

# Trade Dimensions of Logistics Services

## A Proposal for Trade Agreements

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January 2013



## Abstract

Services have a direct impact on the competitiveness of the goods sector. This paper illustrates the importance of logistics services, their trade dimension, and how regulatory issues act as perhaps one of the most significant barriers to competitiveness. The paper discusses recent developments and the role and benefits of logistics services and argues that from a trade agreement standpoint, logistics is a network industry that ultimately provides one service to a final client. It analyzes logistics services from a services trade perspective

and proposes that trade agreements should ensure access to and use of the infrastructure required to provide these services recognizing their interconnectedness. The paper offers suggestions on additional policies World Trade Organization members, and countries negotiating services agreements regionally or bilaterally, could follow in order to fully exploit the opportunities provided by logistics services. Local regulations and complementary policies in areas such as trade facilitation will always remain important.

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# TRADE DIMENSIONS OF LOGISTICS SERVICES: A PROPOSAL FOR TRADE AGREEMENTS

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**JEL codes** F1, F2, F5, L80

**Keywords** trade in services, WTO, GATS, trade agreements, economic development, logistics services

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<sup>1</sup> The authors would like to thank Mona Haddad, Ahmad Ahsan, Jean-Francois Arvis, Thomas Farole, Ian Gillson, Selina Jackson, Mombert Hoppe, Martin Molinuevo, Joan Peterson, Ben Shepherd, Virginia Tanasse, Ruosi Zhang, and participants in an informal seminar of the World Bank Trade Department for comments and suggestions on an early draft. The team would also like to give a special thanks to Claire Hollweg for providing the logistics services restrictiveness data included in the paper and to Shienny Lie for help with the presentation. The usual caveats apply.

## Introduction

Logistics services are a critical determinant of countries' physical connectivity to global markets and their competitiveness. Recent progress in transportation and communications technologies has allowed the fragmentation of production in tasks which can now be performed in different locations. The connection among tasks requires an efficient logistics services sector. The quality of logistics can influence the decisions of firms on the country in which to locate, from which suppliers to buy, and which consumer markets to enter – therefore making efficient logistics systems a critical determinant of a country's connectivity to the world and therefore an important tool for development. While policies and investments that enable good logistics practices help modernize the best-performing countries, logistics still lags in many developing countries, which generally rank low in their logistics performance (Arvis et al, 2012), thus having an adverse impact on their merchandise trade.

Logistics services have a dual role on countries' trade. On one hand, logistics services have a direct impact on trade in goods. High logistics services costs are a major barrier to trade, in particular for developing countries (Portugal-Perez and Wilson, 2008 and Hoekman and Nicita, 2011). On the other hand, logistics services have become increasingly tradable services. For example, countries such as U.A.E, Panama, or Singapore, have taken full advantage of their geographic locations and used that as a primary stimulus for becoming transshipment centers and further developed efficient logistics industries to ultimately become successful exporters of logistics services today. As a result, these countries have become major global distribution centers or transshipment points for global trade.

The logistics services industry encompasses several industries which are not always well integrated. The sector spans across a large set of activities which includes all modes of transportation services, all ancillary services related to these modes of transportation, distribution, packaging, warehousing services, transport management services, and supply chain consulting services, among others. In addition, logistics services providers require access to, and use of, critical physical infrastructure in a non-discriminatory manner such as port, airport, and road infrastructure, which they do not own or operate, but require access to, in order to perform their activities. This implies that in contrast to other services sectors, logistics services are essentially network industries that are however subject to multiple restrictions and regulations under the responsibility of different regulatory authorities, such as port (sea and air), maritime, or Customs and other border-related agencies, each with different regulatory objectives<sup>2</sup>. Therefore, regulatory and institutional fragmentation and the lack of coordination can stand in the way of successfully formulating and implementing coherent logistics policies. As a result, fragmentation compromises the intrinsic qualities of the network and can contribute to increasing costs and thus reducing efficiency. In fact, fragmentation can be more disruptive in supply chains than just differences in direct costs of transportation.

Building on this development, this paper fills an important gap in the logistics services empirical literature: how this sector should be treated in trade agreements. It fills the gap by discussing the trade dimension of logistics services, and by recognizing the network characteristic of these

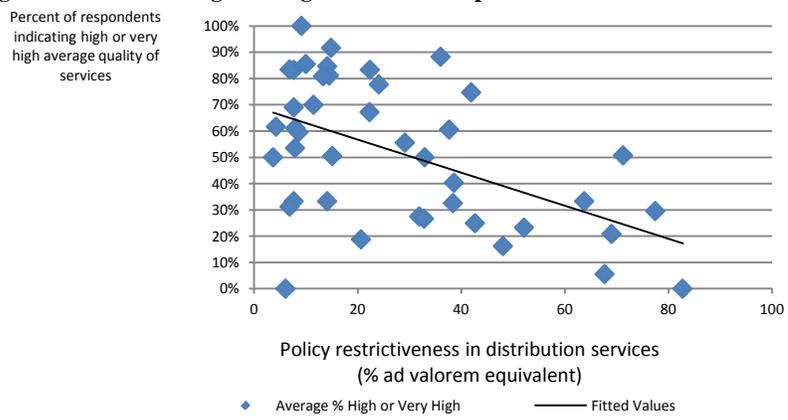
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<sup>2</sup> A network industry is one that comprises a set of points or nodes interconnected by lines or links, organized with the object of transmitting information, goods, energy, etc. Interconnection is an inherent characteristic of networks giving them so-called network effects and significant economies of scale in production, among other attributes. The characteristics of network industries are outlined in Shy, O. (2001) *The Economics of Network Industries*. Cambridge, Cambridge University Press.

activities, and by providing suggestions on additional regulatory commitments countries should develop and adopt beyond the traditional market access and national treatment disciplines, in the context of multilateral, regional, or bilateral negotiations to fully grasp the opportunities provided by logistics services.

Market access limitations, in particular, investment limitations, may prevent the full integration of logistics services. Significant unilateral market liberalization has taken place over the years in key components of the logistics services chain, in particular, in transportation services, and several activities that integrate logistics services now face fewer trade barriers, such as market access limitations, which restrict foreign participation in the provision of logistics services or discriminate against foreign providers. But other components of the logistics services chain, such as ancillary services to all modes of transportation (e.g. cargo handling, freight forwarding, etc.), still confront high barriers. Moreover, regulations can add to the complexity. While in some cases, regulations are necessary to achieve legitimate policy objectives such as safety, in others they may be designed with the aim of protecting the interests of domestic industries. Research confirms that there is a negative correlation between the level of restrictiveness of the regulations affecting logistics services and the performance of the sector (Hollweg and Wong, 2009). Regulations supporting competition by lowering entry barriers and reducing the incidental costs falling on service providers can encourage quality upgrading and cost effectiveness (Figure 1). The downward sloping fitted line indicates that more restrictive regulation—which imposes higher costs on operators—is associated with significantly lower average quality and competence of service providers. Such restrictive regulations impose higher operating costs on logistics operators, which are passed on to consumers of logistics services. This implies that when assessing their regulatory environment, countries, in particular developing ones, should pay close attention to reducing these barriers, including restrictions affecting foreign providers.

**Figure 1: Restrictive logistics regulations reduce performance**



Source: World Bank, 2010

Appropriate competition policy is important to ensure the benefits of liberalization. It is critical to have regulations that prevent anticompetitive behavior and ensure access to and use of critical infrastructure in a transparent and non-discriminatory basis. This is particularly important when government involvement in this activity may limit the extent of private and foreign participation in the provision of some services. Obviously, legitimate policy objectives such as national security considerations, for instance those pertaining to cargo security, need to be accommodated.

International cooperation among countries also plays a complementary role to unilateral

liberalization and in some cases can contribute to overcome domestic resistance to liberalize. Increasingly, countries have been complementing their unilateral efforts to liberalize their trade with negotiation of trade agreements and cooperation arrangements with trading partners. These negotiations have been taking place at the multilateral level, at the World Trade Organization, Doha Round, regional negotiations, such as ASEAN, APEC, Trans-Pacific Partnership (TPP) in the Asia Pacific Region, and at bilateral level as well.

However, very few of these negotiations have progressed beyond the traditional market access barriers such as limitations on the number of services providers or foreign ownership and participation; and/or national treatment matters, such as measures that discriminate against foreign providers. Although poor regulations impede service providers from integrating their activities and performing in an efficient manner, critical areas, such as the need to integrate all activities and to avoid fragmentation of the logistics chain were left untouched in the negotiations<sup>3</sup>. Moreover, negotiations have not recognized yet logistics as a sector integrated by other services activities and the importance of access and use of infrastructure on a non-discriminatory basis to allow the provision of these services.

In the context of the Doha Round of trade negotiations, WTO members have put forward a collective request to liberalize logistics services. This collective request is an important progress towards ensuring a comprehensive treatment of the liberalization of the sectors, which have a wider relevance for the liberalization of logistics services, beyond the WTO framework, and could be included in regional and bilateral agreements as well, and should also be expanded to include regulatory aspects pertinent to this sector.

The paper is organized as follows. The next section defines the scope of logistics services following WTO members' proposals. The second section analyzes the drivers behind the rapidly changing nature of logistics services. The third section briefly explains the GATS framework, the fourth section provides examples and provides a classification of the usual limitations faced by logistics service providers, and the final section suggests ways in which to address those limitations.

## **I. The Scope of Logistics Services**

The logistics sector is ever evolving in response to the changing needs of industry and society. Up until the 1980s, firms typically organized their logistics services in-house and were able to meet their customer requirements. Starting in the early 1980s there was a major shift in industrial production patterns. First, there was a discernible emphasis on bringing down inventory costs and secondly, production networks emerged, requiring coordination across units at different locations or even in different countries, but which were contributing to the same finished product.

These changes required specific solutions to address the new production requirements and coordinated flows among suppliers and across countries. Therefore, one of the reasons for the strong growth in outsourced logistics services is due to changes in production methods: the generalized use of subcontracting within a country and the use of factories in different countries to manufacture different product components. While suppliers in developed countries tend to focus on design, final assembly and marketing, they increasingly rely on foreign suppliers to provide the sub-assemblies. As a result of these trends, logistics has seen a gradual development from the original situation of a

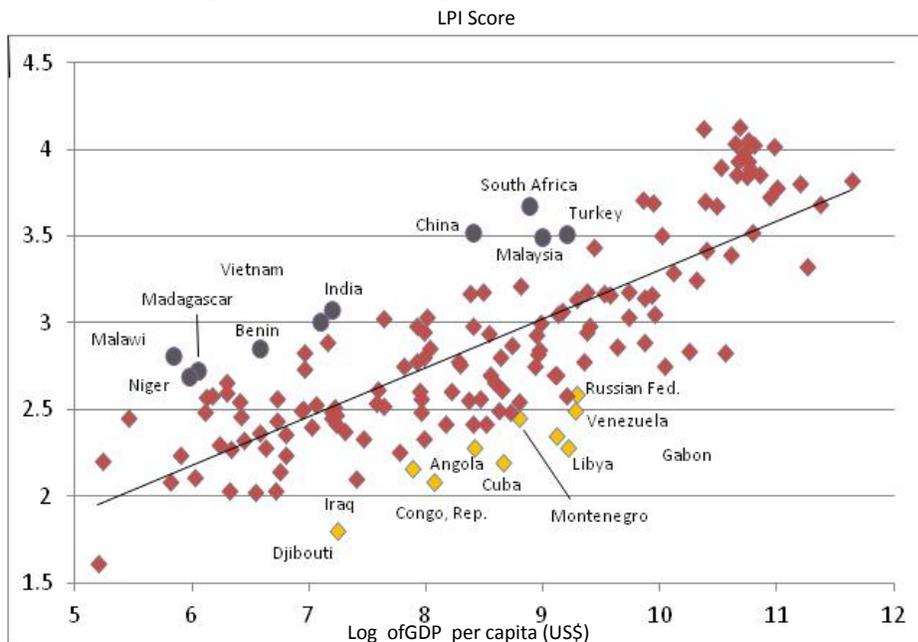
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<sup>3</sup> In all the US bilateral FTAs, there is a non-binding commitment that government monopolies (i.e. postal authorities) will not abuse their position when competing in the competitive area (i.e. express delivery).

majority of insourced services (Management of Integration) towards outsourcing, and the types of activities outsourced, in a first instance as 2PLs, involving “basic” services directly supplied by logistics operators (Management of Relationship) and more recently, development has been directed towards 3PL and 4PL (Management of Knowledge and of Information, respectively), involving an increasing degree of sophistication of the integrated logistics package, providing, in a first instance “value added” services (integrated transportation, warehousing, inventory control, order processing, Customs brokerage and other logistics activities) and subsequently, “strategic” and consultancy services. Thus it is primarily global consulting companies that are among the major players in the 4PL market segment.

Logistics services efficiency has become critical for competitiveness. Better logistics performance is strongly associated with trade expansion, export diversification, ability to attract foreign direct investment, and economic growth. While policies and investments that enable good logistics practices help modernize the best-performing countries, logistics still lags in many developing countries, which generally rank low in their logistics performance (Arvis et al, 2012) thus having an adverse impact on their merchandise trade (Figure 2). Moreover, high logistics costs in these countries are a major barrier to trade. On average, logistics costs represent 18% of firm sales in Latin American countries, reaching 32% for MERCOSUR and Chile (World Bank, 2005). In the case of African countries, improvements in logistics services (as measured by the Logistics Performance Index (LPI) provide the greatest benefits than any other components of trade costs (Portugal-Perez and Wilson, 2008 and Hoekman and Nicita, 2011).

**Figure 2: LPI Overperformers and Underperformer**



Source: Arvis et al 2012

Generally, countries’ income alone does not account for the wide variety of performance levels in logistics across countries (Figure 2). For example, when looked at against others in their income group, the most over performing non-high-income countries are Vietnam, India, China, and South Africa. This means their score and performance is higher than expected based solely on their income level. In contrast, the most underperforming non-high-income countries are Djibouti, Republic of Congo, Iraq, Angola, Cuba, Montenegro, Libya, Gabon, República Bolivariana de Venezuela, and

the Russian Federation. That is, their score and performance is lower than expected according to their income level. These facts, together with a general dispersion in logistics performance within income groups, suggests that policy, as well as income, has a strong influence on logistics performance (World Bank, 2012).

Beyond the business and technological evolution of the past decades, the logistics service providers had to ensure that there is proper and effective synchronization in the movement of raw materials, component parts and partially completed components, from various locations, to final assembly locations and afterwards moving finished goods to satisfy consumer demands<sup>4</sup>.

Over the past three decades, logistics services have evolved as a complex bundle of interrelated services industries. This implies that in contrast to other services, logistics services providers are subject to multiple regulations and must deal with a large number of regulators. Overtime, although some trends to convergence between the various traditional lines of business (freight forwarders, brokers, and postal services) have been observed, this has also added to the complexity of the regulatory environment. For instance, parcel business and air-freight business lines are dominated by express-carriers. Like freight forwarders, who typically move containers or truckloads, express carriers provide for parcels, seamless integrated door-to-door shipments, customs clearance, tracking and tracing capabilities, and express services, with a high level of reliability. Such enterprises can connect more than 90% of the world economy within 1-2 days<sup>5</sup>.

Regulating logistics services on a component-by-component basis makes it difficult to develop an optimal regulatory regime. Ideally, logistics services providers should be subject to a single authorization requirement and a single regulator. But this ideal scenario may prove not to be feasible or even desirable. There are a number of complex issues that justify regulations in this area, such as competition, administration of port and airport physical space, safety, Customs revenue collection, and last but not least, national security considerations, including terrorism threats. A way to address these complexities is to create the institutional framework for implementation, with a clear mandate and the required political support from high levels of government to issue/change regulations in support of logistics, and to coordinate these agencies as recently done by Indonesia<sup>6</sup> and Uruguay. Both countries have designed comprehensive logistics strategies coordinated from very high levels in government (APEC, 2011).

The logistics services sector is integrated by three broad sets of activities. According to a classification used by World Bank (2010), the core freight logistics services, includes supply chain consulting services and transportation management services which are offered by the majority of logistics services firms, and are often supplied on a stand-alone basis or together with other logistics services (Figure 3). Supply chain consulting services involve global network design and distribution strategies, where warehouse locations and transportation needs are determined. They may also include inventory forecasting and planning; product design strategies; technology needs assessment; and vendor identification and management. Such specialized services are however generally not offered as stand-alone services, but usually customized to client needs. Transportation management

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<sup>4</sup> Denis Towill, Time Compression and Supply Chain Management—A Guided Tour; Supply Chain Management: an International Journal, 1996, Volume 1, Issue 1, pp 15-27

<sup>5</sup> Oxford Economics (2009)

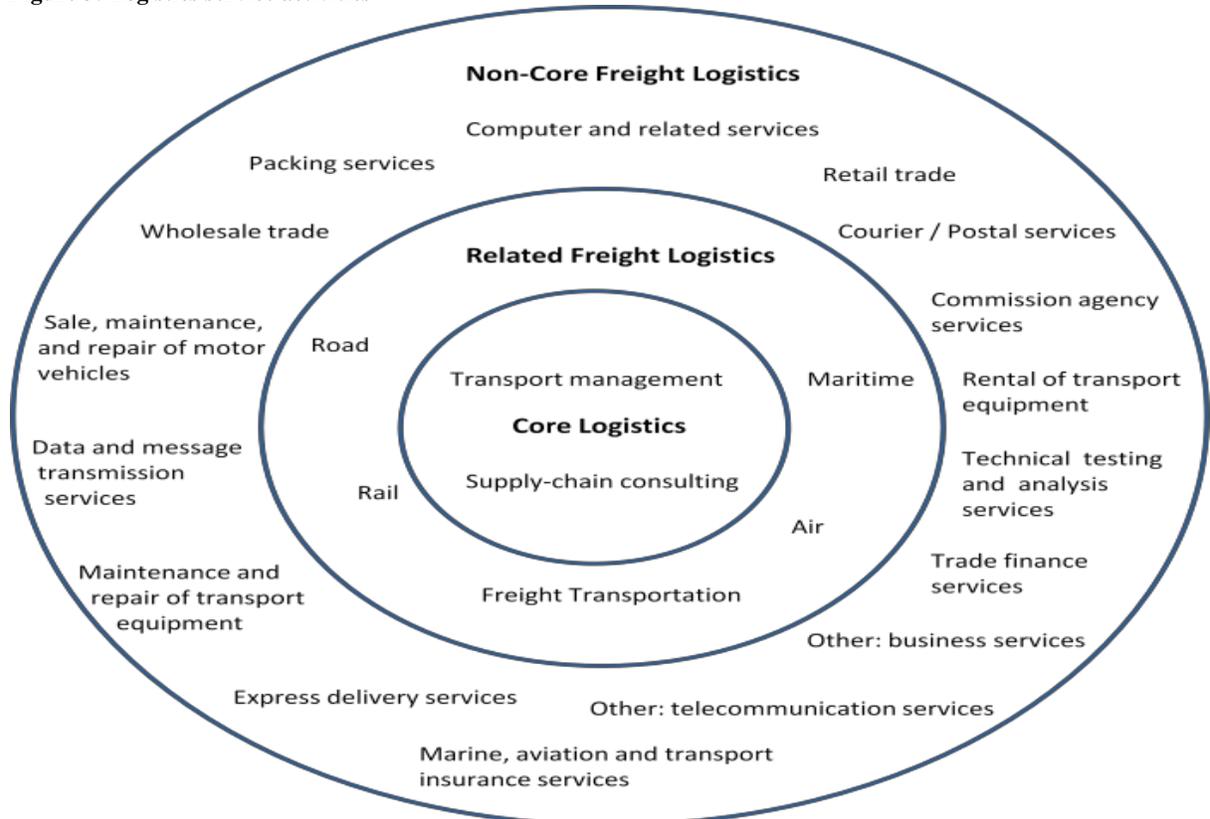
<sup>6</sup> Indonesia set up an institutional framework for implementing the National Logistics Blueprint coordinated by the Coordinating Ministry of Economy. A cross-sectoral Team/Council was formed which involved 11 ministries, agencies and groups and held lengthy consultations with independent experts and regular roundtable discussions with government agencies and the private sector. The Council had legal support and mandate from the president, with appropriate funding, and was empowered to issue/change regulations and recommend budget allocations.

services include storage and warehousing, cargo handling, transport agency services, and Customs brokerage<sup>7</sup>.

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<sup>7</sup> The classification used by World Bank (2010) is based on a classification used by USITC (2005) and the proposed collective request proposed by some WTO members for further details see table 3.

**Figure 3: Logistics service activities**



*Source: World Bank. 2010. Note: Adapted from USITC (2005) and WTO's Logistics Checklist (see Table 3 for more details).*

A second set of services are related freight logistics services, where transportation services that are integral to the movement of goods throughout the supply chain are included. Most core logistics providers also engage in transportation services. Related Freight Logistics Services may be provided by firms that use their own equipment and transportation fleet or by intermediaries that act between clients and transportation firms.

Non-core freight logistics services are a third category. They include fleet maintenance and repair, packaging services, computer and related services, management consulting. They are inputs or value-added services for the supply chain, but they do not necessarily generate revenue. An example includes regular maintenance and repair of important transport equipment which ensures the integrity of the transportation fleets, though it may not necessarily be offered as third-party services to client firms (USITC, 2005). Also, while data and message transmission services and other telecommunication services are key value-added services which are necessary to track the movement of goods, they are often integrated with Core Freight Logistics or Related Freight Logistics Services (World Bank, 2010).

Due to the multiplicity of components and players, logistics services regulatory frameworks tend to be complex and diverse. Providing integrated logistics services is typically subject to regulations from transportation (air, maritime, and land), Customs and other border-related agencies, ports and airport authorities, and in some cases, also to more specific requirements as logistics services providers (Figure 3). Moreover, they may also be subject to several licensing requirements (de Souza, 2007).

## II. Drivers of Logistics Services

**Recent technological developments highlight the role of technology in trade in services growth.**

Logistics services are a derived demand, in that they are required to move or store goods between production centers or between production and consumption centers. Clearly therefore, when policy makers are proposing new initiatives they have to take into consideration the drivers of demand and the practical imperatives that should frame negotiations to improve the global framework for logistics services. Some of the main drivers in low and middle income countries are:

- A desire by countries to attract new production blocks as part of shared production networks
- The desire, especially in middle income countries, to move up value chains
- The need to encourage greater competition in services and to drive down costs and
- Emerging demands, especially minimizing the negative impacts on the environment.

The regional and multilateral frameworks for trade in services should aim to facilitate these trends and demands in a globalized world.

### Trade in Tasks

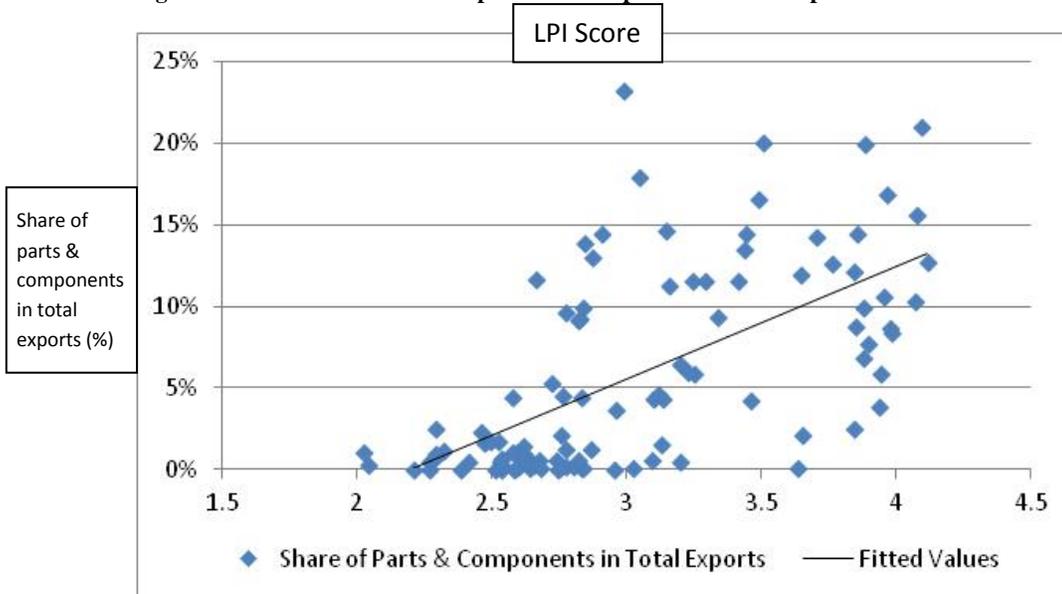
Integrated logistics service providers are responsible for bringing together the multiple industrial processes required to produce finished goods and to coordinate shipments from suppliers scattered around the globe. This requires long- distance logistics flows that can be complex and has led to supply chain management developing as an activity in its own right. Generally, companies entrust this task to third party logistics providers 3PLs, which usually come from the freight forwarding sector, express delivery or transport services. A culmination of this trend is the use of fourth party logistics providers 4PLs, who have no physical assets of their own, but specialize in buying and coordinating logistics services.

Moreover, it is important to be efficient in logistics performance. Recent research shows that networked trade in parts and components is more sensitive to improvements in importing country's logistics performance than is trade in final goods, (Figure 4, sourced from Arvis et al. 2010) pointing to an important policy area in support of the development of international production networks and the potential for logistics upgrading to affect different economic sectors. For instance, one sector that might be particularly sensitive to the quality of logistics is trade in parts and components. These products are traded within international production networks in which speed and reliability of delivery are vital. Networked production relies heavily on efficient and cost effective logistics services to spread production across multiple countries and reduce inventory carrying costs to a minimum. An illustration of this is found in South East Asia where a Japanese electronics manufacturer with a plant in Thailand wanted to utilize a component supplier in Cambodia but found the transshipment of cargo at the border both costly and posing a risk of damage to the components. The firm therefore sought a special dispensation from the authorities to operate trucks through the border to link the two plants. As argued above sometimes seamless logistics flows are just as important as cost.

Figure 4 shows a strong, positive association between logistics performance and the share of parts and components in total exports. A higher trade share in parts and components indicates stronger

involvement in international production networks, as well as a higher degree of specialization in that sector, associations confirmed by recent research. Saslavsky and Shepherd research confirms these associations and thus provide another strong reason for countries to upgrade logistics performance: the widespread desire for further and deeper integration in internationalized production. Development of the logistics sector can play a key role in promoting greater integration in international production networks. Policymakers can help building logistics competence which involves issues such as regulation of transport and related sectors, border procedures, infrastructure and private sector development.

**Figure 4: Relation of the share of parts and components in total exports and the LPI score**



Note: Export shares are constructed as the value of parts and components exports divided by the value of total exports. Data are for 2008, sourced from Comtrade via WITS. The parts and components sector is defined using the classification in appendix 1 of Kimura, Takahashi, and Hayakawa (2007).  
 Source: Logistics performance survey data, 2009, and United Nations Commodity Trade Statistics Database (Comtrade), <http://comtrade.un.org/db>.

However, not all trade in tasks is global in scale. Increases in transport costs before the global financial crisis caused by higher fuel prices coupled with the signing of free-trade agreements were encouraging companies to organize production by major geographical zones (usually at the continental level), thus combining the advantages of relative proximity and lower production costs in the zone in question. In all such cases, firms seek to avoid the risks associated with a breakdown in the long-distance logistics chain. However, some developing regions are better connected globally than they are regionally, mainly because trade has historically been with the OECD countries. Therefore, at either the regional or global levels, the quality of logistics services performance is important to trade integration. A recent study suggests that financial markets react more negatively to announcements of breakdowns in supply chains than to other "bad news" and that the global costs of such incidents may have an impact on logistics performance lasting at least two years.<sup>8,9</sup> This increases the chances that suppliers in unfriendly logistics environments will be excluded from production networks.

<sup>8</sup> See Hendricks, K. B., and Singhal, V. R. (2003), The effect of supply chain glitches on shareholder value, *Journal of Operations Management*, 21, 501-522.

<sup>9</sup> Recent declines in stock market prices following the earthquake and tsunami in Japan in March 2011 are a case in point.

## Moving up value chains

Recent innovations and demand for integrated logistics services occurred in low and middle-income countries as they endeavor to join sophisticated supply chains serving the developed economies. Some of the earliest examples of integrated logistics offering a competitive advantage was observed in two sectors i) high-end agricultural exports, shipped primarily to large supermarket chains based in developed countries; and ii) labor-intensive manufacturing, shipped to global retailers. Third party logistics service providers have been instrumental in facilitating these developments beginning in the late 1970s. Since then, the demand for high value agricultural production has grown rapidly in OECD countries where consumers increasingly demand year-round availability of fresh fruits and vegetables, as well as fresh fish and other forms of table-ready fresh foods. Most of the supply, particularly during the off-harvest season originates in the Southern Hemisphere. Some fairly sophisticated logistics operations are therefore required to meet this demand. This is particularly critical as producers in low income countries tend to be small-scale, thus requiring intermediation to overcome geographical, regulatory, quality and other constraints that would otherwise prevent them from trading internationally.

The above has led to the growth of major logistics operators in emerging economies, which are becoming more international in order to support domestic exporters. Consequently, there are also numerous joint ventures involving service providers of all sizes and across all regions of the world. For example, Tata Steel (India) has teamed up with IQ Martade Holding (Germany) to create inland container depots and to offer warehousing and distribution services, or Yes Log (the logistics subsidiary of the Taiwan, China shipping line Yang Ming) teamed up with the Chinese company Chong Qing National Shipping Group, to build a multi-use distribution center. Likewise, many freight forwarders are engaged in third party traffic that does not involve their own countries, such as the French company Bolloré, for traffic between India and the United States, or across coastal and landlocked countries in Africa.

## Improving market contestability

Transport and logistics costs are lower in regions with more contestable market environments than in those with restrictions on market access. For instance, a recent study on transport costs and prices in Africa found that transport prices were lower in regions that have more competition than in those where market access is controlled by cartels<sup>10</sup> pointing to the importance of competition policy to ensure the benefits of liberalization. Transport prices were found to be lower in Southern Africa, followed by East Africa and highest in Central Africa. Southern Africa has a more integrated road transport market, where there is evidence of spillover effects from the more liberal transport regulatory regime in South Africa into the rest of the region. The opposite is the case in South Asia where, except on a few routes, trucks do not generally cross borders deep into neighboring countries. As a result the trucking markets are fragmented and cost structures in the different countries very different, reflecting the extent of only domestic competition. Integration is important to lower costs as shown in a study in Zambia which found that prices on the international routes were lower than on domestic routes, due to the influence of foreign operators offering services into the country<sup>11</sup>. Generally, it is critical to have regulations that prevent anticompetitive behavior and ensure access in a transparent and on a non-discriminatory basis.

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<sup>10</sup> Teravaninthorn and Raballand (2009) Transport Prices and Costs in Africa: A Review of the Main International Corridors, World Bank, Washington, DC.

<sup>11</sup> Raballand, G. F. R., Kunaka, C. and Giersing, B. (2008) The Impact of Regional Liberalization and Harmonization in Road Transport Services: A Focus on Zambia and Lessons for Landlocked Countries, World Bank Policy Research Working Paper 4482

Market entry for logistics services, especially liberalization of the business environment can have important effects on international trade logistics. Unless there is seamless operation across countries, supply chains will be subject to interruptions and higher costs. The problem is often found in the interface between international operators and local ones, which may offer only limited services. Domestic regulation may tend to protect the latter at the expense of integration and development of door to door services provided by the former with the participation of local providers. Generally, a survey by USITC in 2005 found that in more than half of the 53 countries surveyed US logistics firms considered that in practice it was easier to obtain licenses for domestic than for foreign-owned firms. Protections against foreign sources of service supply are particularly detrimental to economic growth because, in general, such protections result in a tax on production (WTO, 2010).

### **Responding to new demands**

Globally, there is an increasing trend towards greener supply chains. At the same time, growing attention is being paid to product traceability, which in turn requires that logistics flows are properly tracked and monitored, typically for assessing carbon footprints. These developments are becoming critical elements for the integration of logistics services. From an operational perspective, it requires proper integration of modes of transport through intermodal and multimodal systems. Intermodal distribution may be better from an environmental perspective as the most competitive mode of transport is used, depending on the cargo and distance it is carried. Multimodal systems on the other hand, also have the advantage of enhancing efficiency by minimizing empty runs<sup>12</sup>, making better use of equipment and achieving improved economies of scale.

Environmental concerns will undoubtedly play an increasingly important role in the years ahead. In Europe in particular, governments are increasingly promoting intermodal transfers of freight from the road to "greener" modes (river, rail, sea), by means of incentives (subsidies) or constraints (fiscal, transport regulations, etc.).

Logistics services regulations should allow for seamless functioning of logistics services across-borders so firms begin to adapt to the requirements of global production networks. Experience shows that Institutional fragmentation and the lack of coordination stand in the way of successfully formulating and implementing coherent logistics policies; in a way, problems are similar to the ones experienced in the area of trade facilitation. The question is to what extent international negotiations have taken this into account and are facilitating the critical role that these drivers have played in the transformation of these sectors.

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<sup>12</sup> Empty return trips are estimated to be 20 to 30 per cent for international transport and 50 per cent for short distances.

### III. Logistics Services in Trade Agreements<sup>13</sup>

The logistics services in GATS and other trade agreements are not currently subject to an integrated framework. Moreover, relevant regulatory issues such as those identified below are not addressed under this framework. Neither regional nor bilateral trade agreements have adopted a more coherent set of rules on logistics services.

Multilateral rules for trade in services are contained in the General Agreement on Trade in Services (GATS)<sup>14</sup>. These rules and liberalization frameworks have been replicated also at the regional level, increasing the relevance of the GATS. For instance, ASEAN, MERCOSUR, as well as COMESA and EAC in Sub-Saharan Africa, have followed the GATS approach for market liberalization. Also the European Union has followed the GATS framework in its negotiations with developing countries<sup>15</sup>. The GATS is one of the agreements administered by the World Trade Organization (WTO), established in 1994. The GATS defines trade in services by their modes of supply (Table 1). The agreement includes all services except services supplied in the exercise of governmental authority and air transportation traffic rights, and services related to the exercise of traffic rights.

Since the entry into force of the GATS, logistics services have experienced significant changes. As explained in this paper, these changes have been driven by reconfiguration of production networks, technology improvements and other factors that have facilitated the interconnection among services that did not directly interact in the past. During the Uruguay Round, services negotiations were conducted on the basis of the Services Sectoral Classification List prepared by the GATT Secretariat (commonly referred to as W/120). This List aggregated the more elaborated United Nations Provisional Central Product Classification (CPC). Neither the CPC nor the W/120 had a specific classification for logistics services. For instance, both systems classified distinct services such as transportation and distribution, which are part of logistics services, in different sections.

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<sup>13</sup> Part of this section is based on Sáez and Lanoszka (2010) and Sáez and Vaillant (2010).

<sup>14</sup> Mattoo et al (2008)

<sup>15</sup> It must be noted though that the content and discussion in this paper is not linked to any particular agreement approach, but rather, it proposes to go beyond market access and national treatment issues.

## Basic Provisions of the GATS

The most favored nation (MFN) clause ensures nondiscrimination among all WTO's services and service providers. This obligation applies to all measures that affect trade in services for all modes of supply. Nevertheless, in contrast to the MFN clause contained in the General Agreement on Tariffs and Trade (GATT), WTO members listed their exemptions to this clause, before the entry into force of the GATS<sup>16</sup>. The GATS also includes provisions on transparency and domestic regulation that apply to all services sectors.

**Table 1: Modes of Supply and the GATS**

Presence of supplier	Other criteria	Mode
Service supplier <u>is not present</u> in the territory of Member.	Service supplied <u>in</u> territory of one Member from the territory of any other Member.	CROSS-BORDER SUPPLY
	Service supplied to a consumer of Member <u>outside</u> his territory, in the territory of any other Member.	CONSUMPTION ABROAD
Service supplier <u>is present</u> in the territory of Member.	Service supplied in territory of one Member, through commercial presence of supplier of other Member.	COMMERCIAL PRESENCE
	Service supplied <u>in</u> territory of Member and supplier from other Member is present in the form of a <u>natural</u> person.	MOVEMENT OF NATURAL PERSON

Source: WTO S/L/92 (28 March 2001).

The GATS defines six types of domestic measures as market access limitations. Domestic regulations may imply de jure or the facto discrimination between foreign and national services and service providers. WTO members can list and maintain in their GATS schedules such discrimination (Table 2).

When negotiating commitments, members must adopt decisions on a number of procedural aspects: first, the service sector where commitments are adopted; secondly, the modes of supply through which service providers will be allowed to provide a service and third, limitations on market access and national treatment that affect trade in services must be listed. A Member shall not maintain or adopt limitations on market access or national treatment unless they are otherwise specified in its schedule. Finally, Members have no commitments in those sectors that are not included in schedules. This procedure is known as positive listing.

The results of the negotiations are included in members' schedules of commitments where service sectors, subsector, and/or activities, together with any market access and national treatment limitations, are listed for all modes of supply.

Thus, the scope of the barriers to trade addressed by the GATS goes beyond market access and national treatment issues, and includes aspects of business practices and market structure, such as the existence of market failures and anticompetitive practices. However, the process of liberalization in services has faced serious difficulties at the multilateral level, and the difficulties are expected to continue. Some of the problems are that:

- The positive list negotiations allow all countries (developed and developing) to adopt commitments at a low level of ambition. Thus far, the general commitments represent less than the status quo; the commitments of countries, particularly developing countries, do not necessarily represent the actual level of liberalization of the service sectors in these countries.
- The complexity of the process has meant that the identification of measures, the organization of information, and the selection of activities are imperfect, particularly in many developing countries. The objective of transparency has therefore not been reached.
- The classification of service activities is incomplete and outdated. A more robust system and a

<sup>16</sup> WTO Members' MFN exemptions under the GATS are recorded in a list called "MFN Exemption List". Such lists were established at the entry into force of the GATS for original Members. For acceding countries, this is done at the time of their accession to the WTO.

greater level of disaggregation are required.

**Table 2: Schedule of GATS commitments**

<i>Sector</i>	<b>Market Access Article XVI</b>	<b>National Treatment Article XVII</b>	<b>Additional Commitments Article XVIII</b>
<b>Mode of supply:</b>	<i>Type of restriction</i>	<i>Definition</i>	<i>Type of measure</i>
<i>Cross-border supply</i>	-limitations on the number of service suppliers, monopolies, or exclusive service suppliers;	Subject to any conditions and exceptions set out in its schedules, each	Measures affecting trade in services not subject to scheduling under articles XVI or XVII, including those regarding qualifications, standards or licensing matters. Such commitments shall be inscribed in a Member's schedule.
<i>Consumption abroad</i>	- limitations on the total value of assets or service transactions;	Member shall accord to services and service	
<i>Commercial presence</i>	-limitations on the total number of service operations or on the total quantity of service output;	suppliers of any other Member, in respect of all measures affecting the	
<i>Movement of natural person</i>	-limitations on the total number of natural persons that may be employed in a particular service sector; -measures which restrict or require specific types of legal entity through which a service supplier may supply a service; and -limitations on the participation of	supply of services, treatment no less favorable than that it accords to its own like services and service suppliers.	

Source: WTO/GATS legal texts.

In recent years, a group of WTO members presented a collective request list for liberalization commitments in logistics services (see Table 3)<sup>17</sup>. This proposal, which is different from and covers a shorter list of services than the classification included in Figure 3, defines three pillars for logistics services negotiations. The first pillar focuses on core freight logistics services which include auxiliary services related to all modes of transportation, storage and warehousing services, and transport agency services, and other auxiliary services.

<sup>17</sup> The proposal did not attempt to define the sector but was presented as a checklist highlighting intrinsic connections between activities across services sectors. The 2006 plurilateral negotiations were based on this proposal presented as a collective request for liberalization of commitments in logistics services by a wider group of WTO Members, including the US, EU, China, Canada, India, Japan, Korea, and others. There is very little difference between the 2004 proposal and the 2006 collective request. For instance, the collective request list also includes engineering services and integrated engineering services and also postal services.

**Table 3: Logistics Services Collective Request**

Core Freight Logistics Services	Related Freight Logistics Services	Non-core Freight Logistics Services
<p>11. H. Services auxiliary to all modes of transport  a. Cargo handling services:  Container handling services  CPC 7411  Other cargo handling  CPC 7419</p> <p>b. Storage and warehousing services  CPC 742 (including* distribution centre services and materials handling and equipment services such as container station and depot services)</p> <p>c. Transport agency services  CPC 748 (including* Customs agency services and load scheduling)</p> <p>d. Other auxiliary services  CPC 749 (including* through-chain logistics services, reverse logistics, container leasing and rental services)</p>	<p>(1) <b>Freight transport services</b>  11. A. Maritime Transport Services  Services identified under maritime transport negotiations  11. B. Internal Waterways Transport Services  Services identified under maritime transport negotiations  11. C. Air Transport Services  b. Air freight transport  CPC 732 (Currently excluded from GATS, subject to Annex on Air Transport Services)  c. Rental of aircraft with crew  CPC 734 (Currently excluded from GATS, subject to Annex on Air Transport Services)  11. E. Rail Transport Services  b. Freight transport CPC 7112  11. F. Road Transport Services  b. Freight transport CPC 7123  c. Rental of commercial vehicles with operator  CPC 7124  - without operator CPC  83102</p> <p>(2) Other related logistics services  1. F. e. Technical testing and analysis services  CPC 8676  2. B. Courier Services CPC 7512  4. A. Commission Agents' Services CPC 621  4. B. Wholesale Trade Services CPC 622  4. C. Retailing Services CPC 631, 632, 6111, 6113, 6121 (including* inventory management of goods, assembling, sorting and grading of goods, breaking bulk, re-distribution and delivery services)  - Other supporting services not covered by 11. H:  CPC 743, 7113, 744 (excluding 7441) and 746.</p>	<p>Computer and related services; packaging; and management consulting and related services.</p>
<p><b>Accompanying additional (Article XVIII) commitments</b></p> <ol style="list-style-type: none"> <li>[The Member] will accept electronic versions of trade administration documents.</li> <li>Service suppliers are entitled to supply listed freight logistics services (from services auxiliary to all modes of transport, freight transport, courier services and distribution services) in combination, subject to measures necessary to prevent anti-competitive behaviour.</li> <li>[The Member] will ensure that various procedures and formalities such as documentary requirements, Customs clearance, Customs inspection, and electronic processing, would not be unnecessarily burdensome.</li> </ol>		

Source: TN/S/W/20

Note: \*These services are not explicitly listed in the official CPC explanatory note, and should be explicitly listed in schedules for clarity.

The second pillar, related freight logistics services, includes a number of important services such as freight transportation services, courier services, and distribution services. Finally, the third pillar refers to computer and related services; packaging; and management consulting and related services. The collective request list also considers adoption of additional commitments referring to electronic documents and formalities and procedures related to documentation. This is a nonbinding proposal that may or may not be adopted by members as part of their services negotiations. In this paper, this classification is used as a working definition for the purpose of illustrating the trade dimension of logistics services.

The GATS has three important weaknesses regarding logistics services that can be addressed directly by WTO members. The first is the explicit exclusion of air transportation traffic rights and services

directly related to the exercise of such traffic rights<sup>18</sup>. Second, at least until now, maritime transport services commitments (international shipping, auxiliary services and access and use of port facilities) are limited in the GATS framework. And thirdly, the main focus of the negotiations is about market access and national treatment, but additional disciplines such as the one proposed below could play a critical role in ensuring a sound regulatory environment for logistics services development.

Although 32 members included in their schedule during the Uruguay Round commitments on international maritime transport services, the suspension of the negotiations in 1996, including the full application of the MFN clause, meant that the current coverage of maritime services by WTO members' commitments is limited<sup>19</sup>. Though the offers submitted during the post Uruguay Round negotiations have no legal status and have not been implemented, the political understanding is that the current negotiations are conducted on the basis of existing or improved offers<sup>20</sup>. Any meaningful result in logistics services in the current Doha negotiations will require the adoption by WTO members of liberalization commitments in maritime transport services.

Many preferential trade agreements at the regional and bilateral level have followed a similar approach to the GATS, in so far as not to develop a comprehensive approach for logistics negotiations and excluding key transportation services from their coverage.

## IV. Preferential Trade Agreements<sup>21</sup>

At the bilateral or regional level, two models of service liberalization have been used, as follows: (1) the WTO-GATS model, and (2) the North American Free Trade Agreement (NAFTA) model. Within these models there are differences that reflect the context of the negotiations. Some authors consider that NAFTA types of agreements are more successful in terms of services liberalization. This is correct in terms of both sectoral coverage and commitments by modes of supply, but less so in terms of actual liberalization<sup>22</sup>.

There are two main differences between the WTO-GATS model and the NAFTA model. One regards the scheduling of commitments, and the other regards rules. In the case of the scheduling of commitments, the extent of the application of the obligations accorded to specific sectors or service activities is different. In NAFTA and similar agreements, a negative list approach is adopted, meaning that all the provisions of the agreement are applicable unless otherwise specified in countries schedules included in the various annexes where the terms, conditions, and limitations are established.

In terms of rules, the main differences between the two models are related to provisions on market access and domestic regulations that are not included in NAFTA and local presence, performance requirements, and senior management obligations that are part of NAFTA, but are not specifically

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<sup>18</sup> Exercise of traffic rights refers to the ability to carry passengers and freight by air to and from a foreign country (air transportation services are mostly covered under bilateral aviation agreements. The GATS applies to measures affecting: (a) aircraft repair and maintenance services; (b) the selling and marketing of air transport services; and (c) computer reservation system (CRS) services.

<sup>19</sup> See the Decision of the Council for Trade in Services of 3 July 1996 (S/L/24).

<sup>20</sup> [http://www.wto.org/english/tratop\\_e/serv\\_e/transport\\_e/transport\\_maritime\\_urneg\\_e.htm](http://www.wto.org/english/tratop_e/serv_e/transport_e/transport_maritime_urneg_e.htm)

<sup>21</sup> See Sáez and Vaillant (2010).

<sup>22</sup> An analysis of the results of preferential trade agreements and GATS can be found in Marchetti and Roy (2008). Fink and Molinuevo (2007) analysis the result of using negative and positive lists in PTAs in East Asian countries.

addressed in GATS. Although other types of provisions are common to both agreements, this does not mean that they are similar in scope, as illustrated, for example, by the provisions on transparency and transfers.

In NAFTA, specific commitments are included in annexes following a negative list approach in which countries include the nonconforming measures that affect certain sectors, subsectors, or activities (see above). The original NAFTA text includes annexes indicating exceptions to certain general rules, including nonconforming measures, nondiscriminatory quantitative restrictions, activities to be regulated in the future, exceptions to the most favored nation clause, and activities reserved to the state.

In general, the first annex lists the nonconforming measures in relation to the five rules (national treatment, most favored nation, local presence, performance requirements, and senior management and board of directors). The second annex includes nonconforming measures in relation to future regulations whereby countries maintain their ability to introduce or change nonconforming measures. In the third annex, the nondiscriminatory quantitative restrictions or market restrictions (market access) are listed. The fourth annex deals with exceptions to the most favored nation clause. Finally, the fifth annex lists the activities reserved to the government<sup>23</sup>.

This structure of annexes has evolved in more recent agreements based on the NAFTA model and negative lists. In the most recent agreements, there are only two or three annexes. One is devoted to the nonconforming measures in force, and the other to future nonconforming measures.

Nonconforming measures refer to rules on national treatment, market access, most favored nation, local presence, performance requirements, and senior managers and board directors. These annexes also tend to be more general, that is, showing horizontal exceptions by sectors, but containing fewer details by subsector and activity. There may also be a third annex dealing with the financial service sector.

Frequently, trade agreements use a mixed scheduling of positive and negative lists. For example, cross-border trade nonconforming measures might be scheduled following a positive list approach, and investment nonconforming measures might be scheduled following a negative list approach. In recent agreements, contrary to the negative list approach, services subject to market access obligations are specifically listed. Sometimes, a negative list in cross-border transactions and investment is combined with specific commitments (the positive list type) in the financial sector where a list of permitted cross-border services is included.

## V. Restrictions to Trade in Logistics Services

When engaged in international operations, logistics services providers face four groups of constraints. These are embedded both in domestic and international regulations that affect logistics services. Some of the constraints are common to other services activities, while others are specific to logistics. Table 4 illustrates with concrete examples the limitations faced by logistics services providers.

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<sup>23</sup> The NAFTA provisions on nonconforming measures, i.e. measures that violate the agreed provisions, also rely on a ratcheting principle. For example, Annex I in NAFTA describes the existing nonconforming measures a country wishes to maintain. If a country modifies a scheduled nonconforming measure by reducing the degree of nonconformity, this change is immediately frozen and represents the new level of commitment. No such provisions exist in the WTO-GATS or similar agreements (Prieto and Stephenson 1999).

The first group of constraints is related to market access and/or discriminatory regulations (national treatment violation). Joint venture requirements for foreign investment, prescription on specific types of legal entity allowed to provide services, and limitations on foreign ownership, affect certain logistics activities such as transportation services. In addition, restrictions on the movement of persons also affect the provision of logistics services as well as requirements to employ nationals in certain services. For instance, requirements to hire local operators or nationals for the provisions of certain activities affect the integration of the logistics chain. An example of this was recently experienced in South Africa where the government started strict enforcement of restrictive measures on foreign drivers working for locally registered trucking firms. In the short term the measures had the effect of limiting some international operations and required the change of crews at border crossing points with an attendant increase in costs. Such limitations affect the ability of services providers to deliver their services by the desired mode of supply (Table 4).

The second group of constraints is related to access and use of infrastructure to provide logistics services, specifically, whether logistics operators are able to access transport infrastructure-related services (e.g. at ports, airports, rail/road terminals) on reasonable and non-discriminatory terms. Broadly speaking, there are two types of logistics service providers: asset-based and non-asset-based providers. The former use their own equipment and transportation fleets along with value-added logistics services to provide services such as cargo handling, storage and warehousing, Customs brokerage, and supporting and auxiliary transport services. The latter act as intermediaries between clients and asset-based transportation firms but they also can provide supply chain planning, transportation management, supply chain management, warehouse management, and various other IT related services (USITC, 2005, de Souza et al, 2007).

In both cases, logistics services providers require access to the available infrastructure in order to operate. This infrastructure is generally not owned by the services provider, or is controlled by another entity. More specifically, providers of logistics services require for their operation access to ports, airports and roads which are generally owned and managed by public entities or are licensed to a private firm in a nondiscriminatory basis (national treatment and most favored nation treatment). For example, Bangladesh and India have for some time been discussing the possibility of the former granting transit rights for movement between mainland India and its North East States. A couple of the main points of negotiation have been the design of roads and the modality for Bangladesh to recover the costs of Indian trucks passing through its territory. In the absence of harmonization and a mechanism for the latter as at present, access is denied for these and other reasons, resulting in the use of a circuitous and more costly route between the Indian territories. How infrastructure development and maintenance is financed therefore can have a significant impact on logistics service integration. In addition, although the impact of government regulations, poor or inadequate road, airport or port infrastructures may negatively affect the provision of logistics services; lack of infrastructure is just as problematic as poor access.

In some cases, conflict of interests or lack of competition restricts the operations of logistics providers. Facility owners or administrators may also be providers of logistics services or they may establish conditions of access/provision of services and services providers. In this case, terms and conditions to use and access the infrastructure, such as preference to domestic suppliers over foreigners, authorization procedures, and applicable competition rules, are a critical component for an effective provision of logistics services.

Egypt is an example of this type of problems. In fact, according to Ghoneim and Helmy (2007), —the development of ports, the maritime transport sector and its related logistics services suffer

from conflicts of interests as port authorities are the owners, regulators and performers, all at once (where they provide services such as pilotage, safety and tugboat, and are owners of companies that provide stevedoring activities). In the Philippines, the network of public ports is controlled by the Philippines Ports Authority (PPA) which acts as both landlord and regulator. Although there are small private ports, they are allowed to handle their own cargo, and in some cases third party cargo, but they cannot compete with public ports (de Souza et al, 2007). This is a problem also at air cargo terminals where there may be justification to address self-handling of cargo under the multilateral framework. Similarly, in several countries the postal authorities are both regulators of express services as well as service provider competing with private sector operators. In these cases an independent regulatory body should be put in place, something has already been proven to work well in a numerous countries.

**Table 4: Trade in Logistics Services: example of restrictions**

	MARKET ACCESS	NATIONAL TREATMENT	ACCESS AND USE	SYNCHRONICITY <sup>24</sup>	OTHERS
<b>Cross-border logistics services</b> including consumption abroad.	<p>Maritime: subject to cargo reservation which require that a portion of a country's international cargo be transported on national-flag vessels.</p> <p>Road: Regulatory impediments, such as limitations on fleet size, equipment usage, and hours of operation.</p>		<p>Airlines are subject to domestic-level laws and regulations that may impede their ability to operate at foreign airports. Limited hours of operation at Customs facilities, preferred treatment for domestic carriers, and security-related.</p> <p>No coordination between Customs and Quarantine departments</p> <p>No automation procedures for Quarantine-cleared items</p> <p>No post-clearance process for exports</p> <p>No central processing facility for government agencies</p>	<p>Firms are not permitted to own and operate ground transport equipment.</p> <p>In the European Union, shippers are unable to provide uninterrupted cross-border rail transport services between some EU members, because passenger transport has priority over cargo transport, requiring that firms find alternative methods of conveying goods to customers.</p> <p>Laws and regulations in some countries require airlines to use third-party providers for ground-handling services or prevent airlines from offering such services to other airlines.</p>	<p>Logistics service providers encounter the most significant impediments border clearance procedures, including Customs processing and inspection, are the most frequently reported impediments to the foreign provision of logistics services</p> <p>Customs clearance and inspection are the most time-consuming procedures related to air and maritime cargo transportation.</p> <p>Customs laws and regulations may be applied inconsistently at different ports in the same country.</p>
<b>Commercial presence</b>	<p>Brokerage. Foreign providers cannot obtain brokerage licenses Citizenship requirement for service providers. All modes of transportation Cargo reservation; Cabotage requirement to use local road transportation companies in some provinces</p>	<p>Licensing requirement for brokers</p> <p>Logistics firms providing multiple services cannot act as Customs brokers.</p> <p>Maritime and airports each require separate brokerage licenses Foreign providers not permitted to own and operate ground transportation fleets and equipment</p>	<p>Ports: The ability of foreign maritime firms to gain adequate access to government-owned port facilities, or to provide their own or third-party port-related services, is also subject to domestic regulation. In many countries, ports are owned and operated by a government agency, such as a port authority. In some cases, the agency will permit private-sector firms to provide maritime auxiliary services, such as cargo handling, storage and warehousing, and container station and depot services. In other cases, the agency will provide all such services itself or designate one or more private sector firms to provide all port-related services.</p>	<p>Broker responsible for shipment contents</p> <p>Brokerage companies may not finance services on behalf of customer</p>	
<b>Movement of natural persons</b>	<p>Foreign firms are required to hire local residents in countries where they operate</p>	<p>Brokerage Individuals cannot perform services</p>			<p>Lengthy/costly process for obtaining work visas</p>

Source: own elaboration on the basis of USITC (2005).

<sup>24</sup> Synchronicity refers to the parallel processes of synchronising the flow of information and for examples, the movement of raw materials, component parts and partially completed components, from various locations, to final assembly locations and afterwards moving finished goods to satisfy consumer demands.

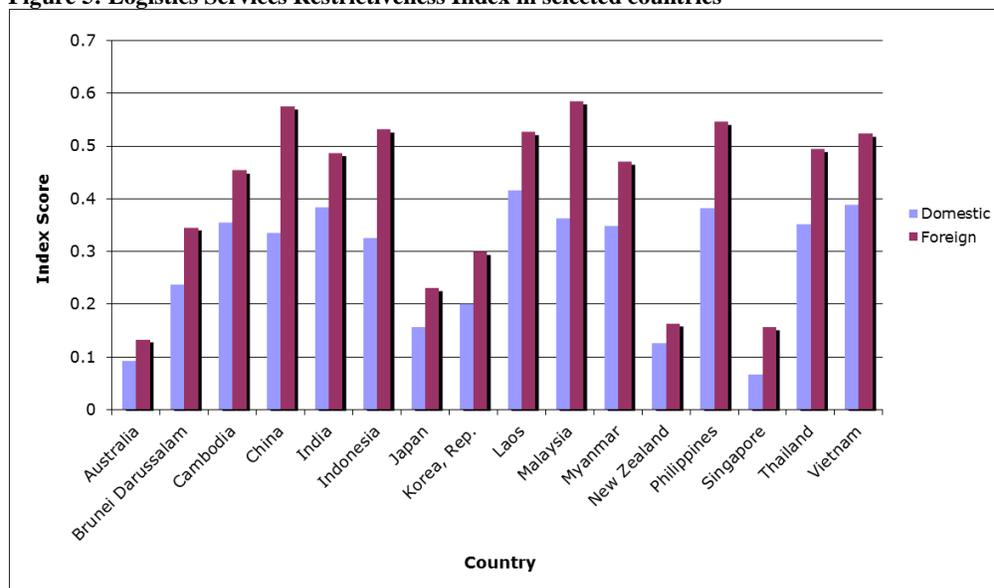
In Uruguay, the Port Authority is engaged both in port administration and in the provision of certain services.

The third group of constraints is related to government regulations that limit the scope of the activity, including regulations imposed at different administrative levels such as sub national or municipal. Logistics is part of an integrated chain that requires close integration and synchronization of several different services. Government regulations that disrupt this integrated supply chain, such as regulations that limit foreign firms' ability to provide brokerage services, inefficiency of inbound clearance process, and regulations that allows foreign investment in warehousing and distribution but not in transportation are also a constraint. The interruption of the logistics chain by governmental regulations such as the requirement to use domestic operators for certain segments of the chain instead of allowing providers to offer the whole range of services, affects the provision of integrated logistics services, or may affect the simultaneity and synchronicity that an efficient logistics chain requires.

Finally, the fourth group of constraints faced by the logistics services providers is related to the management of foreign trade. They can be both formal, when they are included in government regulations or informal, if they are part of administrative procedures or unpublished regulations. According to USITC and de Souza (2007), Customs procedures and inspections pose the most significant obstacle to 3PL providers, most pressing are restrictions on the weight and value of shipments, time consuming documentation requirements, partly due to lack of electronic data interchange (EDI) systems, also included under this category are non-transparent rules, lack of coordination among different public entities responsible for Customs clearance, and burdensome inspection requirements (USITC, 2004 and 2005, de Souza, 2007). This is the core of the trade facilitation agenda that has been the focus of the World Bank research and technical assistance initiatives (McLinden et al, 2011). Figure 5 provides information for a sample of countries in the Asia-Pacific region of the restrictiveness of logistics-related measures. These data confirms that logistics service providers face, for this sample of countries, restrictive regulatory procedures. The gap between the two bars in Figure 5 is a measure of discrimination pointing to the fact although the main discussion in this paper focuses on regulatory reforms that in many cases would affect all operators, there is still much to be done in the "traditional" market access and national treatment areas. How important are the regulations that limit logistics services providers? Estimating the impact of regulations on services performance is difficult. There are a number of limitations which range from lack of adequate data to how to convert regulations into a price measure. Increasingly experts are using restrictiveness indexes as a first step to assess countries' regulatory environments.

Hollweg and Wong (2009) built a restrictiveness index for a group of countries in the Asia Pacific region. The authors differentiate between policies that affect foreigners (i.e. that have an impact on trade) and policies that affect domestic operators. As it can be observed in practice, in general, countries have different regulations for foreign and domestic logistics services providers. Some countries in the region have highly restrictive regimes and in some cases the difference in restrictiveness between foreigners and domestic operators is significant.

**Figure 5: Logistics Services Restrictiveness Index in selected countries**



Source: Hollweg and Wong (2009).

It is relevant also to consider the relationship between restrictiveness and performance. Hollweg and Wong (2009) correlated each country's index with the Logistics Index Performance (LPI) estimated by the World Bank. Using the different components of the index they found that:

- The higher the LPI score, that is, the higher the performance of the country, the lower the restrictiveness index: the less restrictive is the regulatory environment.
- In general, the lower the restrictiveness, the higher the overall perception of the quality logistics performance.

The authors also estimated a restrictiveness index for Customs regulations. These are considered by the operators as one of the most important limitations they faced. The correlation between this index and the Customs component of the LPI again shows that

- The less restrictive the Customs regulations, the better the perception of operators regarding the Customs component of the LPI.

## VI. The WTO and RTA Opportunities

The WTO and other trade agreements provide an opportunity for countries to address the regulatory barriers that services providers confronted with and thus help improve their connectivity. There are three sets of issues that must be addressed. First, aid for trade related aspects that include regulatory framework, capacity building, and increased use of ICT. Secondly, countries must address the more traditional market access and national treatment barriers that affect logistics services, including a definition that corresponds to the industries' characteristics and needs. And thirdly, the negotiations should also address additional regulatory disciplines to ensure a competitive environment, including issues such as access and use of the infrastructure, separation of functions, pro-competitive safeguards, and new logistics services. So far the negotiating proposals have focused on the second aspect, while the other two are just as important and must also be addressed in order to reap the benefits of liberalization. The plurilateral negotiations proposed recently by a group of WTO members are an opportunity to develop this framework.

## **An Aid for Trade Agenda for Logistics Services**

The key question is how the multilateral framework can respond meaningfully to the challenges faced in international logistics integration and efficiency. Clearly a broader focus on improving trade facilitation performance is still relevant and warranted, especially where the issues are broad and systemic weaknesses exist. However, traditional approaches to trade facilitation have emphasized infrastructure improvements without the same amount of energy going into improving logistics services. As demonstrated above in this paper, trade facilitation should be about the ability of logistics providers to deliver quality services to traders. Ultimately, therefore, it is about facilitating door-to-door shipments of commodities. This ability is dependent on improvements in the —classical trade facilitation agenda, such as Customs and other border-related processes, but also the regulatory framework for logistics services.

### ***Regulatory frameworks***

In several developing countries, the logistics sector is governed by traditional frameworks that were developed for postal services. As illustrated above, these frameworks may be outdated and may also pose problems in the regulation of the very dynamic express service industry in particular. While there is little evidence of systemic regulatory barriers impeding trade in the logistics sector, it is also apparent also that services are fragmented. Market forces play an important role but may amplify the imperfections in the regulatory framework. One appropriate objective for a regulatory regime suitable to the integrated logistics services subsector would be the development and maintenance of institutions to support the logistics services market, which are at the same time open, adaptable and pro-competitive.

At the same time, regulatory regimes need to provide users with assurance about the quality of services offered. A defining feature of third party provided integrated logistics services is their lack of homogeneity. It follows that the standards for quality service must necessarily be highly customized for individual clients. Indeed, establishing component-specific regulatory criteria for determining whether any individual service enterprise is qualified to offer integrated logistics services should ideally be avoided in favor of a more flexible regulatory framework that allows for innovation. After all, the logistics services sector needs to be versatile to respond to the ever evolving needs it serves. More generally, private sector development can only be fully nurtured if appropriate regulatory frameworks are in place.

### ***Capacity building***

The role of multinational enterprises in helping to develop logistics sector capacity should not be underestimated. As argued by the WTO (2010), due to of the intrusiveness of integrated logistics services in the core business processes of many global enterprises and the strategic value of this service sector to an economy aspiring to benefit from an FDI commitment from global enterprises, a variety of legal organizational forms, joint ownership forms and contractual forms need to be made available to them, including wholly owned subsidiaries of MNC's, foreign/ local joint ventures which involve foreign partner control. The overriding objective of their investment in local institutional capabilities is the adoption of a precedent in international and trade facilitation protocols—and the capacities to enforce these protocols predictably. In these ways, third party integrators can gradually into a harmonized system government business processes as well as those of other supply chain partners.

## ***Increased use of ICT***

One of the key attributes of logistics services in the twenty-first century is the ability to track and trace shipments. The methods and technologies of integrated logistics management have evolved quickly over the last 30 years, but are now heavily reliant on ICT and related software applications. Local systems in developing countries need to be connected to other systems in other countries in order for real time exchanges of forecasts, inventory levels, shipment schedules and production schedules take place and to be synchronized. A critical area then, which needs to be of concern to regulators, is assuring the availability of information systems and the openness of existing ICT service providers to support new supply chain management applications, to allow new systems applications providers to gain access to existing ICT networks and to introduce new forms of digital information exchange on existing platforms. Provision of ICT backbone infrastructure is therefore as much a core component of logistics management as other infrastructures, such as transport, warehousing, etc, and services. In many developing countries, legacy licensing standards and the protective grandfathering of ICT rights can be obstructive to new service providers and new software applications. This is also an important issue which regulators need to consider in order to ensure a timely adoption of emerging technologies by logistics operators.

## **Trade Negotiations and Regulatory Disciplines**

The primary objective of the GATS negotiations is to provide market access to foreign services providers and eliminate measures that discriminate against them. In the case of logistics services the most relevant access for logistics service providers is through mode 3 or commercial presence (i.e. foreign investment). The GATS provides ample flexibility for members to graduate their market liberalization process. For example, members may design staged transitional arrangements to reach the full market access and national treatment liberalization status agreed in their schedules.

From the point of view of services providers, GATS commitments must allow the integration of services because providers may wish to offer an integrated range of services as part of their business activities. For example, regulations that allow foreign investment in warehousing and distribution services, but limit the participation of foreigners in other auxiliary services related to transportation, may affect the services provision. To achieve this, WTO members should adopt a comprehensive definition of logistics services and a single set of liberalization commitments, including key transportation services commitments. Although this is an important step for meaningful results, it is not sufficient.

Four additional regulatory principles should be incorporated in members' schedules. First, similar to the commitments included in the Telecom reference papers<sup>25</sup>, members must ensure non-discriminatory access to and use of the infrastructure (port, airport, and road and rail transportation) required for the provision of logistics services. Secondly, when the State decides to participate directly as a provider of some logistics services, such as auxiliary maritime services or a postal operator providing express delivery services, corporate governance of State Enterprises becomes an important issue. A clear level-playing field for all services providers must be ensured; regulatory frameworks that help prevent conflict of interest and regulatory capture must be implemented; finally, separation of functions, transparency and due process are part of the required regulatory governance. An example of a possible model that could have broader application is proposed by the

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<sup>25</sup> The Telecom Reference paper is part of the results of the telecommunication negotiations that concluded in 1997 under the WTO/GATS post-Uruguay Negotiations. This paper included a set of regulatory disciplines that the participating members adopted on a voluntary basis. The aim was to complement the market access and national treatment commitments adopted, with additional disciplines that will provide a minimum standard of pro-competition safeguards.

World Bank (2007), and provides a set of good regulatory practices in port reforms, aimed to address these problems. The model advocates for the separation of port ownership and operation functions. Among the additional disciplines that would be required, and already identified by the co-sponsor of the collective request list in logistics services, rules on domestic regulations to ensure that procedure, licensing/authorization, and other requirements do not restrict the services provision are necessary. A complementary model could involve the establishment of independent regulatory bodies where they do not exist.

A third principle has to do with competition policy issues. As this is an industry where major global operators are active, pro-competitive safeguards are required to ensure the benefits of liberalization. Moreover, certain business practices in important components of the logistics chain, such as international maritime services are exempt from domestic competition laws. The potential conflict of interest and anticompetitive practices problems are similar to the ones faced by IT and communications services providers who require access to basic telecommunication infrastructure to conduct their businesses. To overcome this limitation, WTO members negotiated rules to ensure access and interconnection to the basic infrastructure in the context of the WTO telecommunication negotiations (concluded in 1997). In the case of logistics services, nondiscriminatory principles for access and use of the required infrastructure should be implemented in order to ensure the provision of logistics services by asset-based and non asset-based firms as well as for national and foreign providers. Also, as proposed by Fink et al (2001) in the case of maritime services, a starting point could be first, to end the exemption of collusive agreements in the maritime sector from national competition law; and second, to allow foreign consumers to challenge anti-competitive practices by shipping lines in the national courts of countries whose citizens own or control these shipping lines.

Fourth, flexibility is required to adjust to innovation and continuous changes in clients' needs. Innovation gains will be reduced if regulations that do not allow for rapid reallocations of resources are put in place, as for instance, when there are surges in volumes that the infrastructure is not capable to manage. One possible approach would be to allow logistics services providers to introduce new services required by their clients, prior request or notification to the relevant regulator, if any, and provided that the introduction of the new service does not require to adopt a new law or modify an existing law, or other legal obligation. If an authorization is required, the decision shall be made within a reasonable time and the applicant should be informed of the decision concerning the application.

What is the best way to achieve greater liberalization in logistics services? Broadly, there are at least three possible options. In the first option, countries can continue to negotiate the sector component by component as it has been done so far in trade negotiations. However, as discussed above, policy has strong influence on logistics performance and government interventions in parts of the supply chain affect the performance of the entire supply chain. This approach will essentially capture market access and national treatment limitations, but not all the potential limitations relevant to the logistics providers. The second option is to follow the same approach adopted by WTO members during the telecommunication negotiations in 1997, more specifically to complement market access and national treatment with additional commitments to capture other dimensions such as licensing and authorization procedures important for logistics operators.

The main purpose of the Telecom Reference Paper was to introduce detailed provisions to ensure that the major/dominant telecommunications services provider does not abuse its position, other obligations referred to the access to, and use of, public networks and services. The main objective was to ensure access to, and use of, the telecommunications sector's basic facilities or infrastructure, being this the main potential access barrier to service suppliers, as well as other authorization

procedures. Although this was a successful approach to include additional obligations for WTO members, it has two shortcomings. First, some provisions are fairly general. This means that there is great scope in implementing them. Second, because this was not a mandatory obligation, some members either adopted partially these documents, or adopted only parts of it.

A third option, more appropriate would be to negotiate a self-standing agreement which would be part of the GATS, but that would contain both the market access and national treatment commitment of members, and would also contain more details and clear provisions applicable to the sector. Although this is a more complex alternative, there are examples that provide a basis to adopt it. More specifically, during the Singapore Ministerial Conference in December 1996, WTO members negotiated the Information Technology Agreement, which covered more than 90 percent of the trade of the products, and eliminated in only 3 years tariffs on these products on an MFN basis. Although this agreement was much less successful on other matters such as non-tariff measures, in the case of logistics services, all the relevant matters are specifically related to regulations which mean that this is the main topic of the negotiations. Moreover, this same approach may be followed by existing or new PTAs.

Customs regulations as well as border management issues more broadly, are perceived as the most significant barriers to logistics services providers. However, unlike other limitations --such as poor infrastructure, complex regulatory reforms or weak institutional arrangements-- the means and political will (from donors as well as multilateral organizations, such the World Bank) are available to help identify and implement technical solutions to improve regulations in this area. This broad agenda is addressed in McLinden et al (2011) which proposed a collaborative border management approach to reduce costs in an increasingly complex trade environment.

While the WTO provides a multilateral context in which to address logistics services, regional trade agreements are also an option to address other specific issues that may be of particular importance in this context. Therefore, the proposals presented in this paper are also relevant for regional and bilateral negotiations.

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