Chapter 14

Aiding Exports: Lessons from Emerging Economies

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14.1 Introduction

Emerging economies have successfully supported their trade performance. This chapter reviews the cases of China, India and Brazil to describe which major activities they have implemented to improve their export performance. The specific contribution of the chapter is to examine how China, India and Brazil have facilitated trade, focusing on the provision of infrastructure and trade facilitation. Based on a review of the current literature, the chapter also reviews which lessons might be learned from these experiences in low-income countries (LICs).[1]

The chapter puts the spotlight on support for trade-related infrastructure, trade facilitation and state–business relations because of their importance for trade performance. The high cost of trading in many emerging economies and developing countries is a major obstacle to the improvement of their export performance and the benefits this can generate. These costs are often the result of poor-quality infrastructure and slow and cumbersome procedures at the border.

Aid for Trade (AfT) support for trade-related infrastructure and trade facilitation seeks to address these binding constraints. In 2006, the WTO defined AfT as activities identified as 'trade-related development priorities in the recipient country's national development strategies' and singled out six types of such activities, among them 'trade-related infrastructure' and 'trade policy and regulations', which constitute trade facilitation (WTO 2006: 2).

Recent research emphasises that support for trade-related infrastructure and trade facilitation is effective in improving trade performance (e.g. Duval and Utoktham 2011; Francois and Manchin 2007; Helble et al. 2009; Moïsé et al. 2011; Nordås and Piermartini 2004; OECD 2012; Portugal-Perez and Wilson 2011). For example, Calì and te Velde found that a US$1 million increase in AfT funding directed towards trade-related infrastructure can generate a 6 per cent reduction in the cost of packing, loading and transporting goods (Calì and te Velde 2009). Research on aid effectiveness found that each $1 of AfT facilitation can translate into $70 in exports for recipients (Helble et al. 2009).

The chapter is structured as follows. Section 14.2 presents the successful trade performance of China, India and Brazil and outlines the framework for analysis in this chapter, focusing on two types of activities that are key to successful trade performance: support for trade-related infrastructure and trade facilitation. Three brief country case

studies of China, India and Brazil review these three types of measures, in sections 14.3, 14.4 and 14.5 respectively. Section 14.6 provides a summary of the lessons from the experiences in China, India and Brazil to promote their export success explored in the previous sections. Finally, the chapter concludes with recommendations on the way forward in section 14.7.

14.2 Successful export performance in emerging economies

14.2.1 Trade performance in China, India and Brazil

Emerging powers such as China, India and Brazil have successfully supported their exports and their trade performance more generally. Figure 14.1 shows how China's, India's and Brazil's export values, the current value of exports (freight on board) converted to US dollars and expressed as a percentage of the average for the base period (2000), have increased over the past three decades.

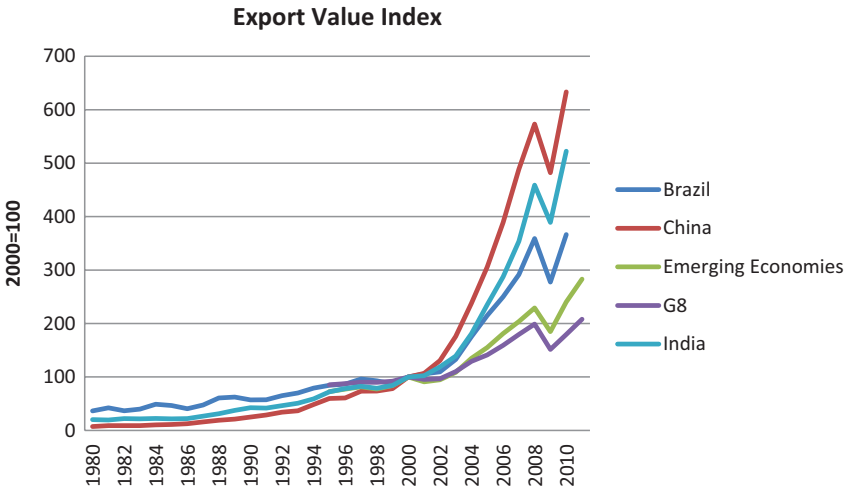
Sections 14.3, 14.4 and 14.5 will turn to three country cases and focus on the question: what makes China, India and Brazil successful in terms of their export performance?

14.2.2 Introducing the framework for analysis

Three main factors behind a country's export success are its productive capacity, its regulatory framework and its market access and trade promotion:

- *Productive capacity* is the capacity of a country to produce goods and services. Building productive capacity includes business development and activities aimed at improving the business climate, privatisation, assistance to banking, financial services, agriculture, forestry, fishing, industry, mineral resources, mining and tourism.

Figure 14.1 Export value index (2000 = 100)



Source: UNCTAD

- *Regulatory frameworks* are an appropriate institutional framework and supportive regulatory environment.
- *Market access and trade promotion* include the trade barriers a country faces for its exports and the trade barriers that exist for imports and also refers to policies aimed at increasing a country's or a company's exports.

The main part of the chapter will review three types of activities that can strengthen and improve the factors behind the export success outlined above. The chapter will focus on the following activities: promoting **trade-related infrastructure** and **trade facilitation**.

Trade-related infrastructure

The first part of each country case study presents how China, India and Brazil have supported trade-related infrastructure. Trade-related infrastructure comprises not only roads, railways and ports but also energy, water and telecommunication and arguably laboratories for quality, sanitary and phytosanitary controls and verification of compliance standards, together with border posts and associated computer and customs software. Empirical evidence indicates that quality of infrastructure is an important determinant of trade performance (e.g. Francois and Manchin 2007; Limão and Venables 2001; Nordås and Piermartini 2004; Portugal-Perez and Wilson 2011).

There is often a lack of high-quality infrastructure in developing countries due to market failures in the context of lumpy investments being delayed in uncertain circumstances (te Velde 2008). The financing of infrastructure gives rise to severe challenges, especially because the huge scale of the needed investment and the long gestation period call for investors who are able to accept a long time frame for debt repayment and return on equity, whereas many financial institutions are not able to invest in such very long-term illiquid assets (Anand 2010). Support for infrastructure can help to address this market failure, for example by providing incentives for public–private partnerships (te Velde 2008).

Trade facilitation

In contrast to common perception, poor-quality infrastructure such as ports, although significant, is not necessarily the most important impediment to trade; almost half of the hold-ups in the trading process are the result of burdensome pre-arrival procedures (World Bank 2007). These cumbersome procedures in turn could be addressed through AfT that focuses on trade facilitation.

There is no generally agreed definition of trade facilitation (Tantri and Kumar 2011). In a strict sense, 'trade facilitation measures' refers to steps undertaken to reduce the transaction costs of conducting business across the border. The WTO defines trade facilitation as 'the simplification and harmonization of international trade procedures' covering the 'activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade' WTO definition from http://gtad.wto.org/trta_subcategory.aspx?cat=33121 (accessed 29 July 2013). Recent research on how aid spent on trade

facilitation relates to trade flows indicates that the trade-initiating effect of US$1 spent on measures directed towards trade policy and regulation reform is considerably higher than the trade creation from investments in other areas of trade support (Helble et al. 2009). Above all, the efficiency of customs has considerable effects on trade-related costs.

The benefits of trade facilitation measures typically more than compensate for the cost of such reforms and frequently exhibit a rather brief payback period (Engman 2005). Complex or inefficient border measures could raise the cost of goods between 2 per cent and 15 per cent (OECD 2005). Duval and Utoktham (2009) provide data that indicate that a 5 per cent reduction in the costs of exports can raise exports by 4.2 per cent. Wilson (2007) illustrates that a 10 per cent decrease in the importer's time at the border can raise trade by 6 per cent, whereas a 10 per cent decrease in the number of documents needed by the importer could raise trade by 11 per cent. Other studies (e.g. Fox et al. 2003; Kim et al. 2004; Wilson et al. 2003, 2004) further confirm this relationship.

Doing Business indicators depict a country's regulatory regime and make out those particular factors that improve trade activities and those that hamper them. Since 2006, the *Trading across Borders* elements of *Doing Business* mirror the overall official costs of exporting a standardised container (valued at US$20,000), excluding ocean transit and trade policy measures such as tariffs, thereby representing the most comprehensive source of information on a country's approach to trade facilitation (see Table 14.1).

The *Logistical Performance Index* (LPI) is an additional set of World Bank indicators that offers valuable insights into a country's situation in terms of trade facilitation. The LPI is based on surveys carried out among logistics professionals and generates information (see Table 14.2) on the efficiency of the customs clearance process (Customs), the ease of arranging competitively priced shipments (International shipment), the competence and quality of logistics services (Logistics quality and competence), the ability to track and trace consignments (Tracking and tracing), the frequency with which shipments reach consignee within scheduled or expected time (Timeliness) and the quality of trade and transport-related infrastructure (Trade- and

Table 14.1 Trading across Borders 2012: China, India, Brazil

Indicator	China	India	Brazil	OECD members
Overall rank	68	127	123	
Documents to export (number)	8.0	9.0	7.0	4.4
Time to export (days)	21.0	16.0	13.0	10.6
Cost to export (US$ per container)	580.0	1,120.0	2,215.0	1,037.5
Documents to import (number)	5.0	11.0	8.0	5.0
Time to import (days)	24.0	20.0	17.0	10.4
Cost to import (US$ per container)	615.0	1,200.0	2,275.0	1,101.9

Source: Doing Business (2012)

Table 14.2 Logistics Performance Index (LPI) 2012

Country	Rank (out of 155)	LPI	Customs	International shipment	Logistics quality and competence	Tracking and tracing	Timeliness	Trade- and transport-related infrastructure
Brazil	45	3.13	2.51	3.12	3.12	3.42	3.55	3.07
China	26	3.52	3.25	3.46	3.47	3.52	3.80	3.61
India	46	3.08	2.77	2.98	3.14	3.09	3.58	2.87
OECD members		3.60	3.40	3.42	3.60	3.66	3.90	3.64

1, very low; 5, very high
Source: World Development Indicators

transport-related infrastructure). In 2012, China had attained rank 26 while India and Brazil were at positions 45 and 46 respectively out of 155 countries.[2] While there is still potential for future improvement, China, India and Brazil have all made progress in terms of trade facilitation in the recent past and their main initiatives in that regard will be presented in the respective country case studies.

The next three sections turn to three country cases that review the measures that China, India and Brazil haven taken in order to foster trade-related infrastructure and trade facilitation.

14.3 China

14.3.1 Trade-related infrastructure

China's unmatched growth in the past two decades has coincided with immense infrastructure development arising from its export-led approach. In the light of its focus on exports, China has invested heavily in railways, port facilities, airports and highways (Syed and Walsh 2012). China's recent and current infrastructure investment is extraordinary. The World Bank estimates that the country spends about 9 per cent of gross domestic product (GDP) on it. By comparison, the EU and the United States spend about 5 per cent and 2.4 per cent, respectively. In September 2012, the National Development and Reform Commission (NDRC) approved the launch of another 55 major infrastructure projects (Back 2012; KPMG 2013).

Chinese infrastructure development is characterised by strong co-ordination between policy-making and implementation, and the presence of both market-based arrangements as well as traditional centrally planned command economy elements. This approach was successful, since the final decision-making authority continued to be with the central government and since this central control made it possible to be less risk averse and to defy the market economy when needed. The Chinese reforms included making use of a trial-and-error approach and also focused on boosting private and foreign investment. The focus is on planning coherent investment, regularly re-examining infrastructure gaps and reorienting resources (Bredenkamp and Nord 2010).

Among the main drivers of China's infrastructure boom have been sub-national governments after receiving economic autonomy (Walsh et al. 2011). The functional and fiscal decentralisation in the context of the 1994 tax administration reform severely amplified the incentives and capacity of local governments for infrastructure development (Liu 2004). For example, local governments began providing guarantees – implicit and explicit – for bank loans to infrastructure projects and in certain cases subsidies directly for infrastructure SPVs (Special Purpose Vehicles) to increase profits and improve credit ratings (Walsh et al. 2011). Further initiatives, such as the simplification of government review and approval procedures and the introduction of performance criteria, contributed to improving government capability of implementing infrastructure projects (Liu 2004). Since 2004, China has deregulated the cumbersome and lengthy project approval system for China's infrastructure, for example such that government approval will no longer be needed for projects not funded by the government (Chen 2010).

At the same time, there are challenges. Rapid infrastructure development has at times led to poor-quality, low-technology service and management (Chuan 2008). Moreover, recently, collapsing bridges, roads, dikes and dams have been a huge problem. They are often the result of corruption among local officials who sub-contract work to friends or inexperienced firms (Nunns 2012).

So far, public banks have provided most of the required long-term financing for infrastructure investments in the context of implicit local government guarantees and bond insurance provided by publicly owned banks (Walsh et al. 2011). It is remarkable that several infrastructure SPVs are listed in the Chinese stock market, directing funds from the capital market to infrastructure projects (Walsh et al. 2011). In 2012, the China Insurance Regulatory Commission (CIRC) decided to allow insurance companies to invest up to 10 per cent of their balance sheets in both real estate and private equity (KPMG 2013).

Deficiencies in the legal and regulatory framework, with slow approvals processes, underdeveloped property rights and restricted means of legal remedy, continue to be a barrier to more extensive private participation in infrastructure (Brooks and Zhai 2008). To promote the implementation of public–private partnerships (PPPs) in China, a series of policies have been introduced, for example, the Opinions on Acceleration of Privatisation Process of Public Facilities in 2002 by the Ministry of Construction (Wang 2013). In the context of the 12th Five-Year Plan's annual GDP growth target of 7 per cent and the search for alternative sources of finance, infrastructure investments are increasingly being opened to private capital, for example by relaxing the rules on Qualified Foreign Institutional Investors and other forms of direct and indirect investment (KPMG 2013; Shao and Yao 2013).

14.3.2 Trade facilitation

In 1998, China Customs decided to establish a modern customs regime and established a two-step strategy to achieve this objective (Shujie and Shilu 2010; Wenjing and Wei 2006). Important developments in customs clearance during the first reform phase until 2003 included, for instance, the nationwide use of fast customs-transfer operation and incorporation of the 'one-stop, single-window' approach to customs-transfer between inland and ports or between different customs offices (see also Tsen 2011). The second phase (2004–10) entailed, among other reform measures, an update of the electronic data interchange (EDI)[3] customs clearance engineering, the expansion of paperless clearance procedures and the introduction of electronic customs, which enables enterprises to complete the customs procedures over the internet. Customs has also promoted co-operation with the customs authorities in the bilateral and regional trade partners in the context of China's FTAs, mainly in electronic networking with regard to preferential certificates of origin and customs data exchange systems (WTO 2012).

The implementation of trade facilitation measures has brought down time spent on customs procedures as well as the transaction costs of trade procedures in China. The introduction of paperless trading and the electronic quarantine and inspection framework reduced the costs for enterprises by around RMB 100 million per year

and the implementation of electronic declaration has cut back the time spent on each batch of goods by 30 minutes (Wenjing and Wei 2006). In late 2007, 85 per cent of the key performance indicator targets of the second step of the two-step trade facilitation strategy had been achieved (Liu 2008). Many exporters began using E-ports and all export goods starting being processed under the H2000 Customs Clearance System (Shujie and Shilu 2010). Almost all customs operations started involving risk management and more than 60 per cent of declarations are automatically processed by the risk-management platform (Liu 2008; Shujie and Shilu 2010). The total physical inspection rate was cut back to 3.41 per cent (Liu 2008). The clearance time was also reduced: 84 per cent of exports shipped by sea and 99.7 per cent of exports shipped by other means of transport could be released within eight working hours (Liu 2008). IT-based customs clearance procedures (known as the 'golden-series projects', including the 'golden customs project', and the 'golden quarantine and inspection project') have helped to boost tax revenue and reduce the amount of smuggling (Wenjing and Wei 2006). In 2010, the average time required for customs clearance was 1.7 hours for exports (2.4 hours in 2008) and 15.5 hours for imports (14.1 hours in 2008) (WTO 2012). In sum, the comprehensive initiatives taken by China Customs and other agencies have helped to foster a trade-enabling environment and helped business to increase export competitiveness in an international supply chain.

14.4 India

14.4.1 Trade-related infrastructure

In both China and India, the municipal government is an important factor in infrastructure development but, whereas in China infrastructure is constructed, operated and maintained by different companies established by local governments, in India it is the local government itself that performs these functions, which has made cost recovery less efficient than in China (Brooks and Zhai 2008).

The future development of India's infrastructure presents a huge opportunity as well as a huge task. The challenges are reflected, for instance, in the Indian road sector. For example, whereas India's road construction was better than that of China in the early 1990s, this situation changed radically in the more recent past, for the most part because of limited infrastructure investment in India. India's investment philosophy differed from China's, where the focus was on new arterial networks, while India, in contrast, centred attention on rural roads. While China now has a striking road system, India is characterised by an undersized and overcrowded road network (Kim and Nangia 2010).

However, toll road projects have proliferated in India, where highway projects account for more than half of all projects involving private participation in infrastructure concluded in 1990–2006 and accounted for more investment commitments in 2003–07 than any other sector apart from telecommunications (Leigland 2010). High traffic volumes and methods for reducing private partners' risks and costs, such as viability gap funding, have helped to promote highway development but, in LICs, lower traffic

volumes and restricted funding for risk and cost reduction constrain the use of toll roads (Leigland 2010).

Investment in railways is difficult because of direct government ownership and, whereas several airport privatisations have been a success, investment in port facilities has been slow, and energy generation and transmission have been undermined by poor pricing models and regulations (Syed and Walsh 2012). The challenges for India's infrastructure sector, more generally, include major capacity improvements but also simpler finance structures with more focus on user fees and greater accountability for infrastructure agencies in terms of outputs.

So far, as in China, banks have dominated infrastructure finance in India, but the Reserve Bank of India (RBI) has not allowed the same high concentration in infrastructure assets as Chinese banks have taken on. In terms of foreign finance, India has so far relied mostly on multilateral lenders. The establishment of the New Pension Scheme (NPS) shows potential for an extensive growth of assets under management of pension funds and is therefore promising for future infrastructure development in India (Walsh et al. 2011). At the same time, Indian insurance and pension funds are constrained by their obligation to invest a substantial portion of their funds in government securities, which limits the direct investment of these institutions in the infrastructure sector (City of London 2012). Recently, India introduced Infrastructure Debt Funds (IDFs), which show significant promise to facilitate the flow of long-term debt in infrastructure projects by tapping into sources of long-tenure savings such as insurance and pension funds, which have so far played a rather small part in financing infrastructure in India (City of London 2012; Jain and Nair 2013; Mahajan 2012).

India attracts a substantial amount of private investment to its infrastructure sectors. In 2010, $75 billion was invested in Indian of infrastructure-related PPPs (Urban Land Institute and Ernst & Young 2012). PPPs have been quite a success story in India and can offer lessons for LICs (ADB and Economist Intelligence Unit 2012). To further boost PPPs in infrastructure, the Government has introduced an SPV, the India Infrastructure Finance Company Limited (IIFCL), to satisfy the long-term financing needs of potential investors (Gupta 2009). Recently, the Indian Government took a range of measures to promote development of infrastructure in the country by putting in place an institutional mechanism to monitor the progress of PPP projects at the central and state levels and facilitating land transfer between government agencies for PPP projects.

Over recent years, a number of steps have been taken by Indian policy-makers to support infrastructure development and financing in India. However, there are still numerous challenges that should be addressed: the process of land acquisition should be streamlined; important policies and regulation reforms should be fast-tracked, including a single window clearance approach for approval of infrastructure projects; a sound dispute resolution framework should be established; better monitoring of projects should be introduced and their funding improved; and more favourable taxation policies for infrastructure projects should be put in place, including for foreign investment (FICCI National Committee on Infrastructure and Ernst & Young 2012).

14.4.2 Trade facilitation

In recent decades, India has taken several steps to facilitate trade (De 2011). For example, in the 1990s, India launched the Indian Customs EDI systems (ICES), which automated the clearance process for import and export consignments and introduced remote filing of import and export documents (Dominic et al. 2012). In 2002, India further facilitated trade by implementing an electronic commerce portal, ICEGATE (Indian Customs and Excise Gateway), which eases the electronic filing of import and export documents and related electronic exchange between customs and the trader, offering a choice of means of communication, including the internet, and offers a helpdesk on a 24/7 basis (Dominic et al. 2012). In 2005, India initiated a risk management system (RMS) in order to decide which containers to inspect and to selectively screen only high- and medium-risk cargo for customs examination (WTO 2011).

As a result, trade procedures have become more efficient over recent years. In the period between 2005 and 2011, the time needed to finish all trade procedures involved in moving goods from factory to ship at the nearest seaport – or vice versa – was cut back by more than 40 per cent, with an 18 per cent reduction being the average for developing economies in the Asia-Pacific region (ARTNeT and UNNExT 2012). Especially the implementation of the electronic data interchange (EDI) system in 1994 and of the risk management strategy in 2005, at India's major customs offices, has increased the efficiency of border procedures (WTO 2011).

14.5 Brazil

14.5.1 Trade-related infrastructure

Despite the chronic historical underfunding of its infrastructure, Brazil has in recent years demonstrated its commitment to rectifying the situation. The recent reduction in political and regulatory risks has strongly enhanced the investment environment in Brazil (Gregoire 2011). In fact, in 2008, Brazil received an investment-grade sovereign debt rating for the first time.

While trade-related infrastructure in Brazil remains to be improved, and it will take a while, for instance, before better transport makes Brazilian goods more competitive on global markets, now, at last, change is under way. Against the background of the current infrastructure needs, the Brazilian government implemented a large infrastructure programme, the so-called Growth Acceleration Programme (Programa de aceleração do crescimento, PAC), followed in 2010 by a follow-up programme (Centre for Development and Enterprise 2012; Mourougane and Pisu 2011; Walsh et al. 2011). The objective of PAC was to raise infrastructure investment and advance co-ordination among the numerous institutions engaged in infrastructure policy, as well as others, on the basis of the following measures (Mourougane and Pisu 2011): additional infrastructure investment, to be financed by the government as well as public enterprises and the private sector; tax exemptions for specific capital and goods related to infrastructure; a tax-exempt

national Investment Fund to finance infrastructure projects; and the monitoring of progress in the infrastructure programmes, with a regularly published progress report. Under its PAC 2 Accelerated Growth Programme, the government has committed to spending R$959 billion on infrastructure projects by 2014 and R$631 billion beyond 2014, capital which is channelled in part through the Brazilian Development Bank (BNDES) (Williams 2011). While the R$274 billion in infrastructure investments estimated for 2010–13 corresponds to 2.2 per cent of GDP, only slightly higher than the average 2.1 per cent of GDP spent in recent years, at least some progress is being made and there are a number of drivers of higher infrastructure spending in the near future, including the 2014 FIFA World Cup and the 2016 Olympic Games. For instance, in an attempt to optimise the procedure for contracting with private providers, the government has recently issued a so-called 'differentiated regimen for contracts', which will apply for civil works and services related to the 2014 World Cup, the 2016 Olympics and projects that are part of the PAC (Leal 2012).

In 2004, a new law introduced a distinction between PPPs and concessions. It regulated a number of aspects of PPPs such as project selection, bidding, signing and management of projects at all levels of government, providing a favourable environment to benefit from private participation in infrastructure (Mourougane and Pisu 2011). This law contributed to constrain the frequency of costly renegotiations, which often undermined PPP contracts in the past (Calderón and Servén 2010). The current management process of PPPs and concessions should be still further simplified, for instance by consolidating responsibilities among the various authorities involved and offering standardised contracts to reduce some of the transactions costs that PPPs generate (Mourougane and Pisu 2011).

Long-term financing for Brazilian infrastructure has been primarily provided by BNDES. BNDES has granted a significant number of loans, and new financing products have been developed for investments in the infrastructure sector (Leal 2012). Brazil has been quite successful in mobilising foreign finance, for instance by attracting foreign companies to bid on road projects and to invest in PPPs. Moreover, Brazilian energy companies have managed to issue shares and bonds in international markets, benefiting from sovereign guarantees because the ratings of those companies are contingent on the rating of the sovereign that investors assume would stand behind the company (Walsh et al. 2011).

14.5.2 Trade facilitation

Over the past years, Brazil has sought to make import and export transactions less cumbersome and continued to take gradual steps to simplify and modernise its customs procedures. For example, Brazil introduced an express import declaration regime for frequent importers, and reduced by 26 per cent the number of rejected import declarations (WTO 2009). Since 2006, the unloading of imported cargo for physical inspection may be exempted where customs premises are equipped with scanners that permit non-invasive inspection, substantially reducing customs clearance time. In 2008, Brazil facilitated trade by updating its electronic data

interchange (EDI) system for customs. In 2009, the Brazilian government established a computerised information system that processes all customs procedures, monitors imports and facilitates customs clearance. Known as the Foreign Trade Integrated System (SISCOMEX), it reduces the time needed for export and import procedures by facilitating and decreasing the amount of paperwork previously needed for importing into Brazil. To exempt companies from filling in about 935 fields in different forms before products can enter the country, hindering the import process, the Brazilian government has worked on introducing a Paperless Ports system to reduce the use of forms and harmonise requirements for entry across the country (Moraes 2011).

For LICs, there are particularly useful lessons to be learned from the Brazilian experience with trade facilitation policies for low-value exports. In 1999, Brazil introduced very successful trade facilitation policies for low-value exports, on the basis of the postal network, in order to simplify cumbersome and costly export formalities and address the problem of limited access to an affordable means of transport. The scheme is targeted primarily at small and medium-sized enterprises, helping them to ship their products abroad quickly. More specifically, the Brazilian government implemented a simplified export procedure for exports valued at less than $10,000 through the 'Declaração Simplificada de Exportação' (DSE) and, in so doing, has considerably cut back the number of steps needed to register an export. These types of policies might be appealing for several countries, including LICs (Guasch 2008). The programme has already been rolled out in Ecuador, Peru, Uruguay and Colombia, after being modified to suit local conditions, while Argentina, Bolivia and Chile are in the process of adopting similar schemes and Serbia has implemented its own programme based on the Brazilian model (Universal Postal Congress 2012).

14.6 Lessons: what can we learn from past experiences?

This part of the chapter pulls together lessons from the experiences in China, India and Brazil to promote export success explored in the previous sections. It reviews differences and similarities between the approaches in these three countries with respect to trade-related infrastructure (14.6.1) and trade facilitation (14.6.2). It will also suggest what each of these might imply for LICs.

14.6.1 Lessons for trade-related infrastructure

China managed to build infrastructure ahead of demand that contributed to promoting exports and economic growth. For India and Brazil and other countries that have traditionally underinvested in infrastructure, the need to respond to the worldwide fragmentation of production and new large and extremely competitive economies in the global market is gaining even more urgency. China's centrally planned economy made infrastructure reforms to some extent less challenging than in India and Brazil, since the central control of the economy enabled the Chinese government to take risks and promoted strong integration between planning and implementation (Leoka and Guma 2012).

Successful infrastructure development involves a number of institutional and policy dimensions, including the way planning and implementation is approached, how the risks are managed and what kinds of incentives and accountability structures are present. In the recent past, the scarce global supply of short- and especially long-term funding has become highly relevant for future infrastructure development. In light of these funding shortages, one goal of this chapter has been to look at how China, India and Brazil have financed infrastructure improvements and what financing alternatives exist for countries that aim to boost infrastructure investment.

It is not possible to finance infrastructure investment on the basis of traditional sources of public finance alone (Kingombe 2011). The financial crisis has further reduced the availability of public investment in infrastructure and there is a need for more private sector finance, but traditional sources of private capital such as banks, have restricted credit growth and may be further constrained in the light of new regulations such as Basel III, which will discourage banks from making long-term loans, traditionally used to finance major infrastructure projects, by demanding that more capital be set aside to cover such loans (Teague 2012). Against this background, institutional investors, such as pension funds and insurance companies, have been considered to help close the infrastructure gap (OECD 2011).

The country cases discussed in this chapter offer some lessons on how infrastructure can be financed using private sector resources. The experiences in China, India and Brazil are very diverse but a number of issues are relevant across the countries reviewed in this chapter. More particularly, the country experiences reviewed above illustrate how overlapping challenges that impede private sector financing of infrastructure finance can be tackled.

Securing sufficient long-term financing for infrastructure investments

Providing adequate long-term financing is essential for infrastructure investments (Walsh et al. 2011). In China and Brazil, bank loans have been helpful to secure such financing: through BNDES in Brazil and through various alternatives in China, including implicit local government guarantees and bond insurance provided by publicly owned banks.[4] To steer clear of maturity mismatches, banks usually cannot offer loans with tenors of more than five years, except if they receive longer-term funding, for example through long-term loans from development finance institutions (Bond et al. 2012). In India, for instance, banks have dominated infrastructure finance in recent years as well but the RBI has worried about asset liability mismatches and concentration risks and has not permitted similarly high levels of concentration in infrastructure assets to those that Chinese banks have accepted (Rastogi and Rao 2011). Moreover, the Indian government has not agreed to tolerate the contingent fiscal liability that a development bank such as BNDES might take on.

Motivating institutional investors to buy into long-term debt markets

One promising solution is for infrastructure projects to be funded in capital markets. However, encouraging institutional investors to buy into long-term debt markets is not easy in the absence of some form of credit enhancement (Walsh et al. 2011). Against

this background, donors have increasingly made use of official development assistance (ODA) to limit investment uncertainty by guaranteeing future returns, which permits donors to make investment projects more financially viable and mobilise funding from capital markets (ODI, ECPDM and DIE 2013). For instance, special purpose bonds, which are backed by donor commitments to service and repay debt from ODA allocations earmarked for specific purposes, and blended finance mechanisms, which involve the complementary use of grants and non-grant sources such as loans or risk capital, are two ways to tap capital markets on the basis of ODA commitments (Girishankar 2009; Wälde 2012). For example, the fact that sovereign states back special purpose bonds makes such bonds appealing for institutional investors that can offer long-term finance for infrastructure development (Spratt and Collins 2012). In India, for instance, domestic institutional investors offer great potential insofar as their investments are to date focused on government securities and insofar as the development of the Indian New Pension Scheme (NPS) promises considerable growth of assets under management of pension funds. Other countries, for example Chile, have managed to motivate institutional investors to buy bonds issued by fully private companies. Chilean pension funds are permitted to invest only in investment-grade securities, but private insurance companies have insured infrastructure bonds, enabling the pension funds to buy into these markets (Walsh et al. 2011).

Mobilising foreign investment

Foreign savings for infrastructure have been mobilised in a number of ways across different countries (Walsh et al. 2011). In several countries, multilateral lenders have played a significant role, whereas it has been more difficult to motivate foreign private finance. In China, there tends to be little foreign participation in infrastructure. India has relied on multilateral lenders but this source of funding will probably not grow much in the medium term, as infrastructure needs continue to be great, yet securing private financing, on the other hand, remains difficult and would necessitate institutional improvements. For example, Brazil has been open to foreign companies bidding on road projects for which a pro-business environment and transparency in policy administration have been essential. Brazilian energy companies have issued shares and bonds in international markets, having had investment-grade ratings and having indirectly profited from sovereign guarantees. This could be a promising option for some larger corporates or public utilities in LICs but the fiscal risks will have to be cautiously monitored and managed. Brazil has also managed to motivate foreign companies to invest in PPPs.

Another option to support infrastructure development in LICs is to mobilise innovative financing that makes use of the large and increasing savings surpluses of some countries held in sovereign wealth funds (SWFs),[5] provide those resources to LICs on concessional terms and use them to promote private investments (Kingombe 2011; Noman 2011). Data from historical databases on SWFs' transactions suggest that SWFs can facilitate up to 50 per cent of the investment needs in infrastructure in Africa over the next decade, benefiting from emerging-economy investors and also African home-grown SWFs (Turkisch 2011). ODA might be leveraged to mobilise SWF resources by providing a guarantee for borrowings from SWFs and using ODA to

subsidise the interest payments for sovereign borrowing, and a Low Income Country Infrastructure Fund (LICIF), administered by multilateral development banks, could be established to intermediate the transactions (Noman 2011).

The focus of BRIC financing on infrastructure could have significant positive effects for trade performance by tackling infrastructure weaknesses in LICs (Mwase and Yang 2012). In Africa, China has become by far the most significant source of additional infrastructure financing (Noman 2011). India is also increasing finance for infrastructure projects in Africa. However, some worry about the impact on debt sustainability, subsidised export credits received by some BRIC firms, and labour practices (e.g. Brautigam 2010).

Supporting public–private partnerships

Well-structured PPPs in trade-related infrastructure can help LIC governments to raise the capital required to address infrastructure shortcomings. While investor hesitation has gone down as a limitation to PPPs in many LICs, for example in Africa, policy deficiencies and poor institutional arrangements have arisen as the new major hurdles (Esterhuizen 2012). It is therefore important to support governments to increase the assurance that PPPs are a promising approach to tackle the infrastructure gap. At the same time, it is not enough to merely put into operation an enabling policy framework and institutional arrangements; these frameworks also have to be backed up by sufficient political commitment (Kingombe 2011).

14.6.2 Lessons for trade facilitation

There are two key policy measures to reduce trade transaction costs: the enhancement of trade-related infrastructure, as discussed above, and trade facilitation, above all the rationalisation of trade procedures (ARTNeT and UNNExT 2012). Whereas the former typically demands huge amounts of capital, which tends to be scarce in LICs, the latter can be swiftly implemented once the political will is present. Furthermore, reforming trade procedures enables making better use of existing trade-related infrastructure in LICs. For example, it can allow the customs clearance checkpoints to handle more transactions as traded goods move faster through the facilities. The modernisation of trade procedures can therefore be regarded as key to improving trade performance in LICs. Faster, predictable and transparent customs clearance greatly helps traders to lower costs and enhance their supply chain management (International Finance Corporation 2006).

The political economy of trade facilitation

At the same time, trade facilitation is frequently highly difficult to put into practice, since it often goes against vested interests and is implemented without the 'ribbon-cutting ceremonies' that are attractive for politicians and donors (Rippel 2011). One key questions is thus how such political economy challenges might be overcome in order to promote trade facilitation and other relevant reforms (Lui and Siziba 2012). In that context, it is essential to first identify the most relevant actors as well as their

motivations and interests. As a second step, it is important to analyse governance relations at the sector level to evaluate the feasibility of reforms and identify what drives or hinders reform as well as the wider context within which reform is supposed to happen. These analyses may lead to a change in focus, for example by moving from an exclusive focus on regional or multilateral trade facilitation protocols to concentrating on the demand-side for policy actions from interest groups or 'showcase' projects that might reduce the opposition to reforms (Lui and Siziba 2012).

Harmonisation and simplification of required documents

The most substantial part of the time needed for an import or export process is taken up by the preparation of the required documents and exchange of information among the relevant different parties (ARTNeT and UNNExT 2012). For LICs, the trade facilitation measure that yields the greatest increases in trade flows is the harmonisation and simplification of documents (OECD 2012). This entails both the harmonisation of trade documents, through reliance on international standards, and the simplification of documentary requirements, through the use of copies and the reduction of the number and complexity of required documentation. For instance, exports to different destinations frequently require different types of documentation, which – more than the mere number of documents – causes delays. Differences in documentary requirements should thus be cut back by aligning national procedures with international standards and conventions, and China, India and Brazil have undertaken successful measures in that regard. For instance, to prepare for the accession to WTO, China Customs amended its Customs Law, which was based on international standards and best practices and incorporated, for instance, the key principles and standards of the Revised Kyoto Convention.

Applying ICT and other modern technology, paperless trade procedures and single window facilities

Results of recent exercises modelling trade costs that are not related to tariff policy - emphasise that enhancing access to information and communication technology (ICT) facilities is essential to reducing trade costs (Duval and Utoktham 2011). China, India and Brazil have successfully applied ICT and focused on paperless trade and single window facilities for submission and processing of information and documents. The implementation of electronic data interchange (EDI) and single window systems enables simplifying documentary requirements and limiting the complexity of documents submission. A single window, for instance, enables data and documentation relating to export or import processes and transit-related regulatory requirements to be submitted just once to a single point, often through one electronic portal, allowing each agency involved to access the information it requires from this single repository in accordance with agreed interagency protocols (Tsen 2011).

Risk management techniques

The Chinese, Indian and Brazilian experiences illustrate the benefits of implementing risk management techniques in order to reduce the need for inspections. Inspection

frequently adds substantially to the time needed for export and import processes and affect their timeliness and predictability, which in turn are highly important for firms that aim to be part of international production networks (ARTNeT and UNNExT 2012). In accordance with key international agreements concerning modernisation of Customs Controls, such as the Revised Kyoto Convention and the World Customs Organization (WCO) SAFE Framework of Standards, many customs agencies are now procuring and employing cargo and baggage scanners which utilise both X-ray and gamma ray sources to augment the control of passengers' baggage and cargoes. Referred to under the generic name of non-intrusive inspection (NII), such equipment, if utilised correctly, can offer an efficient means of detecting high-risk cargoes at the point of import or export without the need to undertake what are often lengthy and costly resource-intensive physical inspections.

Industry- and sector-specific trade facilitation

The duration of the trade processes varies in a way that is strongly conditional on the kinds of goods being traded, as product-specific case studies underline. The trade procedure is especially complex for agricultural goods and food products, which are of high relevance in many LICs, and usually involve complex sampling and testing procedures, which make up almost half of the total export time in some cases (ARTNeT and UNNExT 2012). Another important issue for LICs is low-value exports. As mentioned above, Brazil has had positive experiences with special trade facilitation policies for low-value exports policies, which seek to tackle complex and expensive export formalities and the absence of affordable means of delivery.

Trade facilitation in preferential trade agreements

Preferential trade agreements – be they bilateral or regional in nature – usually lead to added documentary requirements for the trading partners with which they are negotiated. The need for such additional requirements in turn causes considerable trading holdups. Against this background, China and India have taken account of trade facilitation provisions being included in preferential trade agreements.

14.7 Conclusion

14.7.1 Ways forward on trade-related infrastructure

Prevailing large gaps in access to infrastructure services in LICs partly reflect inadequate levels of investment. According to World Bank statistics, LICs are estimated to currently spend about 3 per cent to 3.5 per cent of their GDP on maintenance of and investment in their infrastructure, whereas around 6.5 per cent to 7.5 per cent of GDP is required (Esterhuizen 2012).

New development partners can offer lessons for LICs on how to close infrastructure gaps. The Chinese, for example, have been successful in planning coherent investment, continuously re-examining infrastructure gaps and orienting resources accordingly and

making sure that infrastructure projects are linked, for instance connecting new ports by also building roads and railways that lead to the port (Bredenkamp and Nord 2010).

In the future, the traditional sources of funding for infrastructure, multilateral and official lending institutions, can provide merely a small share of the total funding requirements, deficit funding will cease to be a feasible alternative and the private sector will become ever more central. The key challenge for infrastructure development will be to develop clear financing and pricing policies.

The summary of results provided in the previous section offers a number of lessons for LICs in terms of infrastructure development and financing:

- **Establishing a favourable institutional environment for infrastructure development:** For example, the creation of an independent government body, comprising representatives from different ministries and affiliated agencies who report directly to and are held to account by the head of state, can help to administer infrastructure spending programmes and reduce operational challenges (Wirjawan 2010). A new Development Bank for Infrastructure and Sustainable Development could offer an additional source of funding for infrastructure in LICs (Bhattacharya et al. 2012).
- **Looking for domestic institutional investors:** The main alternative to having banks finance infrastructure, for example if governments are not prepared to agree to enough contingent fiscal liability, is to search for domestic institutional investors. In that context, as mentioned above, a promising source of long-term financing for infrastructure is pre-funded pension plans (Croce 2011; OECD 2011). Pension funds in developing countries have increased from around US$422 billion in 2001 to $1.4 trillion in 2010 (J.P. Morgan 2010). Given the rather young population of most developing countries and the recent introduction of pension plans, the assets held by pension funds are growing very quickly in many countries. Since payments from these funds take place over a long term and are highly predictable, they are a suitable source of funding for infrastructure that can provide stable long-term returns (Bond et al. 2012). In order to attract pension fund investment in infrastructure, a number of hurdles need to be addressed (Croce 2011). In many countries, pension funds do not have sufficient skills to invest in infrastructure projects, and governments often restrict the ability of pension funds to invest in infrastructure projects directly (Bond et al. 2012). Motivating institutional investors to move into infrastructure would require regulatory changes, above all by permitting large insurance companies and pension funds to diversify into bonds issued by private insurance companies. In that regard, a significant worry would be the credit risk of infrastructure bonds. Risk-seeking domestic investors might supply capital for bond insurance, especially if bankruptcy proceedings are enhanced to enable better recovery from infrastructure projects. A recent report by the African Development Bank encourages sponsors of infrastructure projects in Africa to turn to domesti institutional investors by issuing infrastructure project bonds (Mbeng Mezui and Hundal 2013).
- **Looking for foreign investment:** In addition to these approaches, LICs could attempt to attract foreign investment. For example, the excess savings in the

global economy, including a growing pool of savings in developing and emerging countries, should be used for infrastructure development by turning them into stable, predictable and scaled finance while providing investors with a safe, high-quality asset (Bhattacharya et al. 2012). To support the search for foreign investors, credit guarantees should be provided by the public sector, either directly through loan guarantees or indirectly through regulatory forbearance at public sector banks. The process of the public sector issuing credit guarantees raises fiscal risks, which should be managed well. For example, Chile has introduced a refined technique for approximating contingent fiscal liabilities owing to infrastructure investment (Walsh et al. 2011). Developing a comparable approach in LICs would offer enhanced information about contingent fiscal liabilities and shed light on these long-term risks, enabling their better management.

- **Supporting public–private partnerships and private participation in infrastructure:** Private participation in infrastructure has been low in LICs so far. In order to enhance this approach, a number of success factors should be taken into account (Kingombe 2011; Leigland 2010). First, the focus should be on project opportunities with a great probability of success, leaving the rest for funding by government budgets or ODA, which donors and international financial institutions can support by avoiding the pre-emption of potentially bankable projects by ODA (Leigland 2010). Second, a strong business climate – and leadership in easing restrictions on doing business – is critical to the success of private participation in infrastructure projects because it helps facilitate affordable project finance. For example, India's investment-grade credit rating, achieved while the country was still classified as an LIC, has played a big part in its success in terms of private participation in infrastructure. Last but not least, private participation in infrastructure projects in LICs commonly requires extensive upstream preparation, involving sector, policy and legal and regulatory reforms (Leigland 2010). Moreover, one lesson for LICs to consider might be to begin with lighter forms of PPPs, such as operations and management (O&M) contracts, which are easier to enact, carry lower risks and are more likely to be successful, and then, as the environment for and understanding of PPPs improves, to shift towards more complex forms of partnerships with the build–operate–transfer (BOT) approach (Luthra 2012). Guidebooks and toolkits on PPPs can offer additional guidance (e.g. Thomsen 2005; UNESCAP 2011).

14.7.2 Ways forward on trade facilitation

Rationalising trade procedures need not, of course, be alike across countries, insofar as specific needs and capacities of the different implementing countries should be taken account of, above all in the context of LICs. At the same time, there are a number of trade facilitation reforms that recent research considers to be particularly beneficial:[6]

- **Taking account of political economy challenges for trade facilitation:** From a political economy perspective, one important step going forward includes

assessing the major barriers to 'unlocking' reform in trade facilitation in LICs. The question is, for example, to what extent these hurdles are due to a lack of technical capacity, institutional challenges, co-ordination failures or a lack of political will and how incentives can be modified to facilitate reform (Lui and Siziba 2012). Making progress also necessitates assessing who are the main drivers of trade facilitation, who is opposed to reform and why, and what role, if any, external partners can play in driving trade facilitation forward.

- **Supporting the harmonisation of documentary requirements across countries:** According to the OECD, for LICs, the trade facilitation measure that yields the greatest increases in trade flows is the harmonisation and simplification of documents (OECD 2012).[7] LICs score much lower than other country groups in terms of progress regarding the number of documents necessary for exporting and importing, as well as the time required on average for the preparation of such documents, underlining this area as a priority target in future policy interventions and in technical assistance and capacity-building endeavours (OECD 2012). Moreover, compliance with international standards is relatively low (OECD 2012). There should, therefore, be efforts to make trade facilitation practitioners in LICs aware of existing international standards and increase capacities to implement them. LICs should also be involved in the establishment of new international standards.
- **Prioritising paperless trade, with a focus on EDI and national and regional single window facilities:** In most LICs, IT systems capable of electronic data exchange are in the process of implementation or already functional but only a few LICs offer full-time automated processing for customs agencies (OECD 2012). Many developing countries indicate that a single window is planned but numerous LICs have not yet implemented them; this emphasises the importance of efforts undertaken in this area (OECD 2012). Following the example of China, India and Brazil, it is therefore essential to promote EDI and single window facilities for submission and processing of information and documents and to boost the use of information and communication technology and the realisation of paperless trade. The United Nations Network of Experts for Paperless Trade in Asia and the Pacific (UNNeXT) offers guides and toolkits and an online database of trade facilitation and paperless trade experts, facilitating access to relevant expertise to enhance paperless trade implementation, for instance by implementing single window facilities (UNESCAP and UNECE 2012).
- **Minimising physical inspections, in particular through adoption of risk management techniques:** Few LICs have automated risk management implemented so far (OECD 2012). In the light of the Chinese, Indian and Brazilian experiences, LICs should consider introducing risk management techniques in order to reduce the need for inspections. The focus should be on non-intrusive technologies, such as X-ray scanning, to facilitate the cargo inspection process (International Finance Corporation 2006). At the same time, scanning equipment is costly and may, for example, not make adequate

sense in low-volume ports, as the case of extraordinarily high scanning charges in Maputo, Mozambique, illustrates (Bolnick 2007). However, some of the resulting costs might be transferable to other agencies or stakeholders, and the cost of procurement and maintenance of IT systems and X-ray scanners may be financed through processing fees (International Finance Corporation 2006). Establishing certification initiatives, which guarantee certain characteristics of goods through control of the production process instead of each delivery, are a potential alternative to scanning and could also help to bring down the frequency of inspections (ARTNeT and UNNExT 2012).

- **Considering industry- and sector-specific trade facilitation initiatives, such as for agricultural products or low-value exports:** Sector-specific delays, for instance in the context of agricultural goods and food products, are often attributable to a shortage of the necessary testing facilities in the exporting country, and this, in turn, is a frequent problem in LICs. Industry- or sector-specific challenges should therefore be tackled through industry- or sector-specific initiatives, which may also have to take account of providing the testing facilitates that are required for a smooth export process. In addition, trade facilitation policies for low-value exports offer potential for many LICs, inspired by their introduction in countries such as Brazil and the lessons learned from these experiences.
- **Including trade facilitation issues in bilateral and regional free trade agreements:** In order to speed up the process of fulfilling the additional requirements in preferential trade agreements, trade facilitation provisions should be included in such agreements, be they bilateral or regional in nature. The East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA) and Southern African Development Community (SADC), for example, already acknowledge the importance of improving trade facilitation in the context of deepening regional integration and have established a Comprehensive Trade and Transport Facilitation Programme (CTTTFP) in the Tripartite Free Trade Area (Lui and Siziba 2012).
- **One-Stop Border Posts (OSBPs) and trade corridors:** OSBPs and trade corridors should also be tried as part of regional integration. Notwithstanding the verifiable benefits that they generate, only a single OSBP has been implemented in all of Africa, established in 2009 at Chirundu (Lui and Siziba 2012).[8] OSBPs, jointly managed by neighbouring countries, reduce duplication of procedures, allow greater efficiency and improve transit times. They are often connected to other initiatives such as trade corridors and efforts towards more integrated and coordinated border management (Barka 2012).[9] Trade corridors have been at the centre of considerable discussion over the last years, above all across in Africa. The ability to transit goods and people easily along a well-structured trade corridor, with no delays or hindrances such as borders or any other barrier to trade, is a demanding vision that will need a concerted effort and support from every level of the governments within the recognised economic regions.

In sum, these trade facilitation approaches offer the potential to improve a country's trade performance. At the same time, trade facilitation by itself is not likely to generate substantial progress in LICs. Improvements in trade performance call for an integrated programme of strategic investments to tackle the supply-side constraints that constrain a country's possibility to make use of improved trading conditions. For example, recent research shows that trade facilitation reforms could support export performance in Africa, but other reforms, including the quality of the regulatory environment and the quality of the basic transport and communications infrastructure, as discussed above, are required as well (Tomasz and Kirkpatrick 2009). Moreover, the research indicates that the enhancement of on-the-border and behind-the-border policies leads to a higher increase of manufacturing exports in African countries than in the rest of the world. There is, thus, substantial potential for AfT measures to focus on aiding exports in LICs by promoting trade-related infrastructure and trade facilitation against the background of the experiences of emerging economies such as China, India and Brazil and their successful trade performance.

Notes

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2 Table 14.2 suggests that the efficiency of the customs clearance process is the relevant bottleneck for all three countries that offers most room for further improvement.

3 Electronic data interchange (EDI) is the structured transmission of data between organizations by electronic means and is used to transfer electronic documents or business data from one computer system to another computer system, i.e. from one trading partner to another trading partner without human intervention.

4 In the future, a proposed BRICS bank is likely to play an important role in cofunding infrastructure in developing regions. See Xiaotian (2013).

5 At the end of 2010, total SWF assets were around US$4,300 billion, and Noman (2011) projects that they will rise to some $10,000 billion by 2015.

6 For an outline of the World Bank portfolio on trade logistic and trade facilitation support, see World Bank (2011). De Wulf and Sokol (2005) have put forward insightful proposals on cross-cutting issues of customs modernization. In 2007, the European Commission (2007) also laid down clear criteria on a modern customs administration, which were described in its Customs Blueprints.

7 Across all countries, the most significant trade facilitation measures (i.e. those that have the highest impact on trade volumes) are *information availability*, harmonisation and simplification of *documents*, *automated* processes and risk management, streamlining of border *procedures* and *good governance and impartiality* (see OECD 2012).

8 The establishment of the OSBP has led to significant improvements and can be regarded as a success. For example, passengers and commercial traffic stop only once to complete border formalities for both countries, and waiting times for commercial traffic have been reduced from about two to three days to just two hours. In order for comparable initiatives to be established, sufficient political will and adequate budgets are needed (see Kwaranda 2010).

9 There is considerable potential for OSBPs in Africa; see Barka (2012). In Africa, the UK Department for International Development and Japan International Cooperation Agency have been working with EAC, SADC and COMESA to develop the OSBPs that underpin the North–South Transit Corridor. In Southeast Asia, the Greater Mekong Subregion's Cross-Border Transit Agreement (CBTA) entails implementation of single-stop inspection (SSI) and single window inspection (SWI) points. Joint processing initiatives also form part of the multidonor CAREC (Central Asia Regional Economic Cooperation) programme managed by the Asian Development Bank.

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