Chapter 3.

Logistics and Services in the Sri Lankan Economy

Subhashini Abeysinghe and Sirimal Abeyratne

3.1. Introduction

his chapter examines the growth and performance of Sri Lankan services and logistics, and highlights the policy reforms needed to raise their productivity. The chapter commences with a broad overview of the services sector, which is followed by an investigation of one of its most important components, the logistics subsector.

The government has clear priorities for the sector, building on Sri Lanka's locational advantage. The policy documents of successive governments have emphasized the strategy of creating a globally integrated and competitive service hub. The creation of 1 million jobs was a target of the new government elected in 2015. The *Economic Policy Statement* by Prime Minister Ranil Wickremesinghe in Parliament on 27 October 2016 states that the government plans to make Sri Lanka a logistical and business center in the Indian Ocean (Wickremesinghe 2016: 3). Under the previous policy regime too, the government's main policy document—*Mahinda Chintana 2010*—envisaged positioning Sri Lanka as a "naval, aviation, commercial, energy and knowledge hub, serving as a key link between the East and West" (Rajapaksa 2010: 9).

Services and logistics are mainly, but not exclusively, nontraded activities. Reform of services and logistics has proceeded relatively slowly in Sri Lanka, as in many countries. First, as nontraded activities, they have not faced the direct competition that liberalization has imposed on the traded goods sectors. Second, the international benchmarking of productivity and efficiency exercises—such

as ease of doing business, competitiveness, and logistics—that are now used to indicate a country's performance are of relative recent origin. Third, much of the sizable Sri Lankan state-owned enterprise (SOE) sector is concentrated in services. As discussed in Chapter 6, political constraints and unionization have slowed the pace of SOE reform, and by extension that of services and logistics.

The traditional view of the services sector was that it would expand relative to the agriculture and industry sectors as a country's per capita income rose. However, many developing countries, Sri Lanka included, have service sectors that, relative to their gross domestic product (GDP), are approaching the size more commonly found in advanced countries. Moreover, crucially, in contrast to the earlier "stages" approach to economic development, modern thinking emphasizes the synergies between the goods sectors and services. Not only are services increasingly traded across international borders, but also what is now termed "service link costs" is a key determinant of the efficiency of the goods sectors. In addition, the distinction between goods and services is increasingly blurred as many goods embody services as part of the final product.

The chapter is organized as follows. Section 3.2 provides a sketch of the services sector, drawing attention to its size, dynamics, international orientation, and major subsectors. Section 3.3, the major part of the chapter, examines the logistics subsector, including its components, international dimensions, and government policies. Section 3.4 outlines an agenda for reforming the logistics subsector, and section 3.5 concludes. The major interrelated themes, as in other chapters, are missed opportunities and the urgency of reform to maintain the recent growth momentum.

3.2. Services

3.2.1. Sri Lanka's Changing Economic Structure

Sri Lanka has experienced the conventional process of structural change, resulting in a declining share of agriculture and rising shares of both industry and services. The share of the services sector has risen quickly, and since around 2005 it has generated almost 60% of GDP (Figure 3.1 and Table 3.1). A similar transformation has occurred in the labor market, with services employing over 45% of the workforce in 2015 (Figure 3.2). The data also indicate that labor productivity in services is about 25% higher than the economy-wide average.

70 60 50 40 30 20 10 0 1980 1990 2000 2005 2015 ■ Industry Agriculture Services

Figure 3.1: Structural Change in Output, Selected Years, 1980-2015 (%)

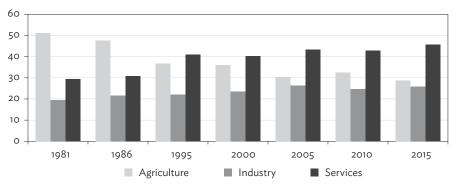
Source: Data from CBSL website.

Table 3.1: Average Annual Rate of Real GDP Growth (%)

Years	Agriculture	Industry	Services	GDP
1981-1985	4.6	2.9	6.2	5.2
1986-1990	1.2	5.3	3.3	3.4
1991-1995	2.3	7.2	5.6	5.4
1996-2000	1.4	6.3	5.8	5.0
2001-2005	0.5	3.4	5.2	4.0
2006-2010	5.5	6.9	6.4	6.4
2011-2015	3.3	9.3	6.5	7.0

GDP = gross domestic product. Source: Data from CBSL website.

Figure 3.2: Structural Change in Employment, Selected Years, 1981–2015 (%)



Source: DCS website.

In fact, the share of services in the Sri Lankan economy is high by regional standards. In 2014, for example, the Sri Lankan share was 7 percentage points higher than the South Asian average and 13 percentage points higher than that for East Asia and the Pacific, excluding high-income economies (Table 3.2).

Table 3.2: Value Added by Industry and Service Sectors,
Selected Asian Economies

		ed Share of 014 (%)	e of Average Annual Growtl 2005-2014 (%)		
Economy	Industry	Services	Industry	Services	GDP
Bangladesh	27.6	56.3	8.4	6.0	6.2
India	30.0	52.6	7.2	9.4	7.6
Nepal	15.6	50.7	3.3	5.3	4.3
Pakistan	20.9	54.1	4.3	4.8	4.0
Sri Lanka	30.6	60.8	6.8	6.7	6.4
South Asia	28.8	53.2	7.0	8.7	7.1
China, People's Republic of	42.7	48.1	10.7	10.6	10.0
Malaysia	40.0	51.2	3.0	7.2	4.9
Thailand	36.9	52.7	3.2	4.1	3.5
Singapore	24.9	75.0	6.5	6.0	6.0
East Asia and the Pacific (excluding high-income countries)	41.7	48.1	9.2	9.5	8.8

GDP = gross domestic product.

Source: Data from World Bank, World Development Indicators.

3.2.2. Major Service Subsectors

The major service subsectors are domestic trade; passenger and goods transport; and banking, insurance, and real estate (Table 3.3). Wholesale and retail trade is the largest single subsector, contributing 18% of GDP in 2015, about 60% of it originating in domestic trade. Transport (passenger and goods) is the second-largest subsector, contributing 12% of GDP. This is a diverse subsector, but it is dominated by land transport (95% of the total), reflecting the unimportance of air and sea transport in Sri Lanka's domestic economy. The third-largest subsector is banking, insurance, and real estate, with less than 12% of GDP. The major subsectors have all grown strongly during the last decade, by at least 6% per annum.

Table 3.3 includes utilities and construction. However, these subsectors are conventionally included as industrial sector activities, together with mining and manufacturing.

Table 3.3: Employment Share in Industry and Service Sectors, Selected Asian Economies (% of total employment)

Economy	Industry	Services	Year
Bangladesh	17.7	35.3	2010
India	21.5	28.7	2013
Nepal	11.2	22.4	2013
Pakistan	22.5	34.0	2014
Sri Lanka	25.5	43.4	2014
South Asia	21.4	29.3	2013
China, People's Republic of	46.9	47.0	2011
Malaysia	27.4	60.3	2014
Thailand	20.3	37.5	2013
Singapore	28.3	70.6	2014
East Asia and Pacific (excluding high-income countries)	41.2	46.6	2011

Source: Data from World Bank, World Development Indicators.

In addition, some of the smaller subsectors have been growing very quickly. Notable among these are hotels and restaurants, and post and telecommunications, both accounting for less than 1% of GDP but both growing at about 13% per annum. The revival of tourism as the security situation has improved after 2009 is a key driver of growth in hotels and restaurants. Tourist arrivals have increased fourfold from less than half a million in 2009 to nearly 1.8 million by 2015, while tourism's earnings have increased twelvefold in the same period, from \$252 million to \$2.98 billion. (Figure 3.3 compares Sri Lanka's share of service sector value added in GDP with that of South Asia and of East Asia and the Pacific.) The rapid growth of telecommunication has been driven by a combination of policy liberalizations and technological innovations, and by a decrease of disruptions caused by security problems. Nevertheless, telecommunication usage remains modest: cellular phone penetration was 116 per 1,000 persons in 2015, and only an estimated 12% of households use the internet.

Government and private services have grown at about the same rate as the economy, somewhat slower in the case of government services, which make up 7.5% of GDP. Much of the increase is explained by the growth in public sector employment rather than wage growth. The historically strong commitment to public education and health has been constrained for much of the recent period by the tight fiscal situation.

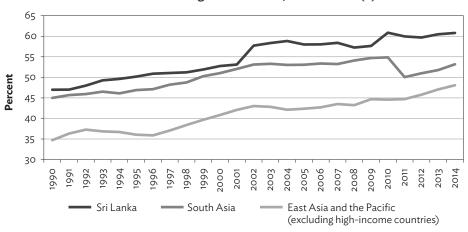


Figure 3.3: Share of Service Sector Value Added in GDP: Sri Lanka in the Regional Context, 1990-2014 (%)

GDP = gross domestic product.

Source: Data from World Bank, World Development Indicators.

Meanwhile, service exports have been growing strongly in recent years, faster than merchandise exports. Services now account for one-third of total exports, up from about 20% a decade ago. Travel accounts for almost half of service exports, with tourism a key factor, as noted.

With regard to employment, of 8.5 million people employed in the fourth quarter of 2015, wholesale and retail trade, and repair of vehicles accounted for the largest share (14.1%). The next largest subsectors, employing in the range of 6.0% to 7.5%, were transport, construction, utilities, and public administration. Education and health, which are primarily delivered by the government, employed a further 6.4%.

Although service sector employment has been growing quite strongly and open unemployment is a relatively low 4.3% of the workforce, unemployment is typically higher among the better-educated people. For example, unemployment is 8.1% for those with the Advanced Level General Certificate of Education and higher qualifications, but only 2.7% for those with educational attainment below the Ordinary Level General Certificate of Education. This is one factor behind continuing high levels of foreign employment. The number of people

gaining foreign employment remains buoyant (Figure 3.4). An interesting feature of recent trends is the decline in the unskilled and housemaid category, from about 80% of the total in the mid-1990s to less than 60% currently. The numbers of professional, skilled, and clerical workers have been rising, reflecting limited employment opportunities at home and opening labor markets abroad. Correspondingly, remittances have been growing strongly and are now equivalent to about two-thirds of merchandise exports.

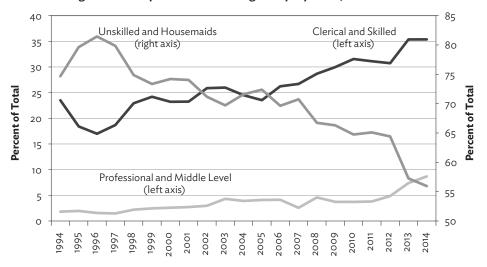


Figure 3.4: Departures for Foreign Employment, 1994-2014

Note: "Percent of Total" = Percent of total departures for foreign employment. Source: Data from Sri Lanka Bureau of Foreign Employment.

3.2.3. Policy and Reform Options

Given the country's strong educational foundations and strategic location, there is much scope for the service sector to be more dynamic, enabled by ongoing policy reform similar to reforms that have been successfully adopted in some of the goods sectors. Three key elements are overall trade liberalization, adjustments of the regulatory arrangements, and decreased government involvement.

First, continue the overall trade liberalization. The reforms of the late 1970s need to be extended and intensified, as discussed in Chapter 4. In turn, an internationally oriented goods sector requires an efficient services sector, so that its service links' costs are competitive.

Second, liberalize the services sector further. Loosen regulatory barriers and strengthen certain regulatory arrangements, particularly those that ensure competitive and efficient services. Unlike trade barriers, tradable services are typically subject to regulatory barriers both at and behind the borders. This constrains the tradable services' global integration and competition. Moreover, there are often discriminatory regulations between domestic and foreign investments in the same services, thus affecting their costs and market structures.

Third, reduce government involvement in the economy by scaling back public ownership in competitive industries and by reforming SOEs more generally. The private sector needs to face fewer regulatory constraints. Government involvement in service supply increases the market risks of, and imposes additional costs on, the private sector, discouraging both domestic private and foreign investment. Often, government service providers are inefficient, thus imposing additional costs on the private sector. The government role needs to shift from service supplier to facilitator, enabling the private sector to play a more effective role in service supply.

3.3. Logistics

The chapter now turns to a detailed examination of the logistics subsector. As noted above, logistics is a significant and diverse component of the services sector, and one where reform is vital to increase Sri Lanka's growth rate and improve its international competitiveness.

3.3.1. An Overview

"Logistics management is a supply chain management component that is used to meet customer demands through the planning, control, and implementation of the effective movement and storage of related information, goods, and services from origin to destination. Logistics management helps companies reduce expenses and enhance customer service" (Techopedia website). The services rendered by logistics providers extend beyond the point of consumption. These services, sometimes referred to as "reverse logistics," include after-sale services provided to customers (e.g., repair); waste management; recycling; and transfer to other parties or to the original manufacturer for reuse, remanufacturing, or resale. Logistics services therefore embrace a wide range of interrelated services and providers, across and within borders.

Logistics efficiency is a critical factor that determines the international competitiveness of a country. As formal trade barriers decline in most countries, the efficiency of logistics provision is often a key determinant of the wedge between international and domestic prices. In many countries, including Sri Lanka, trade liberalization has proceeded more quickly than the regulatory reform that is necessary to ensure that logistics services are comparable to the best international standards. Indeed, the slow reform of logistics services often explains the disappointing outcomes from trade liberalization, and may in turn undermine the reform process.

Technological innovation in the international transport and communication subsectors and in the international organization of production activities, both goods and services, emphasizes the need for efficient logistics services. Global production networks, entailing the fragmentation of production across international borders based on principles of comparative advantage, have developed rapidly in recent decades. Electronic commerce ("e-commerce") is growing rapidly, changing the nature of many internationally traded services.

East Asia has been at the forefront of these changes, while South Asia, including Sri Lanka, has been a relatively minor participant in the goods trade, for reasons discussed in Chapter 4. The international trade in services, facilitated by the rapid growth in e-commerce, has undergone a similar revolution with the advent of business process outsourcing. Here, South Asia has been a major player, led by India. Sri Lanka has also participated in this process, although it could have played a much more significant role given its locational and educational advantages.

The following subsections assess the current status of Sri Lanka's logistics subsector and the impediments to its growth. In turn, this involves examining the components of the logistics value chain, including transport and logistics infrastructure, and the policy, regulatory, and institutional framework. Sri Lanka is compared in a regional and international perspective. This is crucial to the country's reform agenda. Trade liberalization immediately exposes domestic producers to the discipline of import competition. Many of the logistics service providers are in nontraded activities. Therefore, benchmarking against international "best practice" is important. Such an exercise is particularly apposite given the country's proximity to some of the world's most efficient, internationally oriented logistics providers, such as Dubai, Malaysia, and Singapore.

Over time, the types of activities that fall under the ambit of logistics have increased. Traditionally, logistics simply entailed facilitating domestic and international transport and warehousing, which are still the main services provided by most of the world's logistics companies (60%). Now, logistics providers also furnish services such as labeling, packing, quality checking, and managing orders and inventories.

As noted, changes in technology and managerial processes have transformed and elevated the importance of logistics provision. In response to intense competition and to meet increasing consumer demand for lower prices and faster delivery times, global firms have outsourced noncore functions. Such functions include managing inventories, packing, labeling, checking quality, and simple assembly operations, which are now often outsourced to logistics providers (Yang 2014). As noted, the rise of global production networks has accelerated these trends, placing a premium on the efficient transfer of parts and components across international borders. The internet revolution has also spawned the rapid growth of e-commerce.

Logistics services have therefore become an integral and important part of manufacturing globally and a critical determinant of manufacturing and trade competitiveness. The global outsourced logistics market was valued at over \$760 billion in 2015. The largest region in terms of outsourced logistics market size is Asia and the Pacific, followed by Europe and North America (PRNewswire 2016).

3.3.2. The Sri Lankan Logistics Subsector

Sri Lanka enjoys a strategic geographical advantage, given its proximity to the main East–West shipping route, linking East Asia with Africa, Europe, and the East Coast of the United States. Colombo has been a major seaport in Asia since the 14th century, and historically was widely used by merchants from what is now the People's Republic of China as well as India, Persia, and elsewhere. Colombo was ranked the 30th busiest port in the world by the *Journal of Commerce* in 2014. As India has opened up since the early 1990s, Sri Lanka's locational advantage has been further enhanced.

Colombo is the largest transshipment hub for Indian Subcontinent traffic in the region and handles about 35% of the subcontinent's total transshipment traffic (Government of Kerala 2015). The distance to key regional ports from Colombo is less than that from other hub ports in the region and thus the time and cost taken to transport goods via Colombo is lower except for Kandla and Karachi from Dubai (Table 3.4). For example, sailing time from Colombo to Chennai is 1–2 days compared with 4–5 days from Singapore, 6–7 days from

Salalah, and 7–8 days from Aden (Premaratne 2005). Sri Lanka has untapped potential to expand beyond the Indian Subcontinent, to cater to transshipment traffic from Myanmar as well as East Africa (Espina 2016).

Table 3.4: Distance from Feeder Ports to Colombo and Other Major Hub Competitors (nautical miles)

	Hub Port										
Feeder Port	Aden	Colombo	Dubai	Salalah	Singapore						
Kolkata	3,304	1,245	3,134	2,500	1,650						
Chennai	2,650	590	2,359	1,840	1,586						
Chittagong	3,340	1,292	3,155	2,550	1,517						
Cochin	1,850	310	1,483	1,180	1,853						
Kandla	1,700	1,255	907	900	2,801						
Karachi	1,720	1,340	453	890	2,887						
Mumbai	1,657	890	898	950	2,435						
Tuticorin	1,925	175	1,598	1,300	1,617						

Sources: Data from the Colombo Port South Harbor Development Project, Int. Report, Vol. 1, and the Ships Atlas, cited in Premaratne (2005).

Nevertheless, the country's importance as an international logistics hub has declined since the 1950s. More efficient infrastructure providers in the Middle East and Southeast Asia have emerged. A range of factors in Sri Lanka has held back development, including the 30-year conflict lasting until 2009, inward-oriented trade policies, infrastructure bottlenecks, and the regulatory regime. A key policy priority for the government is to regain its earlier advantage as an international logistics hub.

As will be discussed below, Sri Lanka now lags behind the more efficient regional logistics providers. According to the Chartered Institute of Transport and Logistics of Sri Lanka, the country's cost of logistics is as high as 23% of GDP, compared with the global benchmark of 10% (Hathiramani 2010). The Sri Lankan figure is higher than most regional economies, including the People's Republic of China at 21%, Malaysia at 13%, Singapore at 8%, the Republic of Korea at 16%, and Thailand at 20% (Indonesia Investments 2013; Arumugam 2012). Such high logistics costs undermine the competitiveness of Sri Lanka's trade and industry, a point frequently emphasized by the efficient Sri Lankan textile and garment industry, especially as it strives to position the country as a destination for high-end fashion apparel (Lopez-Azevado and Robertson 2016).

International Comparisons. A widely used source is the World Bank's Logistics Performance Index. Although the country ranking improved significantly with the end of civil war in 2009, Sri Lanka consistently lags behind all relevant regional comparators (Table 3.5). Furthermore, the Logistics Performance Index comprises six subindexes, each measuring different factors that affect the efficiency of a country's logistics services. Sri Lanka fared poorly in comparison to key competitors in almost all indicators (Table 3.6). The country fares better only in logistics quality competence against Oman and Pakistan, and in tracking and tracing, against Pakistan. Clearly, the reform agenda is a very large one.

Table 3.5: Logistics Performance Index: Selected Countries, Country Ranka

Year	India	Malaysia	Oman	Pakistan	Singapore	Sri Lanka	UAE
2010	47	29	60	110	2	137	24
2012	46	29	62	71	1	81	17
2014	54	25	59	72	5	89	27

UAE = United Arab Emirates.

Source: World Bank (2014b), accessed 10 September 2016.

Table 3.6: Logistics Performance, Subindexes, Selected Countries' Rank, 2014

Index	India	Malaysia	Oman	Pakistan	Singapore	Sri Lanka	UAE
Customs	65	27	74	58	3	84	25
Infrastructure	58	26	57	69	2	126	21
International Shipments	44	10	31	56	6	115	43
Logistics Quality Competence	52	32	73	75	8	66	31
Tracking and Tracing	57	23	80	86	11	85	24
Timeliness	51	31	67	123	9	85	32

UAE = United Arab Emirates.

Source: World Bank (2014b), accessed 10 September 2016.

The analysis reported in the Global Competitiveness Index 2016 largely confirms the logistics rankings, although Sri Lanka does compare somewhat more favorably (Table 3.7). It lags well behind Malaysia and Singapore, but compares more favorably with South Asian neighbors. For Sri Lanka to reemerge as a major South Asian logistics hub, it needs to significantly outperform its neighbors, especially India, as Singapore has done in the Southeast Asian context.

^a Sri Lanka was not ranked in the 2016 Logistics Performance Index.

Table 3.7: Quality of Infrastructure, Selected Countries' Rank Among 138 Countries

Infrastructure	Bangladesh	India	Malaysia	Singapore	Sri Lanka	Thailand	Viet Nam
1. Quality of Overall Infrastructure	120	51	19	2	55	72	85
2. Quality of Roads	113	51	20	2	43	60	89
3. Quality of Railroad Infrastructure	72	23	15	5	43	77	52
4. Quality of Port Infrastructure	89	48	17	2	60	65	77
5. Quality of Air Transport Infrastructure	115	63	20	1	58	42	86
6. Available Airline Seat-Kilometers, (million/week)	58	8	23	20	54	15	29

Source: WEF (2016) accessed 10 October 2016.

Output. The closest sectoral classification in the national accounts that can be taken as representative of logistics is transport of goods and passengers, including warehousing,² and postal and courier services. In 2015, transport of goods and passengers was valued at \$2.1 billion and accounted for 10.8% of GDP, while postal and courier services were valued at just 0.04% of GDP. In recent years, the transport sector has been growing at about 6% annually, in line with the economy. About 528,000 people were employed in transport and storage,³ or 6% of the total employed workforce. With regard to exports, in 2015 the value of transport services was \$2 billion, about half of which was sea and air freight, which generated about 12% of total service exports.

3.3.3. Transport Infrastructure

Transport infrastructure includes seaports, airports, railroads, and roads. They all play a vital role in determining the efficiency and competitiveness of a country's logistics services. They have somewhat different institutional and regulatory characteristics and are therefore reviewed separately.⁴

The current published data do not provide data separately for transport of goods and transport of passengers.

The International Standard Industrial Classification (ISIC) classification is used when calculating employment. The national account classification measures contribution to GDP. Thus, the two measures are different.

Much of the data in this subsection comes from the CBSL (2015), Annual Report, particularly Chapter 3, Economic and Social Infrastructure.

Seaports. Sri Lanka has four main commercial ports: Colombo on the western coast, Hambantota and Galle on the southern coast, and Trincomalee on the eastern coast. The Port of Colombo is the main international gateway, accounting for over 95% of the total cargo by volume, and is thus the main focus of this subsection.

As noted, the Port of Colombo's location makes it a natural transshipment hub port for the Indian Subcontinent region. About 75% of the cargo the port handles is being transshipped in that region. Until 2013, the port's growth was constrained by capacity limits—its two terminals could together handle only 4.7 million twenty-foot equivalent unit (teu) per annum, and its depth could not accommodate new generation mega vessels. Three new terminals are being provided, including with Asian Development Bank funding. The Colombo South Terminal—Colombo's first deep water terminal—has been completed and operational since 2013. The terminal can handle 2.4 million teu. By the end of 2016, the terminal had handled 2 million teu. The terminal operator noted that 70% of the cargo handled by the port was generated by ultra large and very large container carriers (Colombo International Container Terminals website). The three new terminals are expected to more than double the port's capacity by 2023, to 11.7 million teu per annum.

The facilities of Hambantota Port in Sri Lanka's southern region, are currently underutilized, but its use could increase in the future. It is strategically located within 10 nautical miles of the East–West shipping lane and has received very large People's Republic of China-funded investments.

Airports. Sri Lanka has 2 international and 18 domestic airports. Most of the domestic airports are operated by the Sri Lankan Air Force. Bandaranaike International Airport (BIA) is the main airport serving international passenger and cargo movements. A second international airport, Mattala Airport, commenced operations in 2013 but remains hugely underutilized.

BIA is relatively small by international standards. It is designed to handle 6 million passengers and 250,000 tons of cargo annually. Passenger numbers are growing quickly in response to the dynamism of the tourism sector. The airport reached its designated passenger capacity in 2011. In 2016, BIA handled over 9 million passengers (Rafeek and Hemachandra 2017). Expansion of the airport commenced in 2014, planning to increase BIA's passenger capacity to 15 million per annum by 2019; however, the plan does not include increasing cargo capacity. Discussions to address this were ongoing at the time of writing this chapter.

Land Transport. Sri Lanka's road network density is one of the highest

in Asia. The present network comprises about 11,700 kilometers (km) of national highways, 15,500 km of provincial roads, 65,000 km of local authority roads, and 24,000 km of roads owned or controlled by irrigation, wildlife, and other authorities (GSL 2007). Work has commenced on a major expressway connecting Colombo to the northern regions through the Central Province (Kandy). Nearly 98% of total domestic freight is carried by road.

During the last 5 years, the road network has been upgraded by introducing expressways. Three are operating. The Southern Expressway, covering 126 km from Colombo to Galle, commenced operations in 2011. In 2014 it was extended to Matara, connecting the south of Sri Lanka to Colombo. The Katunayake Expressway (26 km) opened in 2013 and connects Colombo with BIA. The Outer Circular Highway (19 km) is in the Colombo Metropolitan Region. It opened in 2015, and passes through Colombo and Gampaha administrative districts connecting to the Southern Expressway. Work has commenced on a major northern expressway connecting Colombo to the northern regions through the Central Province and Kandy (MOHEH n.d.).

The rail network is underdeveloped. About 90% of the 1,500 km of rail is single track, resulting in very slow average speeds of 18–33 km per hour. Much of the track network needs maintenance. As a result, rail accounts for just 2% of total freight movements. Plans are slowly proceeding for railway electrification and modernization under the Western Region Megapolis Project. The expansion of the rail network and the Port of Colombo is hampered by land acquisition issues.

In addition to inland container depots, the Western Region Megapolis Project plans to build an "Aero City," a "Logistics City," and a "Logistics Corridor." Multimodal connectivity such as dedicated roads, expressways, and railway links are proposed for freight handling and transport. Industrial clusters are to be developed to accommodate facilities such as transshipment, dry port, warehousing, cold storage, vehicle repair, and cargo distribution. The facilities will also be integrated with the 13 industrial parks and export processing zones managed by the Board of Investment; six of the industrial parks and export processing zones are in the Western Province.

Impediments to Transport. Congestion within and beyond the Port of Colombo continues to be a major problem. "During the peak city hours, it is usual to find about 40 container-laden semi-trailers queuing to leave the port via Gate 6. This is due to police giving priority to city traffic outside the gate and the long time taken by Sri Lanka Customs to clear [fully loaded] containers" (ADB 2012: 24). Approximately 2,300 containers enter and leave the Port of

Colombo daily (Ministry of Megapolis and Western Region Development n.d.). A similar line of semi-trailers awaits entry to the port at the same time. Congestion is a key problem in transporting cargo between factories and the Port of Colombo and BIA. Currently, only one access road connects the Port of Colombo and Colombo City. The Road Development Authority is planning to alleviate this bottleneck by constructing an elevated port access highway that will run through the port and beyond the current road.

The number of passenger vehicles within Colombo City area is also increasing rapidly, resulting in a significant reduction of vehicular travel speed. A Ministry of Transport survey found that the average speed of vehicles entering Colombo is 13 kilometers per hour (km/h) from Galle, 16 km/h from Negombo, 14 km/h from Malabe, and 16 km/h from the High Level Road (Lankacnews.com 2014 and MOT 2014). In response to the rising congestion and lower average speeds, transport operators are increasing their charges.

Compounding these problems on the freight side is the absence of central collection or distribution centers for access by rail. The result is double handling of cargo, with cargo being trucked from different locations to the train station at the point of origin and again trucked from the train station to a port or vessel at the point of departure, thereby increasing the cost of transporting cargo via rail. Another significant drawback is the lack of rail linkages to new port terminals in the Port of Colombo. Further, because trucks do not pay road user charges, trucking by road is effectively subsidized. This also makes rail freight a less attractive alternative at present (Kumarage 2004). Stakeholder interviews revealed that the utilization of expressways for trucking remains low; one reason is that truckers consider that the highway toll is too high. Powerful trucking interests are also holding back the transition from road to rail.

Underlying these problems is the absence of long-term network planning. As stated in the National Road Master Plan 2007–2017, the development of roads (and other transport infrastructure) has been mostly reactive to emerging land use and transport patterns (GSL 2007: 3). Two major infrastructure development projects—the Colombo South Harbour Expansion project and the BIA expansion project—demonstrate the impact of weak long-term planning and lack of an integrated approach to transport. For example, the port expansion plan has failed to make the necessary provisions to connect the new terminals at the Port of Colombo via rail to the rest of the country, and the airport passenger expansion plans originally made no provision for increased cargo capacity.

Interministerial and interagency cooperation and coordination need strengthening. Four ministries are working separately and in parallel in planning the development of transport infrastructure:

- for the Road Master Plan—the Ministry of Transport and Civil Aviation;
- for the Western Region Megapolis Master Plan—the Ministry of Megapolis and Western Region Development;
- for the Port Master Plan—the Ministry of Ports and Shipping; and
- for the Northern Expressway—the Ministry of Higher Education and Highways.

3.3.4. The Policy, Regulatory, and Institutional Framework

As noted, policies affecting the logistics subsector's performance are set by several government agencies that are separately responsible for transport, investment, commerce, industry, and customs and border management. The lack of a unified approach to logistics policy can lead to inefficiencies, duplication, and inconsistencies. In other countries, success at coordinating the logistics subsector has been based on developing a national logistics master plan and strategy. For example, the Republic of Korea has been developing comprehensive logistics plans and regulations since the 1990s (ESCAP 2013). The country's performance in terms of cost and time taken to engage in international trade (Table 3.8) demonstrates the success of good planning and execution. The Republic of Korea enacted the *Framework Act on Logistics Policies in 2007*. The country formulates a National Logistics Master Plan every 5 years, based on the guidelines set by the *Act* (ESCAP 2013). The other high-performing logistics economies of East Asia have broadly similar approaches. By contrast, Sri Lanka does not have a logistics or a maritime sector policy or strategy in place at present.

Table 3.8: Trading Across Borders: Performance of Selected Asian Countries

Indicator	India	Indonesia	Korea, Rep. of	Malaysia	Philippines	Singapore	Sri Lanka	Thailand
Border Compliance Cost (\$)								
Export	416	254	185	321	456	335	366	223
Import	574	383	315	321	580	220	300	233
Border Compliance Time (hours)								
Export	109	39	14	20	42	12	43	51
Import	287	99	6	24	72	35	72	50
Documentary Compliance Cost (\$)								
Export	102	170	11	45	53	37	58	97
Import	145	160	27	60	50	37	283	43
Documentary Compliance Time (hours)								
Export	41	72	1	10	72	4	76	11
Import	63	144	1	10	96	1	58	4

Source: World Bank (2014b).

Given the wide scope of activities covered in the logistics subsector, countries usually do not have a dedicated ministry or agency overlooking the subsector. The more common approach has been to create an inclusive public-private framework in a national-level committee or council comprising key public and private stakeholders and academics to design and implement logistics policy for the country. Sri Lanka does not have such a council or committee. However, the chambers of commerce have recently initiated committees to address impediments faced by the subsector and propose policies and strategies to the government. An example is the National Agenda Committee on Logistics and Transport set up by the Ceylon Chamber of Commerce. The Committee includes the private sector, public sector officials from relevant organizations, and academics specializing in transport and logistics (CCC 2016a).

Regulations and administrative procedures governing logistics activities have a significant impact on the performance of the logistics subsector. Overly complex administrative procedures and red tape are often obstacles to developing logistics centers. Ad hoc and frequent changes to the import tax regime during the last decade also impact logistics performance. The revisions have resulted in

the introduction of multiple para tariffs including, for example the Import Cess, the Port and Airport Development Levy, and the Special Commodities Levy, which have increased the level of protection and reduced the transparency and predictability of the import tax regime.

Facilitating trade by enhancing efficiency in the administration and procedures associated with cross-border trade can help improve the efficiency of logistics services. Hence, reducing red tape can significantly enhance the overall performance of the logistics subsector and facilitate value-added logistics services.

Sri Lanka ratified the Trade Facilitation Agreement in May 2016, which was concluded at the World Trade Organization's 2013 Bali Ministerial Conference. The Trade Facilitation Agreement contains provisions for expediting the movement, release, and clearance of goods, including goods in transit. It also sets out measures for effective cooperation between customs and other authorities on trade facilitation and customs compliance issues. The Agreement contains provisions for related technical assistance and capacity building (WTO 2016). Sri Lanka's government is in the process of compiling the commitments it will make as part of this protocol.

Returning to the World Bank's Doing Business Index (Table 3.8), Sri Lanka has consistently fared well compared with India, except for documentary compliance (World Bank 2014a). This creates scope for Sri Lanka to develop as a business-friendly bridge to India and the rest of South Asia. However, as noted the country still lags well behind the most efficient Southeast Asian comparators.

Stakeholder consultations also revealed that the logistics subsector suffers from the lack of regulation in some areas and overregulation in some other areas. For example, most stakeholders interviewed were of the view that trucking and ports and terminal operations are not adequately regulated, impeding the growth and efficiency of the logistics subsector. Trucking in Sri Lanka is fully deregulated. There is no rate regulation and restrictions on vehicle sizes are not adhered to. One assessment noted that, while at the organized corporate level the trucking industry's efficiency is reported to be acceptable, the industry has numerous individually owned trucks that have a multitude of problems, including unroadworthy vehicles and high accident rates (Kumarage 2004: 2).

While proposals have been made to reduce the age limit of imported container trucks to improve the quality of the vehicles and thereby the quality of the services (GSL 2004), the proposals have not yet been implemented. Increasing private sector participation in port terminals has highlighted the need

for an independent regulator for Sri Lanka's ports. At present, the Sri Lanka Port Authority (SLPA) functions both as a regulator and an operator; this conflict of interest highlights the need for an independent regulator (CCC 2016b).

Sri Lanka Customs suffers from overregulation. Its regulations need to be updated to reflect modern trade practices and use of technology. A key proposal to facilitate modern trade and logistics practices is to amend the Sri Lanka Customs Ordinance, originally enacted in 1869. The Ordinance has been amended several times, but stakeholders note that the current law still fails to address a number of areas. At present, the government is taking measures to amend the existing act (Lanka Business Online 2016).

Sri Lanka introduced *Commercial Hub Regulation No. 1 of 2013* to facilitate and encourage value-added logistics activities and to reduce red tape. According to the regulation, companies engaging in entrepot trade, off-shore businesses, front-end services to clients abroad, operations of headquarters, and value-added logistics services are exempted from exchange control, customs, and import and export control regulations. However, the companies have to secure 65% of their funding from foreign sources and obtain minimum investments ranging from \$3 million for companies engaging in value-added logistics services to \$5 million for companies engaging in entrepot trade. Additionally, the activities have to be carried out in areas designated by the regulation as free ports and bonded areas.

Another regulatory barrier highlighted as preventing growth in the logistics subsector and greater participation by global firms is the restriction of foreign ownership in ship agency and freight forwarding services. Per the Gazette Notification issued in 2002 under the *Exchange Control Act No. 24 of 1953*, foreign ownership of shipping agencies and freight forwarding is restricted to 40% (Gazette 2002). The commercial hub regulations introduced in 2013, however, remove foreign ownership restrictions on investments in logistics services (such as freight forwarding) provided the firms meet the conditions outlined (such as minimum capital requirements) and operate within designated free ports and bonded areas (Gazette 2013). The associations representing freight forwarding companies have resisted unconditional liberalization of the sector. Ship agency services are still limited to 40% foreign ownership and the industry is opposing further liberalization of the sector (*Daily Financial Times* 2015).

Information and communication technology is frequently used to improve the efficiency of border regulations, enhance transparency and accountability, and thereby reduce the time and cost of compliance. Sri Lanka's initiatives in this field date back to the 1990s. The country also started to automate customs functions in the early 1990s. However the results have been mixed. In 2012, Sri Lanka

Customs launched an initiative to introduce the "Single Window," a facility that enables all parties involved in trade and transport to lodge all necessary trade-related documents and information to be submitted at once at a single entry point to fulfill all trade and regulatory requirements. However, the current Single Window's operations do not meet the criteria of a single window because (1) it has only partly automated the trading process; (2) traders still have to produce hard copies of documents to clear goods; and (3) only a few border agencies are linked to the electronic system, with a majority still being outside it. The stakeholders linked are the traders, customs brokers, transport operators, port operators (e.g., terminals), some banks, and a few border agencies such as the Sri Lanka Tea Board (Lankadeva 2016).

The SLPA started to move toward electronic communications in the mid-1980s, much earlier than Sri Lanka Customs. The SLPA commenced developing electronic data interchange activities in 1986 with the maritime information network—MARINET—which came into effect in 1989/1990. All shipping agents involved in container handling were connected electronically with the SLPA through the MARINET system (UN 2003). In 2009, the SLPA purchased a new terminal management system called NAVIS (Wijayasiri and Jayaratne 2009). The new system is web based and several electronic data interchange modules are available to exchange information between the SLPA and agents (Navis.com 2017).

3.3.5. Regulatory, Policy, and Institutional Impediments

The current Sri Lankan logistics regulatory arrangements lack harmonization. For example, transport policy and infrastructure development plans for airport, road, and rail connectivity are largely focused on facilitating passenger movement and provide little recognition of the needs of freight movement. Further, because transport infrastructure related to road, rail, sea, and air is developed with little or no communication and coordination between their agencies, the networks fail to facilitate the flow of cargo and passengers. Another example is that trade facilitation initiatives are not recognized as a vital component of better logistics services.

Private sector respondents surveyed complained about the inefficient administration of regulations, fees, and levies imposed and the lack of transparency and accountability. For example, although Sri Lanka generally has the potential to develop entrepot trade with the broader South Asian region and beyond, to do so requires minimal red tape. Cargo that is brought in for entrepot trade and is for re-export should be processed fast with minimum intervention by Customs and should not be subject to duties or levies. However, interviewees noted that the current government procedures and resulting red tape hinder development of the entrepot trade (a view supported by media, e.g., *Sunday Times* 2013).

Exporters of perishable goods find the process of checking for regulatory and security compliance time consuming and inefficient. Interviews with the exporters of perishable goods revealed that the goods are checked separately by four different authorities before loading onto aircraft—the Air Force, the National Plant Quarantine Service, Customs, and Sri Lankan cargo. The process of checking, from quarantine until the goods are handed over to the Sri Lankan cargo officials, can take 10–12 hours. Other grievances include inadequate training of agency officials on how to handle perishable cargo, frequent pilferage of items packed for export, lack of surveillance cameras in inspection areas, and lack of temperature controlled areas for inspecting perishable items.

Sri Lanka's potential for increasing value-added logistics services through multi country consolidation (MCC) is considered to be high. MCC is a cost-effective solution that consolidates cargo from different countries of origin to build full container loads. MCC helps companies that import small volumes of goods from multiple countries to take advantage of the more economic freight rates for full container loads (OOCL Logistics website). The Port of Colombo is only in the primary stage of MCC activities, compared with ports in Dubai, Salalah, and Singapore (Gajanayake and Mudunkotuwa 2015). A key competitive disadvantage highlighted by stakeholders and confirmed by research is the relatively high cost of operating MCC operations in Sri Lanka compared to other major MCC hubs in the region, owing to the high levies imposed (Gajanayake and Mudunkotuwa 2015). Moreover, MCC operations are only permitted within the Port of Colombo premises. The space limitations and bureaucratic red tape within the port hinder the development of MCC (Whybrow 2008).

The time and cost taken to demonstrate compliance with border regulations have led to traders increasingly outsourcing this section of the supply chain to logistics companies and clearing and forwarding agents. In effect, the complexity has created a business opportunity. Companies with good access to information and networks offer to assist clients to comply with government regulations. The downside is that the costs of trading are increased by the payments to the clearing agents, which may include "unofficial" payments.

Respondents also complained about the slow progress in introducing paperless trade and the Single Window facility. Evidently, the absence of political will and bureaucratic resistance has stymied progress. International evidence, for example from Malaysia, has demonstrated that the success of a single window facility depends on having an effective mechanism to monitor and evaluate its progress. Sri Lanka currently has no such mechanism.

Finally, stakeholders interviewed in both the public and private sectors stated that successive governments have introduced policies and regulations that affect the logistics subsector, but have done so with limited or no consultations with stakeholders, including the government agencies delivering the services, while formulating the policies and regulations or before their implementation.

3.4. Recommendations for Logistics

Nine recommendations follow from the foregoing analysis.

Devise a master plan and a strategy to develop the logistics subsector.

The private sector highlights the lack of a clear policy on maritime and logistics as a key impediment to their development (Kotalwela 2016). A national-level logistics plan and/or strategy will help create synergy between different policies and plans governing aspects of logistics activities. This will help prevent duplication and inconsistencies in the current policy-making process. The overarching purposes of a national logistics plan/strategy are to (1) set out the national priorities and goals for logistics in the short, medium, or long term; and (2) bring together all the key stakeholders, both private and the public, to ensure synergy between different plans and strategies.

Establish a national-level committee on logistics. Logistics-related activities fall under the ambit of several government and private sector stakeholders. The development of a logistics strategy and policy requires continuing dialogue among stakeholders, and their active involvement is important for effective implementation of the strategy. Therefore, a formal national coordination mechanism—a national-level committee or council comprising senior representatives from all key agencies as well as academics—is highly desirable. The committee's or council's objective would be to coordinate and serve as a focal point for policy matters relating to logistics.

Ensure that objectives of city development are integrated into logistics development. To position Colombo to be a key maritime logistics hub in the region, urban plans (e.g., the Western Region Megapolis Plan) aimed at developing a hub need to take measures to integrate the objectives of city development into logistics development and to ensure harmony between city functions and port functions, including logistics centers. This is of particular concern as the Port of Colombo is facing challenges due to unplanned infrastructure development around the port (e.g., congestion within and outside port gates, and scarcity of land to develop into logistics parks).

Introduce a central data exchange to facilitate seamless flow of information. It is important to fast-track implementation of the Single Window facility. For Sri Lanka to compete with other logistics hubs in the region, the Single Window must ultimately be a central data exchange facility similar to the Republic of Korea's KTNET and Singapore's TradeNet. The experience of other countries clearly demonstrates the benefit of such a system in improving the efficiency of logistics services and reducing the time and cost of conducting cross-border trade. Having a paperless trading environment is important to achieve the government's economic policy objectives.

Introduce regulations to ensure fair competition and standards for service quality. The quality of logistics services can be improved by setting up minimum requirements for entry and regulating the standards of operation. An example is introducing voluntary certification schemes. Many authorities in the region have introduced certification schemes that encourage companies to improve their operations (ESCAP 2013). Such certification signals to the customer that the service provider has been vetted by government authorities and recognized as a company of good standing. To encourage certification, the company is given special benefits such as decreased frequency of inspection; facilitation measures, such as expedited clearance or "green lane" treatment—forgoing physical inspection; high priority when entering public facilities; dedicated officials to work with the company; and high-priority status for participating in other government schemes, such as financial support (ESCAP 2013).

Facilitate greater participation of global leading third-party logistics providers. The presence of internationally competitive logistics companies is critical in developing a logistics hub. Therefore, logistics policy should encourage and support domestic logistics firms to expand internationally and encourage global logistics firms to expand locally. The experiences of advanced international ports demonstrates that the increased use of third-party logistics service providers is closely related to the successful operation of logistics centers in ports (ESCAP 2002). The presence of global firms in the Port of Colombo's logistics provision would help to enhance its credibility as a logistics hub and encourage global manufacturing firms and retailers to use the Port of Colombo as a center for value-added logistics activities. Removing foreign ownership restrictions alone will not suffice to encourage investments by global third-party logistics providers. Other regulatory and procedural bottlenecks that undermine the ability of private companies to provide high-quality logistics services at a reasonable cost and speed must also be addressed, such as improving the functioning of the public sector apparatus.

Increase the focus of transport infrastructure development plans on the logistics subsector's needs. Logistics have not been given sufficient attention in plans to develop modes of transport infrastructure, specifically for air, roads, and rail. Plans for the logistics subsector have been largely limited to seaport development. That the planned expansion of BIA's facilities originally failed to take into account and integrate the expansion of cargo facilitates is a serious drawback that needs to be redressed as a matter of priority.

Fast-track implementation of logistics infrastructure. Sri Lanka has several plans in place to develop state-of-the-art logistics parks, cargo villages, dry ports, and inland container depots with good connectivity to seaports and airports. It is important to fast-track the development of these logistics facilities. The world's leading logistics hubs have succeeded because they have up-to-date infrastructure to facilitate value-added logistics services.

Implement far-reaching SOE reform. SOE logistics providers play a very large role in Sri Lanka's logistics subsector. There is nothing wrong in principle with a large SOE presence, as the Singapore experience has demonstrated. However, as shown in Chapter 6 of this book, parts of the Sri Lankan SOE sector are inefficient and resistant to reforms of the sectors in which they operate. The reform of SOEs in logistics will therefore need to be part of a broader SOE reform agenda.

3.5. Conclusions

Consistent with the narratives developed in the other chapters of this book, there is great scope for productivity-enhancing reforms in services and logistics, reforms that will both accelerate economic growth and generate improved distributional outcomes. With its well-educated population, Sri Lanka has a latent and thus far underexploited comparative advantage in most service subsectors. The country's strategic location gives it great opportunities to regain its historic status as a key regional and international hub for transport and associated services.

Improved logistics services link directly to, and underpin, the performance of the other sectors and issues examined in this book. More efficient logistics will boost the performance of manufactured exports and of agriculture. Some SOEs are major logistics providers, and reforming them is central to better logistics. Greater efficiency of the state-owned logistics providers will have beneficial fiscal policy effects by reducing their claims on the budget. Efficient mass transit and other key services are essential for efficient and livable cities.

Better infrastructure is needed for labor markets to operate more effectively, including connecting geographically marginalized workers to the country's commercial mainstream.

More investment is needed in all services subsectors, especially in logistics. Most of this investment will have to come from the private sector, both domestic and international, because many services are better operated by the private sector and to relieve the government's constrained fiscal position. But the government will need to be the key driver of this growth. A clear, credible, and transparent business climate is needed for investors to be comfortable with placing their resources in infrastructure projects, which usually have long gestation periods. Regulatory reform is critical to open up all sectors to the private sector and to ensure that SOEs compete with the private sector on an equal footing. SOE reform will result in increased efficiency and relieve their drain on the government budget.

Some major infrastructure projects—for example, ports, airports, major highways, and telecommunication facilities—have natural monopoly characteristics. In such cases, the government's role is to create arms-length regulatory agencies that protect the national interest.

References

- Arumugam, M. 2012. *The Role and Contribution of the Logistics Sector as a Trade Facilitator.* Seminar on Assessing the Contribution of the Maritime Industry to Malaysia's Economy. Kuala Lumpur. 20 July.
- Asian Development Bank (ADB). 2012. Sri Lanka Multimodal Transport Report. V1. Mandaluyong City: ADB. https://www.adb.org/sites/default/files/project-document/81062/41249-022-tacr-01.pdf
- Central Bank of Sri Lanka (CBSL). 2015. *Annual Report 2015*. Colombo: Central Bank of Sri Lanka.
- _____. Website. Data. http://www.cbsl.gov.lk
- Ceylon Chamber of Commerce (CCC). 2016a. Ceylon Chamber Launches 'National Agenda Committees' to Spur New Thinking on Strategic Economic Issues. Media release.
- ______. 2016b. Sri Lanka Economic Summit—Insights from Audience Survey. Colombo: CCC.
- Colombo International Container Terminals. Website. http://www.cict.lk/ CICT%20surpasses%202%20m%20TEU%20milestone%20in%20 second%20full%20year%20of%20operation.php
- Council of Logistics Management, United States. 1991. Cited in *Encyclopedia Britannica*. https://global.britannica.com/topic/Council-of-Logistics-Management
- Daily Financial Times. 2015. Outgoing SLFFA Chairman Outlines Challenges Facing Freight Forwarders. 15 July.
- $Department\ of\ Census\ and\ Statistics\ (DCS).\ http://www.statistics.gov.lk$
- Espina, K. 2016. Colombo International Container Terminals Seeks 10% Volume Growth in 2016. *Lloyd's List*. 20 April.
- Gajanayake, H., and M. Mudunkotuwa. 2015. *A Study of Developing Colombo Port as a Major Multicountry Consolidation (MCC) Hub in South East Asia Region with the Help of Improving the Effectiveness of the MCC Activities.*Proceedings of 8th International Research Conference, 27–28 August, Kotalawela Defense University. p 218.
- Gazette of the Democratic Socialist Republic of Sri Lanka (Extraordinary) (Gazette). 2002. *Notices under the Exchange Control Act (Chapter 423 of the CLE*). No. 1232/14, 19 April. Section 3.
- _____. 2013. The Finance Act No. 12 of 2012. No. 1818/30. 11 July. Section 7.
- Government of Kerala. 2015. Feasibility Report—Development of Vizhinjam International Deepwater Multipurpose Port through PPP. Thiruvananthapuram: Government of Kerala.
- Government of Sri Lanka (GSL). 2004. *National Ports and Shipping Policy*. Colombo: GSL.

- Hathiramani, J. 2010. 23% of GDP Logistics Costs Resulting in Too-High Cost of Living. *Sunday Times*. 18 July.
- Indonesia Investments. 2013. World Bank: Logistics Costs Reduces Economic Potential of Indonesia. 10 September. http://www.indonesia-investments.com/news/news-columns/world-bank-report-logistic-costs-reduce-economic-potential-of-indonesia/item1079
- Journal of Commerce (JOC). 2014. Top 50 Global Container Ports. http://www.joc.com/port-news/international-ports/joc-top-50-world-container-ports_20150820.html
- Kotalwela, H. 2016. To Become Logistics Hub, SL Needs to Develop Human Capital: Maritime Professionals. *Daily Mirror*. 22 August.
- Kumarage, A. 2004. Regulatory Impediments to Land Transport Sector in Sri Lanka, Workshop on Regulatory Impact Assessment. Sri Lanka Institute of Policy Studies. Colombo. 22–23 June.
- Lanka Business Online. 2015. Full text of Economic Policy Statement made by PM in Parliament. *Lanka Business Online*, 5 November. http://www.lankabusinessonline.com/full-text-economic-policy-statement-made-by-pm-in-parliament
- ______. 2016. CCC Proposes Amendments to Sri Lanka's Customs Ordinance.

 12 September. https://www.wto.org/english/news_e/news16_e/
 fac_31may16_e.htm
- Lankacnews.com. 2014. The Speed a Vehicle enters Colombo is 10 KMPH....Now it's 16 KMPH. In VivaLanka.com, 20 March. http://www.vivalanka.com/newspage/627373ai-the-speed-vehicle-enters-colombo-10-kmph-now-it-s-16-kmph
- Lankadeva, A. 2016. Sri Lanka Customs Single Window. Seminar on Sri Lanka Customs Single Window, Current Status and Future Outlook, National Chamber of Exporters, Colombo, 10 June.
- Lopez-Azevado, G., and R. Robertson, eds. 2016. Stitches to Riches? Apparel Employment, Trade and Economic Development in South Asia. Washington D.C.: World Bank.
- Ministry of Megapolis and Western Development. n.d. Western Region Megapolis Planning Project, Infrastructure needs, Draft Report, Working Group 03, p. 56.
- Ministry of Transport (MOT). 2014. *Urban Transport System Development Project* for Colombo Metropolitan Region and Suburbs. Technical Report No. 2 Present Road Network and Traffic Condition. Colombo: MOT. http://open_jicareport.jica.go.jp/pdf/12176681_02.pdf

- Navis.com. 2017. navis.com/news/in-news/sri-lankas-sagt-goes-live-navis-terminal-system (accessed 19 August 2017).
- OOCL Logistics. Multi Country Consolidation. http://www.oocllogistics.com/eng/internationallogistics/multicountryconsolidation/Pages/default.aspx (accessed March 2017).
- Premaratne, H. 2005. Can Colombo Port Emerge as Mega Hub of South Asia. 25 February. http://www.skyscrapercity.com/showthread.php?t=184331
- PRNewswire. 2016. World Logistics Market 2016 Analysis: Outsourcing, E-Commerce Driving Growth. http://www.prnewswire.com/news-releases/world-logistics-market-2016-analysis-outsourcing-e-commerce-driving-growth-571059941.html
- Rajapaksa, M. 2010. *Mahinda Chintana: Vision for the Future, Presidential Election* 2010. Colombo.
- Sri Lanka Bureau of Foreign Employment. http://www.slbfe.lk
- Sri Lanka Ports Authority. n.d. *Colombo Port Location*. http://www.slpa.lk/port-colombo/location
- Sunday Times. 2013. Sri Lanka Blows Away Millions of Rupees Owing to Lack of Support for 'Entrepot' Trade. 15 September.
- United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). 2002. Commercial Development of Regional Ports as Logistics Centers. Bangkok: ESCAP. p. 61.
- _____. 2013. *Guide to Key Issues in Development of a Logistics Policy*. Bangkok: ESCAP.
- United Nations (UN). 2003. Initiatives for E-Commerce Capacity-Building of Small and Medium Enterprises, Proceedings and Papers Presented at the Regional Consultative Meeting on Initiatives for E-Commerce Capacity-Building of Small and Medium Enterprises. Seoul. 13–15 November 2002.
- Whybrow, S. 2008. We Have the Ingredients, Lack Focus to be Logistics Hub: Ruwan Waidyaratne. *The Nation*. 27 July.
- Wickremesinghe, R. 2016. Hon. Prime Minister's Economic Statement in Parliament on 27th October 2016. Colombo. http://www.pmoffice.gov.lk/download/press/D00000000053_EN.pdf?p=7
- Wijayasiri, J., and S. Jayaratne. 2009. The Impact of Information Technology (IT) in Trade Facilitation on Small and Medium Enterprises (SMEs) in Sri Lanka. Asia Pacific Research and Training Network on Trade. p. 28. https://www.google.de/search?q=Wijayasiri%2C+J.%2C+and+S.+Jayaratn e.+2009.+The+Impact+of+Information+Technology+(IT)+in+Trade+Facil itation+on+Small+and+Medium+Enterprises+(SMEs)+in+Sri+Lanka&trac kid=sp-006
- World Bank. 2014a. *Doing Business 2015*. http://www.doingbusiness.org/reports/global-reports/doing-business-2015

- _____. 2014b. Logistics Performance Index. http://lpi.worldbank.org/ (accessed 10 September 2016).
- _____. World Development Indicators. http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators
- World Economic Forum (WEF). 2016. *Global Competitiveness Report 2016–2017*. https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1
- World Trade Organization (WTO). 2016. News Items. Sri Lanka Ratifies Trade Facilitation Agreement. https://www.wto.org/english/news_e/news16_e/fac_31may16_e.htm
- Yang, Xu. 2014. Status of Third Party Logistics, A Comprehensive Review. *Journal of Logistics Management*.