



BULLETIN 369 /

FACILITATION OF TRANSPORT
AND TRADE IN LATIN AMERICA
AND THE CARIBBEAN

Logistics for production, distribution and trade

Background

On the basis of its mandate, the Economic Commission for Latin America and the Caribbean (ECLAC) works to contribute to economic development in Latin America and the Caribbean, coordinate actions for international integration and promotion, reinforce regional economic ties and promote social development in line with the economic context.

In its more than 70-year history, ECLAC has formulated different strategies, policies and instruments, not only during the rise and fall of import substitution industrialization, but also during open regionalism, and the globalization of production and finance. During that time, it has also put forward proposals to address inequality and the impacts of the global environmental crisis.



Background	1
I. The role of logistics in production and trade	2
II. Infrastructure development in a context of meagre economic resources	4
III. The new challenges for sectoral infrastructure policies brought by market globalization	6
IV. Technological progress and its impact on the logistics sector	8
V. Value chains in an expanded regional space	9
VI. Recommendations	11
VII. Bibliography	13
VIII. Publications of interest	14

This document analyses the role of logistics in production, distribution and trade in Latin America and the Caribbean. This is in connection with the incorporation of the Infrastructure Services Unit into the Trade, Infrastructure and Integration Division of the Economic Commission for Latin America and the Caribbean (ECLAC).

This bulletin was prepared by Gabriel Pérez and Ricardo J. Sánchez, with input from the entire Unit.

For more information on this subject, contact gabriel.perez@cepal.org.

The views expressed in this document are those of the authors and do not necessarily reflect the views of the Organization.

The changes in the region lead to work within ECLAC being reorganized, to adapt to the new situation. It was for this reason that the former International Transport Division was succeeded by the Transport Unit of ECLAC, one of the last heads of which was Larry Burkhalter,¹ who recently passed away and to whom this special edition of the *FAL Bulletin* is dedicated.

In late 2009, the Office of the Executive Secretary of ECLAC decided to create an Infrastructure Services Unit within the Natural Resources and Infrastructure Division to replace the Transport Unit. This was done to add new issues such as infrastructure management, accessibility and equity of infrastructure services, and especially cargo logistics and sustainable passenger mobility to the Unit's traditional remit, which up to that point had focused on transport.

Over the last decade, ECLAC has advocated an agenda that places equality at the centre of sustainable development and makes technological change a driver of shifts in the production matrix. In these areas, policies on trade, regional integration, logistics and infrastructure are essential pillars of the proposed new development model. Therefore, on 1 January 2019 the Infrastructure Services Unit team became part of the new Trade, Infrastructure and Integration Division of ECLAC, in order to better support the governments of the region in changing production patterns with social equity, by creating a single team to address the trade, facilitation and infrastructure provision issues linked to regional integration. This will also strengthen trade policy proposals and the position of Latin America and the Caribbean in the world economy, given the links to transport infrastructure, cargo logistics and passenger mobility.

ECLAC has been preparing a series of studies of the characteristics regional infrastructure and provide countries with guidelines to improve public policies, investment plans and related law. The new operational structure of the Unit aims to reinforce these actions by adding research and technical assistance to increase the efficiency, productivity, resilience, connectivity and sustainability of infrastructure and of logistics and mobility services. The objective is to reduce transaction costs, offer competitive advantages in certain market segments, improve the quality of infrastructure investments and minimize the negative externalities of transport activity on society and the environment. In addition to being reflected in the price of services, all these elements can be differentiating factors in markets with greater purchasing power and socioenvironmental awareness.

This document analyses, over five sections, the changes in the infrastructure, logistics and mobility sectors in the region, which explain why a new policy approach is needed. The sixth and final section contains a set of recommendations on how to address the main challenges that the sector must contend with in this new context.

I. The role of logistics in production and trade

The quantity and quality of available infrastructure determine, to a large extent, the production and consumption patterns of an economy. Similarly, the type of infrastructure chosen and the way it is designed, regulated and operated have significant determining effects on the prices, timing and quality of the products that are produced. Furthermore, transport infrastructure and logistics services enable connectivity with the territory, and in the cases of agriculture or extractive natural resources, logistics chains are crucial to the competitiveness of products.

¹ Larry Allen Burkhalter Carlidge, specialist in commercial and maritime law, began working at the Economic Commission for Latin America and the Caribbean (ECLAC) in 1977, and retired in 1999 from his position as head of the Transport Unit of what was then the International Trade, Finance and Transport Division. His work focused on port and labour reforms, as well as other legal, economic and technical aspects of maritime transport in the region. His main works can be found at the following address: <https://tinyurl.com/y29m85pz>.

Strategies to increase competitiveness in the countries of Latin America and the Caribbean have frequently focused on opening up new markets, reducing tariffs and facilitating customs procedures. However, the lack of physical and technological infrastructure, as well as regulatory shortcomings with regard to competition among logistics services—including transport— can also significantly affect the competitiveness of trade, by influencing the cost and fluidity of exports of goods and services, as well as the end-user prices of the goods and services that the population consumes.

Lastly, it goes without saying that trade and other economic activities could not have been multilateralized without creating new supporting trade routes and consolidating existing ones. Trade routes are a reflection of the level the development of infrastructure, primarily for transport and telecommunications, but also for national and international logistics services, to connect different markets, taking advantage of economies of scope and demand-side economies of scale that make fast, cost-effective, safe and secure services possible.

Despite these considerations, simplification, standardization and harmonization of the different procedures, documents, payments and technical requirements that determine how goods, services or factors of production move between countries and influence the final cost to consumers have to date been addressed separately: on one hand those events that occur at border crossings (trade facilitation) and, on the other, those that occur within national territory (transport regulation). However, from a logistical point of view, it is difficult to determine where each of these stages begins and ends, since today the supply of inputs and components is a continuous flow between the different elements in the value chain. Furthermore, the value chain itself is spatially fragmented, with local, regional and global linkages that can cross borders multiple times before final export.

The term “trade logistics facilitation” is starting to be used in some specialized areas, in reference to management of flows of goods, documents and payments in logistics operations with the aim of reducing direct and indirect costs. This document does not aim to discuss whether the term “facilitation” should be used, but it is important to consider how this new approach considerably broadens the traditional scope of facilitation, by seeking expeditious, reliable, safe and secure flows not only of the information relating to international trade in goods and services, but also in the functioning of supporting infrastructure and logistical operations, including transport, without distinguishing between cross-border international transit and local transport operations.

One of the advantages of this new vision of facilitation is that it advocates comprehensive analysis of the set of processes and requirements involved in international trade transactions, seeking to eliminate any inefficiencies or excess costs that limit fluidity and competitiveness, regardless of whether the flaws are in infrastructure, documents or technical matters. This approach is in line with the ECLAC proposal for integrated logistics and mobility policies (Jaimurzina, Pérez-Salas and Sánchez, 2016), which seeks to increase coordination and coherence within States and with neighbouring countries, to reduce inefficiencies.

The approach of the modern concept of logistics is also integrative. The traditional approach, which separates “international” logistics from “internal” logistics, leads to confusion and decision-making that may not favour sustainable development. Conversely, the inclusion of logistics, infrastructure for development, trade and production services allows the supply chain to be envisaged as an effective and efficient continuum, from the origin of the goods and services that a country exports through to their international destination. This approach also supports the idea of production transformation and sustainable development, since cargo logistics and passenger mobility are fundamental to achieving the connectivity and accessibility targets of the United Nations Sustainable Development Goals.

II. Infrastructure development in a context of meagre economic resources

The demands of economic development and the pursuit of increased productivity and greater competitiveness in international markets have pushed the countries of the region to expand their infrastructure and modernize logistics and mobility services, to meet new needs and technological standards. The modernization has mainly focused on building work tied to foreign trade (such as ports, airports and major road corridors), sometimes to the detriment of the construction and maintenance of domestic infrastructure (engineering work such as secondary roads, bridges and tunnels). This has contributed to a progressive decline in the coverage and quality of infrastructure, driving up the cost of infrastructure use, user travel times and travel costs and generating significant negative externalities that affect the quality of life of the population.

Perhaps the most significant effect of this lack of investment is the gradual fall in the productivity of countries' public infrastructure capital, adding to the already low economic productivity that characterizes the region. In recent years, the region has experienced both limited capital accumulation and a reduction in total factor productivity (ECLAC, 2017). Similarly, a recent Inter-American Development Bank (IDB) report has found that the main obstacles to increasing productivity and growth are related to shortcomings in infrastructure investments and financial markets, as well as low competitiveness, poor integration, a low level of more sophisticated exports, and a low propensity to innovate and adopt better technologies (IDB, 2018).

Public investment in infrastructure in Latin America averaged 1.5% of annual GDP between 2012 and 2015. For the same period, the average for private investment was just 1.1% annually, according to Economic Infrastructure Investment Data (INFRALATAM).² Estimates of the investment required to reduce the infrastructure gap in the region range from 3.7% to 7.4% of annual GDP, depending on the projected economic scenario (Sánchez and others, 2017). In the 2008–2015 period, most investment in transport infrastructure in Latin American countries was in road construction or rehabilitation; this averaged 0.75% of GDP per year, equivalent to US\$ 64 per capita. In the same period, the countries of the European Union (27), South Korea, Japan and China invested more than US\$ 150 per capita in road construction or rehabilitation (Chauvet and Albertone, 2018).

To meet expected demand for transport in the 2016–2030 period, at least 2.2% of GDP would have to be invested annually in transport infrastructure, including expenditure on maintenance and repairs. This would entail a threefold increase in investment compared to current levels. These amounts do not necessarily take into account design improvements or incorporation of new materials or technologies. If other important criteria of infrastructure, such as quality, reliability, sustainability and resilience (rather than just availability), are taken into account, the current situation in Latin American countries appears even more alarming.

For all these reasons, substantial efforts are urgently needed in the sector, in terms of investment and other improvements, particularly with regard to the work referred to in the 2030 Agenda for Sustainable Development to improve resilience or to adapt to and mitigate climate change.

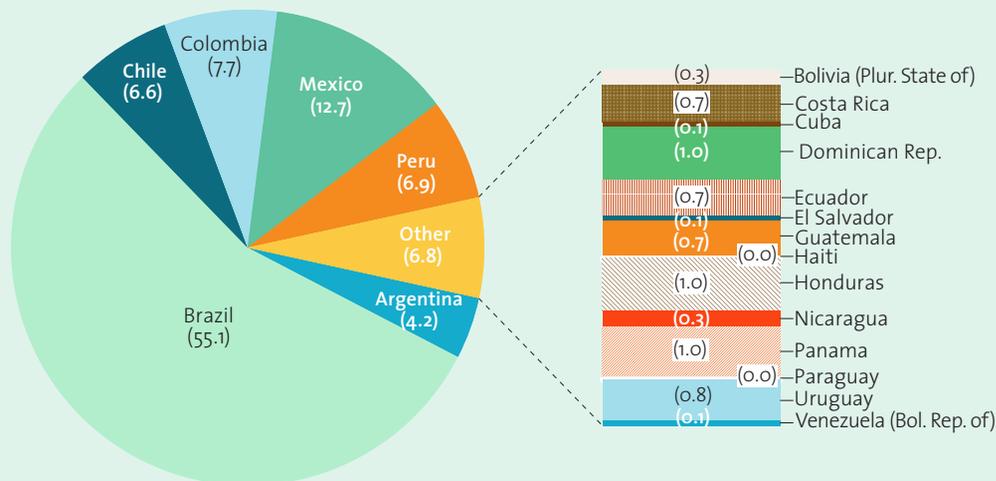


² INFRALATAM is an initiative of ECLAC, the Inter-American Development Bank (IDB) and the Andean Development Corporation (CAF), which aims to create a databank of investment in economic infrastructure by the countries of Latin America and the Caribbean. It can be consulted free of charge [online] <http://infralatam.info/>.



Public investment has not been sufficient, on its own, to expand capacity and ensure that infrastructure is properly maintained and updated. Several countries in the region have looked to infrastructure concessions and public-private partnerships (PPPs) as means of increasing the quantity and quality of available infrastructure. However, despite the interest shown by governments and the effective progress in countries' regulatory frameworks and operational capacities with respect to PPPs in recent years, significant gaps remain in terms of financing, institutional frameworks and business climates. According to Global Infrastructure Hub, traditional PPPs are costly for low- and middle-income countries, with estimates suggesting that preparation and implementation of such processes can amount to 5%–10% of the total cost of a project. This, together with the reluctance of some countries to use this financing format, explains in part the lack of significant and uniform progress in private investment. According to the World Bank Private Participation in Infrastructure (PPI) database, between 1990 and 2016, the six largest economies in the region: Argentina, Brazil, Chile, Colombia, Mexico and Peru accounted for 93% of total private sector investment, as shown in figure 1.

Figure 1
Latin America: private sector investment in PPP infrastructure projects
by country, 1990–2016
(Percentages)



Source: Infrastructure Services Unit, on the basis of World Bank, Private Participation in Infrastructure (PPI) database, 2018.
Note: Includes the four sectors of economic infrastructure: transport, energy, telecommunications and water and sanitation.

Another element that should be borne in mind in this analysis is that many infrastructure concessions are entering their closing stages or are approaching their end dates. Countries will therefore have to reflect on how to rethink their infrastructure and the shape of relationships with concessionaires for the next round of tenders. For example, a significant number of concession agreements for container ports will need to be renewed over the next six years. Considering that these port terminals handle more than 20% of the container trade in Latin America and the Caribbean, the decisions made regarding upcoming tenders or repeat concessions could clearly affect not only on the functioning of the port market but also the competitiveness of the region's foreign trade.

This is why it is crucial to strengthen State technical bodies that are linked to management of PPPs, so as to gain insight into the strengths and weaknesses of the different public-private partnership mechanisms, with a view to expanding the capacity of infrastructure and seeking innovative mechanisms that enable it to be properly maintained, made resilient and adapted to climate change. Institutional strengthening in the political sphere is also essential, especially as regards the formulation of major projects and in decision-making on selection, prioritization, financing and operation of regional construction work.

III. The new challenges for sectoral infrastructure policies brought by market globalization

Private participation has also brought with it new challenges in regulation of services that may affect the competitiveness of Latin America and the Caribbean. A key source of such challenges is consolidation and concentration of the logistics, maritime and port industries, resulting from horizontal and vertical integration strategies in the supply chain. For example, in 2017, concentration in the overland distribution logistics industry meant that one in seven maritime trade containers was transported by the 25 largest global companies. Concentration in maritime and port logistics is even more marked: 71% of maritime traffic is controlled by 3 global ocean carrier alliances, 5 countries account for 69% of world fleet tonnage and companies from three countries (China and two in Europe) control 59% of global port operations. These levels of concentration, if they reach levels of market dominance, will also affect Latin America and the Caribbean and, therefore, the region's international trade. In the case of the region's ports, there is now an increased risk of anti-competitive behaviour, owing to incomplete contracts and market concentration resulting from integration (especially vertical and, in some cases, horizontal).

The same can be seen in the infrastructure construction sector, exacerbated by the acts of collusion—and corruption—that have characterized the last few years in the region. Information on recent cases in Latin America reveals that on average the cost of corruption amounts to 30% of the investment and can be as high as 50% in some cases. In addition to the significant value of bribes, corruption reduces the efficiency of investments, undermines public trust in institutions and imposes high socio-economic costs on countries by fuelling tax evasion, sovereign borrowing and transaction costs, ultimately reducing overall economic growth.

In this respect, policy analysis and proposals regarding regulation, antitrust issues, and infrastructure and services concessions are key to properly functioning strategic income-earning assets in terms of development of infrastructure and supply chains. This is reflected in a recent study by the World Economic Forum (WEF), which puts the region's average performance in the institutions pillar of the Global Competitiveness Index (47.8 out of an ideal value of 100) at almost the same level as the worst performing region, sub-Saharan Africa (47.5) (WEF, 2018). This indicates problems such as corruption, organized crime and issues with the judicial system that can determine whether or not growth and development take hold. Of course, there is significant heterogeneity, and these problems affect some countries in the region more than others.

In this context, it is necessary to analyse and update regulatory frameworks, including technical and economic regulations, bearing in mind that more and more of the private agents involved in operating logistics services will be global companies, whose commercial decisions and strategies will not necessarily be aligned with regional expectations. This underscores the need for in-depth reflection on logistical governance that offers a comprehensive perspective, so that the resulting regulations, rules and institutions can effectively and efficiently meet the challenges of the different markets, and especially those linked to new thematic areas in State regulatory action, such as systems to prevent horizontal and vertical integration and the incorporation of technologies into both services and trade.

In order to make progress in this regard, there has been repeated emphasis on the need to align the conception, design, implementation, monitoring, supervision and evaluation of infrastructure, logistics and mobility policies with the harmonized technical and regulatory procedures needed to promote complementarity among the different regional economies. There is also now a need to address anti-competitive actions as well as a growing need for attention to development policies and to technical assistance for governments. This could be achieved through an integrated and sustainable logistics and mobility policy with a regional perspective (Pérez-Salas, 2008; Cipoletta, Pérez-Salas and Sánchez, 2010). Institutional and regulatory flaws or obstacles in policy management and market organization, which are the result of multiple unfocused public visions on different processes relating to economic infrastructure and services (conception, design, implementation and monitoring, supervision and evaluation), would thus be overcome.

A diagnosis of infrastructure policies highlights how weakly sustainability criteria are applied in policy design and implementation. Although it is difficult to determine these criteria, because there are various evaluation systems —each developed for a specific context that is far removed from the realities facing infrastructure in Latin America and the Caribbean—, these experiences can provide valuable lessons and methodologies for the development of metrics that can be applied to the regional reality. Sustainable infrastructure should be designed to mitigate environmental risks, but also to generate economic, social and environmental co-benefits that favour long-term sustainable development. Such considerations must therefore be taken into account in all stages of an infrastructure project, from approval, during operation and maintenance, through to the end of its useful life (recycling), in line with the recommendations that originate from the 2030 Agenda for Sustainable Development and other international commitments adopted under the auspices of the United Nations.

Finding a balance between efficiency, resilience and sustainability in infrastructure for development is an enormous challenge the region is facing. As previously mentioned, investments in infrastructure in Latin America and the Caribbean are limited and related decisions do not follow sustainability criteria. This clearly makes reconciling efficiency, resilience and sustainability an even greater challenge. Consequently, the governments of the region will require significant international support for institutional strengthening in these areas and for the design of long-term policies that promote incorporation of these three dimensions as a means of achieving structural change and equality in Latin America and the Caribbean. This also entails taking into account the Sustainable Development Goals, the targets and indicators of which provide possible alternatives for achieving this balance and for evaluating achievements.

It is important that infrastructure's resilience —to the impact of climate change and other disturbances— is incorporated into project evaluation systems, and that mitigation work is no longer seen as a superfluous cost. If evaluations were to include the cost of infrastructure failing or being out of service because of a lack of resilience —that is to say the losses arising from disruptions caused by shocks or stress— many assessments would undoubtedly be oriented towards more robust infrastructure assets that recover more quickly from breakdowns. Under the right circumstances, investment in resilience enhances infrastructure's ability to produce gains in efficiency, productivity and competitiveness.

Although the challenge of reconciling efficiency and resilience is addressed in supply chains around the world, the situation in the region is more complex because of historical structural flaws in provision of infrastructure, increasing vulnerability to a set of natural and human hazards that are not present to the same degree in the rest of the world. The insufficient and inefficient provision of infrastructure services causes or exacerbates the structural imbalances that have characterized the region, such as an undiversified productive structure, lagging efforts and performance in terms of innovation, marked concentrations of income and wealth, and high vulnerability to climate change (ECLAC, 2016). It also prevents greater resilience, not only in infrastructure—that is to say transport assets’ ability to withstand and respond to shocks—but also in the economies, communities and people of Latin America, as a whole. For example, proper channels for the provision and distribution of services and commodities are key to minimizing impacts and recovery times after a devastating natural event.

These elements must be considered in infrastructure planning, sectoral public policies and trade strategies, since the rupture of a supply chain affects all its components: in addition to the direct costs of the rupture, there is also significant propagation to the rest of the chain. It is also important to promote innovation and collaborative approaches to management of multimodal and regional supply chains, not only as a means of improving infrastructure resilience, but also to reduce logistics costs and thereby increase regional competitiveness.

IV. Technological progress and its impact on the logistics sector

Digitization and technological innovation are profoundly transforming logistics in the new century. As a result of changes in the systems for producing and distributing goods, close, real-time synchronization of different parties and logistics processes is required. That is why the logistics system of the future must aim for interconnected information and optimized time and resources, with significant investment in innovation and development to maintain competitiveness. The management and exchange of data among participants in the logistics chain is proving a key source of innovation and insight into customers’ needs, contributing to the design of value-added services.

Applications of technology must be seen as a technological filament that connects and feeds an increasingly complex and extensive logistics chain, increasing participants’ competitiveness and maximizing the productivity of available infrastructure and services. These technological applications combine and coordinate different information control, transmission and processing technologies to improve the efficiency, safety, security and sustainability of infrastructure services. To this end, these systems capture, process and transmit information on commercial transactions, freight operations and conditions, traffic and other operational variables relating to the flow of goods and services, in order to construct integrated logistics and mobility, improving companies’ operating margins, generating opportunities for distinctive value-added services and reducing negative social and environmental externalities.

However, in the transport industry in Latin America and the Caribbean there is resistance to digitalization and innovation, possibly driven by a fear of job losses and a lack of opportunities for digital learning. The use of disruptive technologies, such as blockchain, the Internet of Things, artificial intelligence, automation and robotics, is in its infancy in the region. Nonetheless, such developments will cause profound changes throughout the logistics chain. While digitalization and technology will not be a universal solution to all the stress and externalities surrounding the regional logistics sector, they are undoubtedly tools that are here to stay; the private sector and public rules and regulations must promptly adjust to take advantage of their potential and promote regional competitiveness.

With regard to the digitalization of logistics, Latin America and the Caribbean presents the following challenges:

- The digital divide in the region is wider than that in more developed countries, which have accumulated technological and institutional capacities through cooperation and standardization of the use of technologies, which evolve endogenously as part of the learning process.
- A lack of development regulations and strategies that properly incorporate new issues such as cybersecurity, the use of patents and regulations to promote knowledge generation, and international cooperation.
- A lack of effective public-private measures to promote interoperability between systems and increased investment in research, technology and development.
- A shortage of public mechanisms to promote technological training and the creation of new jobs, enabling technological innovations that make logistics and international trade in Latin America and the Caribbean more productive and efficient.

Logistics policies and private investment strategies must address these challenges promptly to boost productivity gains, create new business opportunities, promote a production transformation and increase regional competitiveness. If this is not done, the extraction-based development model will be maintained, despite having proved unable to deliver development that is sustainable and benefits all sectors of the population. In this regard, a WEF study affirms that it is precisely the low capacity for adoption and innovation of information and communications technology (ICT) in Latin America and the Caribbean that deepens the region's dependence on exports of commodities and low-cost manufactured goods (WEF, 2018). According to the study, this also explains why the region has not been able to move towards a more sophisticated basket of exports, and why its share of world exports of goods in 2017 (5.6%) was almost the same as it was in 1970 (5.4%).

To move forward with this production transformation, towards more productive and sustainable trade, one of the first steps is to establish an institutional framework to ensure that these technologies are properly developed and implemented by applying basic technological standards and definitions, so as to make sure the various public and private initiatives exchange information and are interoperable, at the national and subregional levels. The aim of this is to lay the foundations for coordinated development of such systems, reducing roll-out costs and alleviating uncertainty over technological change.

A second step is to advance with integrated sectoral policies that are aligned with the desired form of development. To achieve this, Latin American countries need to implement trade, industry, technology and education policies to increase the knowledge content of their goods and services. In other words, the structural change that ECLAC is advocating requires innovation and adaptation, as well as strategic investments with a long-term horizon.

A third step is to resolve coordination shortcomings within government apparatuses, favouring greater public-private coordination and fostering proper logistical governance and facilitation of processes. Similarly, many governments in the region still have room to increase the efficiency of regulatory frameworks and to improve transparency and corporate governance. Adoption of new technologies and value-added services would thus make it possible to seize the opportunities presented by the fourth industrial revolution, favouring greater competitiveness, innovation and social inclusion.

V. Value chains in an expanded regional space

ECLAC has always played a leading role in regional integration, linking the various component elements and viewing the process as multidimensional, encompassing not only economic and trade matters, but also political, social, cultural and environmental issues (ECLAC, 2014), as well as regional physical and technological integration. In this respect, the components of regional integration are:

- Commercial and economic: including the different degrees or stages of integration (preferential trade agreements, free trade areas, customs unions, common markets and economic and monetary unions).
- Policy-related: including coordination and harmonization of actions at the governmental and institutional levels among member countries, entailing a deeper and more mature institutional framework in the region, establishment of shared procedures, and a focus on social matters.
- Physical: including interconnection of economic infrastructure and of the services delivered through it, which requires regional coordination of planning, regulations and sectoral rules.
- Production-related and technological: including not only establishment of regional production chains but also coordinated digital connectivity that supports interconnection of regional projects in science, technology and innovation.

The interest in regional integration as a tool to promote trade is nothing new. At its third session in June 1950, ECLAC recommended to the Latin American governments, when formulating programmes and adopting economic development measures, “take into account the possibilities of expanding demand through reciprocal trade, in order to achieve a better integration of their economies and higher levels of productivity and real income”. In response, the various integration initiatives that existed at that time began to incorporate coordinated planning of production and transport activities, as proposed by ECLAC (Fuentes, 1973). Subsequently, in the 1960s, ECLAC also stressed the importance of infrastructure networks in regional integration, stating that for the Latin American Free Trade Association to succeed (now the Latin American Integration Association, LAIA), it was essential to develop a regional transport and energy policy that favoured proper regional economic integration (Brown, 1966).

More recently, ECLAC has promoted production integration through the creation of value chains that deepen the regional market and favour innovation and generation of quality and inclusive employment. For these chains to materialize and function efficiently and competitively, one of the elements needed is the physical and technological support provided by logistics. This inevitably raises the need for the region’s logistical infrastructure to be managed in a different way, since the existing models were often designed to export large volumes at the lowest possible cost and in the shortest possible time, with no consideration to encouraging production chains, much less trade in digital goods and services. It also raises the need to interlink investments to provide digital connectivity that favours the production transformation and competitive access to ICT for companies and for all the segments of the population.

Regional integration of economic infrastructure is therefore a strategic tool for promoting growth and achieving greater levels of development in the region. Such integration makes it possible to close the infrastructure gap at a lower economic cost, but also boosts the social return on the total investment (both public and private) by better aligning public-private interests with the principle of intergenerational equity. It also increases the competitiveness of industries by cutting logistics costs and reduces negative externalities for the population and the territory. In this context, strengthening the links between major infrastructure projects, international trade and local production could increase investment and boost the production transformation through shared use of logistics infrastructure, making alternative investments possible through potential economies of scale, scope or agglomeration.

One of the significant limitations on territorial integration between and even within countries comes from the lack of territorial connectivity. Connectivity should not be analysed solely from an international point of view, given that problems with internal connectivity are often more serious than those of an international nature. Indeed, although the countries of Latin America and the Caribbean share strong cultural, historical and economic ties, there are still considerable differences between subregions, countries and even within countries themselves. For this reason, it is important to keep in mind the

heterogeneity of the region in terms of social and economic development, provision of transport and infrastructure, and international and territorial connectivity. In general, across the region international air and maritime connectivity are better than overland connectivity, be it intraregional or within countries. The great challenge, therefore, is to improve internal connectivity within countries and at the subregional level, mainly with regard to secondary roads and in rural areas, where the lack of investment in infrastructure is compounded by isolation and often inefficient, costly, unsafe and insecure logistics and mobility services, further increasing the precariousness of these areas.

Although some governments in the region have been making efforts to improve the connectivity of the main transport networks, including development, improvement and maintenance of secondary and tertiary roads, the vision for regional connectivity and integration remains road-centred, as reflected in the modal division of infrastructure projects within the main regional integration mechanisms. This results in significant negative externalities, such as inflated logistics costs, severe congestion and high volumes of greenhouse gas emissions. In addition to having direct implications for the resilience of the transport system, modal concentration contributes to exacerbating stresses that may affect infrastructure in the future.

More than 70% of national cargo in Latin America is carried by automotive haulage, to the detriment of maritime, inland water and rail transport, which remain underused and marginal within regional connectivity and integration initiatives and also in usage of different modes of transport within countries. Favouring co-modality in transport (road, rail, air, water or pipelines) would increase the number of intermodal options and operations, reducing logistics costs and improving the competitiveness of the economy.

Specifically, there is particularly high potential for inland water mobility in South America, at the different levels: from local modes such as cabotage to regional and international transport. In some parts of the region, inland water transit not only offers a significant transport capacity to and from production hubs in the centre of the continent but is also the only form of connection for a significant part of the population. However, inland water mobility represents only 1% of total transport, owing to a lack of infrastructure, as well as a scarcity of services offering quality, safety, security and reliability. To take advantage of the geographical and economic advantages of this mode of transport, a coordinated and sustained effort must be made on the basis of national public policies and policy coordination at the subregional level, providing a long-term logistical vision and jointly addressing the needs for infrastructure, regulation of services and specific rules for each mode of transport.

VI. Recommendations

To address the challenges of development, joint actions must be undertaken in the region, improving regional integration processes, harmonizing, integrating existing trade agreements on facilitating trade logistics and resolving inefficiencies arising from shortcomings in coverage and quality of infrastructure.

Infrastructure planning with a long-term perspective and subregional coordination will allow effective support to be provided for industrial transformation, as well as enabling better adaptation to economic changes and new social and environmental concerns that emerge as development progresses (Pérez-Salas, 2017).

In view of the magnitude of the infrastructure deficit and infrastructure's growing importance in development policies, countries must analyse the main factors that determine how investment—both public and private—in infrastructure and the services it provides evolve, seeking innovative mechanisms to expand capacity and improve the quality of infrastructure, not only along major logistics corridors but also in rural areas. Similarly, they must fix the flaws in how systems operate, which in some cases allow dominant private companies to hold sway over regulators or enable anti-competitive or corrupt actions to occur within infrastructure markets.

Facilitation of logistics and trade processes at the national and international levels is crucial to the production transformation towards more sustainable development. This is because such facilitation benefits a large number of producers, as well as the labour force and end-users by reducing transaction costs, improving the competitive position of exporters, increasing the volume of trade flows, promoting international integration of small and medium-sized enterprises and reducing the prices of the final products consumed by the population. From the point of view of governments, this facilitation also has positive effects on investment climates, tax revenues and application of controls, especially in terms of reducing corruption, bureaucracy and administrative expenses that do not create added value for society.

It is important to generate up-to-date standardized information that is comparable between countries, with a view to developing investment plans, making evidence-based decisions, and monitoring and evaluating actions from economic, social and environmental standpoints.

Institutional strengthening, at the national level and also of regional bodies for coordinating infrastructure policy and investment, is key to fostering growth and achieving greater connectivity in the region. Moreover, making the region function as an integrated space via an economic infrastructure that provides high-quality services is crucial not only for maintaining and enhancing competitiveness but also for reducing the costs of imported consumer products.

Lastly, as they did in previous decades, the countries of the region have continued to make significant progress in reducing trade tariffs and dismantling the quota system. The next step, for which ECLAC aspires to provide appropriate support, is to promote tangible progress in facilitation and provision of infrastructure for production integration, moving from a purely trade- and customs-based perspective to a much more holistic approach, aimed at simplifying operational procedures and reducing or eliminating transaction costs that affect exchanges and movements of goods, persons, capital and payments in international physical and digital trade.

International trade has expanded and become more globalized, and developing economies or those in transition have gained access to supply chains, improving the return on their exports. It is therefore important to reduce or eliminate any barriers to trade or to the movement of factors of production between countries. In order to make progress on these issues, to form an integrated and competitive regional market, multidisciplinary technical work is required to identify best practices that increase the quality, safety and security of services without increasing the costs or time involved. To achieve this, trust must be built and participants must pool their technical knowledge.

As a result, the thematic areas in which trade, physical and technological infrastructure and regional integration need to be developed are increasingly broad. The competitiveness of the countries of Latin America and the Caribbean no longer depends solely on customs matters, taxation, rules of origin or free transit; it is also determined by the ability to guarantee transparent investment mechanisms and secure, traceable digital services that provide competitive, safe, secure and sustainable logistics and mobility.

VII. Bibliography

- Brown, R. (1966), *Transport and the Economic Integration of South America*, Washington, D.C., The Brookings Institution.
- Chauvet, P. and B. Albertone (2018), "Road transport in Latin America: evolution of its infrastructure and impact between 2007 and 2015", *FAL Bulletin*, No. 367, Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
- Cipoletta, G., G. Pérez and R. Sánchez (2010), "Políticas integradas de infraestructura, transporte y logística: experiencias internacionales y propuestas iniciales", *Natural Resources and Infrastructure series*, No.150 (LC/L.3226-P), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
- ECLAC (Economic Commission for Latin America and the Caribbean) (2017), *Economic Survey of Latin America and the Caribbean, 2017* (LC/PUB.2017/17-P), Santiago, September.
- ____ (2016), *Horizons 2030: Equality at the Centre of Sustainable Development* (LC/G.2660/Rev.1), Santiago, July.
- ____ (2014), *Integración regional: hacia una estrategia de cadenas de valor inclusivas* (LC/G.2594(SES.35/11)), Santiago.
- Fuentes, A. (1973), *La creación de un mercado común: apuntes históricos sobre la experiencia centroamericana*, Buenos Aires, Institute for the Integration of Latin America and the Caribbean (INTAL)/Inter-American Development Bank (IDB).
- Jaimurzina, A. and R. Sánchez (2017), "Governance of infrastructure for sustainable development in Latin America and the Caribbean: An initial premise", *FAL Bulletin*, No. 354, Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
- Jaimurzina, A., G. Pérez-Salas and R. Sánchez (2016), "Logistics and mobility policies for sustainable development and regional integration: conceptual framework and regional experiences", *FAL Bulletin*, No. 345, Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), January.
- ____ (2015), "Políticas de logística y movilidad para el desarrollo sostenible y la integración regional", *Natural Resources and Infrastructure series*, No. 174 (LC/L. 4107), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
- IDB (Inter-American Development Bank) (2018), *2018 Latin American and Caribbean Macroeconomic Report: A Mandate to Grow*, Washington, D.C.
- Pérez-Salas, G. (2017), "Institucionalidad y políticas de logística: lecciones para América Latina y el Caribe del proceso implementado por la República de Corea", *Natural Resources and Infrastructure series*, No. 185 (LC/ TS.2017/126), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
- ____ (2008), "The need to establish comprehensive policies for infrastructure, transport and logistics", *FAL Bulletin*, No. 263, Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), July.
- Sánchez, R. and others (2017), "Inversiones en infraestructura en América Latina: tendencias, brechas y oportunidades", *Natural Resources and Infrastructure series*, No. 187 (LC/ TS.2017/132), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
- WEF (World Economic Forum) (2018), *The Global Competitiveness Report 2018*, Geneva.

VIII. Publications of interest



Inversiones en infraestructura en América Latina: tendencias, brechas y oportunidades

Ricardo Sánchez
Jeannette Lardé
Pablo Chauvet
Azhar Jaimurzina

The provision of infrastructure services in Latin America today—insufficient, inefficient and unsustainable—is one of the factors holding back the region’s progress towards sustainable development. One cause of the shortage and poor quality of infrastructure and infrastructure services in the region is the low level of public and private investment in the infrastructure sector: in other words, the gap between existing investment and the needs of the economy.

In this context, this document offers a new approach to the vertical gap—the magnitude of investment needed to support projected growth in economic activity and in the population for the period 2016–2030—and the horizontal gap, which is the investment needed to achieve universal coverage in the provision of basic infrastructure services.

Available in:



Políticas de logística y movilidad: propuestas para una política de movilidad urbana eficiente, integrada y sostenible

Patricio Rozas Balbontín
Azhar Jaimurzina
Gabriel Pérez

This document complements Rozas, Jaimurzina and Pérez (2015), which offers a panoramic vision of urban mobility in the Latin American countries, by proposing elements that, in the opinion of the authors, serve to build an efficient urban mobility policy capable to responding to the various problems that affect the region’s largest cities in this connection.

Available in: