



BULLETIN 376 /

FACILITATION OF TRANSPORT
AND TRADE IN LATIN AMERICA
AND THE CARIBBEAN

The evolution of modal split in freight transport in South America, 2014–2017

Introduction

This *FAL Bulletin* updates issue No. 343 and describes the evolution of modal split in international freight transport in South America between 2014 and 2017, in particular as regards Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay. Modal participation analysis is closely related to the Sustainable Development Goals (SDGs), in that the combined use of different modes of transport can contribute to their achievement in several ways: for example, one way to reduce the emissions generated by freight transport (SDG 13) and to encourage the construction of more resilient infrastructure (SDG 9)



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This *FAL Bulletin* analyses data on the commodities traded and modes of transport used between nine South American countries between 2014 and 2017. The aim is to identify the current modal split in intraregional freight transport and to ascertain the level and evolution of trade flows and imbalances by mode. The authors conclude with some policy recommendations.

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is to make use of short waterborne journeys as a partial replacement for road haulage (Brooks, Wilmsmeier and Sánchez, 2014). The use of more efficient and environmentally friendly modes of transport in logistics chains also bolsters economic growth (SDG 8) and more sustainable consumption and production patterns (SDG 12).

International trade information broken down in this way is therefore a vitally important asset. This *FAL Bulletin* offers a baseline for measuring shifts in the international transport modal split in South America to assist informed decision-making by policymakers and the monitoring of progress with the SDGs.

This issue uses data taken from the International Transport Database (BTI) maintained by the Economic Commission for Latin America and the Caribbean (ECLAC). Created by the ECLAC Transport Unit in 1999, the International Transport Database contains data on the Latin American countries' foreign trade and the modes of transport used to carry it. The analysis that follows covers Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay. The BTI database comprises processed historical data from the countries' national customs authorities, furnished by the Latin American Integration Association (ALADI) and covering the years from 2000 to 2017. It contains the following information:

- The mode of transport by which merchandise leaves from or arrives in a country.
- The product, classified according to the Harmonized Commodity Description and Coding System.
- The country of origin and final departure (in the case of imports) and the country of destination (in the case of exports).
- The volume of the shipment in metric tons.
- The cost, insurance and freight (CIF) value of imports and the free on board (FOB) value of imports and exports in current United States dollars.

This issue of the *FAL Bulletin* contains an analysis for the period from 2014 to 2017. The analysis does not cover international transport data for the commodities included under codes 27 and 99 of the Harmonized System since trade data for those products are less complete and energy commodities are not related to other trade flows (Hoffmann, Pérez and Wilmsmeier, 2002).

The issue is divided into four sections, the first of which is this introduction. Section two examines recent developments in intraregional transport. The third section then explores the modal split in trade among the selected countries, while section four examines their trade imbalances. Finally, in the fifth section, some conclusions are offered.

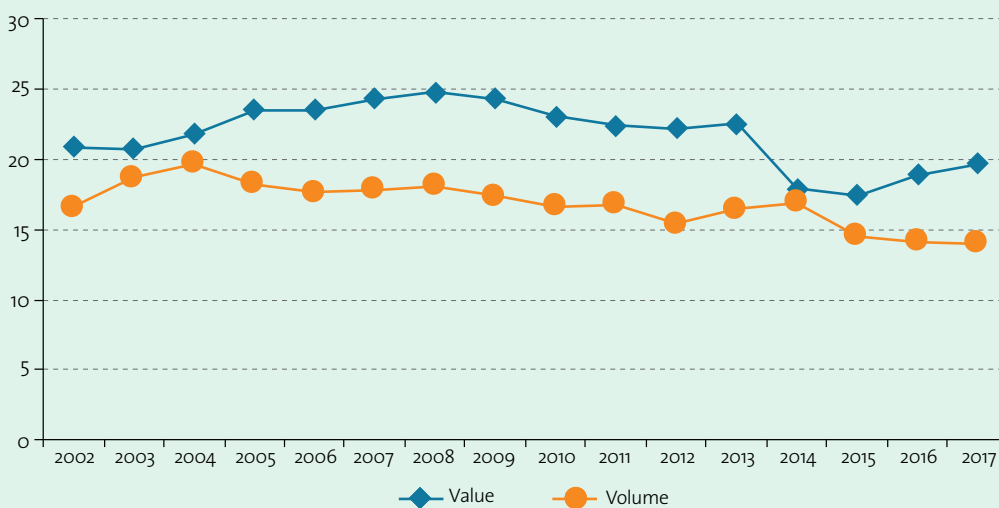
I. Developments in intraregional transport

The transformation of the South American economies and their production systems, driven by changing demands from other regions (such as the emerging Asian economies and, in particular, China) and new consumption patterns in Latin America have been the main factors behind recent freight transport trends. Raw materials are still the main exports of Latin America's economies although, as South American trade statistics show, demand for them continues to decline.

An examination of figures for the countries in question reveals that intraregional trade volumes continue to decrease. A modest recovery began in 2015, however, and two years later, in 2017, increases of 14% in volume and 20% in value were posted (see figure 1).

Figure 1

Evolution of intraregional trade, 2002–2017
(Percentages with respect to total South American trade)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), several years.

The importance of intraregional trade also varies among the region's countries (see table 1). In 2017, the export value of intraregional trade as a percentage of total trade ranged from 10.5% in Peru to 43.5% in Paraguay. Import values ranged from 11.3% in Brazil to 35.2% in Uruguay. In volume terms, Brazil exports the least to the region's other countries (3.3%), while at the other extreme, Paraguay's intraregional exports accounted for 43.2% of its total volume.

Fewer than 20% of the imports entering Brazil, Colombia and Peru came from within the region. Colombia posted the lowest percentage (11.8%), followed by Brazil with 12.1% and Peru with 16.6%. The Plurinational State of Bolivia and Paraguay were the most dependent on intraregional imports (47.2% and 42.6%, respectively), probably because they are the region's only two landlocked countries.

Table 1

Proportion of South American intraregional trade in total trade, imports and exports, 2017

	In value terms (percentages)		In volume terms (percentages)	
	Exports	Imports	Exports	Imports
Argentina	29.0	30.8	19.3	36.0
Bolivia (Plurinational State of)	18.5	34.9	67.3	47.2
Brazil	16.3	11.3	3.3	12.1
Chile	11.7	14.3	9.0	24.4
Colombia	22.3	12.3	26.0	11.8
Ecuador	14.7	22.1	16.0	22.7
Paraguay	43.5	33.4	43.2	42.6
Peru	10.5	16.8	16.1	16.6
Uruguay	26.1	35.2	10.6	38.2

Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), several years.

Note: Data for Chile are from 2015.

Intraregional trade is dominated by the countries that belong to the Southern Common Market (MERCOSUR).

That trade bloc's exports and imports accounted, respectively, for 79.9% and 69.5% of intraregional trade in volume terms in 2017 and, in value terms, for 83% and 34.7%.

In 2017, Argentina and Brazil accounted for 63.2% of all intraregional freight flows in volume terms, and for 67% in value terms. Those patterns indicate that the highest concentrations of trade flows are located in the southernmost part of South America.

It is therefore necessary to determine how these commodities are transported and the impact that changes in trade over the past decade have had; accordingly, the following section analyses how the modal split in the region has evolved.

II. Modal split

The volume of intraregional trade fell by 4.5% between 2014 and 2017, although in value terms it rose by 2.4% over the same period.

An analysis of the region's patterns reveals that maritime transport is still predominant, accounting for more than 65 million tons of freight in 2017. Road haulage accounts for the second largest share in terms of volume. The importance of airborne transport fell over the period under study, although there was a slight recovery in the final year (see figure 2).

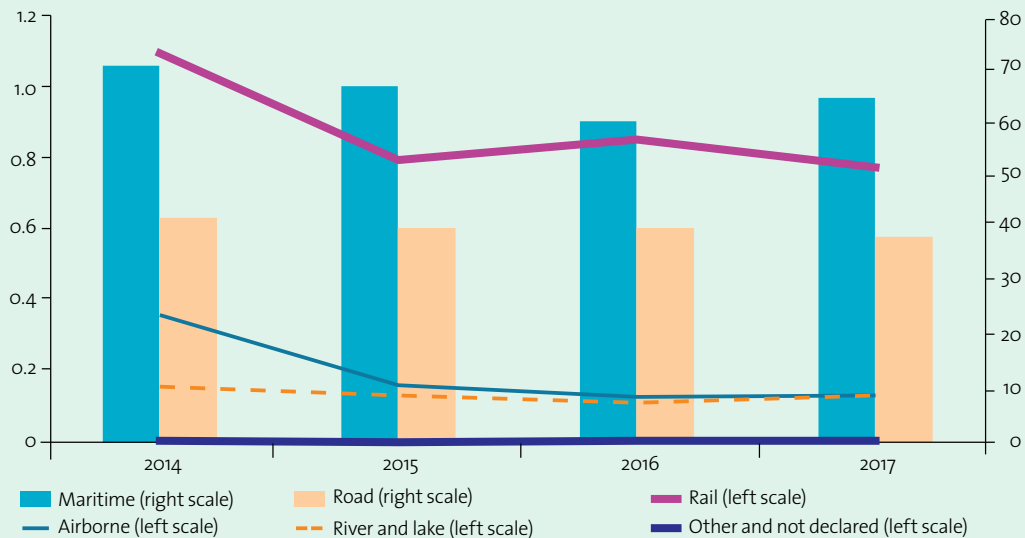
However, examining the modal split by the value of the goods carried (see figure 3) produces a different result.

The value of intraregional airborne trade fell between 2014 and 2017, from US\$ 6.23 billion to around US\$ 4.63 billion. The value of goods carried by maritime transport rose over the last year of the period, to US\$ 61 million, after declining over the two previous years. Road haulage followed a similar pattern to airborne and maritime transport, recovering in 2017 to reach a value of almost US\$ 60 million.

Figure 2

South America: total volume of goods transported between countries, 2014–2017

(Millions of tons)



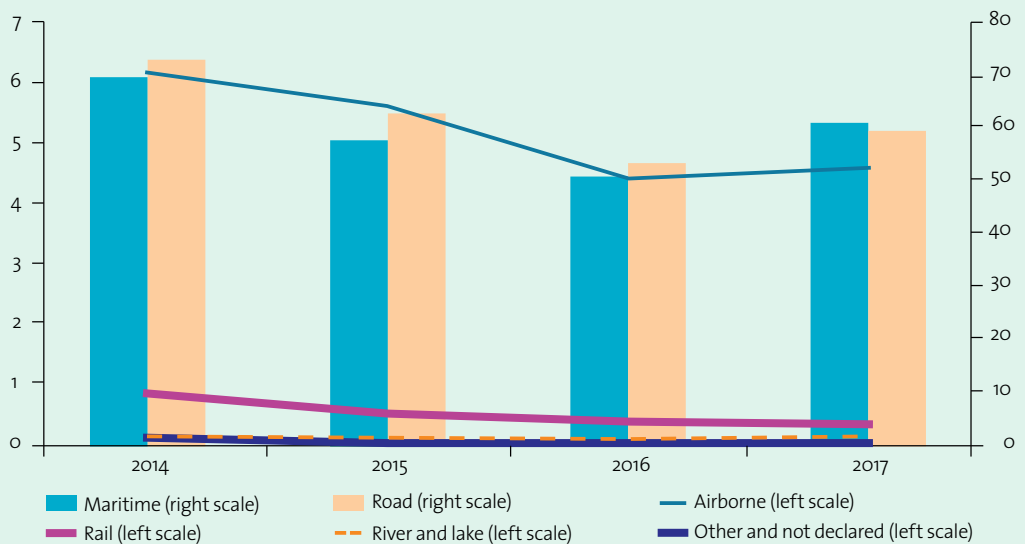
Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), several years.

Note: Other modes include not declared, postal and pipeline. The available information for Chile is from 2015.

Figure 3

South America: total Free on Board (FOB) value of goods carried between countries, 2014–2017

(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), several years.

Note: Other modes include not declared, postal and pipeline. The available information for Chile is from 2015.

Maritime transport remained the leading mode for intraregional trade in 2017, accounting for 56.8% of total volume and 47.7% of total value; it was followed by road haulage, with totals of 34% and 46.4%, respectively. Airborne transport carried a mere 3.5% of the total value of intraregional trade (see figure 4).

Tables 2 and 3 depict how the modal split evolved in each country, by both value and volume of imports and exports. Between 2014 and 2017, waterborne flows of both imports and exports remained stable in all the countries, albeit with a slight increase in 2017. In aggregate terms, there was a drop in both exports and imports transported by road. Air freight also decreased between 2014 and 2017.

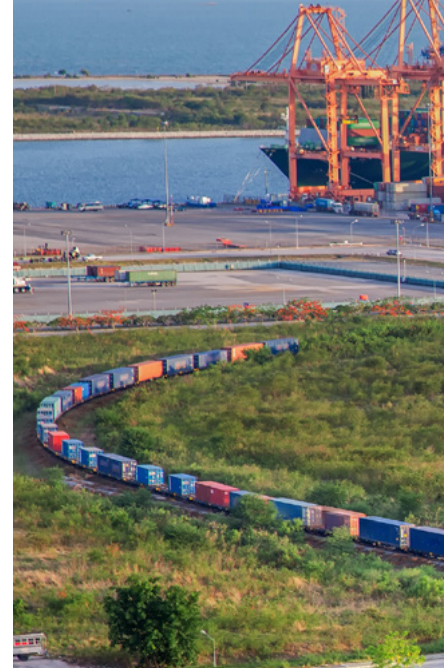
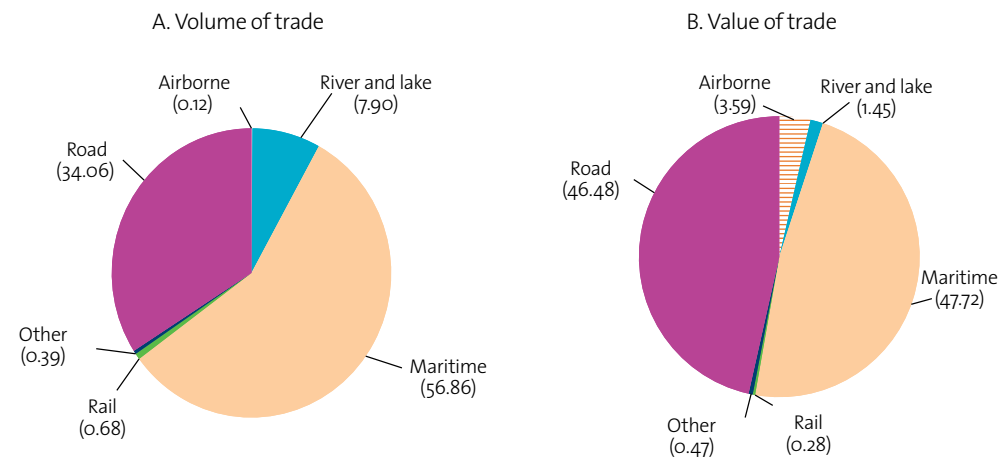


Figure 4
Modal split in intraregional trade by volume and value, 2017
(Percentages of total intraregional volume and value)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.
Note: Other modes include not declared, postal and pipeline.

Table 2
Modal split in the transport of intraregional imports, 2014–2017
(Percentages)

Country of origin	Share of total value of imports					Share of total volume of imports				
	Air	Waterborne	Road	Rail	Other	Air	Waterborne	Road	Rail	Other
2014 Total	4.0	46.4	47.4	0.6	1.6	0.4	65.7	32.7	0.9	0.3
Argentina	1.8	36.5	53.9	0.6	7.2	0.0	71.4	26.7	0.8	1.0
Bolivia (Plurinational State of)	3.5	1.2	85.4	9.6	0.3	0.2	2.6	81.4	15.5	0.3
Brazil	2.0	53.2	44.6	0.2	0.0	0.1	63.9	35.4	0.5	0.0
Colombia	9.0	77.4	13.6	0.0	0.0	0.4	85.9	13.7	0.0	0.0
Chile	5.6	43.6	50.8	0.0	0.0	1.3	78.3	20.4	0.0	0.0
Ecuador	10.5	55.8	33.3	0.0	0.5	0.3	68.8	30.4	0.0	0.5
Paraguay	1.9	5.3	92.5	0.0	0.2	0.0	10.7	88.5	0.4	0.4
Peru	6.6	79.0	14.2	0.0	0.1	0.2	82.9	16.9	0.0	0.0
Uruguay	2.7	10.0	84.8	0.0	2.4	0.1	18.4	81.3	0.0	0.3



Table 2 (concluded)

	Country of origin	Share of total value of imports					Share of total volume of imports				
		Air	Waterborne	Road	Rail	Other	Air	Waterborne	Road	Rail	Other
2015	Total	4.3	46.6	48.5	0.4	0.2	0.1	66.3	32.9	0.7	0.0
	Argentina	1.8	40.2	57.7	0.2	0.2	0.0	69.4	30.0	0.5	0.0
	Bolivia (Plurinational State of)	3.6	1.0	87.9	7.4	0.2	0.1	2.0	86.2	11.6	0.1
	Brazil	2.0	54.3	43.6	0.1	0.0	0.1	69.8	29.8	0.3	0.0
	Colombia	9.2	74.1	16.7	0.0	0.0	0.5	83.5	16.0	0.0	0.0
	Chile	5.8	41.7	52.4	0.0	0.0	0.1	77.0	22.9	0.0	0.0
	Ecuador	12.4	56.7	30.8	0.0	0.0	0.5	71.5	27.6	0.0	0.3
	Paraguay	2.0	13.3	84.5	0.0	0.2	0.0	20.2	79.3	0.1	0.3
	Peru	7.5	78.0	14.4	0.0	0.1	0.2	83.1	16.6	0.0	0.0
	Uruguay	2.9	10.8	83.4	0.0	2.9	0.1	20.9	78.8	0.0	0.3
2016	Total	3.6	48.2	47.3	0.3	0.5	0.1	62.6	36.4	0.8	0.0
	Argentina	1.7	47.2	49.5	0.1	1.5	0.0	69.2	30.4	0.3	0.0
	Bolivia (Plurinational State of)	4.1	1.4	89.0	5.4	0.1	0.1	2.8	85.0	12.1	0.0
	Brazil	2.0	50.6	47.3	0.1	0.0	0.0	66.6	33.2	0.1	0.0
	Colombia	6.5	75.3	18.2	0.0	0.0	0.3	84.8	14.9	0.0	0.0
	Chile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Ecuador	11.1	59.3	29.5	0.0	0.1	0.4	76.8	22.7	0.0	0.2
	Paraguay	2.1	6.1	91.6	0.0	0.2	0.0	12.8	87.0	0.0	0.2
	Peru	7.0	78.7	14.1	0.0	0.2	0.2	83.3	16.4	0.0	0.0
	Uruguay	3.1	10.1	85.7	0.0	1.1	0.1	19.2	80.5	0.1	0.1
2017	Total	3.3	50.2	45.9	0.3	0.3	0.1	64.2	34.6	0.7	0.3
	Argentina	1.4	51.6	46.8	0.0	0.2	0.0	49.0	20.7	0.1	0.0
	Bolivia (Plurinational State of)	3.6	1.4	89.5	5.4	0.1	0.1	2.7	68.4	11.3	0.0
	Brazil	2.0	52.1	45.3	0.0	0.6	0.0	71.0	29.4	0.0	0.8
	Colombia	6.4	75.2	18.4	0.0	0.0	0.3	62.1	14.1	0.0	0.0
	Chile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Ecuador	9.5	60.3	30.0	0.0	0.2	0.2	62.5	18.5	0.0	0.2
	Paraguay	2.1	5.8	91.9	0.0	0.2	0.0	11.6	68.4	0.0	0.0
	Peru	6.5	80.4	12.9	0.0	0.1	0.2	77.6	13.1	0.0	0.0
	Uruguay	2.8	10.6	84.8	0.0	1.8	0.1	14.7	68.2	0.0	0.2

Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.

Note: Other modes include not declared, postal and pipeline. The available information for Chile is from 2015.

Table 3

Modal split in the transport of intraregional exports, 2014–2017
(Percentages)

	Country of origin	Share of total value of exports					Share of total volume of exports				
		Air	Waterborne	Road	Rail	Other	Air	Waterborne	Road	Rail	Other
2014	Total	4.0	47.2	47.8	0.5	0.4	0.2	63.9	34.7	0.9	0.4
	Argentina	2.9	42.1	54.1	0.3	0.6	0.1	55.4	43.5	0.8	0.1
	Bolivia (Plurinational State of)	1.6	21.9	76.1	0.4	0.0	0.0	25.9	72.8	1.3	0.0
	Brazil	4.8	43.3	50.2	1.2	0.5	0.3	72.7	24.5	1.7	0.9
	Colombia	8.9	63.7	27.4	0.0	0.0	0.6	77.2	22.2	0.0	0.0
	Chile	3.0	64.0	32.9	0.0	0.0	0.1	81.8	18.1	0.0	0.0
	Ecuador	3.8	53.8	42.3	0.0	0.0	0.3	57.6	42.1	0.0	0.0
	Paraguay	1.4	27.2	71.4	0.0	0.0	0.0	37.5	62.5	0.0	0.0
	Peru	5.3	72.9	21.2	0.0	0.7	0.1	81.0	18.6	0.0	0.3
	Uruguay	2.9	28.2	68.4	0.4	0.1	0.1	46.9	52.1	0.9	0.0
2015	Total	4.5	45.7	48.8	0.4	0.6	0.1	63.0	35.8	0.7	0.4
	Argentina	3.8	38.5	56.7	0.1	0.9	0.1	55.1	44.4	0.4	0.0
	Bolivia (Plurinational State of)	1.8	27.8	69.9	0.5	0.0	0.0	33.0	66.0	1.0	0.0
	Brazil	4.9	42.2	51.2	0.9	0.8	0.2	69.5	27.6	1.6	1.2
	Colombia	9.3	67.5	23.2	0.0	0.0	0.7	79.2	20.1	0.0	0.0
	Chile	3.2	61.7	35.1	0.0	0.0	0.2	79.4	20.4	0.0	0.0
	Ecuador	4.4	55.2	40.3	0.0	0.0	0.7	58.5	40.9	0.0	0.0
	Paraguay	1.8	26.8	70.8	0.0	0.5	0.0	46.3	53.6	0.0	0.1
	Peru	4.7	71.9	23.5	0.0	0.0	0.1	78.8	21.1	0.0	0.0
	Uruguay	3.6	22.6	73.6	0.3	0.0	0.1	38.9	60.3	0.7	0.0
2016	Total	4.3	46.0	48.7	0.4	0.6	0.1	61.2	37.4	0.8	0.5
	Argentina	3.2	39.0	57.3	0.1	0.4	0.1	63.4	35.9	0.6	0.0
	Bolivia (Plurinational State of)	2.5	26.8	69.9	0.8	0.0	0.0	31.3	67.6	1.0	0.0
	Brazil	4.5	46.8	47.0	0.7	1.0	0.2	67.4	29.3	1.7	1.4
	Colombia	9.5	68.5	21.9	0.0	0.0	0.8	80.6	18.6	0.0	0.0
	Chile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Ecuador	5.9	61.0	33.1	0.0	0.0	0.3	64.4	35.3	0.0	0.0
	Paraguay	1.3	24.5	73.8	0.0	0.4	0.0	28.6	71.4	0.0	0.0
	Peru	4.8	71.8	23.4	0.0	0.0	0.1	80.4	19.5	0.0	0.0
	Uruguay	3.5	29.5	67.0	0.0	0.0	0.1	51.2	48.7	0.0	0.0
2017	Total	3.9	48.2	47.0	0.3	0.6	0.1	65.2	33.5	0.7	0.5
	Argentina	3.0	40.0	56.2	0.2	0.6	0.1	78.2	40.1	1.0	0.1
	Bolivia (Plurinational State of)	2.3	24.0	73.4	0.2	0.0	0.0	86.0	151.8	1.9	0.0
	Brazil	4.0	49.5	45.2	0.5	0.8	0.1	45.5	18.5	0.7	0.8
	Colombia	8.3	67.4	24.3	0.0	0.0	0.3	44.1	13.3	0.0	0.0
	Chile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Ecuador	5.8	59.4	34.8	0.0	0.0	0.3	60.7	30.0	0.0	0.0
	Paraguay	1.0	34.5	64.3	0.0	0.1	0.0	100.3	109.8	0.0	0.0
	Peru	4.6	71.7	23.5	0.0	0.1	0.2	114.3	27.6	0.0	0.1
	Uruguay	3.0	28.5	68.3	0.0	0.2	0.1	39.7	47.9	0.0	0.0

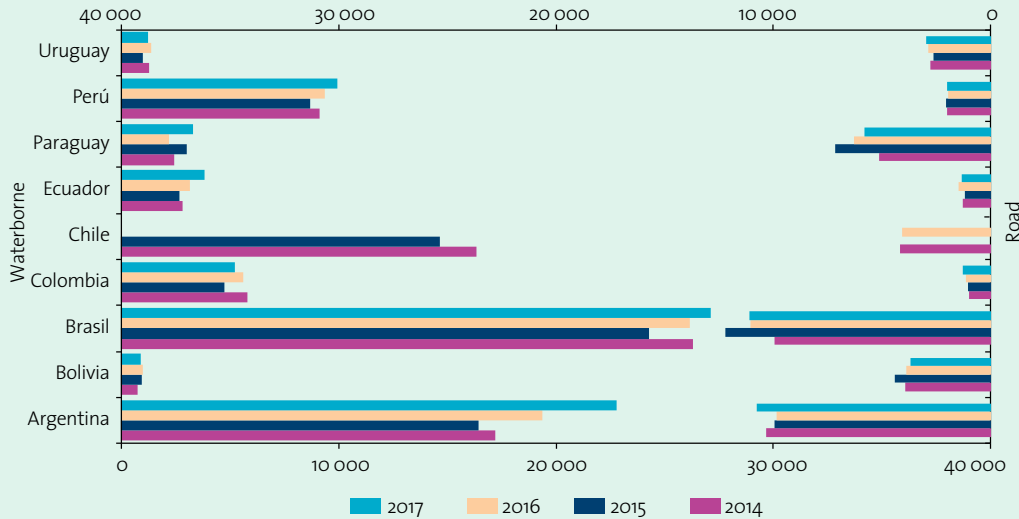
Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.

Note: Other modes include not declared, postal and pipeline. The available information for Chile is from 2015.

Argentina and Brazil transport the largest volumes of freight by water and by road. Although Argentina's waterborne intraregional trade fell in volume terms in 2014 and 2015 (see figure 5), it was offset by an increase in road transport during those years; the same was the case in Brazil. That shift from sea to land was then reverted during the subsequent

years. The situation was different in the countries of the north and west of South America, such as Ecuador and Peru, which reported increases in intraregional trade using both those modes of transport.

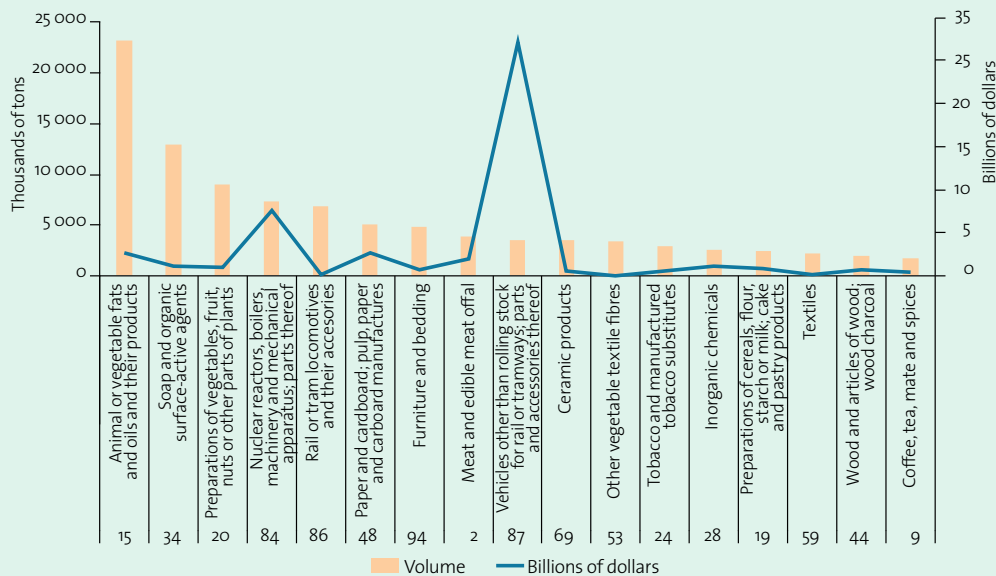
Figure 5
Evolution of waterborne and road transport volumes, 2014–2017
(Thousands of metric tons)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.
Note: Other modes include not declared, postal and pipeline. The available information for Chile is from 2015.

For a better understanding of how these movements of goods are structured, figure 6 identifies the groups of commodities in which the countries of South America trade.¹ In 2017, vegetable and animal products, machinery and parts, and paper and wood accounted for the majority of the volume of products sold in the region. Tables 4 and 5 show a breakdown of each country’s top 10 export and import products.

Figure 6
South America: main commodities traded between countries, 2017



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.
Note: Other modes include not declared, postal and pipeline.

¹ Products listed under codes 27 and 99 of the 2007 Harmonized System are not included.

Table 4
Modal split in the transport of south american exports, 2017

Countries	Code	Description	Thousands of tons						Millions of dollars FOB					
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Argentina	10	Cereals.	9 532.8	0.035	118.83	444.8	0.00	10 096.5	1 744.5	0.29	17.98	165.9	0.00	1 928.6
	11	Products of the milling industry; malt; starches; inulin; wheat gluten.	526.8	0.004	30.51	751.5	0.00	1 308.8	251.0	0.03	9.79	224.3	0.00	485.1
	23	Residues and waste from the food industries; prepared animal fodder.	713.5	0.067	0.00	533.4	0.00	1 246.9	230.8	0.63	0.00	200.8	0.00	432.2
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	587.2	0.004	0.00	359.0	0.00	946.2	453.4	0.10	0.00	343.6	0.00	797.1
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	1.6	0.005	5.43	853.1	0.00	860.2	0.6	0.02	1.11	80.8	0.00	82.6
	39	Plastics and articles thereof.	372.4	0.799	0.00	191.5	0.00	564.7	462.9	11.67	0.00	415.1	0.00	889.6
	87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof.	193.9	0.122	0.00	182.2	1.3	377.5	2 315.9	1.71	0.00	2 264.4	6.84	4 588.9
	07	Edible vegetables and certain roots and tubers.	15.4	0.024	0.00	309.4	0.00	324.7	17.6	0.15	0.00	264.8	0.00	282.6
	20	Preparations of vegetables, fruit, nuts or other parts of plants.	24.8	0.026	0.00	251.7	0.00	276.6	23.4	0.05	0.00	296.4	0.00	319.9
	38	Miscellaneous chemical products.	68.9	0.377	0.00	185.9	0.00	255.1	70.8	13.01	0.00	468.7	0.00	552.5
Bolivia (Plurinational State of)	23	Residues and waste from the food industries; prepared animal fodder.	521.6	0.000	0.00	739.8	0.00	1 261.4	144.7	0.00	0.00	217.6	0.00	362.4
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	114.3	0.000	0.00	189.9	0.00	304.1	77.7	0.00	0.00	148.9	0.00	226.6
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	162.1	0.000	18.73	111.6	0.00	292.4	10.5	0.00	2.28	21.6	0.00	34.4
	08	Edible fruit and nuts; peel of citrus fruit or melons.	0.0	0.000	0.00	110.4	0.00	110.4	0.0	0.00	0.00	39.8	0.00	39.8
	12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	0.0	0.009	0.00	82.6	0.00	82.7	0.0	0.09	0.00	45.3	0.00	45.4
	69	Ceramic products.	0.0	0.000	0.00	71.4	0.00	71.4	0.0	0.00	0.00	4.1	0.00	4.1
	22	Beverages, spirits and vinegar.	0.0	0.009	0.00	49.5	0.00	49.6	0.0	0.11	0.00	27.8	0.00	28.0
	26	Ores, slag and ash.	38.5	0.000	0.00	5.2	0.00	43.7	0.8	0.00	0.00	29.1	0.00	29.9
44	Wood and articles of wood; wood charcoal.	0.0	0.000	0.00	21.4	0.00	21.4	0.0	0.00	0.00	8.2	0.00	8.2	
	10	Cereals.	0.0	0.004	0.00	12.4	0.00	12.4	0.0	0.35	0.00	9.7	0.00	10.1

Table 4 (continued)

Countries	Code	Description	Thousands of tons						Millions of dollars FOB					
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Brazil	26	Ores, slag and ash.	6 772.3	0.000	2.28	17.4	0.0	6 792.0	249.8	0.00	0.30	1.7	0.00	251.8
	72	Iron and steel.	2 475.9	0.120	173.32	304.9	0.3	2 954.5	79.3	0.92	99.83	261.2	0.54	441.8
	87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof.	782.5	2.066	0.00	495.7	1.0	1 281.2	0.8	36.04	0.03	4 110.3	4.57	4 151.8
	39	Plastics and articles thereof.	620.7	1 680	15.83	453.6	2.2	1 094.0	442.6	23.73	20.98	851.4	7.40	1 346.2
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	410.9	1 519	3.24	541.4	1.3	958.4	11.3	5.16	2.82	575.4	2.37	597.0
	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.	635.2	0.114	14.26	133.1	0.2	782.9	274.6	2.10	6.07	79.3	0.18	362.3
	69	Ceramic products.	210.0	0.148	2.21	373.5	112.8	698.7	75.4	1.47	1.54	122.6	21.14	222.2
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	105.0	0.035	0.84	492.3	30.1	628.3	413.7	0.08	0.12	29.1	2.26	445.2
	31	Fertilizers.	21.2	0.020	0.00	414.1	0.0	435.3	63.3	0.21	0.00	171.5	0.03	235.1
17	Sugars and sugar confectionery.	258.2	0.008	0.00	125.7	7.6	391.5	43.7	0.02	0.00	82.6	5.72	132.1	
Chile	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	1 109.5	0.0	0.0	25.2	0.00	1 134.7	25.0	0.0	0.0	3.8	0.00	28.8
	31	Fertilizers.	649.4	0.0	0.0	72.5	0.00	721.9	249.6	0.0	0.0	36.5	0.00	286.1
	8	Edible fruit and nuts; peel of citrus fruit or melons.	220.4	0.3	0.0	200.1	0.00	420.7	235.2	1.6	0.0	262.8	0.00	499.6
	26	Ores, slag and ash.	334.7	0.0	0.0	0.4	0.00	335.1	505.8	0.2	0.0	1.6	0.00	507.6
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	191.0	0.1	0.0	103.8	0.00	294.9	174.2	1.7	0.0	103.6	0.00	279.4
	44	Wood and articles of wood; wood charcoal.	275.1	0.0	0.0	12.5	0.00	287.6	155.7	0.0	0.0	15.0	0.00	170.8
	74	Copper and articles thereof.	186.0	0.0	0.0	18.1	0.00	204.0	1 086.5	0.2	0.0	106.2	0.00	1 193.0
	73	Articles of iron or steel.	127.9	0.1	0.1	49.5	0.00	177.7	154.3	1.8	0.0	83.5	0.00	239.6
29	Organic chemicals.	167.1	0.0	0.0	4.7	0.00	171.8	57.7	0.4	0.0	9.1	0.00	67.2	
47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard.	113.4	0.0	0.0	42.5	0.00	155.8	73.3	0.0	0.0	21.7	0.00	95.0	
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	43.3	3.5	0.0	107.1	0.00	153.9	77.8	26.8	0.0	526.8	0.00	631.4	

Table 4 (continued)

Countries	Code	Description	Thousands of tons					Millions of dollars FOB						
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Colombia	39	Plastics and articles thereof.	452.4	0.609	0.00	20.3	0.00	473.3	634.2	7.61	0.00	0.00	70.34	712.1
	17	Sugars and sugar confectionery.	356.2	0.022	0.00	115.6	0.00	471.9	189.1	0.06	0.00	0.00	61.38	250.5
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	73.1	0.271	0.00	77.5	0.00	150.9	91.5	2.21	0.00	0.00	69.82	163.5
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	107.6	0.014	0.00	18.2	0.00	125.9	90.2	0.05	0.00	0.00	19.51	109.8
	34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster.	91.2	0.218	0.00	23.3	0.00	114.8	108.2	1.48	0.00	0.00	27.01	136.7
	31	Fertilizers.	88.1	0.007	0.00	1.1	0.00	89.2	24.6	0.10	0.00	0.00	1.02	25.8
	38	Miscellaneous chemical products.	60.8	0.222	0.00	17.1	0.00	78.1	254.6	5.29	0.00	0.00	18.59	278.5
	69	Ceramic products.	32.0	0.007	0.00	36.4	0.00	68.4	24.0	0.07	0.00	0.00	16.90	41.0
	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.	49.4	0.019	0.00	8.6	0.00	58.0	34.0	0.26	0.00	0.00	3.05	37.3
	33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations.	38.3	3.110	0.00	9.9	0.00	51.4	156.1	47.61	0.00	0.00	61.03	264.7
Ecuador	8	Edible fruit and nuts; peel of citrus fruit or melons.	611.3	0.004	0.00	18.9		630.2	245.1	0.0	0.00	0.00	2.1	247.2
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	99.2	0.005	0.00	107.1		206.4	85.7	0.0	0.00	0.00	89.2	174.9
	44	Wood and articles of wood; wood charcoal.	75.8	0.050	0.00	90.8		166.7	40.5	0.2	0.00	0.00	61.0	101.7
	16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates.	61.9	0.000	0.00	20.6		82.5	239.6	0.0	0.00	0.00	52.3	291.9
	73	Articles of iron or steel.	25.7	0.025	0.00	40.0		65.7	52.7	0.5	0.00	0.00	58.4	111.7
	23	Residues and waste from the food industries; prepared animal fodder.	8.4	0.018	0.00	44.6		53.1	9.7	0.1	0.00	0.00	48.6	58.4
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	10.6	0.001	0.00	41.9		52.5	1.7	0.0	0.00	0.00	4.1	5.8
	17	Sugars and sugar confectionery.	49.8	0.000	0.00	1.4		51.2	42.7	0.0	0.00	0.00	2.0	44.7
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	15.7	0.016	0.00	33.7		49.3	10.4	0.1	0.00	0.00	20.2	30.7
	39	Plastics and articles thereof.	20.1	0.029	0.00	17.6		37.7	34.0	0.8	0.00	0.00	33.2	68.0

Table 4 (continued)

Countries	Code	Description	Thousands of tons					Millions of dollars FOB						
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Paraguay	10	Cereals.	353.7	0.000	0.00	1 602.2		1 955.9	58.1	0.0	0.00	315.4	0.00	373.5
	12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	1 695.1	0.000	0.00	259.3		1 954.4	592.6	0.0	0.00	89.3	0.00	681.8
	23	Residues and waste from the food industries; prepared animal fodder.	731.9	0.000	0.00	147.6		879.5	229.8	0.0	0.00	30.8	0.00	260.7
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	6.5	0.000	0.00	423.4		429.9	0.1	0.0	0.00	4.9	0.00	5.0
	2	Meat and edible meat offal.	2.8	0.015	0.00	121.2		124.0	5.7	0.1	0.00	562.9	0.00	568.7
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	27.2	0.000	0.00	68.6		95.8	18.8	0.0	0.00	44.1	0.00	62.9
	11	Products of the milling industry; malt; starches; inulin; wheat gluten.	2.3	0.000	0.00	69.3		71.6	0.8	0.0	0.00	27.9	0.00	28.7
	39	Plastics and articles thereof.	0.0	0.026	0.00	60.1		60.2	0.1	0.5	0.00	96.3	0.00	96.8
	69	Ceramic products.	0.0	0.058	0.00	59.5		59.5	0.0	0.0	0.00	2.7	0.00	2.8
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	0.5	0.001	0.00	48.2		48.8	0.3	0.0	0.00	27.3	0.00	27.6	
Peru	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	1 630.4	0.007	0.00	375.4	0.0	2 005.8	94.9	0.00	0.00	35.3	0.0	130.3
	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.	1 429.2	0.031	0.00	15.2	0.0	1 444.4	154.4	0.00	0.00	8.3	0.0	162.8
	26	Ores, slag and ash.	536.1	0.003	0.00	0.0	0.0	536.1	816.7	0.00	0.00	0.0	0.0	816.7
	69	Ceramic products.	314.6	0.009	0.00	2.1	0.0	316.7	75.9	0.00	0.00	2.6	0.0	78.6
	23	Residues and waste from the food industries; prepared animal fodder.	96.9	0.019	0.00	197.6	0.0	294.6	68.7	0.00	0.00	191.0	0.0	259.8
	72	Iron and steel.	31.1	0.003	0.00	126.0	0.0	157.1	17.4	0.00	0.00	82.1	0.0	99.5
	39	Plastics and articles thereof.	85.9	0.418	0.00	26.8	0.0	113.1	187.0	0.00	0.00	75.6	0.0	267.3
	7	Edible vegetables and certain roots and tubers.	3.8	1.520	0.00	80.1	0.0	85.4	5.6	0.00	0.00	28.9	0.0	40.5
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	55.1	0.057	0.00	25.1	0.0	80.2	46.4	0.00	0.00	30.0	0.0	77.1	
74	Copper and articles thereof.	62.3	0.013	0.00	0.2	0.0	62.5	388.5	0.00	0.00	1.6	0.0	390.3	

Table 4 (concluded)

Countries	Code	Description	Thousands of tons					Millions of dollars FOB						
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Uruguay	4	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included.	29.6	0.010	0.00	0.00	0.0	80.9	94.4	0.0	0.00	174.0	0.00	268.5
	10	Cereals.	334.2	0.002	0.00	0.00	0.0	521.5	156.6	0.2	0.00	75.8	0.00	232.6
	11	Products of the milling industry; malt; starches; inulin; wheat gluten.	257.1	0.000	0.00	0.00	0.0	264.7	124.5	0.0	0.00	2.8	0.00	136.0
	12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	59.1	0.000	0.00	0.00	0.0	71.1	3.0	0.0	0.00	8.4	0.00	30.7
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	9.5	0.000	0.00	0.00	0.0	46.5	20.2	0.0	0.00	82.9	0.00	103.1
	23	Residues and waste from the food industries; prepared animal fodder.	2.0	0.000	0.00	0.00	0.0	58.7	0.6	0.0	0.00	4.0	0.00	4.6
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	50.8	0.000	0.00	0.00	0.0	248.2	0.1	0.0	0.00	26.4	0.00	30.9
	34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster.	8.1	0.000	0.00	0.00	0.0	48.2	11.1	0.0	0.00	57.8	0.00	68.9
	39	Plastics and articles thereof.	3.3	0.023	0.0	0.00	0.0	105.3	6.3	0.3	0.0	204.2	0.00	210.8
	44	Wood and articles of wood; wood charcoal.	1.6	0.005		0.00	0.0	31.9	1.2	0.0	0.00	8.5	0.00	9.7

Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.

Note: Other modes include not declared, postal and pipeline.

Table 5
Modal split in the transport of south american imports, 2017

Countries	Code	Description	Thousands of tons						Millions of dollars CIF					
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Argentina	26	Ores, slag and ash.	4 579.3	0.000	2.82	3.9	0.0	4 586.0	440.7	0.00	0.61	1.7	0.00	443.0
	12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	1 898.1	0.023	0.00	3.0	0.0	1 901.1	703.1	6.93	0.00	7.4	0.00	717.5
	72	Iron and steel.	1 050.4	0.011	0.00	200.6	0.0	1 251.0	652.0	0.12	0.00	219.4	0.00	871.4
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	546.9	0.008	0.00	581.7	0.0	1 128.6	41.3	0.04	0.00	30.9	0.00	72.2
	87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof.	634.6	0.129	0.00	313.1	4.6	952.4	6 087.7	2.23	0.00	2 733.9	42.32	8 866.1
	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.	481.6	0.011	7.61	112.1	0.0	601.3	168.2	1.05	2.97	82.9	0.00	255.1
	8	Edible fruit and nuts; peel of citrus fruit or melons.	1.1	0.141	0.00	563.1	0.0	564.3	8.3	0.32	0.00	352.4	0.00	360.9
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	52.8	0.055	0.22	452.3	0.0	505.4	57.1	0.60	0.20	466.2	0.00	524.1
	39	Plastics and articles thereof.	166.1	0.376	0.00	320.7	0.0	487.2	270.5	7.36	0.00	624.3	0.02	902.2
	47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard.	0.1	0.000	0.00	228.4	0.0	228.5	0.1	0.00	0.00	130.0	0.00	130.1
Bolivia (Plurinational State of)	72	Iron and steel.	32.1	0.002	172.56	248.0	0.0	452.6	18.4	0.03	102.84	158.8	0.00	280.1
	11	Products of the milling industry; malt; starches; inulin; wheat gluten.	30.3	0.001	37.07	307.5	0.0	374.9	17.9	0.00	12.99	104.9	0.00	135.8
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	9.9	0.000	3.55	272.7	0.0	286.1	0.8	0.00	0.35	31.6	0.00	32.7
	10	Cereals.	6.4	0.007	118.77	145.8	0.0	271.0	1.3	0.20	19.83	39.2	0.00	60.5
	39	Plastics and articles thereof.	0.2	0.096	15.28	123.1	0.0	138.7	0.0	1.49	20.48	236.8	0.09	259.0
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	0.0	0.036	3.14	93.8	0.0	97.0	0.0	0.31	2.92	100.9	0.04	104.2
	73	Articles of iron or steel.	0.1	0.119	5.97	69.9	0.0	76.1	0.3	1.06	6.52	127.9	0.06	135.8
	69	Ceramic products.	2.1	0.002	2.26	59.4	0.0	63.7	0.2	0.03	1.63	28.0	0.00	29.9
	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.	0.0	0.005	7.22	56.1	0.0	63.3	0.0	0.23	4.01	31.7	0.00	36.0
	44	Wood and articles of wood; wood charcoal.	0.7	0.001	0.00	61.2	0.0	61.9	0.2	0.01	0.00	30.0	0.00	30.2

Table 5 (continued)

Countries	Code	Description	Thousands of tons						Millions of dollars CIF					
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Brazil	10	Cereals.	6 306.1	0.024	0.00	1 934.7	0.0	8 240.8	1 374.9	0.56	0.00	486.0	0.00	1 861.4
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	1 542.8	0.002	5.64	259.1	0.0	1 807.5	103.9	0.01	1.29	60.0	0.00	165.2
	11	Products of the milling industry; malt; starches; inulin; wheat gluten.	723.3	0.008	0.00	417.0	0.0	1 140.3	402.6	0.05	0.00	143.8	0.00	546.4
	39	Plastics and articles thereof.	645.6	0.360	0.00	188.4	0.0	834.4	827.6	6.98	0.00	377.3	0.39	1 212.3
	26	Ores, slag and ash.	772.5	0.000	0.00	0.1	0.0	772.6	1 145.6	0.00	0.00	1.1	0.00	1 146.7
	31	Fertilizers.	766.3	0.002	0.00	1.3	0.0	767.6	221.2	0.02	0.00	4.6	0.00	225.8
	29	Organic chemicals.	455.5	0.030	0.00	32.1	0.0	487.6	217.5	2.46	0.00	53.5	0.00	273.5
	87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof.	151.5	0.131	0.00	159.0	0.0	310.6	1 859.2	2.81	0.00	2 081.8	0.03	3 943.9
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	189.1	0.006	0.00	103.3	0.0	292.4	182.9	0.07	0.00	141.2	0.00	324.1
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.	211.2	0.009	0.00	75.2	0.0	286.4	125.9	7.37	0.00	46.3	0.00	179.6	
Chile	71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery.	4 604.9	1.786	0.00	0.0	0.00	4 606.7	0.3	11.42	0.00	0.5	0.00	12.2
	10	Cereals.	1 828.7	0.013	0.00	155.9	0.00	1 984.5	376.2	0.16	0.00	64.9	0.00	441.3
	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.	1 360.7	0.023	0.00	42.5	0.00	1 403.2	178.7	1.05	0.00	31.9	0.00	211.7
	23	Residues and waste from the food industries; prepared animal fodder.	673.6	0.046	0.00	626.2	0.00	1 299.9	305.2	0.59	0.00	296.9	0.00	602.7
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	331.6	0.009	0.00	593.9	0.00	925.5	26.1	0.05	0.00	81.8	0.00	108.0
	17	Sugars and sugar confectionery.	253.5	0.007	0.00	112.4	0.00	365.8	103.3	0.06	0.00	63.2	0.00	166.6
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	63.9	0.007	0.00	275.7	0.00	339.6	81.2	0.06	0.00	271.2	0.00	352.5
	8	Edible fruit and nuts; peel of citrus fruit or melons.	239.9	0.012	0.00	26.0	0.00	265.9	108.5	0.21	0.00	17.8	0.00	126.5
	11	Products of the milling industry; malt; starches; inulin; wheat gluten.	36.2	0.001	0.00	201.6	0.00	237.9	20.9	0.03	0.00	56.3	0.00	77.3
2	Meat and edible meat offal.	20.9	0.039	0.00	209.7	0.00	230.6	36.1	0.30	0.00	826.3	0.00	862.7	

Table 5 (continued)

Countries	Code	Description	Thousands of tons						Millions of dollars CIF					
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Colombia	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	419.4	0.078	0.00	0.00	0.0	435.7	284.7	12.86	0.00	0.00	0.00	337.5
	23	Residues and waste from the food industries; prepared animal fodder.	425.7	0.192	0.00	0.00	0.0	426.3	66.5	0.24	0.00	0.00	0.00	130.6
	10	Cereals.	386.1	0.074	0.00	0.00	0.0	399.8	80.1	0.01	0.00	0.00	0.00	98.2
	72	Iron and steel.	138.2	0.353	0.00	0.00	0.0	229.6	178.0	0.44	0.00	0.00	0.00	196.3
	44	Wood and articles of wood; wood charcoal.	34.1	0.345	0.00	0.00	0.0	177.6	121.9	0.69	0.00	0.00	0.00	123.0
	38	Miscellaneous chemical products.	144.5	0.001	0.00	0.00	0.0	177.0	37.4	0.15	0.00	0.00	0.00	41.4
	17	Sugars and sugar confectionery.	159.1	0.913	0.00	0.00	0.0	176.4	75.9	4.00	0.00	0.00	0.00	92.5
	39	Plastics and articles thereof.	118.6	0.007	0.00	0.00	0.0	160.8	201.6	0.17	0.00	0.00	0.00	208.2
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	149.7	0.015	0.00	0.00	0.0	157.2	0.0	0.00	0.00	0.00	0.00	0.0
	69	Ceramic products.	0.0	0.000	0.00	0.00	0.0	0.0	16.3	0.02	0.00	0.00	0.00	20.5
Ecuador	8	Edible fruit and nuts; peel of citrus fruit or melons.	76.0	0.009	0.00	24.9	0.0	100.9	79.3	0.10	0.00	5.7	0.00	85.1
	10	Cereals.	369.4	0.008	0.00	4.3	0.0	373.7	94.4	0.10	0.00	1.3	0.00	95.8
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	139.3	0.001	0.00	0.5	4.2	144.0	130.4	0.02	0.00	0.8	3.78	135.0
	17	Sugars and sugar confectionery.	23.0	0.006	0.00	93.6	0.0	116.6	14.8	0.06	0.00	54.6	0.00	69.5
	23	Residues and waste from the food industries; prepared animal fodder.	745.8	0.032	0.00	204.2	0.0	950.0	305.6	0.25	0.00	207.5	0.00	513.4
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	139.4	0.008	0.00	45.4	0.0	184.8	11.1	0.02	0.00	4.7	0.00	15.8
	39	Plastics and articles thereof.	164.8	0.400	0.00	24.5	0.3	190.1	250.8	5.14	0.00	85.3	0.56	341.8
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	92.7	0.980	0.00	73.8	0.0	167.6	112.9	4.71	0.00	75.9	0.04	193.5
		69	Ceramic products.	82.5	0.003	0.00	34.1	0.0	116.6	25.4	0.07	0.00	12.2	0.00
	72	Iron and steel.	286.3	0.009	0.00	1.4	1.7	289.5	153.1	0.12	0.00	2.4	0.55	156.2
Paraguay	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	56.2	0.002	0.00	536.9	0.0	593.1	6.1	0.01	0.00	30.0	0.00	36.0
	31	Fertilizers.	103.6	0.014	0.00	376.0		479.7	20.6	0.09	0.00	171.4		192.0
	72	Iron and steel.	118.3	0.000	0.00	123.7	0.1	242.1	75.9	0.02	0.00	87.7	0.02	163.7
	22	Beverages, spirits and vinegar.	0.9	0.000	0.00	193.6	0.0	194.4	1.7	0.00	0.00	166.0	0.00	167.7
	69	Ceramic products.	2.4	0.001	0.00	186.1	0.0	188.5	0.7	0.02	0.00	64.0	0.00	64.8
	26	Ores, slag and ash.	117.3	0.000	0.00	0.0		117.3	6.1	0.00	0.00	0.0		6.1
	39	Plastics and articles thereof.	7.0	0.035	0.00	109.2	0.0	116.3	8.8	1.41	0.00	237.1	0.00	247.3

Table 5 (concluded)

Countries	Code	Description	Thousands of tons						Millions of dollars CIF					
			Waterborne	Air	Rail	Road	Other	Total	Waterborne	Air	Rail	Road	Other	Total
Paraguay	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	0.8	0.011	0.00	104.5	0.0	105.3	1.4	0.20	0.00	159.1	0.01	160.7
	23	Residues and waste from the food industries; prepared animal fodder.	0.2	0.000	0.00	90.3		90.5	0.4	0.01	0.00	64.2		64.6
	7	Edible vegetables and certain roots and tubers.	0.0	0.015	0.00	89.6	0.4	90.1	0.0	0.01	0.00	14.9	0.11	15.1
Peru	23	Residues and waste from the food industries; prepared animal fodder.	660.6	0.055	0.00	476.2	0.0	1,136.8	281.3	0.51	0.00	176.1	0.00	457.9
	10	Cereals.	800.1	0.005	0.00	2.7	0.0	802.9	308.5	0.07	0.00	1.4	0.00	309.9
	72	Iron and steel.	590.3	0.024	0.00	40.9	0.0	631.2	292.9	0.17	0.00	8.2	0.01	301.3
	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	459.4	0.010	0.00	24.0	0.0	483.4	387.7	0.05	0.00	19.9	0.00	407.7
	17	Sugars and sugar confectionery.	322.5	0.034	0.00	2.0	0.0	324.5	175.4	0.16	0.00	1.3	0.00	176.9
	44	Wood and articles of wood; wood charcoal.	314.0	0.005	0.00	3.4	0.0	317.5	157.6	0.05	0.00	1.2	0.00	158.8
	39	Plastics and articles thereof.	261.4	0.764	0.00	4.7	0.0	266.9	407.7	10.99	0.00	13.0	0.39	432.1
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	258.7	0.601	0.00	7.4	0.0	266.7	253.4	3.85	0.00	8.9	0.03	266.2
	12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	171.2	0.028	0.00	78.7	0.0	249.9	75.4	6.23	0.00	43.1	0.19	124.9
Uruguay	31	Fertilizers.	128.1	0.006	0.00	0.4	0.0	128.6	44.8	0.09	0.00	0.5	0.00	45.5
	23	Residues and waste from the food industries; prepared animal fodder.	64.6	0.001	0.00	338.2	0.0	402.7	8.9	0.01	0.00	94.7	0.00	103.7
	10	Cereals.	104.2	0.003	0.00	168.8	0.0	273.0	16.4	0.02	0.00	46.6	0.00	63.0
	44	Wood and articles of wood; wood charcoal.	0.5	0.028	0.00	192.0	0.0	192.5	0.5	0.03	0.00	33.0	0.00	33.5
	69	Ceramic products.	6.0	0.000	0.00	120.8	0.0	126.8	1.9	0.04	0.00	26.9	0.00	28.8
	25	Salt; sulfur; earths and stone; plastering materials, lime and cement.	94.6	0.000	0.00	27.7	0.0	122.2	6.1	0.00	0.00	5.1	0.00	11.1
	17	Sugars and sugar confectionery.	23.7	0.000	0.00	97.0	0.0	120.7	11.4	0.00	0.00	57.3	0.00	68.8
	39	Plastics and articles thereof.	5.2	0.039	0.00	80.9	0.0	86.1	10.3	0.99	0.00	185.6	0.04	197.0
	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	2.5	0.046	0.00	78.7	0.0	81.3	3.7	0.52	0.00	109.2	0.00	113.5
	31	Fertilizers.	21.5	0.001	0.00	50.8	0.0	72.3	5.2	0.01	0.00	9.9	0.00	15.1
	72	Iron and steel.	14.8	0.002	0.00	48.7	0.6	64.1	12.8	0.02	0.00	45.5	0.05	58.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.

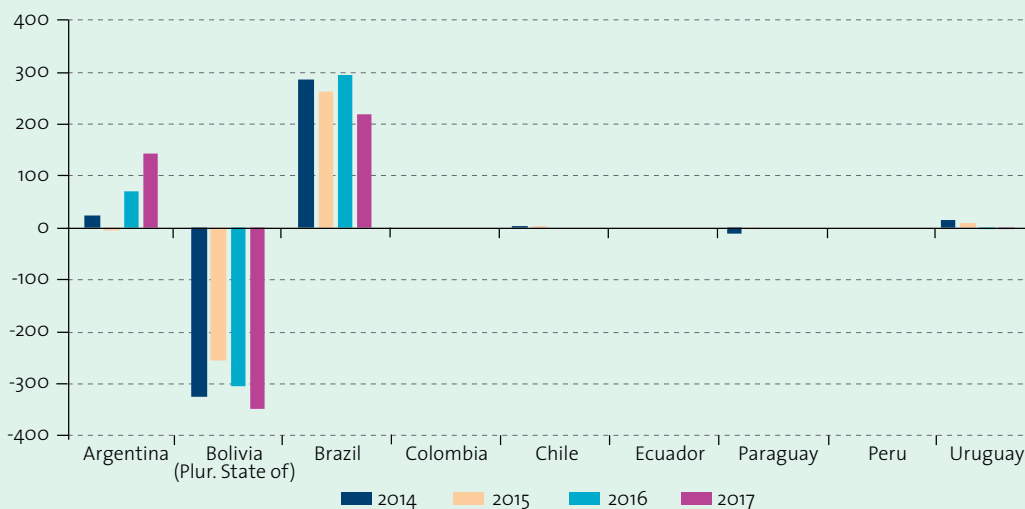
Note: Other modes include not declared, postal and pipeline.

III. Trade imbalances

This section examines the trade surpluses, deficits and imbalances of nine South American countries over the period 2014 to 2017 (see figures 7 and 8). A trade surplus —when exports exceed imports— means that trucks or trains leave a country laden with goods but return empty. As a result, countries must deal with the problem of repositioning empty trucks, rail wagons, containers and other equipment.

Figure 7

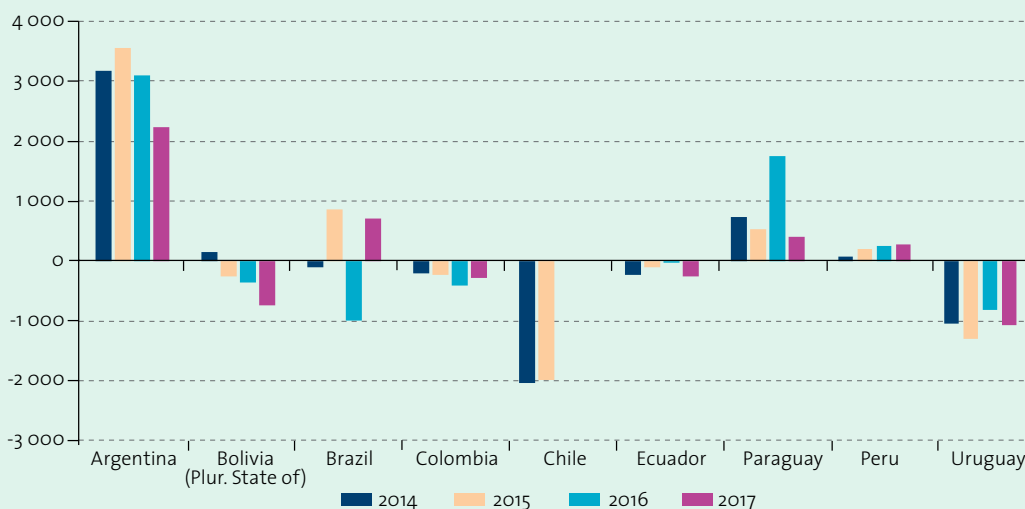
Trade imbalance in goods transported by rail, 2014–2017
(Thousands of metric tons)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.
Note: Other modes include not declared, postal and pipeline.

Figure 8

Trade imbalance in goods transported by road, 2014–2017
(Thousands of metric tons)

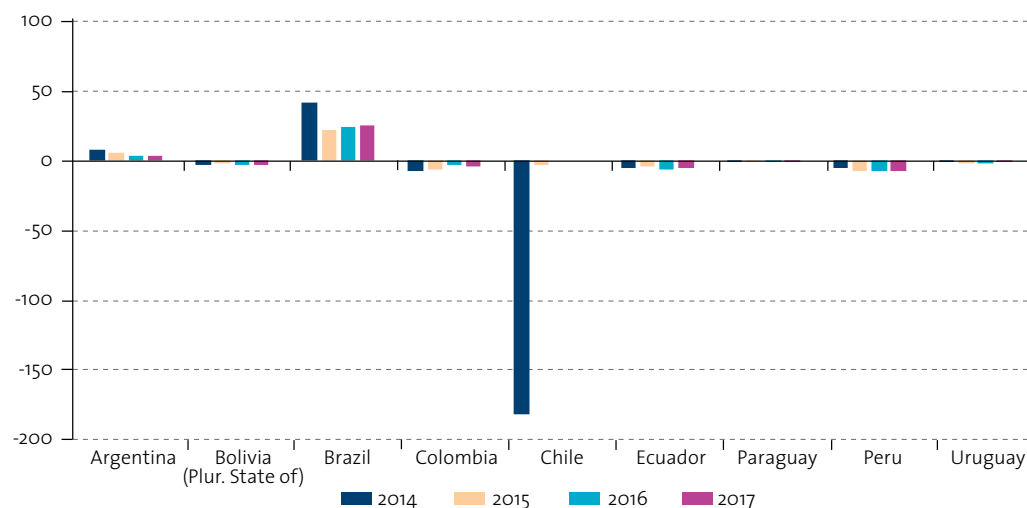


Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.
Note: Other modes include not declared, postal and pipeline.

Argentina, Brazil and the Plurinational State of Bolivia all reported trade imbalances. In 2017, Argentina exported 693,000 tons of goods by road to the Plurinational State of Bolivia and another 149,342 tons by rail. In turn, the Plurinational State of Bolivia exported 135,544 tons to Argentina by road and a negligible amount by rail. Trade imbalances in waterborne freight volumes largely depend on the merchandise in question. However, increasing use is being made of maritime transport in order to tap into economies of scale; as a result, new strategies for investments in port infrastructure will be needed in the near future so that larger ships can be handled.

Figure 9

Trade imbalance in goods transported by air, 2014–2017
(Thousands of metric tons)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), International Transport Database (BTI), 2017.

Note: Other modes include not declared, postal and pipeline.

IV. Conclusions

This *FAL Bulletin* updates the data of earlier issues on trade flows between South American countries and on the different modes of transport they use, in order to identify the current freight transport modal split and how it has evolved over time.

Analysing the data for 2014 to 2017 reveals that interregional trade flows continued along a downward trend, decreasing from 17% of the countries' total trade volume in 2014 to 14% around 2017. In value terms, however, there was an uptick of 2.4% over the 2014–2017 period.

Regarding the specific modal split of each country and region for interregional imports and exports, it can be seen that in general, the most frequently used modes of transport, in terms of both volume (tons) and value (FOB dollars) are maritime shipping and road haulage: in 2017, almost 57% in volume terms was transported by sea, with roads accounting for 34%. A similar situation holds in value terms, with maritime transport accounting for 47.7% of the total and roads for 46%. In addition, the evolution seen in trade patterns between 2014 and 2017 suggests that the relative shares of each mode of transport have remained stable.

This point highlights the importance of forging connections among the region's conventional modes of transport (road, rail, air, water and pipelines) so that the relative weight of the different modes can be consolidated in their captive markets in what could be called an "intermodality approach", with high levels of intermodal options and operations.

In the future, intermodal connections and the reliability of transport networks and infrastructure will have a far reaching impact on the region's economies. As intermodal transport grows in importance, transport and logistics systems must be developed by deploying the necessary technological capacities and economic resources.

The lack of financial resources for constructing and operating transport infrastructure undermines the region's transport systems, as does the pressure to make sustainable use of those resources and to create viable projects. Moreover, the related infrastructure services are among the other elements responsible for the transport sector's performance (particular as regards freight) and therefore for the bottlenecks they produce in the logistics chain (Sánchez, R. J. and others, 2017)

All the countries of South America must meet the challenges of competitive efficiency, geographical accessibility and environmentally sustainable development. To secure a competitive advantage, South America's segmented economy requires integrated, efficient networks.

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VI. Publications of interest



FAL Bulletin 364

Logistics in Mesoamerica: outcomes of the policy workshops and logistics integration indicators 2017

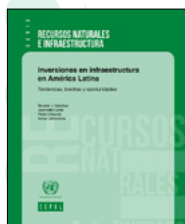
Gabriel Pérez
Rolando Campos Canales

This issue of the FAL Bulletin systematizes the main outcomes and findings of the 10 national policy workshops on logistics and mobility conducted by ECLAC's Infrastructure Services Unit between 2014 and 2017. It also presents an update on the indicators for logistic integration in Mesoamerica for the 10 countries in the subregion.

Available in:

English

Spanish



Serie Recursos Naturales e Infraestructura

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

Ricardo J. Sánchez
Jeannette Lardé
Pablo Chauvet
Azhar Jaimurzina

The insufficient, inefficient and unsustainable infrastructure services in the Latin American region today are a hindrance to progress towards sustainable development. One of the reasons for the shortage and poor quality of infrastructure and related services in the region is the low level of public and private investment in the infrastructure sector, in other words the gap between current investment levels and what the economy needs.

In this context, this document offers a new approach to the vertical gap—the volume of investment needed to support the projected growth in economic activity and the forecast population trends for the 2016–2030 period—and the horizontal gap. It provides an approximate estimate of the investment needed to achieve universal coverage of basic infrastructure services.

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