p>

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Table 4.1 Most Significant Challenges Impacting Freight Logistics Costs in Vietnam (continued)

No.	Issue description	Impact for freight stakeholders
F-4	<p>Because the trucking industry mainly comprises small companies, it is difficult for them to gain economies of scale. Most operators cannot afford to properly maintain their trucks, which contributes to air pollution and unsafe vehicles. Overloading of trucks is common.</p> <p>Regulations governing trucking companies and drivers such as on-duty driver hour limits, use of GPS units in trucks, driver training and safety, cargo load ceilings, vehicle quality, equipment depreciation, and road speed limits are not stringent enough to change how the trucking industry operates.</p>	<p>While BCOs benefit from competitive trucking rates, trucking practices like overloading containers cause highway damage.</p> <p>The lack of driver training leads to accidents, which increases the trucking companies' cost of doing business, reduces road safety, and increases logistics costs to BCOs.</p> <p>Improper truck maintenance increases air pollution.</p>
<i>Policy issues</i>		
P-1	<p>Government-issued regulations, including those made by Vietnam Customs, are often not clear or easy to understand. This uncertainty in new circulars and laws creates a risk exposure for BCOs and LSPs in making business decisions. BCOs also stand the risk of being in violation of laws previously not enforced.</p> <p>Implementation of decrees at the provincial and local levels is not consistent. Interpretation of regulations can be different from province-to-province, official-to-official, and day-to-day.</p> <p>Enforcement of regulations is based on shades of gray, not black and white.</p>	<p>The ambiguity in regulations and the inconsistency in interpreting and enforcing regulations creates unexpected costs to BCOs for unintentional noncompliance; delays in getting imports cleared necessitates that importers carry higher levels of safety stock; missed aircraft and vessel departures for exporters; and higher-than-normal administrative costs to monitor and react to government regulations.</p>
P-2	<p>Bureaucracy throughout the central and provincial governments and requirements for multiple certificates and documents slows the clearance of imports and exports.</p> <p>Multiple ministries can be involved in the import and export process. Import licenses are required on many types of consumer goods, particularly those considered by the GoV to be luxury items.</p> <p>Obtaining import licenses can take from 4 to 10 days, while the cargo sits at the port or airport before customs clearance can be completed.</p>	<p>The number of licenses that are required to do business and the lengthy process that must be followed to obtain licenses bogs down the system; creates delays, unnecessary work and costs for BCOs; and generates additional inventory carrying costs.</p>
P-3	<p>The GoV considers movement via barge between HCMC or Cai Mep and Cambodia to be "transit" rather than "transshipment" because the border is an inland border. Cambodia permits imports of secondhand machinery and autos originating in the United States that are prohibited from being imported into Vietnam, so this type of restricted cargo cannot be transported to Cambodia through Vietnam via barge. This is an arbitrary rule imposed because of GoV concerns about smuggling, but this reduces the pool of cargo that can travel on the barge service (likely via Cai Mep-Thi Vai). Now this cargo goes through Singapore to Sihanoukville and bypasses Vietnam altogether.</p> <p>Currently the trade between Vietnam and Cambodia is imbalanced with more cargo coming out of Cambodia than going in. But if this restriction were lifted, the trade would come into balance and barge operators could be more profitable in this barge trade.</p>	<p>Barge operators in Vietnam and the Vietnam economy lose potential revenue from Cambodia's large secondhand automobile and machinery market as a result of this inland border restriction.</p>

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Table 4.1 Most Significant Challenges Impacting Freight Logistics Costs in Vietnam (continued)

No.	Issue description	Impact for freight stakeholders
P-4	<p>Corruption in various forms is endemic at all levels of government. Payment of facilitation, as noted by freight stakeholders interviewed, accounts for anywhere between 5 and 50 percent of their customs clearance costs in Vietnam.</p> <p>Companies believe that facilitation payments, which are illegal in Vietnam, are nevertheless necessary to expedite the movement of goods through Customs. Facilitation relates to frequent small payments made by BCOs and other freight stakeholders to government officials to get routine activities accomplished in a timely manner. But it may also refer to outright bribery, such as paying Customs agents to accept wrong data on documents (e.g., inaccurate weights or Harmonized Tariff System numbers) or missing documentation. The system therefore operates on wrong and missing information, which is inefficient.</p> <p>LSPs believe it necessary to engage in constant relationship building to get things done in their cargo-handling facilities, which includes pampering Customs agents, taking them to dinner, providing gifts, etc. Customs has a policy of rotating agents every six months to other facilities, which reportedly forces LSPs to start the relationship building all over again.</p>	<p>Business dealings are not transparent, and the playing field is not level for all participants.</p> <p>Because of facilitation, BCOs, for example, can never be certain how long it will take to clear cargo, or if inspection of cargo will be required, how long the inspection will take, and how much it will cost.</p> <p>Inventory carrying costs are high because of the extra time built into the supply chain.</p> <p>LSPs find it difficult to work efficiently and provide superior service to their customers because government officials are perceived as deliberately slowing down processes as leverage to exact facilitation payments.</p>
P-5	<p>The application of customs policies is inconsistent and not universally applied. Customs is supposed to adhere to the World Customs Organization guidelines, but how Customs operates is another story. The interpretation of customs regulations varies among different Customs officials and between provinces. In some cases, local Customs officials are not aware of special arrangements granted to certain BCOs.</p>	<p>The lack of transparency of regulations and enforcement oversight increases uncertainty (and therefore costs) in supply chains and leads to undocumented facilitation payments to Customs officials.</p>
P-6	<p>E-Customs has only been partially implemented. Entries are required to be filed with Customs electronically, but hard copy documents must also be presented for signature.</p> <p>Vietnam Customs is planning to implement a single-window, fully automated customs solution called the Vietnam Automated Cargo and Port Consolidated System and the Vietnam Customs Information System (VNACCS/VCIS) by 2014, but it is uncertain if this schedule will be achieved.</p>	<p>Hybrid customs model creates unnecessary administrative work for BCOs and LSPs, higher operating costs, clearance delays, and opportunities to exchange facilitation payments.</p>
P-7	<p>Business licensing requirements are generally vague, and the licensing process is very controlled. For example, obtaining CFS licenses is very difficult due to the lack of straightforward laws, and LSPs cannot easily determine what the rules really are. Often licenses are granted through facilitation payments and relationships, rather than based on clear rules.</p>	<p>LSP operating costs increase.</p>
P-8	<p>The skill level of some government officials who work directly with the movement of cargo is perceived to be poor. Often they get their jobs by having relationships with people in power or through payment of facilitation, not because they are qualified. This is more likely to be the case in rural areas. GoV human resource systems are not merit-based.</p>	<p>Delays in moving cargo occur and operating costs increase for freight stakeholders.</p> <p>Situations arise where facilitation payments may be offered or requested.</p>

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Table 4.1 Most Significant Challenges Impacting Freight Logistics Costs in Vietnam (continued)

No.	Issue description	Impact for freight stakeholders
P-9	International BCOs and LSPs have difficulty hiring managers experienced in supply chain and logistics. Vietnamese with this experience are expensive to recruit and retain. International LSPs find it more cost-effective to staff senior management level positions with experienced expatriate staff. The GoV has recently required that expatriate work visa requests include a development plan for a Vietnamese employee to assume the expatriate's position when the expatriate departs Vietnam.	Operations costs for international BCOs and LSPs increase. Identifying local staff to assume an expatriate's position so far in advance is difficult.

Note: BCO = beneficial cargo owner; CFS = container freight station; DWT = deadweight tons; FDI = foreign direct investment; GoV = Government of Vietnam; GPS = Global Positioning System; HCMC = Ho Chi Minh City; LSP = logistics service provider; MoT = Ministry of Transport; MTO = marine terminal operator; NBA = Noi Bai Airport; SCSC = Saigon Cargo Service Corporation; TCS = cargo terminal at TSNA; TEU = 20-foot equivalent unit container; TSNA = Tan Son Nhat Airport; Vietnam Customs/Customs = General Department of Vietnam Customs.

“Vietnam Customs” or simply “Customs”), provincial authorities, and other government officials.

The challenges, as listed, are not ranked in order of significance.

Development of a Multicriteria Evaluation Matrix

A multicriteria evaluation matrix was created to prioritize the above list of challenges (table 4.4). The matrix scores each of the major challenges according to key impact variables as defined in table 4.2, along with a timeline indicator showing whether full implementation could be accomplished within the next five years (short-term), 5–10 years (medium-term), or beyond 10 years (long-term).

Prior to evaluating the key challenges, similar issues (e.g., those driven by similar root causes) were grouped together, resulting in 14 major categories (second column of table 4.4). Using a three tier scoring system of Low, Medium, and High (see table 4.3) to reflect expected impact on logistics costs along each of the criteria of table 4.2, categories were given a weighted impact score (second to last column of table 4.4). The five highest-scored categories are the primary challenges this report suggests the GoV should address with the highest level of priority to have (1) the greatest economic and financial impact on logistics costs for freight stakeholders and (2) a more enduring improvement in trade competitiveness.

Five goals were developed for the highest-rated challenges. Table 4.5 indicates how these goals impact the various freight stakeholders using the same scoring system as shown in table 4.4.

For each of the chosen priority challenges/cross-cutting goals of table 4.5, section 4.3 will (1) describe their relevance (e.g., impact on freight stakeholders), (2) recommend solutions and, where appropriate, implementation strategies, (3) identify barriers and obstacles to implementation, and

Table 4.2 Multicriteria Evaluation Impact Variables

<i>Code</i>	<i>Description of key impact variables</i>
GSC	Impacts global BCO supply chains that demand JIT deliveries, visibility of product flow, and high responsiveness.
FSI	Has cost impact to BCOs and other freight stakeholders.
FFF	Impacts future freight flow decisions in Vietnam in five to ten years, given authors' container volume projections.
LAW	Impacts compliance with international laws governing fair trade and anti-corruption practices as demanded by trade agreements like the Trans-Pacific Partnership.
COR	Requires strategic freight corridor investments or policy.
ENV	Provides an opportunity to reduce the environmental carbon footprint of freight shipments.
SOL	Has a reasonable solution that is implementable based on anticipated costs, associated government policy changes, and/or freight stakeholder pushback.
<i>Timeline for full implementation (years)</i>	
ST	0–5
MT	5–10
LT	Longer than 10

Note: BCO = beneficial cargo owner; JIT = just in time.

Table 4.3 Scoring System

<i>Expected impact on logistics costs</i>	<i>Score</i>	<i>Symbol</i>	<i>Description of measure</i>
No or low impact	1	○	No impact; or only has an insignificant positive or negative impact; or is unlikely to be implemented by the GoV, at least during the next 10 years.
Medium impact	3	◐	May create a measureable positive or negative impact on logistics costs, infrastructure planning, fair trade, and/or the environment and would not likely result in reevaluating strategies and business practices; or has a reasonable chance of being implemented by the GoV.
High impact	5	●	Will create a measureable positive or negative impact on logistics costs, infrastructure planning, fair trade, and/or the environment and could result in reevaluating strategies and business practices; or has a good chance of being implemented by the GoV.

Note: GoV = Government of Vietnam.

(4) sketch what a successful implementation timetable could look like, as well as potential funding mechanisms (in selected cases).

Goals Assessment and Recommendations to Improve Performance

Customs Modernization

Why This Is Relevant

The administrative effort associated with the current customs clearance process is time consuming and costly to customs brokers, who pass along their costs to beneficial cargo owners (BCOs). Clearing customs is fraught with

Table 4.4 Significant Challenges: Weighted Average Scores

Task no.	Category description	GSC	FSI	FFF	LAW	COR	ENV	SOL	Impact score	Time line
	Weights =>	4	4	2	3	1	1	2		
P-5 P-6	Cumbersome and inconsistently applied customs policies, procedures, and practices	●	●	●	●	○	○	●	77	ST
P-1/P-2 P-4	Inconsistent implementation, interpretation and enforcement of government regulations; lack of transparency; bureaucracy; and facilitation payments	●	●	◐	●	○	○	○	65	MT
I-1 I-7 I-8	Infrastructure projects: Nonintegrated multimodal transportation infrastructure planning Development of port at Lach Huyen	●	●	●	○	●	◐	◐	67	LT
F-3/F-4	Fragmented trucking industry delivering suboptimal service	●	●	○	○	○	●	●	61	MT
I-4/I-6	Lack of critical mass of Cai-Mep/ Thi Vai as transship terminals	◐	●	●	○	●	○	●	61	ST
I-9 I-10	Absence of strategically located logistics parks integrated with ports, airports, highways, and production facilities	◐	◐	◐	○	●	◐	●	51	MT
F-1/F-2	Inefficient terminal ownership structure and operations at TSNA and inability for airfreight forwarders to consolidate cargo	◐	◐	◐	◐	○	○	◐	47	ST
I-3	Imbalanced of supply and demand at marine terminals in Southern Vietnam	○	●	●	○	◐	○	○	43	LT
P-7	Cumbersome business licensing processes for LSP cargo-handling facilities	○	●	◐	◐	○	○	○	43	LT
P-8	Inadequate education and skills of government workers relating to logistics	◐	◐	◐	○	○	○	◐	41	LT
I-5	Small footprint of marine terminals in Southern Vietnam	○	●	◐	○	◐	○	○	39	MT
P-3	Underutilized Cambodia barge service	○	◐	◐	○	◐	○	◐	35	ST
P9	Lack of skilled Vietnamese managers who are knowledgeable in logistics	○	◐	○	○	○	○	●	33	MT
I-2	Van Phong Seaport development	○	○	◐	○	○	○	○	21	LT

Note: LSP = logistics service provider; TSNA = Tan Son Nhat Airport.

Table 4.5 Key Goals and Impact on Freight Stakeholders

Key issue identifier	Cross-cutting goals	Impact on freight stakeholders				
		MTOs	LSPs	Trucking	Ocean carriers	Shippers
P5, P6	Customs modernization	◐	●	●	○	●
P1, P2, P4	Transparent and consistently applied, interpreted, and enforced government regulations and operations; reduced bureaucracy	○	●	●	◐	●
I1, I7, I8	Strategic corridor planning	●	◐	◐	●	◐
F3, F4	More professional trucking industry	○	●	●	◐	◐
I4, I6	Expanded business opportunities at Cai Mep-Thi Vai	●	◐	○	●	◐

facilitation payments to officials as a perceived requirement to “get things done,” primarily due to a high level of human involvement and variation in interpretation of customs regulations. It is also a major contributor to extended delays in processing import and export shipments, with the greatest impact on imports.

Customs modernization is a key component of Vietnam’s trade liberalization and international integration agenda. For example, it will likely strengthen Vietnam’s participation in the TPP multilateral trade agreement, currently under negotiation between Australia, Brunei Darussalam, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam. In meeting this requirement Vietnam stands to gain tremendous growth opportunities in key export products—such as apparel and electronics—through the reduction of duties among trading partners. Both the president and prime minister of Vietnam have expressed commitment to securing Vietnam’s position in this trade agreement.

Customs modernization is also required by Vietnam’s commitments to the ASEAN Economic Community (AEC). These commitments call for simpler, harmonized customs procedures in line with international standards and best practices. The AEC also calls for smooth customs valuation with origin determination and establishing ASEAN e-Customs.¹

In all interviews with BCOs and LSPs doing customs brokerage and/or international expedited freight shipments, the prospects of moving to an e-Customs platform in 2014 was seen as a giant leap toward reducing their operating and inventory costs. In particular, it was consistently seen as an effective way to reduce points of what has sometimes been referred to as “system nervousness”—choke points in the supply chain that account for a disproportionate share of delays and itinerary unpredictability (including of cost and time).

Recommended Solutions

Vietnam Customs' primary goal should be to implement a fully automated system by 2014 as planned. This will significantly reduce human intervention and paperwork and will provide a consistent, predictable and transparent clearance process. When customs clearance is aided by a fully electronic exchange of data and documents, products are not only cleared in a timely manner, but all interaction with Customs officials (e.g., to establish tariff classifications, proper licenses, and other customs formalities) is settled in advance of the physical importation and exportation of the BCO's inputs and finished goods. By eliminating the physical handling of documents, no paper documents are printed or compromised. Customs officials are still expected to occasionally inspect shipments to validate the BCO's compliance to what the electronic records report.

In connection with a paperless environment, Vietnam Customs will need to assure BCOs that it can safeguard data in the records filed electronically. The relevance of this stems from the handling of the year-end reconciliation process between imported raw material value and the export value of finished goods. Since this reconciliation determines whether manufacturers can avoid duties imposed for documentation discrepancies, Customs' ability to safeguard the integrity of electronic records would be a critical component of paperless clearance.

Not only does operating in an e-commerce environment with Customs expedite the customs clearance process, it should greatly reduce instances where facilitation payments to Customs officials are offered or requested. It also provides a strong foundation upon which to develop a formal (e.g., well-established, IT-enabled) "trusted shipper" or "green lane" concept that works well in other countries and country groups, notably the United States and the European Union (EU). The physical inspection of documents is a significant revenue stream for Customs and Customs officials. But it contributes greatly to the delay of cargo, especially import cargo where every container is inspected either partially or fully. Under a "trusted shipper" program, inspections would be reduced in number and scope. Scope may range from door inspections of several cartons to full inspection of container contents, where the sample size is defined by accepted (e.g., industry standard) statistical methodologies.

Vietnam Customs should also adopt the World Customs Organization standards for classification, filing practices and common electronic data interchanges (EDI) like File Transfer Protocol (FTP). This would relieve LSPs and BCOs from having to customize their international systems in order to exchange information with Vietnam Customs.

Recommended Strategies

Assuming the e-Customs system is completed in 2014 (as planned), the system should be implemented under a phased deployment over a period of

at least 12 months. Beyond an electronic interface, the customs clearance process can be further streamlined by taking some of the following actions:

- Begin implementing a “trusted shipper” program that is based on a to-be-determined compliance level for document and shipment accuracy based on a formula that considers such things as the BCO’s length of time doing business, location of BCO’s buyers (e.g., the United States or the EU, which have more stringent cargo security requirements), frequency of shipments, type of commodity, and volume of shipments. It is recommended that compliance be less than 100 percent, but more than 95 percent.
- Establish an effective prearrival classification system that allows BCOs to obtain official product classifications and required customs forms for timely product clearance upon cargo arrival.
- Accept small variations in weight for airfreight imports such that customs brokers can be confident in preparing customs documents prior to cargo arrival.
- Simplify documentation requirements for purchase orders and sales contracts on imported items to be consistent with other ASEAN countries.
- Use trucking companies’ bills of lading as the only document truck drivers need to possess instead of carrying a complete set of documents.
- Operate Customs inspection and testing stations with sufficient staff and equipment, and adequate cargo storage areas (e.g., with refrigeration for perishable food products), to expedite the cargo inspection process and to maintain shipment integrity.
- Staff Customs offices, inspection sites, and testing stations six days a week to process shipments to and from factories and marine terminals, as the latter operate on that schedule.
- Communicate well in advance any new regulations for all types of cargo, with assurance that they will be uniformly followed by all Customs officials upon cargo arrival.
- Develop an electronic calculation process to measure raw material content in finished goods to prevent redundant duty payments on imported raw materials used exclusively for the manufacturing of export products. Also maintain, as a minimum, the 275 days currently allowed for duty-free imports to be exported in finished goods.
- Stabilize customs duty rates within the framework of existing free trade agreements.
- Raise the level of professionalism of Customs officials through improved training (this can be an area for South-South collaboration) and performance evaluation, especially in the smaller cities and provinces, to promote a more uniform application and interpretation of customs regulations.
- Establish an open “hot line” for communication with Vietnam Customs such that BCOs can report inconsistencies in the way customs rulings are applied by officials.

Barriers and Obstacles

An implementation roadmap and performance benchmark have already been established by the e-Customs “Gold Standard” system developed and operated for one high-profile international BCO in the HCMC area. All the freight stakeholders interviewed were supportive of this paperless system.

Customs officials could be the biggest barrier to full implementation of an electronic customs process that would minimize human touch, since this would redefine their role in the clearance process and potentially take away a major if informal source of income. Another potential obstacle is the definition of customs regulations, which at present are prone to subjective interpretation. To the extent that the application of regulations is significantly streamlined (e.g., made more predictable and consistent) by reducing the need for in-person interaction between officials and BCOs, this risk can be mitigated through the e-Customs system. However, a strong case can be made that, irrespective of the customs clearance process in place, customs regulations should be simplified. Best practice examples from advanced and middle-income countries in the region can be used as an initial benchmark.

Definition of Success

By the end of 2015, the e-Customs system will ideally be available for use by customs brokers for the timely processing of import and export shipments at any of Vietnam’s water or land entry points for ocean, truck, and airfreight shipments. Deployment of the new system will be field-tested prior to a phased deployment over a one-year period (in 2015) in order to avoid unnecessary disruption to the flow of commerce.

Transparent, Streamlined Government Regulations and Operations

Why This Is Relevant

Inconsistent implementation and interpretation of government regulations beyond customs is widespread across Vietnam, as reported by every international BCO and LSP interviewed for this report. This stems largely from red tape (e.g., cumbersome procedures), a legal framework whose gaps give de facto discretion and power to officials, and a lack of transparency and accountability. Root causes include (1) gaps in institutional capacity, (2) unnecessarily complex, incomplete and/or ambiguously drafted regulations, and (2) inadequate recruitment and compensation management processes at the various levels of government. Besides having a number of direct impacts on the ease of doing business and the profitability of freight stakeholders, this provides fertile ground for (and is therefore a root cause of) the solicitation and/or offering of undocumented facilitation payments.

BCOs and LSPs incur higher-than-necessary administrative costs to monitor and react to government regulations that are constantly changing. Moreover, this increases the risk of incurring penalties for unintentional noncompliance. For example, BCOs risk being in violation of regulations that were not

previously enforced. BCOs and LSPs spend unexpected and unnecessary administrative time to assess how to change their business practices to comply with new or revised regulations.

Bureaucracy and complex procedures increase the time involved in moving inputs and finished goods in and out of Vietnam and make this process unpredictable. Cumbersome and sometimes onerous clearance regulations create bottlenecks in the import and export process. A single import shipment may require dealing with Vietnam Customs, Ministry of Health, Ministry of Information and Technology, Ministry of Agriculture, and Ministry of Culture and Communication, all of which may require myriad documentation. Because Customs does not register the importer using an official number or code, the importer must copy and present its import buying contract with each bill of lading. Obtaining import licenses can take from 4 to 10 days, while the cargo sits at the port or airport before customs clearance can be accomplished. BCOs can rarely be certain how long it will take to clear cargo, if inspection of cargo will be required, how long the inspection will take, and how much it will cost. LSPs stated that these issues undermine their ability to operate efficiently and provide superior service to their customers.²

Because of the need to add redundant safety stock to their supply chains to account for clearance delays, BCOs experience higher-than-necessary inventory carrying costs (table 4.6). It takes three days longer to clear³ imports and two days longer to clear exports in Vietnam compared with Malaysia.⁴ It is conservatively estimated that, if Vietnam's clearance times matched Malaysia's, manufacturers and BCOs engaged in nondomestic imports and exports of containerized cargo could have saved \$96 million in inventory carrying costs in 2012. Taking into account projected growth in international trade, savings in inventory carrying costs from faster clearance times could reach \$182 million in 2020.

With remarkable consistency, interviewees across all freight stakeholder categories stated that situations routinely arise where facilitation payments are exchanged between BCOs/LSPs/truck drivers and government officials (particularly Customs and the police). Most international BCOs were unable to pinpoint the relative magnitude of facilitation payments as a share of logistics costs, since facilitation is typically paid by their LSPs or trucking companies and built into their customs entry, cargo handling, and trucking rates. Some stakeholders, however, estimated that these nontransparent facilitation

Table 4.6 Interest Cost on Extra Inventory Due to Import-Export Clearance Delays

Millions of dollars

<i>Interest cost on extra inventory due to clearance delays:</i>	<i>2012</i>	<i>2015</i>	<i>2020</i>
In import shipments	46.6	58.4	86.7
In export shipments	49.5	62.7	95.1
Total capital cost of carrying inventory	96.1	121.1	181.8

Source: Authors; see table A.3 for details.

costs added as much as 50 percent to these rates. All ocean carriers, LSPs, trucking companies, and BCOs that deal directly with trucking companies and/or customs brokers stated unanimously that the undocumented facilitation payments made to Customs officials and police constitute anywhere between 5 and 50 percent of customs brokerage fees, cargo inspections, and trucking.

The estimated cost of facilitation payments paid to Customs officials and police is \$78 per FEU on imports and \$76.50 per FEU on exports (table 4.7). These facilitation amounts were calculated assuming that a 30 percent facilitation fee⁵ is included in what LSPs identified as “good market rates” for customs brokerage and trucking. As a percentage of total origin costs,⁶ facilitation fees are estimated to be 15.1 percent and 13.4 percent of import and export origin costs, respectively, for general merchandise cargo in a 40-foot container.

For illustrative purposes, assuming that all foreign import and export containers were subject to the above estimated facilitation payments, annual facilitation fees associated with clearing customs and transporting containers over the road would be \$261 million in 2012 and \$493 million in 2020 (table 4.8).

Table 4.7 Import and Export Origin Costs for General Merchandise Cargo in 40-Foot Container (FEU)

<i>Charge types</i>	<i>Cost per FEU (dollars)</i>	<i>Facilitation payments^a (dollars)</i>	<i>Facilitation payment % total origin cost</i>
Import costs			
Delivery order	35.0	n.a.	n.a.
Terminal handling charge	130.0	n.a.	n.a.
Related ocean charges	70.0	n.a.	n.a.
Origin administration fees	20.0	n.a.	n.a.
Foreign security filing	n.a.	n.a.	n.a.
Customs brokerage and container inspection	75.0	22.5	n.a.
Trucking from port to factory	185.0	55.5	n.a.
Total origin costs	515.0	78.0	15.1%
Export costs			
Bill of lading	35.0	n.a.	n.a.
Terminal handling charge	130.0	n.a.	n.a.
Related ocean charges	15.0	n.a.	n.a.
Origin administration fees	75.0	n.a.	n.a.
Foreign security filing	62.0	n.a.	n.a.
Customs brokerage and container inspection	70.0	21.0	n.a.
Trucking from port to factory	185.0	55.5	n.a.
Total origin costs	572.0	76.5	13.4%

Source: Authors; see table A.2 for details.

Note: n.a. = not applicable.

a. Facilitation payments that are included in the customs brokerage, container inspection, and trucking origin costs (cost per FEU column).

Table 4.8 Estimated Cost of Facilitation Payments in Clearing and Transporting Import and Export Containers*Millions of dollars*

<i>Annual facilitation payments based on:</i>	<i>2012</i>	<i>2015</i>	<i>2020</i>
Total foreign import volumes	134.6	168.7	250.3
Total foreign export volumes	126.2	159.9	242.4
Total facilitation costs	260.8	328.5	492.8

Source: Authors; see table A.5 for details.***Recommended Solutions***

Solutions to promote consistent implementation, interpretation, and enforcement of regulations, and to streamline government processes related to international trade, are generally feasible of short-term implementation. Interventions to minimize the incidence of facilitation payments are medium- to long-term in nature, given the strong behavioral component of such initiatives and the obvious entrenched interests that would oppose reform. Specific recommendations are as follows:

- The GoV should be as clear and transparent as possible when stating policies and issuing decrees and laws related to international trade in order to remove vagueness, ambiguity, and room for individual (and especially idiosyncratic) discretion; there should be no or minimal room for different interpretations by different government officials.
- The GoV should establish an audit system whereby it could set up selected key regulations governing international trade as test cases. By surveying BCOs and LSPs on a set schedule over the course of one to two years, the GoV could review how those regulations were implemented by the various ministries and provincial governments. Identified gaps and issues could then be addressed, and strategies for more consistent application and interpretation of laws could be applied for general rule making and execution.
- Using other ASEAN countries as models, the GoV and Customs should streamline import and export clearance processes by loosening onerous requirements and reducing the number of required documents and certificates.
- The hiring, promotion, salary scale, and salary-adjustment system for government officials should transition to being merit based.
- The GoV could embark on a communications campaign that promotes transparency in supply chain transactions, highlights ongoing public sector efforts on this front, and engages the BCO and LSP community, whose members in many instances assume that facilitation payments are necessary as a matter of course.

Possible Funding Mechanisms

Establishing more easily understandable circulars and decrees in the future should not cost the GoV more than the amount of administrative time

expended today. The GoV will incur some cost to study existing laws and regulations relating to the import and export process and determine how they can be made more streamlined and transparent. This should come from the general treasury.

To ensure consistent application, interpretation, and enforcement of regulations, the GoV will need to spend more administrative time auditing the performance of individual Customs officials across provinces. This audit activity could be funded, at least partially, through higher Customs entry filing.

Some amount of effort will need to be applied by the GoV to review the regulations governing international trade in effect in Vietnam today to determine how to simplify them and reduce the number of documents and certificates required to import and export. This activity should be funded from the general treasury.

Eliminating facilitation payments to Customs officials and police will in part require the restructuring of hiring, pay, and benefit programs for these officials. Funding to pay for skills-aligned, merit-based salary increases for Customs officials can come from increasing the published filing fees for import and export clearance, cargo inspections, and other inspections. The expectation is that the new, higher published fees will be less than what LSPs are currently charging BCOs for customs brokerage services.

Funding for police officers should come from the general treasury, as is the case in advanced countries. The role of the police is to serve the general public; the general public should therefore bear the cost of their service.

Roles and Responsibilities

Going forward, the prime minister's office and National Assembly could devote more attention to establishing unambiguous laws and regulations governing international trade activities; assessing how existing laws and regulations can be clarified; implementing a process to routinely audit how individual Customs officials in the provinces apply, interpret, and enforce those laws and regulations; and evaluating how import and export regulations and documentation can be streamlined and simplified to reduce logistics costs for BCOs and LSPs.

Laws will need to be enacted to change the hiring and compensation basis of Customs officials and police officers to coincide with implementation of the e-Customs solution. The Ministry of Finance could have responsibility to administer a new human resources administration program.

Barriers and Obstacles

To simplify laws and regulations, ensure consistency among Customs agents, and streamline customs processes the Prime Minister should make a clear case to government officials and the public of the benefits to be derived from such actions in terms of making Vietnam an easier place for freight stakeholders to conduct business. Changing attitudes and behaviors will take time, and overcoming systemic inertia will be challenging.

As seen throughout this report (and as noted by other studies), facilitation payments are commonplace in Vietnam, and there will likely be significant barriers of resistance to implementing the recommended strategies. It will take a concerted effort by the prime minister's office to recognize the need for this transformation and to steer the necessary legislative and social changes needed to eliminate facilitation payments and increase transparency.

Custom's proposed deployment of an e-Customs system can be the prime driver for making the hiring, promotion, and compensation system for Customs officials more merit based.

Definition of Success

In 2015–16, when surveyed by the GoV, BCOs, and LSPs will report that Vietnam is an easier place to do business and is comparable to other Asian countries such as China and Thailand.

Beginning in 2016, facilitation payments will be significantly reduced, aided by the rollout of higher, documented rates for import and export clearance filings. By the end of 2019, facilitation payments to Customs officials and police will no longer be routinely reported by LSPs and BCOs, and police will be enforcing highway laws with clearly defined citation amounts with documented payments.

Strategic Freight Corridor Planning

Why This Is Relevant

Mode-specific, silo-based planning with limited avenues to foster logistics-informed (e.g., integrated) transport infrastructure has resulted in inadequate connectivity and broad demand-supply mismatches. A lack of complementary land-side infrastructure reduces international competitiveness for Vietnam's ports. The overbuilding of port facilities in Southern Vietnam, which stand underutilized, has translated into financially weak investments for terminal operators. This undermines supply chain stability and increases risks not only to terminal operators themselves but also ultimately to BCOs.

While Southern Vietnam ports are plagued by overcapacity, Northern ports in the Hanoi area are at risk of saturation in the medium term. Demand at the Northern region ports is expected to reach 5.5 million 20-Foot Equivalent Unit Containers (TEUs) by 2020, from about 2.7 million TEUs in 2011. The existing terminals are expected to reach full capacity (4.8 million TEUs) by 2018. Even with additional capacity from two additional terminals planned in Dinh Vu, which would raise total capacity to 5.8 million TEUs, the terminals are still expected to reach full capacity by 2020.

The development of Lach Huyen, a deep-water facility at Haiphong port, is expected to bring about immediate benefits, allowing vessels between 2,000 and 8,000 TEUs to call Northern Vietnam for the first time. Unit costs per TEU for such ships are significantly lower than existing feeder ships, which could result in savings of up to 60 percent for ocean carriers. The expected cost savings from

the elimination of feeder and transshipment costs for Haiphong cargo is estimated at an additional \$100–200 per TEU, for an annual savings to ocean carriers that could reach over \$74 million² by 2020, with much of the cost savings expected to be passed to BCOs.

On the land side, manufacturers and BCOs in both the Northern and Southern regions continue to pay higher trucking fees resulting from significant congestion on the main highways leading to ports and on the access roads from those highways to the marine terminals. In 2012 BCOs will have paid approximately \$150 million in additional trucking costs, and up to \$270 million in 2020, because of highway congestion (see table 4.9).

Recommended Solutions

The MoT would benefit from adopting a holistic, multimodal approach to planning and executing strategic freight infrastructure development. The concept brings relevant public and private sector freight stakeholders together to (1) build consensus in determining the appropriate investments for each strategic freight corridor, (2) agree upon the needed development timelines, (3) review funding options, and (4) transparently communicate and execute the plan.

Corridor Planning: Strategic corridor planning should replace the MoT's current “stove pipe” planning process. This planning process brings together officials from the highways, ports, waterways, rail, and air transport functional departments to produce multimodal design and management structures for chosen (e.g., high-volume) corridors. This process will also need to include input from key freight stakeholders: marine terminal operators (MTOs), ocean carriers, LSPs, trucking companies, and prominent BCOs.

Specifically, in conjunction with the next five-year Master Plan, the MoT should develop a Multimodal Corridor Investment Plan (MCIP) based on inputs from a tactical planning process that reflects the needs of multisectoral central

Table 4.9 Highway Congestion Cost Impact on Trucking Costs

Millions of dollars (unless otherwise specified)

	2012	2015	2020
<i>North</i>			
Haiphong and Lach Huyen terminals	75.4	95.8	144.9
Cai Lan terminals	4.3	5.4	8.0
Total truck savings: North	79.7	101.2	152.9
<i>South</i>			
HCMC terminals	70.9	84.5	113.0
Percentage barge service to CM-TV	95%	90%	90%
Cai Mep-Thi Vai terminals	1.3	4.1	8.2
Total truck cost savings: South	72.3	88.5	121.2
Total truck savings: Vietnam	151.9	189.7	274.1

Source: Authors; see table A.4 for details.

government officials, provincial government freight leaders, and major freight stakeholders. To ensure the plan is fully executed, resources allocated to provincial governments for infrastructure development should include a commitment-based funding mechanism linked to the timely construction of MCIP-targeted infrastructure projects, such as critical port access roads. This will better ensure that the right projects (e.g., those that will deliver the most benefits to freight stakeholders) are identified, funded, and completed within the prescribed timeframes to keep pace with demand.

Lach Huyen Port Development: Haiphong is the only port in the world today handling annual volumes of over 2.5 million TEUs but with draft limits of less than 9 meters. There is a need for a deep-water port in Northern Vietnam to cater to the expected growth in market volumes as well as the global trend toward the use of larger containerhips. The Lach Huyen Port project should be given the highest priority among all ports in Northern Vietnam. It will be the only port in the Northern region able to accommodate vessels above 4,000 TEUs, making it both a game changer for the region and compliant with standard BCO requirements.⁸ Based on a planned launch of Lach Huyen in 2016, volumes at the port are expected to reach full capacity (of about one million TEUs) within four years. This would require the early planning for the development of Lach Huyen Phase 2 to meet the potential demand after 2020.

Funding for Lach Huyen includes the construction of the Tan Vu Highway, which will be connected to the new, under construction, Hanoi–Haiphong Expressway. Total budget for this project has been currently set at \$1.6 billion.

The new Lach Huyen port complex will benefit ocean carriers (and their BCO customers) by allowing them to deploy larger ships with lower slot costs. It will also result in savings of approximately \$74 million per year from the elimination of feeder vessels transshipping containers to foreign ports. More broadly, Lach Huyen will enable significant economic growth opportunities in the northern part of the country. In particular, BCOs will have a more cost-efficient and effective transportation system from factories around Hanoi to end-customers in the global economy.

Recommended Strategies

As part of developing the next five-year Master Plan for ports and land-side infrastructure, the MoT should begin the process of creating an MCIP for each of the six strategic freight corridors discussed in chapter 3, with short-term emphasis on the HCMC–Vung Tau, the Hanoi–Haiphong, and the Mekong Delta corridors.

The development of Lach Huyen Port should address its funding constraints and move forward toward construction completion in 2016 using the experience in developing the Cai Mep-Thi Vai terminals. Crucially, every effort should be made to avoid repeating at Lach Huyen the same mistakes now affecting Cai Mep-Thi Vai (see chapter 2).

The following further contextualizes the challenge of operationalizing a more strategic approach to corridor planning and strengthening the development of port capacity at Lach Huyen:

- **Corridor Planning**

- *Funding mechanism*: Developing MCIPs will require no major funding effort by the MoT since the extra cost to the current infrastructure planning process will be in the form of additional meetings and committee travel to major production and consumption areas (e.g., Hanoi, HCMC, Danang, Mekong Delta) to hold feedback sessions with local freight stakeholders.
- *Roles and Responsibilities*: MoT will be responsible for organizing MCIPs that will include government representatives from Vinamarine, inland waterways, highways, rail, airports, the Ministries of Planning and Investment and Finance, and appropriate provincial government representatives of major urban cities within their jurisdictions.
- *Barriers and Obstacles*: Provincial governments currently have independence in how non-National Highway public funding resources are spent in their jurisdictions on access roads to ports as well as land zoning issues.
- *Definition of Success*: The next five-year MoT Master Plan is developed with a holistic approach toward addressing transportation infrastructure investments using multimodal solutions to provide freight stakeholders with seamless access to/from international gateways and major domestic destinations.

- **Lach Huyen Port**

- *Funding Mechanism*: The port is currently funded through a combination of Japanese Official Development Assistance (\$900 million) and a Public-Private Partnership (PPP)⁹ arrangement comprising a Vietnamese state-owned enterprise (SOE) and a Japanese consortium (\$321 million). The PPP component is a joint venture between Vinalines and MOLNYKIT (a group led by Itochu Corporation and including ocean carriers MOL and NYK). However, the latter arrangement is far from stable, given Vinalines's financial struggles.¹⁰
- *Roles and Responsibilities*: Vinamarine has responsibility for this high-profile project (Vietnam's prime minister has urged for timely project completion, consistent with launching port operations in 2016). The Ministry of Finance has oversight to ensure foreign and state funding sources are available.
- *Barriers and Obstacles*: The current financing framework, centered on a single state-owned company (Vinalines) with weak management and under significant financial stress, does not appear to be sustainable. Ongoing discussions to replace Vinalines in the developing consortium may lead to significant delays in implementation, with the associated impact this would have on BCOs who would continue to face substandard international connectivity in the economically vital Hanoi region.

- *Phasing and Dependent Projects*: Lach Huyen will be developed in two phases with the first phase, according to existing plans, completed by 2016. Dredging the access channel and quay side channel to a depth of 14 meters is required.
- *Definition of Success*: Phase 1 of Lach Huyen is operational by 2016, including all the connector roads to NH 5.

Promoting a More Professional Trucking Industry

Why This Is Relevant

With fewer than 10 large trucking companies and about 100 small to midsized carriers, the trucking industry is fragmented. Like their counterparts in China,¹¹ most Vietnam-based trucking companies are single-truck outfits. This reduces service levels as marginal carriers are constantly exposed to shipment disruption.

In an environment of lax regulation of trucking operations and inconsistent enforcement, barriers to entry in the trucking industry are low. This has led to a race to the bottom in rates as a means for low-performing carriers to stay in business. Because rates are not always compensatory, most operators cannot afford to properly maintain their equipment, resulting in unsafe vehicles, frequent accidents, congestion from truck breakdowns on highways, and air pollution.

Although inflation has put pressure on wages and fuel costs continue to escalate, the competitive pricing of truck rates is a major driver of truck overloading. This further degrades the condition of already poor roadbeds and is a contributor to accidents due to the need for longer minimum stopping distance. Indeed, the prevalence of poorly maintained and overloaded trucks on Vietnam's highways is a major root cause of the country's alarmingly high 13 road crash fatalities per 100,000 people.¹² The rate pressure issue also suggests that truckers will avoid toll roads when possible, which contributes to trucks clogging secondary highways that are even less suited to handle overweight or large trucks. There is little incentive for larger trucking companies to add to their capital stock by investing in newer equipment when truck rates are noncompensatory.

The incidence of facilitation payments to the police increases operating costs and hurts service levels beyond disruptions at the shipment level. Because of special arrangements established by trucking companies with the police on certain road sections (a notable example being Binh Nai to Vung Tau), ocean carriers and other LSPs need to contract with many trucking companies to transport freight on behalf of their BCO customers in order to reduce transit delays due to police stops. This increases management complexity, drives up costs, and acts as a disincentive to long-standing relationships with trucking companies that are critical in times when shipment volumes are high.

While international BCOs may make trucking decisions based solely on price, by and large the substandard portion of the trucking market is believed to be driven by domestic shippers. Most large international BCOs, which tend to manage large volumes of high-value, time-sensitive goods (and/or security compliance obligations like C-TPAT) prefer larger trucking companies because of

their ability to better dispatch trucks and track the movement of goods with operable GPS systems. Domestic BCOs tend to have much less demanding operational requirements and their lower service expectations generally lead them to seek the lowest-cost truckers.

Mandating and/or better enforcing suitable operator licenses for truck drivers and properly maintained trucks can be an effective way to encourage industry consolidation; it should also lead to fewer accidents, fewer equipment breakdowns on highways, and lower congestion levels. While this would almost certainly require driver wage increases and generate higher maintenance expenses for truck carriers, these additional costs would likely be more than offset by increased equipment utilization (due to fewer itinerary disruptions) and a better ability to command compensatory trucking rates from BCOs and LSPs. Since larger companies are already operating at this level, there could be a contraction in the number of trucking companies (e.g., among marginal carriers) and an overall increase in the average fleet size.

One operational area in need of performance improvement is the high incidence of empty backhauls. Trucking companies benefit when they can secure a high percentage of backhaul cargo, thereby increasing equipment utilization and better spreading operational fixed costs. Not only would this increase trucking sector profitability, it would also reduce congestion, as fewer trucks would be needed to move the same amount of freight.

A younger national fleet could contribute to both reducing shipment disruptions and improving the carbon footprint profile of international and domestic supply chains. If the GoV should impose more stringent requirements regulating the engine emission standards (and therefore model year) of trucks on highways (probably involving a subsidy program), the economic costs of trucking could be reduced. From a financial cost standpoint, trucking companies would likely benefit from lower maintenance costs, but would incur higher capital costs in the form of payments for the purchase of new(er) trucks (partially offset by public subsidies, if these were deemed feasible). The impact on BCOs would likely be higher trucking rates, as resulted from the implementation of the Clean Truck Program recently established by the ports of Los Angeles and Long Beach, California (see box 4.1), partially or fully offset by lower inventory carrying costs in their supply chains through more reliable trucking services.

Recommended Solutions

Trucking regulations should be strengthened, and a revamped enforcement program should be introduced. This two-pronged approach would focus on the following:

- Improving active duty driver qualifications
- Requiring proper licensing of all trucks and chassis
- Requiring semiannual vehicle and chassis inspections and
- Eliminating overweight containers and trailers.

Box 4.1 Ports of Los Angeles and Long Beach Clean Truck Program¹³

In 2008, 1,200 trucking companies were in operation in the Southern California San Pedro Bay region. Drivers operated 16,000 port drayage trucks, of which 5,000 were part-time drivers who mostly worked on weekends and made minimal investments in equipment on their old, fully depreciated trucks. In an effort to reduce air pollution, the ports' Clean Truck Program mandated that all trucks not meeting the 2007 Federal Clean Truck Emissions Standards by January 1, 2012, be banned from entering to the ports.

As of year-end 2012, there were 8,000–9,000 registered trucks and 400 trucking companies serving this region. The two ports offered trucking companies grants of \$20,000 and \$50,000 to help finance new diesel or liquid natural gas (LNG) trucks, respectively. The Southern California Air Quality Management District offered additional grants of \$50,000 and \$100,000 for new diesel or LNG trucks, respectively. New trucks partially financed by these grants were required to make 350 trips to the ports annually or the trucks were supposed to be used in the Southern California drayage business for seven years.

The cost of a 2007 or newer diesel truck is approximately \$150,000 and \$200,000 for an LNG truck. The increased cost to BCOs ranged from \$35 to \$50 per container move, depending on the length of the trip. The incentive for BCOs to support higher truck rates was that new port infrastructure development was suspended until trucking companies complied with the new regulations. Trucking companies were also required to meet established safety scores for driver performance, the equipment was subject to biannual inspections and drug testing became mandatory for all drivers.

The GoV should also (1) evaluate interventions that can help reduce the number of empty backhauls (as this will lead to an overall reduction of trucks on highways), (2) support firm-level expansion plans (where these are assessed financially viable) by asset-based trucking companies as a means to reduce industry fragmentation and promote better service levels, (3) incentivize the development of a vibrant truck brokerage sector, and (4) strengthen the environmental sustainability of the trucking industry in ways that can also improve trucking profitability.

Recommended Strategies

The following specific actions are recommended to implement the solutions outlined above:

- Set up rigorous truck driver license testing based on the driver's ability to pass a stringent driver's exam and eyesight testing. This should be administered at GoV-sanctioned exam centers (actual operation of such centers could be licensed to private parties under PPP arrangements). Irrespective of the chosen operating arrangement, specialized training should be given to management and staff in order to prevent tests from being compromised by facilitation paid to officials.

- Conduct semiannual vehicle and chassis roadability inspections (head and tail lights in working order, appropriate tread on tires, adequate braking system, and good engine performance) and proof of insurance. These inspections could also be conducted by private parties in partnership with the GoV to promote efficiency.
- Monitor container weights at marine terminal in-gates using electronic scanners.¹⁴ These devices are able to photograph truck license plates and container numbers at marine terminal in-gates to match the container to the trucking company. If the weight scale is not at the in-gate, the container will be weighed later as part of the vessel preload planning process. When overweight containers are identified, the container number can be traced back to the trucking company, which is then automatically issued a fine by the system.
- Off-port overloading controls should be extended where available, and established where not, through permanent weigh stations with weigh-in-motion capability—and ideally operated under PPP arrangements. To increase the impact of a weigh station network, random audits at low-traffic sections may be conducted via mobile scales. Whether on highways or at port locations, overloading fees assessed on offenders should strictly reflect the cost to repair roads from overloading-induced damage.
- Provide access to more affordable, longer-term credit to trucking companies, whether fleet-owning carriers or smaller owner-operators, that have a solid business plan, meet (or have a credible plan to meet) revamped regulations, and/or are seeking possible expansion plans through acquisition or internal growth.
- Promote joint-venture investments by foreign trucking companies.
 - As a potential measure to reduce the incidence of empty backhauls, assess the viability of implementing electronic information exchanges where BCOs can post loads on which trucking companies (for this type of setup, typically owner-operators) can bid. Under such a scheme, the lowest-priced, qualified carrier (e.g., based on requirements posted by the BCO) would be awarded the load. China is testing such a system, known as the “Road Ports” program (see box 4.2).
- As a means both to further reduce backhauls and to increase trucking industry performance, support the development of the truck brokerage sector. This can be done through credit access support, increased openness to foreign company participation, and stronger (e.g., accessible, unambiguous, internationally competitive) regulations for this subsector.
- Develop stronger emission control standards for trucks and review current import regulations for new and used trucks that meet such standards.

Box 4.2 Global Logistic Properties Road Ports: China Test

China is developing electronic exchanges where truck drivers can bid on shipments to reduce empty trips. Global Logistic Properties, a \$566 million company and one of the largest logistics property developers in China and Japan, is working on a solution it hopes will make Chinese trucking more efficient and less uncertain. The company partnered last year with China's Transfer Road-Port to build a network of logistics centers and "road ports" throughout China under a joint venture company, Zhejiang Transfer Logistics. Such road ports are now hubs where owner-operators can park trucks, have meals, rest, and find freight using a digitized exchange.

Giving drivers the ability to interact with an electronic software system to bid on freight loads saves time, as it grants owner-operators access to a virtual dispatch office. However, the early stages of implementing the new "road ports" concept have shown that it is difficult to change deep-seated habits of using traditional methods to secure backhaul loads rather than relying on an impersonal, automated, electronic bid system.

Source: Cassidy 2012.

- Develop and disseminate tools (e.g., an interactive website, workshops at areas of high trucking activity, free informational material, university courses) to promote a better understanding, on the part of both truckers and shippers, of the tradeoffs involved in logistics management (e.g., transport costs versus inventory carrying costs), of how to strengthen business operations (e.g., in the case of truckers, practical ways to improve fuel efficiency), and of ways to assess and measure logistics value (e.g., savings and responsiveness in the supply chain). This can improve trucking industry performance from both the supply and the demand side.

Possible Funding Mechanisms

Better enforcement of trucking industry safety standards is an area where PPP arrangements can be pioneered (e.g., to operate testing centers, weigh bridges, and inspection yards) as a funding and efficiency enhancing mechanism. Should these activities be kept government run and implemented, requiring all truck drivers to have their licenses revalidated by passing a driving test and having their eyesight checked will likely require increasing the staff at MoT to develop and administer the tests. Additional staff needed for this activity can be paid in part from examination fees collected from drivers. Similarly, MoT-administered truck and chassis inspections for roadability should be conducted throughout the country and paid by trucking companies.

Marine terminals currently weigh containers upon arrival. Ongoing monitoring of weight information will require additional staff positions and equipment provision, which may be implemented on a fully private or public-private basis. A system of these characteristics can be incrementally implemented, starting

with a pilot at one or more selected locations. This would allow for the economics of the intervention to be corroborated and for operational issues to be addressed.

As part of developing stronger truck emission control standards, if the GoV decides to limit the number of imported, used model-year trucks in favor of new or more recent imported model-year trucks that have higher emission standards, it may consider providing subsidies to support this (e.g., this was the case for the Port of Long Beach and Port of Los Angeles Clean Truck Program). For illustrative purposes only, if the GoV were to help finance the purchase of 10,000 new tractor heads countrywide, where these are new \$150,000 clean diesel trucks with a \$70,000 contribution per tractor head, the GoV’s cost would be \$700 million over a four-year period. The total cost to all trucking companies participating in the program—assuming they pay a 20 percent down payment plus financing costs on a 10-year 10 percent interest loan—would be \$1.1 billion (see table 4.10). The return on investment of such a scheme would be mainly determined by fuel and maintenance savings for transport carriers and the impact of lower diesel emissions on health and environmental outcomes. Reducing the public’s associated health costs from lower truck pollution is the key driver for funding a clean truck program.¹⁵

The concept of setting up an electronic exchange service for improving two-way loads will need to be studied to determine its effectiveness within the trucking community. A China study tour by representatives from MoT and the Vietnam Trucking Association could be suggested, to discuss the “Roads Ports” concept and other approaches to improving industry performance.

Table 4.10 Cost of a Notional Truck Replacement Program

Cost per new tractor head	\$150,000				
Number of trucks to be replaced	10,000				
GoV funding per tractor head	\$70,000				
Rate of replacement per year	25%				
Down payment (20%) amount	\$30,000				
Loan amount per tractor head	\$50,000				
Financing cost	10%				
Loan term in years	10				
Monthly loan payment per tractor head	\$660.75				
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Total</i>
Number of tractor heads to be replaced	2,500	2,500	2,500	2,500	10,000
Down payment paid by trucking companies	\$75,000,000	\$75,000,000	\$75,000,000	\$75,000,000	\$300,000,000
Loan payment per year	19,822,500	19,822,500	19,822,500	19,822,500	
Over 10 year period	198,225,000	198,225,000	198,225,000	198,225,000	792,900,000
Total cost					1,092,900,000

Source: Authors; see table A.6 for details.

Barriers and Obstacles

- Behavioral impediments are a likely obstacle, including the entrenched role of facilitation payments in the various licensing and inspection processes.
- Evidence of the economics of investments in new tractor heads (e.g., from pilot programs) would need to quickly materialize in order to elicit broader support by trucking companies and BCOs, since this initiative will likely increase trucking costs and rates.
- As China has found in the early stages of implementing the new “Road Ports” concept, it is difficult to change cultural habits of using traditional methods to secure backhaul loads versus using an electronic bid system.

Definition of Success

By the end of 2014, the GoV can revamp trucking regulations and develop enforcement plans to be implemented in 2015.

By year-end 2015, all truck drivers should have valid, GoV-issued driver’s licenses, and trucks and chassis must have passed mandatory roadability testing.

By the end of 2016, scanning equipment will have been installed at major marine terminals in HCMC, Cai Mep-Thi Vai, and Haiphong and connected to the nation-wide software system, where container weights will be linked back to trucking companies. With significant fines sent to trucking companies delivering overweight containers beginning in 2017, there should be at least some evidence of decline in overweight trucks and containers by the end of 2018.

By the end of 2014, the MoT will have concluded whether a “Road Port” system is justified for Vietnam and, if so, begin plans to implement one or more test sites. The implementation horizon for such sites would depend on the choice of financing arrangement (e.g., public funds, PPPs, or official development assistance).

Ideally in parallel with improved enforcement of road safety regulations (e.g., licensing and roadability tests), the hiring and compensation policies for police officers should be modernized in line with those recommended for Customs officials. Traffic citations should be for valid offenses based on published regulations, and fines should be published and consistently applied. Auditing mechanisms should be in place to assess progress.

By 2020 or sooner, depending on economic viability, the GoV will start implementing a pilot “Clean Truck Program” for drayage-only trucks at one or more selected ports. Such a program can then be extended as feasible to wider implementation.

Expanded Business Opportunities for Cai Mep–Thi Vai Marine Terminals

Why This Is Relevant

The economics of calling at Cai Mep–Thi Vai are weak for most international container shipping carriers. For example, carriers are not receiving sufficient incentives to offset the relatively low container move counts at Cai Mep-Thi Vai

(currently 1,000–2,000 TEUs per call), tonnage and pilotage fees form a high percentage of operating costs on a per TEU basis, and carriers are facing obstacles in getting approval to bring in larger ships over 80,000 deadweight tons (DWT). Additional discounts are needed for vessels above 90,000 GT (above 8,000 TEUs), which are now the primary vessels used on the Far East–Europe routes. These additional incentives and the lifting of current restrictions on vessels of over 80,000 DWT could potentially increase the number of direct Vietnam to Europe services from one as of September 2012 to four or five weekly service strings. The lower slot costs on these larger vessels could be passed along to BCOs in terms of lower or more stable rates.¹⁶

Further regulatory restrictions on Cai Mep–Thi Vai volumes are expected. Effective January 1, 2013, foreign-flagged carriers that are currently arranging their own feeding of international containers from domestic ports to Cai Mep–Thi Vai, will no longer be permitted to do so. Cabotage laws will restrict containers transiting between domestic ports to be only carried on Vietnamese-flagged carriers. Foreign-flagged carriers are expected to transship the vast majority of those international containers to a foreign port, at an estimated cost of between \$2.1 and \$3.0 million per year¹⁷ because they are unable to rely upon Vietnamese-flagged carriers to provide suitably reliable feeder services.

Targeted (and most likely temporary) incentives to container carriers could bring more volumes to Cai Mep–Thi Vai, benefiting not only the carriers themselves but also MTOs and BCOs. For example, if adequate load rates and/or appropriate GoV discounts on tonnage, maritime security, and wharfage fees at Cai Mep–Thi Vai were implemented on a temporary basis, ocean carriers could benefit from lower slot costs on those larger vessels and avoidance of feeder and higher transship costs at foreign ports. These savings can be passed along to BCOs in terms of lower ocean rates.¹⁸

Recommended Strategies

- Further capacity additions at Cai Mep–Thi Vai, as scheduled, should be reassessed based on updated demand projections. The program to close or relocate inner-city ports at HCMC should also be reassessed by explicitly addressing the institutional bottlenecks that have prevented a more successful implementation of long-held plans to reduce city congestion while improving international connectivity.
- As a temporary measure, volume discounts on operating fees should be extended for vessels calling Cai Mep–Thi Vai, and especially those above 80,000 GT.
- Cabotage rules should be further relaxed to allow foreign-flag carriers to carry international containers from Haiphong, Danang, and Nha Trang to/from Cai Mep–Thi Vai.
- Incentives should also be provided to attract international transshipment volumes (e.g., from Cambodia, Malaysia, the Philippines, and Thailand) to Cai Mep–Thi Vai.

Possible Funding Mechanisms

Financing for the additional discounts to ocean carriers for calling Cai Mep-Thi Vai can come from the general treasury or by increasing the current Terminal Handling Charge (THC) that ocean carriers charge BCOs. The current THC ranges from \$114 to \$151 with most carriers charging around \$130. Table 4.11 lists the 2012 THCs for neighboring countries, demonstrating that there is room for Vietnam to raise its tariff fee and still be competitive with most Asian countries.

Barriers and Obstacles

One barrier will likely emerge from Vinalines and the other Vietnamese-flagged carriers resisting the continuation of foreign-flagged carriers transshipping international containers from domestic ports to Cai Mep-Thi Vai. However, foreign-flagged carriers have said they will transship these containers at foreign ports because Vietnamese-flagged carriers cannot provide the service needed to make transshipping over Cai Mep-Thi Vai work.

Another barrier may come from the MTOs in the HCMC area targeted to be shut down or relocated.

Definition of Success

In the very short term, continued fee-discount support is provided to ocean carriers calling Cai Mep-Thi Vai, until such time as there is sufficient volume to offset the tonnage, maritime security, and pilotage fees. Further, the GoV continues to allow foreign-flagged carriers to transship international containers from domestic terminals to Cai Mep-Thi Vai.

By 2014 ocean carriers will find it more attractive and financially viable to serve Cai Mep-Thi Vai, resulting in additional liner services for BCOs within two years. Capacity at Cai Mep-Thi Vai terminals will be better utilized.

By 2015 fewer marine terminals will be operating in the HCMC area, bringing supply and demand into closer alignment.

By 2016 Cai Mep-Thi Vai terminals succeed in attracting additional volume and this port complex becomes a viable transshipment hub.

Table 4.11 Terminal Handling Charges for Vietnam and Neighboring Countries, 2012

U.S. dollars

<i>Country</i>	<i>Terminal handling charge</i>
China	\$301 (includes new 6% VAT)
Singapore	\$219
Thailand	\$156
Indonesia	\$145
Vietnam	\$130
Philippines	\$120
Cambodia	\$115

Source: Authors.

Institutional Mechanisms to Support Logistics Policy Making

Achieving more effective logistics policy making requires Vietnam to adopt a more integrated approach, resembling the integrated (e.g., multimodal) nature of the underlying measures that should be pursued. A critical feature of most of the recommendations proposed in chapter 4 is that their conceptualization, planning, approval, and execution is best conducted through multi-agency (in many cases, multiminsty) collaboration and in consultation with a broad base of freight and competitiveness stakeholders—including BCOs, LSPs, trade associations, academia, and the donor community. It should also be informed by verifiable data rather than anecdotal evidence or narrow views of market trends and requirements.

International experience has shown that inclusive institutional arrangements can facilitate multidisciplinary decision making in logistics—and that without it projects tend to continue to be managed in silos. Such arrangements have included in practice logistics councils and committees made up of senior representatives of a wide array of public sector entities, such as modal administrations; Ministries of Planning, Industry and Trade, Economy, Agriculture, and Finance; Customs administrators; police and law enforcement; and governance and anticorruption agencies; and chaired by the country's highest executive authority, such as the president or prime minister. Typically set up at the national level, logistics councils may also be established at the subnational level and be complemented by mechanisms to systematically promote and facilitate public-private avenues of engagement, consultation, and collaboration, such as logistics fora. In East Asia, examples of countries that have implemented dedicated institutional arrangements of this kind include Australia (Australian Logistics Council, state-level Freight Logistics Councils, Transport and Logistics Centre, and the Integrated Logistics Network), Japan (Japan Institute of Logistics Systems), Malaysia (Malaysian Logistics Council), and Thailand (National Logistics Committee).¹⁹ Logistics councils and committees can be particularly effective at (1) coordinating interministerial priorities within budgetary, technical, legal and other constraints—something that can be done, for example, through the crafting of a National Logistics Strategy; (2) monitoring the timely and cost-effective implementation of such priorities; (3) assessing systemwide performance improvements by tracking selected key performance indicators; and (4) informing public policy by evidence-based research and consultations with concerned (public and private) parties. Since some of the latter activities are data intensive, logistics committees are best supported by the establishment of a data-gathering body—for example, in association with one or more academic institution—such as a Logistics Observatory.

However, it should be noted that multistakeholder institutional arrangements are not necessarily a “silver bullet” and should be strictly seen as a means to an end. For example, despite its several years in operation, Malaysia's Logistics Council continues to work toward truly delivering on its promise of coordinating strategies, policies, and regulations across the logistics sector. In Vietnam itself, the

donor community has called for the GoV to establish interagency coordination mechanisms and institutions in the context of logistics policy making since at least 2006,²⁰ to little avail. This reflects the complexity of setting up such institutions in practice.

It is recommended that Vietnam continue to pursue the establishment of inter- and intraministerial coordinating bodies, such as a National Logistics Committee, as well as a Logistics Observatory; it is also recommended for the GoV to develop, adopt, and monitor the implementation of a long-term National Logistics Strategy. Ideally, this should be done in parallel to the implementation of the short- and medium-term recommendations offered by this report, as well as those being generated by academia, the private sector, the broader donor community, and other actors relevant to national and international supply chains.

Notes

1. ASEAN Economic Community Blueprint, <http://www.aseansec.org/5187-10.pdf>.
2. Frequent and lengthy product inspection and delays in import clearance can cause production schedule complications, missed delivery dates to customers, diminished customer satisfaction and future lost sales. Delays in export clearance can result in spoilage of perishable products because of the length of time it takes to test products and obtain export licenses. The export shipment may miss the intended aircraft or vessel and have to wait for the next available slot.
3. Including not only customs but also technical (e.g., security, legal, etc.) clearance.
4. Customs clearance information was obtained from one beneficial cargo owner (BCO) that manufactures in Vietnam and Malaysia. Data are largely consistent with findings from the World Bank's *Doing Business in 2013* database.
5. With facilitation fees reported at between 5 and 50 percent, 30 percent was used as the approximate median of the reported percentages.
6. Origin costs for imports include import declaration, delivery order preparation, Terminal Handling Charge (THC), Container Imbalance Charge, container inspection as charged by the LSP, and trucking fees for a 100-kilometer drayage haul. Origin costs for exports include bill of lading fee, THC, export declaration, Container Yard Administration Fee, security fillings (for the U.S. and European Union), container inspection, and Load-on/Load-off.
7. Ocean carriers report saving of between \$100 and \$200 per TEU by not having to transship containers (e.g., at Hong Kong SAR, China). Assuming 1.1 million TEUs will be handled at Lach Huyen by 2020, and 45 percent of that volume will be exports, the total savings to ocean carriers using mother vessels will be $1.1 \text{ million} \times 45\% \times \$150 = \$74 \text{ million}$.
8. The existing draft limit at Cai Lan Port is insufficient to permit the deployment of ships over 4,000 TEUs, which are commonly utilized in linehaul routes.
9. See appendix F for a brief discussion of PPPs in Vietnam and the key components to successful implementation of PPP projects.
10. As of January 2013, there were discussions by the MoT to replace Vinalines as Lach Huyen developer with Saigon New Port Corporation, another state-owned enterprise and the largest terminal operator in the country.

11. Cassidy (2012).
12. Status Paper on Road Safety (For the Calendar year 2010), available at <http://www.unescap.org/ttdw/common/Meetings/TIS/EGM-Roadsafety-2011/Status/Countries/VietNam-2010-Status.pdf>.
13. Based on Cambridge Systematics research with several Southern California-based trucking companies.
14. Based on Cambridge Systematics Prior Project Work; see appendix B for more details. Additional information is available at <http://www.htsol.com/Files/TOCAsia2003.pdf>.
15. Estimating the return on a clean truck program investment of this type for Vietnam was beyond the scope of this report and is offered as a main avenue for future research.
16. As of September 2012, low rates have resulted in ocean carriers in the Asia-to-Europe trade operating in the red; being able to use larger vessels today will only help to defray those losses.
17. Transshipment cost estimates are based on an estimated weekly volume of transshipment containers for three of the largest ocean carriers of 600–850 TEUs per week at a cost of \$68 per TEU.
18. Same note as note 16, except that rates in the Asia-to-U.S. trade are more compensatory to the ocean carriers than in the Asia-to-Europe trade.
19. For a more detailed discussion of the institutional arrangements of the Australian logistics sector in particular and of institutional approaches to logistics policy making see World Bank (2012).
20. Specifically, Meyrick and Associates *et al.* (2006), a World Bank–sponsored report, called for the establishment of an Inter-ministerial Logistics Committee and a National Logistics Forum. Further efforts in this respect are being supported by the World Bank–financed Mekong Delta Transport Infrastructure Development Project (2007–present).

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