Strategic Plan to Support Air Transport in the SAM Region

Connectivity Module

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1. Executive Summary

1.1. What is air connectivity?

The ability to link-up the world's cities and countries for the purpose of transporting resources (passengers, cargo and mail) from one territory to another. It allows for the operation of a competitive global market. The more liberalized and integrated the global air connectivity network, the greater the long-term benefits for all of the world's inhabitants. By ICAO's definition, "connectivity is is a characteristic of the networks and can be defined in such a way as to constitute an indicator of a network's concentration."

1.2. How can it be measured?

While there is no specific way to measure connectivity, air connectivity can be gauged in terms of two network characteristics:

(i) **Size and concentration:**
The more routes and frequencies that exist, the greater the possibilities for a State's connection. Even so, it is the use of that capacity for connection (passengers, cargo and mail) that will determine a nation's true degree of connectivity.

(ii) **Seamlessness**:
More direct routes with the smallest possible number of connections facilitate air traffic. Embarkation, disembarkation, immigration and security controls and airport connection times all play a part in the quality of connectivity.

Existing literature on aviation advocates a variety of indices or metrics[1] that account for different connectivity characteristics that can be used individually and/or in combination to provide a better understanding of each country's/region's connectivity. Inasmuch as measuring connectivity is a complex process that incorporates both quantitative and qualitative factors, any individual measurement will serve for reference purposes only for it fails to fully incorporate all relevant aspects.

1.3. Importance of connectivity development and its socio-economic impact

According to the ATAG (Air Transport Action Group), in 2015, a total of **3.6 billion passengers** (40% international and 60% domestic) and **51.2 million tonnes of cargo were transported.** There is a network of almost **53,000 routes** operated by over **1,400 airlines** through close to **4,000 airports**.

Socio-economic benefits:
In the current context of globalization and commercial openness, a country with no policy for developing adequate connectivity reduces its opportunities for economic growth and development. While it is difficult to gauge the true impact of the aviation industry on the global economy, its benefits go beyond the direct consumers to impact the strengths of each national economy. The main benefits of aviation are:

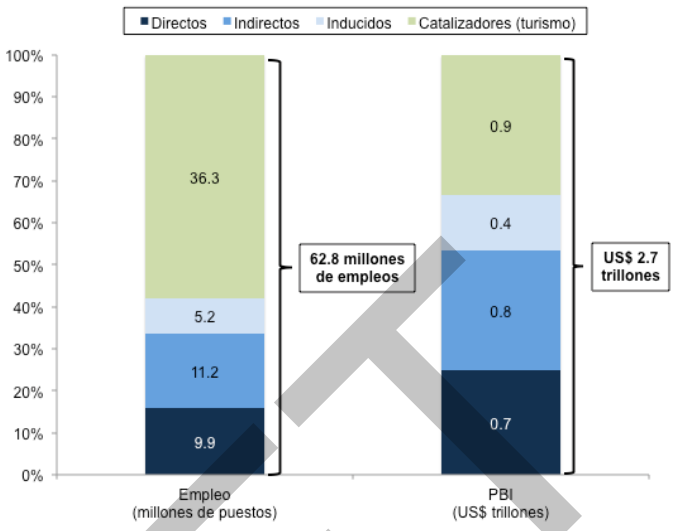
- **It enhances GDP and creates more employment**

[1] "Air Connectivity: Why it matters and how to support growth" – PwC, Hayley Mophet and Claudia Bottini (2014)

Charts 1.3.1: Global impact of the aviation industry on GDP and the creation of employment

Spheres of impact (GDP and employmen	
Direct:	Airlines and airport services
Indirect:	Aviation industry-related providers and services
Induced:	Local businesses benefited by the purchasing power of direct and indirect employees
Catalysts:	Tourism, international air trade and any other business that exists thanks to the presence of the aviation industry

Source: ATAG



-Direct; -Indirect; -Induced; -Catalysts (tourism)
Employment (millions of jobs): 62.8 million Jobs
GDP (in US$ trillions): US$ 2.7 trillion

- **It promotes infrastructure investment and development**
  - Airports invested US$ 37 billion in project construction in 2014.
  - Each US$ 100 million invested in air navigation technology research and development is estimated to produce an additional US$ 70 million in GDP per year.
  - Because of its catalytic effect on different economic sectors, the industry also boosts the three branches of State investment (foreign and public and private domestic investment).

- **It raises productivity**
  - Companies operate in a global market, specialize in activities in which they are most efficient, accede to economies of scale, and benefit consumers with a variety of products and more competitive prices.
  - The aviation industry facilitates the operation of transnational enterprises that locate their facilities, personnel and distribution logistics where they can be most productive. It creates employment in the economies in which it operates.

- **It promotes technological innovation and sustainable development**
  - Highly technological activity; requires continuing investment in innovation, promotes university research and development departments and fosters the training of highly qualified technicians.
  - Active commitment to invest in new technology to fight climate change and at 2050 to reduce the aviation industry's carbon footprint by 50% of net emission levels in 2005.

- **It facilitates labour mobility (boosts remittances)**
  - Individuals can seek better job opportunities in economic and qualitative terms.
  - They send part of their income earned abroad to maintain their families in their countries of origin.

❖ **Tax collection**

- The income of workers in the aviation industry and other related sectors, company social security and income tax payments and, in some countries, VAT charged on airfare tickets, etc. contribute to tax collection.

❖ **It connects remote towns and villages**

- Best or only transport alternative for towns that are remote or difficult to reach.
- A city without communications or connectivity would fail to share in the progress or socio-economic development of the country or region or would not enjoy sufficient access to basic education and health services.

❖ **It allows for humanitarian emergency aid**

- In cases of natural disasters or wars requiring urgent assistance, air transport has proven to be the best alternative for the rapid and effective transfer of medical and rescue workers, evacuation of the wounded and transfers of donated medicines, clothing, foods and other priority needs.

1.4. What elements determine a country's degree of connectivity?

❖ **Air-ground safety**

- Without safety, there can be no air connectivity; airlines and governments attribute priority to flight safety control for strengthening the industry and connectivity in the long term.

❖ **Tourist attractions and potential**

- The greater the potential for tourism and its development, the greater the interest and benefit in establishing direct routes to such destinations.

❖ **Business potential**

- Greater connectivity will depend upon potential and existing trading relations between the local economy and the world's other cities.
- The more diversified and prosperous the local economy is seen to be, the greater the interest in creating a wide-reaching connectivity network within the region and with other continents or more developed economies.

❖ **Airport infrastructure**

- The development of a city's connectivity cannot be boosted without the existence of appropriate infrastructure for sustaining the additional flow.
- The technology that is applied and the complexity of the processes (check-in, customs, immigration and security) can also affect the network's seamlessness and the opportunity to make use of some airports as regional hubs.

❖ **Geographic situation**

- Each State's individual geographic characteristics can influence its decision and need to create a more or less concentrated internal and external air transport network.
- A city or country's strategic positioning in terms of the world's other economies is capable of promoting the use of its territory as a hub for other destinations.

❖ **Technological innovation**

- Continuous development of technology in air navigation systems and innovations in aircraft design enhances safety levels, makes it possible to reduce operating costs, and expands flight offerings in longer-haul (distances) and larger capacity (passengers) aircraft.

❖ **Airline business model**

- Low-cost carriers have boosted greater connectivity on short-haul routes and increased access by lower-income population segments.
- Loyalty and frequent flyer programmes promote greater customer consumption.
- Commercial cooperation agreements make it possible to jointly operate routes where the entry of a single airline is not economically viable.

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❖ **Regulatory liberalization**

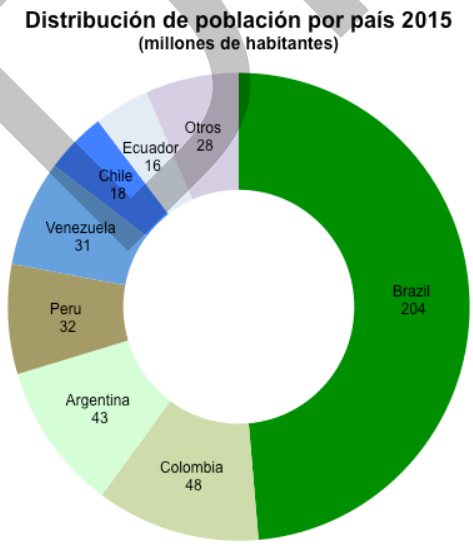
- Crucial factors in a State's level of air connectivity: Bilateral and multilateral air services agreements (ASAs) between and among countries and foreign relations standards and regulations.
- Many countries have liberalized their regulations in recent years, but limitations still exist: cases in point are the entry of foreign investment and the complexity of the processes and procedures for obtaining visas, among other things.

1.5. Socio-economic situation of the SAM Region

The SAM Region is made up primarily of raw materials exporters. It is one of the world's most socially, culturally and demographically diverse regions. It also varies hugely in geographic terms and has a wide range of climates and altitudes containing a total of 81 of UNESCO's World Heritage sites. As a result, it presents an alluring and varied offering that attracts many different types of tourists and investors. World Bank figures reveal that the number of passengers transported in the region has multiplied 3.5-fold over the past 20 years (for an annual average of 7.9%).

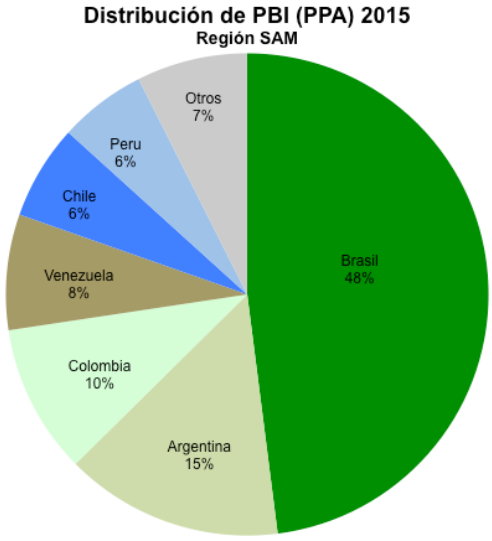
Charts 1.5.1 – Population and GDP distribution by country

Population distribution by country in 2015
(millions of inhabitants)
Brazil 204 ... Ecuador 16... Others 28



Total population: 422 million inhabitants

GDP Distribution (PPP) in 2015
SAM Region
Brazil 48%...Peru 6%...Others 7%

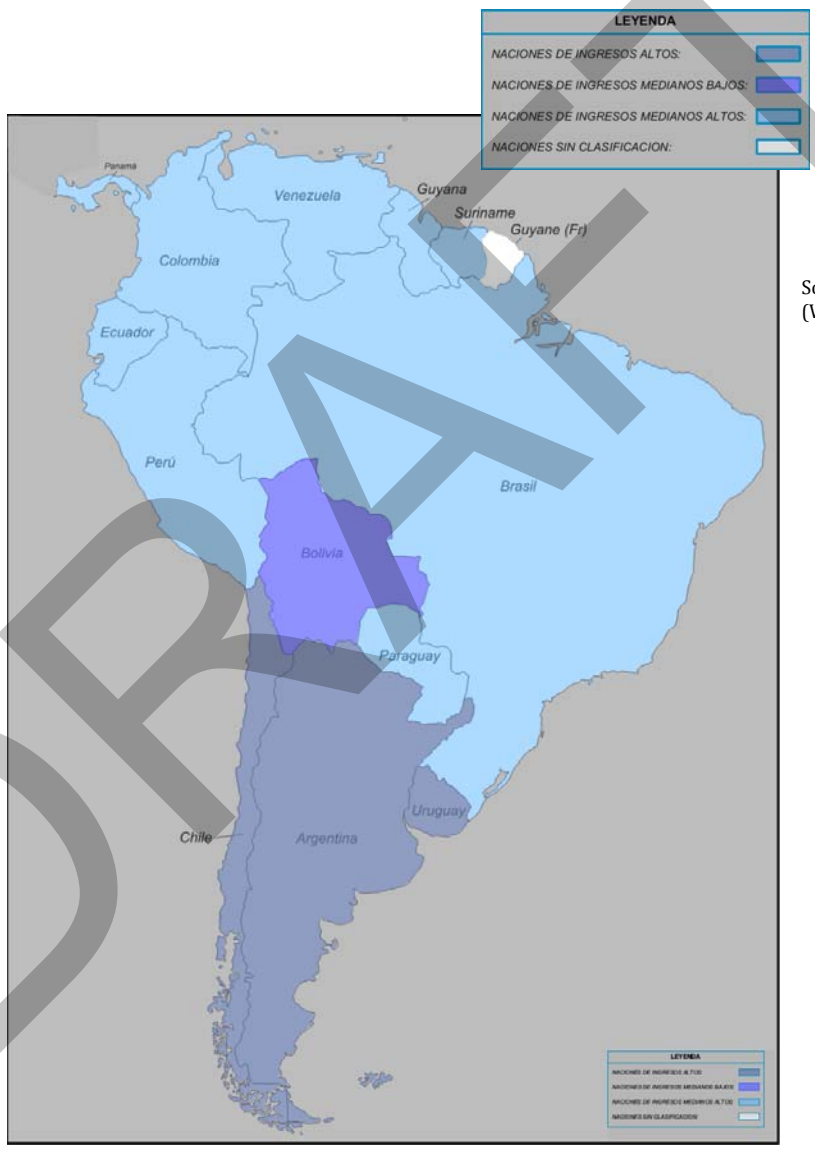


Total GDP: US$ 3.6 trillion (4.9% of the global GDP)

Source: IMF (International Monetary Fund). UNdata (United Nations) for the case of French Guiana

Figure 1.5.2 – Map of the SAM region by income level, as classified by the World Bank

LEGEND
HIGH-INCOME NATIONS:
LOWER MIDDLE-INCOME NATIONS:
HIGHER MIDDLE-INCOME NATIONS:
UNCLASSIFIED NATIONS



Source: WB (World Bank).

1.6. The aviation industry in the SAM Region in figures

Table 1.6.1 –General information about the aviation industry in the SAM Region

GDP – travel and tourism*	US$ 134 billion
Employment - travel and tourism*	5.4 million
Spending on tourism	US$ 63.1 billion

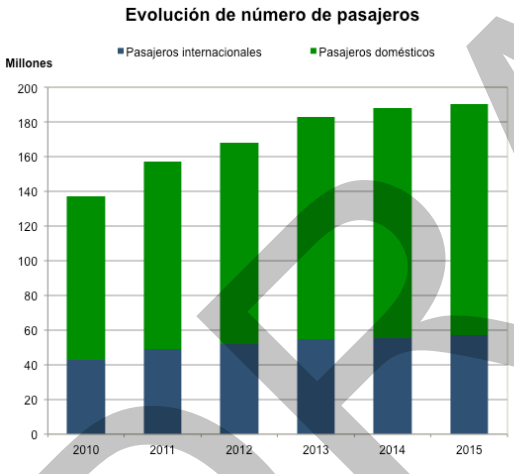
Total passengers	198.4 million
Airports	>300 (106 international)
Air carrier operators	>80
Countries of destination with direct routes	67 (52 non-stop connections)

According to data supplied by IATA, a total of 198.4 million passengers were transported from/to and inside the region in 2015. Of these, Brazil, Colombia, Argentina and Peru had the heaviest passenger traffic, accounting for over 75% of the total traffic that year.

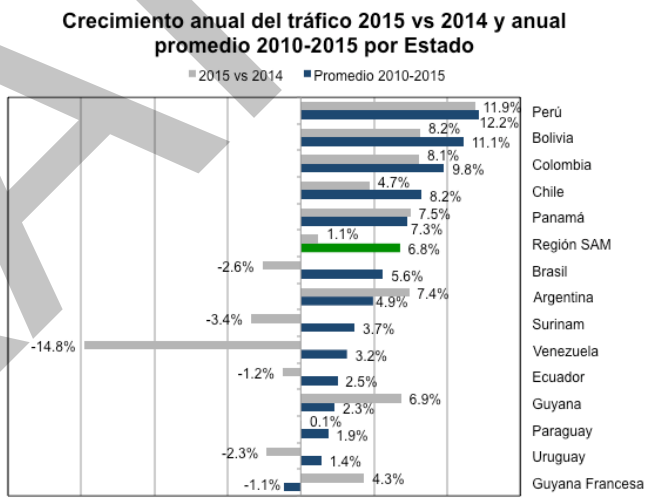
Traffic over the past year increased barely 1.2% in the SAM Region, due mainly to the slowdown of traffic in Brazil (-2.6%) and Venezuela (-14.8%). It should be noted, however, that growth during the previous years surpassed 7% (except in 2014, when it rose 3.2%), placing its annual average for the 2010-2015 period at 7.2%.

Destination-wise, 70% corresponded to domestic traffic inside each State, 8% to intra-regional traffic among the SAM States and the remaining 22% to international traffic with other world regions.

Charts 1.6.2 – Air traffic evolution in the SAM Region



Evolution in the number of passengers



Annual traffic growth in 2015 vs. 2014 and average annual growth in 2010-2015, by State

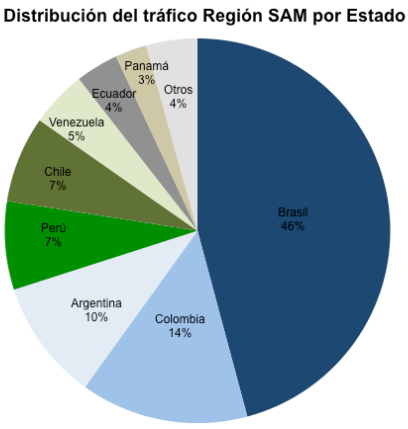
Millions -International passengers; -domestic passengers;

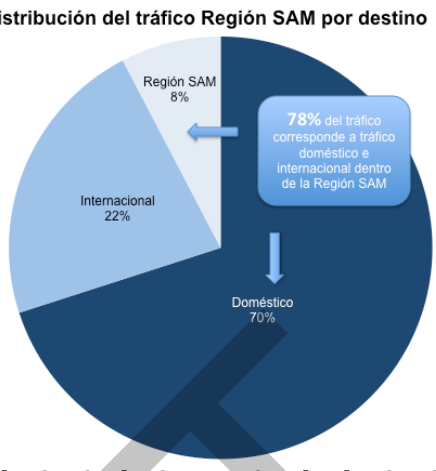
-2015 vs. 2014 -Average for 2010-2015

Peru;....Panama; SAM Region; Brazil; ... Suriname; ...French Guiana

Source: IATA. Preparation : In-house

Charts 1.6.3 –Composition and annual growth of the passenger traffic, by State





Traffic distribution in the SAM Region, by State

Brazil;...Peru;...Panama; Others 4%

Traffic distribution in the SAM Region, by destination

78% of the traffic is domestic and international within the SAM Region

Domestic 70%; International 22%; SAM Region 8%;

Source: IATA.

1.1. **Situation and level of connectivity of the SAM Region**

The characteristics of the SAM Region in terms of its level and quality of air connectivity are (see section 5 for further details):

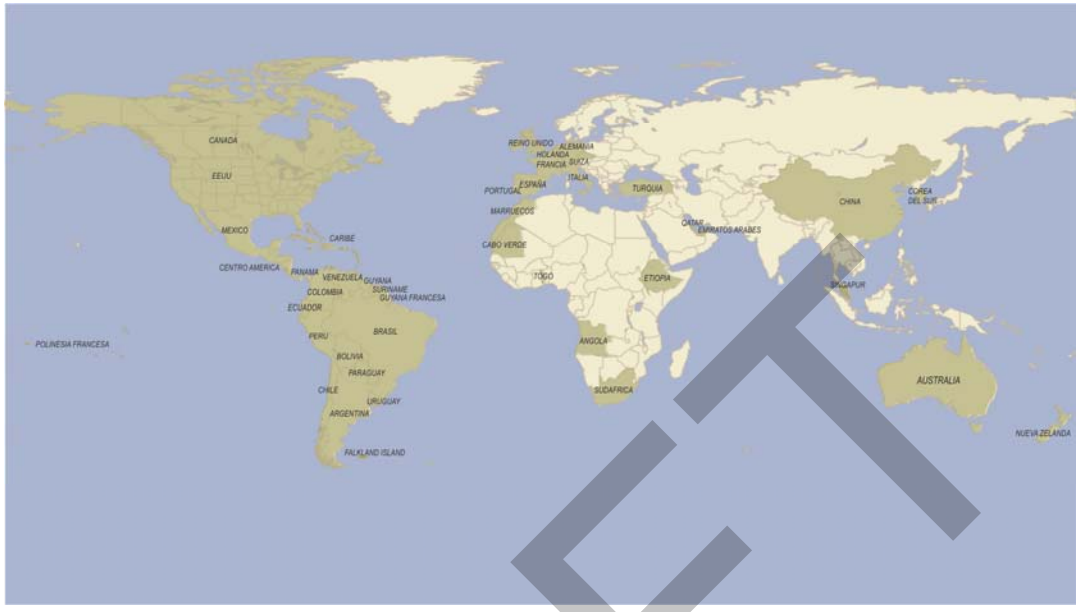
- Brazil is the most connected country as to number of airports, air carrier operators and direct routes. It also accounts for almost one-half of the region's total air traffic. Nonetheless, considering the large size of its territory and its population, its relative level of connectivity is smaller. Not all of its territory is adequately connected (its airport density is lower than that of most countries in the region; see section 5.3 for further details) and it still shows considerable room for further development of its air traffic decentralization.

- Regional airport density, measured as the total number of airports per one million inhabitants, is below 1 in 9 of the 14 States. According to the World Economic Forum (WEF), over one-half of the 140 countries evaluated in its "Travel and tourism competitiveness report 2015" have an airport density of over 1. That situation reveals that a sizeable number of States in the region still have room to improve the amount of infrastructure available for connecting their populations.

- In terms of number of flights and of passengers compared with the population size and GDP, the SAM Region ranks midway among the world's regions. Its level of air cargo transported in comparison with its GDP, however, is among the world's lowest. Proof of this situation is the fact that, according to Boeing, the SAM Region today accounts for less than 2% of the total air trade of the Middle East, Asia and the Pacific regions.

- The region is relatively well-connected with the rest of America and with some important European countries, but has very few routes with Asia and the Pacific, Africa and the Middle East. Brazil is the only country with connections to the three regions. The SAM States, except for Argentina, Chile, Peru and Panama, have routes only to America and Europe.

Map 1.6.4 – Countries of destination connected via direct routes with the SAM Region



Source: IATA.

- Furthermore, very few air carrier operators from these same regions are present.

- The region is not yet fully interconnected. Passengers from some of the smallest States, like Guyana, have no direct routes to more connected countries in the region and find it necessary to leave the region to accede to indirect routes.

- Insofar as the quality of its connectivity is concerned, the SAM Region still shows a large potential for development. According to the World Economic Forum's "Travel and tourism competitiveness report 2015," Brazil (Position 28) and Panama (Position 34) lead the region in a sampling of 141 of the world's countries. Generally speaking, the report reflects the finding that most of the countries in the region need to work on improving the quality of their air transport infrastructure and airport processes, on making their bilateral service agreements (ASAs) more open, and on reducing airfare ticket taxes and airport services charges in order to improve their global competitiveness.

1.2. Vision of the development of aviation industry connectivity at 2035

A number of different organizations recognized at the world level like IATA, ATAG, Boeing and Airbus estimate that air traffic in the SAM Region will increase by approximately 4 to 6% a year on average. For purposes of this analysis, we have considered an increase in the SAM Region passenger level from 198 million in 2015 to over 430 million in 2035. As a result, the vision of the region at 2035 shows a large potential for growth, in which air traffic will more than double its current level. Specifically speaking, growing demand (number of passengers and cargo) and supply (number of routes, flights and frequencies offered by air carrier operators) will swell the region's connectivity. Even so, the boost in connectivity will not depend solely on these elements; work will also be necessary on three development fronts, to wit:

(i) Regulatory liberalization
(ii) Infrastructure expansion and updating

(iii) Process efficiency

Figure 1.7.1 – Air connectivity development fronts (Prepared: In-house)

- Air transport supply and demand determine the potential level of connectivity
- An optimum level cannot be reached without support on the three connectivity development fronts: regulation, infraestructure and processes

-Air transport supply and demand: -Regulation; -Infrastructure; -Processes;

All industry stakeholders: States, airlines, air navigation system providers and airports have the responsibility to act on these fronts. They must coordinate efforts and cooperate to enhance the region's economic and social prosperity.

The following areas of development and facilitation for improved and more efficient air connectivity have been identified for the specific case of the SAM Region, considering the development fronts cited above. These are paired with specific objectives and metrics in order to outline an action plan for connectivity development at 2035:

Table 1.7.2 – Development areas and objectives for improving the region's air connectivity

	Strategy	Objectives
A	Liberalization of air transport regulations	Take measures for fuller opening and more flexibility in regard to the following: 1. International traffic rights (freedoms of the air) 2. Immigration control and visa policies
B	Strengthening of national airlines	3. Permit foreign investment in order to strengthen national airline operation and sustainability
C	Optimizing of air transport infrastructure	4. Remove the main restrictions on capacity in the ground and air zones of each State's most important airports
D	Simplification of airport processes	5. Modernize airport processes to allow for more seamless passenger and cargo transport 6. Facilitate and simplify in-transit passenger security controls
E	Optimizing of charges and tax levels	7. Reduce charges and/or enact tax exemptions for air transport 8. Improve the control of operating charges applied by airports to air carrier operators

	Strategy	Objectives
F	Promotion of new routes	9. Expand the network of existing direct routes, in order to achieve greater intra-regional connectivity 10. Enter new destinations and markets of countries outside the region showing a large potential for growth
G	Establishment of a regional tourism alliance	11. Jointly attract travellers from distant countries with little presence in the region like Asia and the Pacific, the Middle East and Oceania
H	Consolidation of hub airports	12. Reinforce the operation of existing and potential regional and domestic hubs to ensure that each State has at least one efficient hub airport
I	Entry into and development of the low-cost airline market	13. Foster an increase in the supply of flights and routes at more competitive prices to ensure the inclusion of a larger percentage of each State's population 14. Promote secondary airports in order to boost traffic development in cities with little connectivity
J	Promotion of airline alliances and agreements	15. Establish a favourable regulatory environment for the entry/operation of new airlines through alliances

Action Plan Summary

Objective	Activities	Targets	Date
1) Attainment of a greater opening to international traffic (ASAs and freedoms of the air)	• Review existing ASAs and propose changes	100% of the States	2020
	• Sign agreements/addenda within the SAM Region	100% of the States	2023
	• Sign agreements/addenda with other regions	100% of the States	2030
2) Attainment of more flexible immigration controls	• Exempt all SAM Region States from visa requirements	100% of the States	2020
	• Exempt from visa processes or make them more flexible for the rest of the world's countries	100% of the States	2025
3) Authorization of foreign investment in national airlines	• Permit SAM Region air carrier operators to invest over 51% in their ownership	50% of the States 75% of the States	2022 2028
	• Allow a greater opening to foreign investors so that they can gradually attain a 51% shareholding	75% of the States	2035
4) Elimination of restrictions on the capacity of the air and ground infrastructure of the main airports	• Confirm that each of the region's airports is provided with the operating plans recommended by ICAO (Airport Operational Efficiency)	100% of the States	2022
	• Ensure that runway use at peak hours does not exceed 70% of the installed capacity	100% of the States	2025
	• Outbound passenger service: 60 min Inbound passenger service: 45 min In-transit passenger service: 30 min Cargo service: 4 hours until delivery	80% of the target 100% of the target	2025 2030
	• Total airport density ratio of 1.0 and international density ratio of 0.5 for each State	50% of the States 100% of the States	2025 2030
	• Implement ICAO's performance-based air navigation system PBIP	100% of the States	2025
	• Annual airport growth and real capacity monitoring plan	100% of the States	Starting in 2019
5) Updating of airport processes	• Self-service check-in modules	70% of the States 100% of the States	2020 2030
	• Centralized baggage drop-off area	50% of the States	2020

Objective	Activities	Targets	Date
		70% of the States 100% of the States	2025 2030
	• New security control technology using international standards (security metal detector arches, x-ray machines, etc.)	70% of the States 100% of the States	2025 2030
	• Electronic immigration system processing (API – Advanced Passenger Information)	50% of the States 70% of the States 100% of the States	2025 2030 2035
	• Implement alternatives of "something to declare" and "nothing to declare" at customs	50% of the States 100% of the States	2020 2025
6) Simplification of traffic security control	• Sign agreements among SAM Region States	50% of the States 100% of the States	2022 2025
	• Implement the one-stop security (OSS) system	50% of the States 100% of the States	2025 2030
7) Reduction of charges and/or exemption from taxes on air transport	• Review consumer charges and draft proposals for their reduction	50% of the States 100% of the States	2025 2030
	• Exempt international airfare tickets from payment of VAT	50% of the States 70% of the States 100% of the States	2025 2030 2035
	• Exempt overflights from payment of VAT	100% of the States	2022
8) Control of airport charges	• Review existing charges and set maximum levels	50% of the States 100% of the States	2022 2030
	• Implement special charges for airport use during periods of low flight frequency	50% of the States 100% of the States	2022 2025
9) Expansion of the intra-regional flight network	• Implement special charges for airport use during days of low flight frequency	100% of the States	2025
	• Connect each State with at least 4 States in the Region (intra-regional connectivity ratio of 29%)	100% of the States	2030
10) Entry into new foreign destinations and markets	• Open at least 3 direct routes to new destinations per State	75% of the States	2025
	• Possess at least one direct route in Asia and the Pacific, the Middle East, Africa and Oceania	50% of the States 75% of the States	2030 2035

Objective	Activities	Targets	Date
11) Joint promotion of regional tourism for tourists from distant countries	• Establish an organizing committee and set the date and venue for an event to promote regional tourism	At least 50% of the States participate	2020
	• Prepare and fund the event	End of the activity	2022
	• Hold the event	End of the activity	2023
12) Strengthening of regional and/or domestic hubs	• Analyze the traffic and sphere of influence of each airport	50% of the States	2020
		100% of the States	2025
	• Prepare investment plans to guarantee appropriate operation during peak hours	50% of the States	2022
		100% of the States	2028
	• Consult with airlines interested in connection centres (hubs)	50% of the States	2022
		100% of the States	2028
	• Implement the Master Plan	50% of the States	2025
		100% of the States	2030
13) Augmentation of the supply of low-cost airline flights and routes	• Participate in a "Routes" or similar event in order to make presentations to low-cost airlines	100% of the States	2020
	• Arrange for one-on-one meetings with operators that show the most interest in operating in the region	At least one meeting per State	2021
	• Allow for the entry of at least one new low-cost carrier with an operating license that will broaden the existing route network	50% of the States	2025
14) Promotion of secondary airports	• Analyze the current status of the main secondary airports by State and cost benchmark	100% of the States	2020
	• Review and improve existing legislation for the entry and operation of new air carrier operators	100% of the States	2025
	• Allow for the entry of a new low-cost carrier with a license to operate and routes into at least 1 secondary airport	50% of the States	2025
		75% of the States	2035
15) Establishment of a regulatory environment favourable to the establishment of airline alliances	• Review and secure a greater opening and/or the reduction of obstacles to joint operating structures and alliances	100% of the States	2022
	• Review and improve existing regulations in order to permit the operation of offline airlines represented by GSAs	100% of the States	2022

2. Definition of connectivity

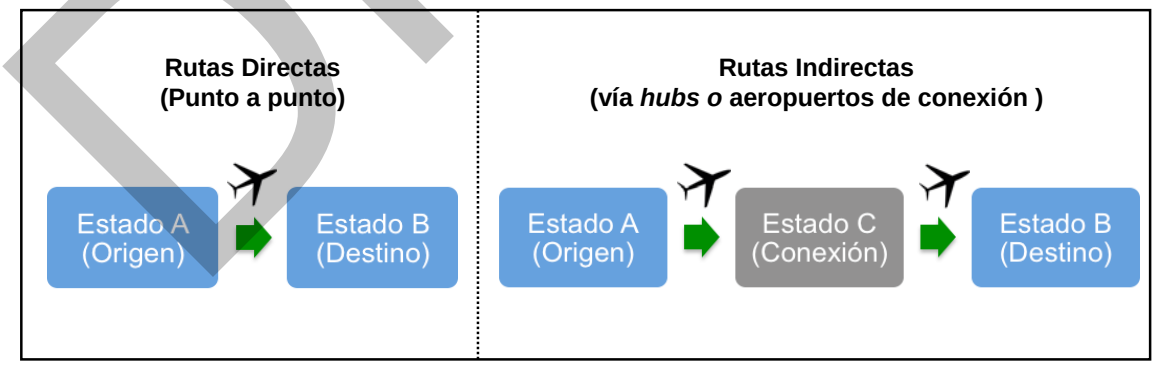
2.1. What is connectivity?

The concept of connectivity comes from the verb "to connect" (in Latin, *Connectere*), which refers to the creation of a common link; to link up a whole. Connectivity, specifically referring to air transport, is the reason for the existence of airlines and refers to their capacity to link up different countries and cities in the world so that resources can be transported from one territory to another. Thanks to the aviation industry, countries are interconnected through a global transportation network that makes it possible to move people, trade goods, provide services and send mail. According to ICAO, "connectivity is a property of networks and can be defined in such a way as to constitute an indicator of a network's concentration. Therefore, connectivity is the ability of a network to move a passenger from one point to another with the lowest possible number of connections and without an increase in fare, focusing on, from a commercial perspective, minimum connecting times with maximum facilitation ultimately resulting in benefits to air transport users.[2]

There are two of Civil Aviation categories: (i) Commercial Aviation that involves the air transport of passengers, cargo or mail for remuneration or hire; and (ii) General Aviation, which encompasses all operations other than commercial aviation and aerial work (defined as being specialized services operations, such as agriculture, construction, photography, mapping, observation and patrolling, search and rescue, and aerial advertising, among others.)[3]

The air connectivity network comprises: (i) routes between city pairs and (ii) weekly flight frequencies. The flights can be cabotage flights inside each country (domestic) or international flights to/from other States. The connections between city pairs, for their part, can be: (i) direct connections between two cities (point-to-point) or (ii) indirect connections in which two or more flights are used to connect the point of origin with the final destination (hubs or connection airports).

Figure 2.1 – Types of air routes



Direct Routes (Point-to-point): State A (Origin) – State B (Destination)
Indirect Routes (via hubs or connection airports): State A (Origin) – State C (Connection) – State B (Destination)

Preparation: In-house

[2] Worldwide Air Transport Conference (ATCONF) – Sixth Meeting. (Montreal, 2013)
[3] Operation of Aircraft, Annex 6 to the Convention on International Civil Aviation (Part II, 1998).

Such system permits the operation of a global market that distributes the resources more efficiently, in which all nations have the opportunity to specialize in their most productive economic activities, benefit from trade in resources with other nations at competitive prices and share knowledge, technology and innovations with the rest of the world. The more liberalized and integrated a global network is, the greater the long-term benefits for all people.

2.2. How can it be measured?

While there is no specific way to measure connectivity, air connectivity can be gauged in terms of two network characteristics:

(iii) **Size and concentration**:

The more routes and frequencies it has, the greater a State's possibility for connection. Even so, it is the use of that capacity for connection (passengers, cargo and mail) that will determine a nation's true degree of connectivity.

A country's connectivity will develop in accordance with the economic characteristics and benefits produced by the trade resulting from one city's connection with another. In other words, it is not enough to merely connect one point with another; it is also important to measure the contribution produced by that connection in terms of greater resource mobilization. For example, connecting two developing countries is not the same thing as connecting one developing country with a more advanced economy. In the latter case, the degree of connectivity created in the network produces a greater impact by increasing its access to a larger and more dynamic economy in which the traffic that has been created could prove to be more beneficial (tourism, business travel, movement of personnel, and exports, among other things).

Geographic considerations also play an important role. The connection with a new continent, for example, could be more beneficial than the addition of a further connection within the same region. Connection with hub airports strengthens network connectivity, for it not only provides access to a new city, but also opens the possibility of acceding indirectly to an entire network of new cities.

(iv) **Seamlessness**:

More direct routes with the fewest possible number of connections facilitate air traffic. Embarkation, disembarkation, controls and airport connection times all have an impact on the quality of the connectivity.

The various types of aviation industry consumers make their travel decisions considering three main factors: security, service speed and price. As a result, greater connectivity is not gauged in quantitative terms alone, as to the number of flights offered and size of the destination airport. Qualitative elements must also be incorporated, indicative of the seamlessness of the service, whether the connections are direct or indirect and the ground and air transit speed. The SAM Region applies the Concept of Operations (CONOPS) in which States, ICAO, airports, air navigation services providers, airlines and other stakeholders involved define the sphere of action to ensure safe and efficient Air Traffic Flow Management (ATFM).

The more direct and rapid the connection, the lower the passenger's cost in monetary terms and in terms of lost time. As in any industry, the lower the cost to the public, the greater the demand. As a result, more seamless connections will contribute to greater connectivity.

Existing aviation literature advocates a variety of indices or metrics[4] that account for different connectivity characteristics and can be used individually and/or combined to provide a better understanding of each country or region's connectivity. Some of the best-known are presented in the following table:

Table 2.2.1 – Connectivity Indicators

Index	Description
IATA Connectivity Index	Measures the availability of a State's flights to its various destinations weighted according to the importance (capacity and use) of the destination airports. It includes neither process fluidity nor connection times.
World Bank Air Connectivity Index	Determines the integration of the global air market by considering the interactions among all countries, even in the absence of direct flights (incorporates the benefits of hubs). The index does not consider process fluidity or connection times.
World Economic Forum Availability of Air Transport Infrastructure	Compares the number of available seats scheduled per week for each country. That metric fails to incorporate the network's actual traffic and does not consider process fluidity or connection times.
Netscan Connectivity Index	Takes into consideration the seating capacity for direct and indirect flights and hubs and also incorporates connection times and airport process facilitation[5]. It does not consider the actual traffic or the destination's economic value.
York Aviation Business Connectivity Index	Focuses on measuring the value of air connectivity for business purposes, based on the economic importance of the destination.

Source: "Air Connectivity: Why it matters and how to support growth" (PwC) and each organization's official website

From the above, it is clear that measuring connectivity is a complex task that incorporates both quantitative and qualitative factors and that each individual measurement will be used for reference purposes only and may not fully incorporate all relevant aspects. Furthermore, many of these indicators have not been updated frequently or in recent years; given the changing conditions in the aviation industry, their use cannot be considered representative. This document will later analyze different types of measurements available for evaluating the degree and seamlessness of SAM Region connectivity.

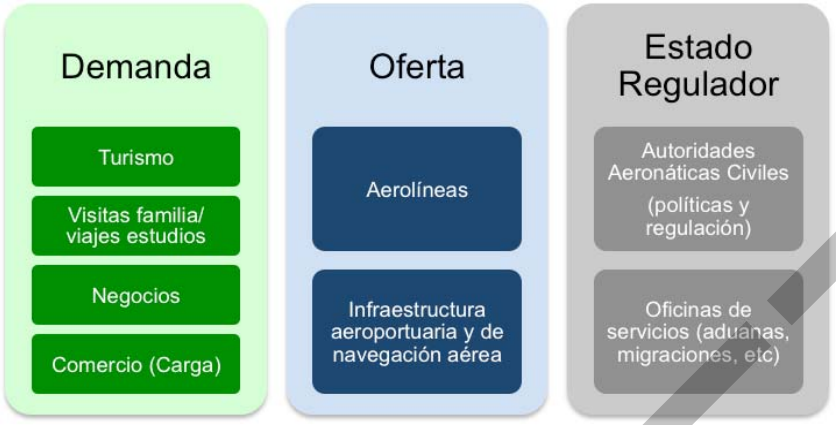
[4] "Air Connectivituy: Why it matters and how to support growth"-PwC, Hayley Mophet and Claudia Bottini (2014)

[5] According to ACI (Airports Council International), that index is widely used in European airport consulting services and projects

2.3. **Importance of connectivity development and its socio-economic impact**

Structure of the air transport sector:

Diagram 2.3.1 –Structure of the Air Transport Sector



Demand: -Tourism -Family visits/study travel -Business -Trade (Cargo)
Supply: -Airlines -Airport and air navigation infrastructure
Regulating State: -Civil Aeronautical Authorities (policy and regulation) -Service offices (customs, immigration, etc.)

Preparation: In-house

Air Transport Demand

There are 4 types of consumers: (i) tourism, (ii) visits to family/friends or travel studies, (iii) business travel and (iv) cargo and mail transport. Each has its own individual characteristics and preferences, which airlines and governments take into account to structure the air transport route network, frequencies and services offered.

Most tourists seek attractive destinations with suitable tourism infrastructure, are flexible as to travel times and consider price an important element in their choice of travel destinations and seasons. There are also tourists who travel to attend major events (sports or entertainment, for example), who may not be as flexible as to travel dates and are strongly influenced by air fares in deciding whether or not to make the trip. Travellers going to visit family or friends or for study trips, on the other hand, show similar behaviour in seeking the most economic fares and flexibility in choosing their travel dates, but have little leeway in choosing their destinations.

Business travellers, for their part, who fly to destinations where they have economic interests and attend public or private international events, give priority to speed, flight availability and connections. They place less importance on airfare ticket prices and seek, rather, flexibility in being able to change the dates or destinations of tickets already acquired, if necessary.

The final category is cargo and mail transport. In this case, the choice to ship them by air goes hand-in-hand with a cost-benefit analysis of the service life of their product, its weight and/or size, the cost of the air transport and the sales value to the consumer. Air is the most expensive means of transport, but is also the one that moves the product to the destination market most swiftly; according to the ATAG (Air Transport Action Group), **although less than 1% of the total export volume is transported by air, this volume represents 35% of the total global export value**.

Air Transport Supply

The air transport supply available to consumers is represented by the airlines that offer the transport service and the airport and air navigation infrastructure that permits the flow and administration of flights on the ground and in the air.

Airlines create their route networks and point-to-point frequencies and establish their hubs in such a way as to offer indirect flights in accordance with the characteristics and economic importance of each destination and the expected demand from each type of consumer. As a result, they will make their decisions to operate flights in countries where the State permits them, taking care to ensure that their expected occupancy rate justifies the investment.

The ground infrastructure needed to house and sustain the flight frequency consists of the airports and the terminals where the embarkation and disembarkation take place, fuel is supplied, airport maintenance is performed and the aircraft are temporarily parked between flights. They also offer consumers a physical space in which to comply with all airline and State regulations (check-in, security, immigration and customs) and constitute a commercial attraction of mutual benefit to consumers and airports. At the same time, the Air Navigation Services Providers (ANSPs[6]) are equipped with the necessary air navigation infrastructure and technology to organize air traffic and ensure flight safety.

These three services providers (airlines, airports and ANSPs) must always work together when the aim is to improve a specific city's connectivity. In other words, the offering of new destinations or increase in flight frequencies by an airline can only be achieved if and when the airports and ANSP of the cities of origin and of destination possess sufficient physical and technological capacity to manage the additional flight flow or if an investment is made in broadening that capacity.

The importance of the rest of the stakeholders involved in the aviation industry, which supply and/or provide related services to facilitate flight quality and operation, cannot be overlooked: airplane manufacturers, travel agencies, tourist operators, safety technicians, and catering services, among others.

Regulating State

The aviation industry cannot exist without the regulation and authorization of each territory's State. It is the governments that are responsible for granting licenses to fly and for certifying and regulating the operation of the aviation industry in their territories.

State interaction takes place for the most part within the framework of bilateral or multilateral ASAs (Air Services Agreements), in which each country defines the commercial air rights governing the use of its territory by other States to transport passengers, cargo and/or mail. These agreements usually establish the characteristics that will define the size and concentration of the country's connectivity network, such as: licensed routes and airlines, number of frequencies and authorized Freedoms of the Air[7],

[6] Air Navigation Services Providers

[7] The so-called Freedoms of the Air were established in 1994, through the Chicago Convention. There are 9 freedoms, broken down into technical, commercial and other freedoms. They specify different degrees of freedom and authorizations of the

among other important factors. As a result, connectivity will be greater where the regulatory framework is more liberal--in other words, in States where the ASAs are less restrictive and more flexible in facilitating the industry's operation and development.

The Regulating State also has an influence on the quality of the connectivity offered to the inhabitants by not only establishing commercial air rights within its territory, but also by taking charge of various strategic tasks that make the sector's appropriate operation possible through each country's Civil Aviation Authorities (security, airport plan, air navigation systems, and coordination with customs, immigration and other official agencies).

Socio-economic benefits of aviation:

Commercial aviation has been operating for over 100 years. For a long period of time, the sector defined itself as "elite" transportation, heavily regulated by governments through inflexible rates not acceptable to the greater part of the population.

The advent of globalization and the consequent market opening and liberalization over the past 30 years triggered a great deal of economic and social development worldwide, with the result that a stronger middle class emerged and began to gain access to these services, previously considered a luxury. Together with this, new aeronautical technology emerged and larger and lighter aircraft with lower fuel consumption were introduced, making it possible to bring down operating costs; as a result, air fares were reduced and conditions made more flexible. **According to ATAG, air transportation costs have dropped over 60% in real terms since 1970. Today, 54% of all tourists worldwide travel by air.**

In 2015, a total of **3.6 billion** (40% international and 60% domestic) **passengers** and **51.2 million tonnes of cargo** were transported annually. There is a network approaching **53,000 routes** operated by more than **1,400 airlines** through almost **4,000 airports**[8].

It is difficult to gauge the true full impact of the aviation industry on the global economy, for its benefits go beyond the direct consumers to impact the strengths of each economy. In the current context of globalization and commercial opening, a country without policy measures for developing appropriate connectivity finds its opportunities for economic growth and development limited. Below is a description of the main socio-economic benefits of greater aviation connectivity worldwide:

,

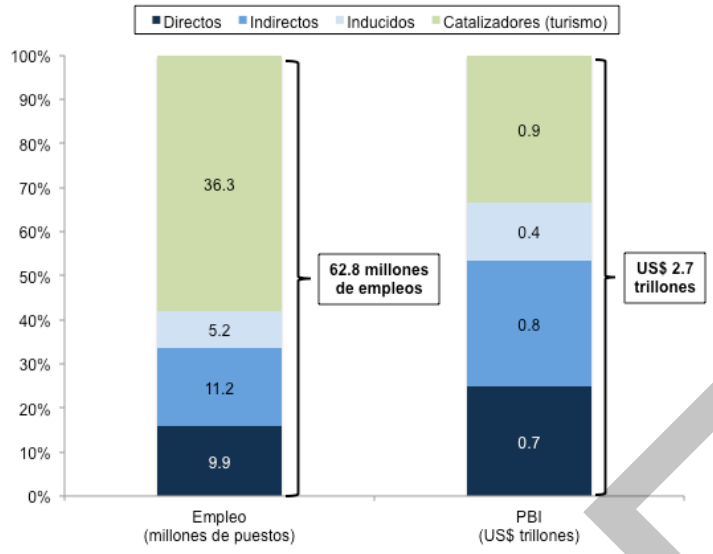
- **Increase in GDP and creation of employment**

The first impact identified will always be the increase in a country's domestic production and the consequent creation of employment. Even so, it is important to define the sphere of influence of aviation within each economy. Economic literature identifies 4 benefits of the aviation industry within a country's economy:

States signatories to the agreement, with regard to overflights, landings, and the embarkation and disembarkation of passengers, cargo and mail in or through the territories of the signatories or of third parties

[8] Aviation Benefits Beyond Borders" – ATAG, July 2016. According to ATAG, there are 41,788 aviation fields, including commercial, general and military aviation.

Figure 2.3.1: Global impact of the aviation industry



-Direct -Indirect -Induced -Catalysts (tourism)
Employment (millions of jobs): 62.8 million jobs
GDP (US$ trillions): US$ 2.7 trillion

Si la industria aérea fuera un país, ocuparía el puesto **número 21** entre las economías más grandes del mundo

If the aviation industry were a country, it would rank **21st** among the world's largest economies.
Source: ATAG

Direct impact: The production and creation of employment by the companies directly involved in the aviation sector--in other words, airlines and all airport services (including airplane manufacturers, maintenance services, air traffic management, restaurants and duty-free stores, among others.)

Indirect impact: The increase in production and creation of employment by companies indirectly related to the aviation industry (providers and connected services). Some examples are: fuel suppliers, catering companies, travel agents, financial services companies, electricity companies, construction companies, systems engineering and many other businesses that benefit from the services they provide to the aviation industry.

Induced impact: the additional product and employment produced in a country's economy as a result of the increase in purchasing power of people directly or indirectly employed by the aviation industry. Some examples are shopping centres, restaurants, and banks, among many other domestic businesses benefitted by the greater purchasing power of a country's inhabitants.

Catalyzing impact: All of the other industries and activities strengthened by the operation of commercial and general aviation. Tourism is one of the driving forces of the global economy, particularly in the case of developing countries. Tourists direct their spending toward an entire network of businesses, like accommodations, restaurants, car rental, and shopping centres, among others. It should be stressed that the economic impact of the tourist sector extends to offering more and better quality products and services to not only tourists, but also to local inhabitants. The aviation industry also contributes to domestic and

international trade by giving companies access to a larger market. It should be mentioned that some commercial trade, like the sale of perishable food products, would not be possible without a rapid and safe means of transport, like air transport.

It is estimated that the global aviation industry **produced a total of US$2.7 trillion (in direct, indirect, induced and catalyzing activities), representing 3.5% of global GDP. It also accounted for a total of 62.8 million jobs worldwide**[9]. ATAG estimated these figures for 2015 and it should be stressed that it is difficult to comprehensively gauge all of the catalyzing effects that could be produced by the aviation industry within an economy. ATAG included only the catalyst effect of tourism and its figures fail to include the benefits of aviation in terms of the employment and product of companies or industries that have developed within a company thanks only to the presence of the aviation industry or of the value created by domestic transport or trade, as well as the intrinsic value contributed by the industry to a country in terms of greater swiftness and connectivity.

❖ **Investment promotion and infrastructure development**

The aviation industry is responsible for large investment flows within each country in which it operates, not only to procure the physical infrastructure it needs to operate, but also for the continuous development and innovation of new air navigation technologies. According to ATAG, **in 2014, airports invested a total of US$ 37 billion in new construction projects. At the same time, it is estimated that every US$ 100 million invested in technological research and development produces an additional US$ 70 million in GDP year-by-year.** The aviation industry also promotes three branches of economic investment (foreign, public domestic and private domestic), not only through the investments of stakeholders directly involved in the sector (airlines, airports and the State), but also by activating and boosting a country's economic activities.

One of the benefits of increased globalization is that it facilitates foreign investment in the rest of the world's countries. Today, many corporations operate beyond the borders of their countries of origin and enable the inhabitants of neighbouring countries and even of other continents to accede to their goods and services locally. This benefits the country of origin that enters a new market and the country of destination where it creates greater employment and enhances economic activity. Furthermore, the arrival of new industries or products can give consumers access to alternative goods and services that cannot be produced locally, thereby enhancing their well-being.

At the same time, (public and private) domestic investment is encouraged in other industries. The construction of access routes to link up the airport with the city, the promotion of new business or an increase in the production capacity of already existing industries to take advantage of the opportunity to serve arriving passengers, the possibility of providing services and solutions to companies involved in air trade, are only some of the many opportunities that are created for the different branches of public and private activity.

❖ **Increase in productivity**

The aviation industry, by facilitating domestic and international trade, in addition to allowing for the unhampered movement of personnel and resources between different

[9] "Aviation Benefits Beyond Borders" – ATAG, July 2016

territories, helps to increase productivity in different sectors. This situation benefits both consumers and producers:

- It allows companies to become specialized in activities in which they demonstrate comparative advantages and to make use of economies of scale by entering larger markets, in such a way that they can maximize their profits and, at the same time, offer a good or service at better prices.

- It facilitates the operation of transnational enterprises that locate their facilities or move their personnel and/or resources to strategic territories where they can operate at a lower cost or enjoy a comparative geographic advantage. That situation boosts the productivity of their operations and creates employment in the economies in which they operate.

- The entry of foreign competitors broadens the array of products and services offered locally and creates a competitive environment with better market conditions for the benefit of consumers.

- The entry of foreign products and companies also encourages local companies to adopt better international practices (in order to reduce their unit costs and keep themselves competitive) or to seek innovations that would enable them to reduce their costs or increase their productivity or that would give their products or services greater value.

❖ **Promotes technological innovation and sustainable development**

Air transport is a highly technological activity that requires continuing investment in research and development. That investment not only fuels the manufacture of aircraft and air navigation systems, but also promotes university research and development departments and the education and training of highly qualified specialists.

It should be stated here that the aviation industry has committed actively to invest in new technology to fight climate change. **Although the industry is responsible for only 2% of total global carbon emissions** (739 million tonnes of CO_2), it has set itself the target of achieving sustainable development in coming years through a three-pronged effort: (1) attaining savings in fuel use of at least 1.5% a year up until 2020, (2) stabilizing carbon emissions at their levels of 2020 and continuing from that point on with neutral carbon growth and (3) **reducing carbon emissions to 50% of the net emission levels of 2005 at 2050**.

❖ **Facilitates labour mobilization (boosts remittances)**

As in the case of trade in goods and services, labour mobilization enables individuals to seek better working opportunities in economic and qualitative terms, and companies to accede to a larger and more skilled labour pool.

The ease and speed with which people can travel between their cities of origin and employment also facilitates the decision to work far from the family. Many emerging countries depend heavily on the remittance of funds by labour migrants who send part of their incomes earned abroad for the maintenance of their families in their countries of origin.

❖ **Tax collection**

The aviation industry is a major contributor to the taxes collected in each of the States in which it operates. Those taxes come from the incomes of workers employed directly and indirectly by the industry, social security payments and corporate income taxes and, in some countries, the VAT charged on airfare tickets and other services. An induced and catalyzing benefit can also be said to exist in the case of taxes, as a result of the increase in output and employment in other industries benefitted by air transport.

- **Connects remote towns and villages**

There are territories and communities where, because of their rugged topography or lack of ground infrastructure, air travel is the best or only available transportation alternative. Some examples are Easter Island (belonging to Chile) or distant communities and towns in the Peruvian and Bolivian Andes, or villages in southern Argentina and Chile. A city without communications and connectivity would not benefit from progress and would have no opportunity to share in the socio-economic development of the country or region. It could also be prevented from obtaining adequate access to basic education and health services. In those cases, the aviation industry plays a crucial connectivity role.

- **Enables humanitarian aid to be received during emergencies**

In the case of natural disasters like earthquakes, tidal waves and hurricanes or of war requiring urgent aid, air transport has proven to be the best alternative for transporting medical and rescue workers rapidly and efficiently, evacuating the wounded and transferring donated medicines, clothing, food items and all other primary needs. In some cases, access by other routes is impossible because of lingering after-effects, making joint efforts necessary by military and commercial aviation and the aviation fleet specialized in humanitarian aid.

2.4. What factors determine a country's degree of connectivity?

There are two ways to increase a country's connectivity: (i) by opening up new direct or indirect routes or (ii) by increasing the frequency of already existing routes. Airlines define, structure and propose their connectivity networks to States by first considering a country's geographic, political and economic characteristics and situation and its relationship to the rest of the world's economies. They decide whether or not to enter a new market by making a cost-benefit analysis of the potential demand they could meet, the business climate in which they would operate and the obstacles they could encounter.

Direct routes between the consumer's origin and destination produce better quality connectivity; the more direct routes a State has in operation, the better its global position. In those cases, consumers benefit from lower air fares and reduce their travel times, prompting a greater demand for the service. Likewise, if a city is used as an aviation hub toward other destinations, its connectivity level with the world will be greater, as will the positive impact on its economy. A large passenger and cargo flow through its territory will produce important direct, indirect, induced and catalyzing effects in different sectors of its economy. An example is the case of Panama, one of the region's main and most developed hubs. According to information put out by the World Bank, the country's passenger flow has grown at more than 20% a year over the past 10 years, and this has gone hand-in-hand with average annual GDP growth of 8% over the same period, constituting the highest in the region.

The principal factors that can determine the size and quality of a country's connectivity network are:

- **Air-ground safety**

Air connectivity cannot exist without safety. Airlines and governments prioritize flight safety in order to strengthen a long-term industry. When an accident occurs, this can affect the demand for connectivity with the airline or airport involved. The industry's safety is the first link in the production chain on which the sustainability of the aviation system rests.

- **Tourist attraction and potential**

The greater the tourist potential and development, the greater the interest of States and airlines in creating direct routes to such destinations. That potential must go hand-in-hand with an appropriate infrastructure of roads, hotels, restaurants and other services capable of properly supporting the flow of inbound passengers. As seen earlier, the tourist industry is an extremely beneficial generator of employment and production for a country, making investment in its development a matter of public and private interest.

- **Business potential**

In this case, it is important to differentiate between the interest of foreigners in entering the local market and the interest of local businessmen in acceding to an international market. Greater connectivity will depend largely upon potential and existing trade relations between the local economy and each destination.

If we analyze connectivity by regions, it is usual to find that most countries enjoy a high degree of connectivity with their neighbours, as the connection costs and speed are more reduced in that case. Stronger economies or those showing evidence of great opportunities for development could become attractive to more developed countries seeking to diversify their investments or interested in some specific business or industry. The more diverse and prosperous the local economy is seen to be, the greater the interest in creating a broad-based connectivity network within its region and with other continents.

- **Airport infrastructure**

Routes or frequencies to a given State cannot be increased without the necessary physical capacity of airport terminals to sustain the increased flight flow. As a result, the number and size of airports existing in each country or city will always limit the increase in connectivity. Access to and the location of the airports also plays an important role because it contributes to the quality of the service offered to passengers and has an influence on their decision of whether or not to travel to that destination.

In addition, the technology used and the complexity of the processes (check-in, customs, immigration and security) can also affect passengers' experience and their expected demand. This is particularly important in the cases of cities that are chosen to be hubs, where the passenger's experience in regard to the service received and the speed of connections positions the airport as a better connection centre and facilitator of global air traffic fluidity and connectivity.

The ideal is to have a clear and simple flow of procedures using the same shared information system, a single language accessible to all airlines, customs offices and

immigration services, thereby enhancing the productivity of the information required of all passengers and reducing consumer times and costs. This is particularly important during "peak hours" when passengers from several flights congregate simultaneously and the capacity for response of airport and air navigation systems procedures are key in ensuring that flights depart as scheduled and that there are no operational delays or shortcomings. Better quality service produces greater demand in the long term.

- **Geographic location and demographic situation**

Each country's unique geographic characteristics and its location in terms of the rest of the important cities in the region or on other continents can determine the necessary degree of connectivity. Access to oceans, presence of mountains, population size and density of each city in the territory and many other elements can influence the decision and need to create a more or less concentrated domestic and foreign air connectivity network. Furthermore, the strategic positioning of a city or country with relation to the rest of the world's economies can promote the use of its territory as a link-up point with other destinations (hub).

- **Technological innovation**

Continuous technological development of air navigation systems and innovation in aircraft design enhance safety levels, making it possible to reduce operating costs as a result of greater efficiency and broadens the offering of long-haul (distances) and larger-capacity (passengers) aircraft with no need for en-route refuelling. These elements help offer consumers prices that are more competitive and can make new direct route options profitable and enhance global connectivity or that of any particular territory.

One of ICAO's priorities today is to ensure the development and implementation of different air navigation methods, some being: PBN (Performance Based Navigation), CDO (Continuous Descent Operations), CCO (Continuous Climb Operations) and AMAN/DMAN (runway sequencing capabilities). These technological innovations permit better airspace management by optimizing flight operation safety, seamlessness, order and efficiency, permitting cost reductions, improving pilot-air controller communications, and reducing the environmental impact, among other benefits.

Information technology innovation is another important element for improving air transport quality and fluidity. Over the past decade, IATA (the International Air Transport Association) worked with the airlines to develop projects designed to simplify and facilitate passenger and cargo service processes. Easily accessible self-services were implemented that have benefitted consumers and reduced airline costs, making them more competitive.

The first project, "Simplifying the Business," was launched with the issuing of the electronic ticket that made it possible to use a single two-dimensional boarding pass (BP 2D) from the point of origin and for all passenger connections en-route to his/her destination, with the added facility of being able to use electronic devices (mobile phones) for the boarding controls. Another example of the improvements is the use of Internet check-ins or check-in at airport electronic counters.

In the case of air cargo, the "e-freight" project makes it possible to transport cargo without any need for printed documents where secure electronic communications can be used, as in the case of the issuing and transmission of the electronic air waybill. That process is

regulated by State customs standards, following the guidelines of the World Customs Organization.

In line with the passenger self-services, the second project, known as "Fast Travel," offers passengers more electronic options like the printing of baggage tags for delivery of baggage at centralized airport drop-off points and the "Passenger Facilitation" project that offers solutions for efficient passenger passage through Security, Immigration and Customs controls (services regulated by each country's government).

- **Airline business model**

As in the case of any industry, the characteristics and services offered by airlines have varied over time and have also impacted the countries' degree of connectivity.

A case in point is the recent entry into the market of low-cost carriers that have boosted greater connectivity on short routes and broadened the access of lower-income population groups. This service initially targeted tourists and family visitors, but over time evolved towards the conquest of the business traveller market because of the wide offering of frequencies and routes.

Loyalty and frequent flyer programmes are other systems that have brought about an increase in connectivity and in number of flights. The accumulation of kilometres or miles travelled and the possibility of acceding to upgrade services have helped to consolidate a network of loyalty customers who seek to benefit from free flights and/or improvements in the quality of their flight experiences. The more distance travelled and number of flights taken by passengers, the greater their access to additional benefits. The final effect is a larger passenger flow willing to travel several times a year in order to enjoy those benefits, either toward new routes or frequent destinations.

To conclude, the importance that airline partnerships and alliances have taken on must be mentioned. Interline or commercial cooperation agreements allow for the joint operation of routes not economically viable for a single airline. They also enhance passenger trust in choosing to travel routes with connections, for which a single airline reservation will be sufficient with only one check-in and baggage delivery at the point of origin, thereby reducing the complexity of in-transit airport processes and lost waiting times.

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- **Regulatory liberalization**

Bilateral and multilateral agreements among countries (ASAs) and foreign relations standards and regulations are one of the most important elements influencing a State's level of connectivity.

Each State determines its own policy in accordance with its characteristics and economic needs. By way of example, it is likely that geographically isolated economies without a strong tourist industry for attracting passengers or a little developed aviation industry, will agree to liberalize their air regulations in order to accede to the globalized market. More developed economies and those with a large number of routes, on the other hand, could prefer greater regulation of their domestic markets in order not to adversely affect national industry, producing a negative impact on the development of connectivity.

Although many countries have chosen to liberalize their ASAs in recent years by means of "open skies" agreements, in practice their operational restrictions are still in place and have become the main stumbling block to their achievement of greater connectivity.

Limitations on connectivity development

Some of the most significant regulatory issues restricting connectivity development are:

- The complexity of the processes and procedures for securing in-transit and visitor visas (tourist, business, study, etc.) are one of the primary obstacles holding back the facilitation of connectivity via indirect routes and traffic hubs. Resident visas, on the other hand, affect the development of all industries that benefit directly or indirectly from the aviation industry's existence.

- The limitation on the number of route frequencies and possibilities of given air carrier operators not only hinders their possibilities for increasing their connectivity, but also inhibits free competition. This keeps final consumers from benefiting from the lower fares or better services that would emerge in a more competitive environment.

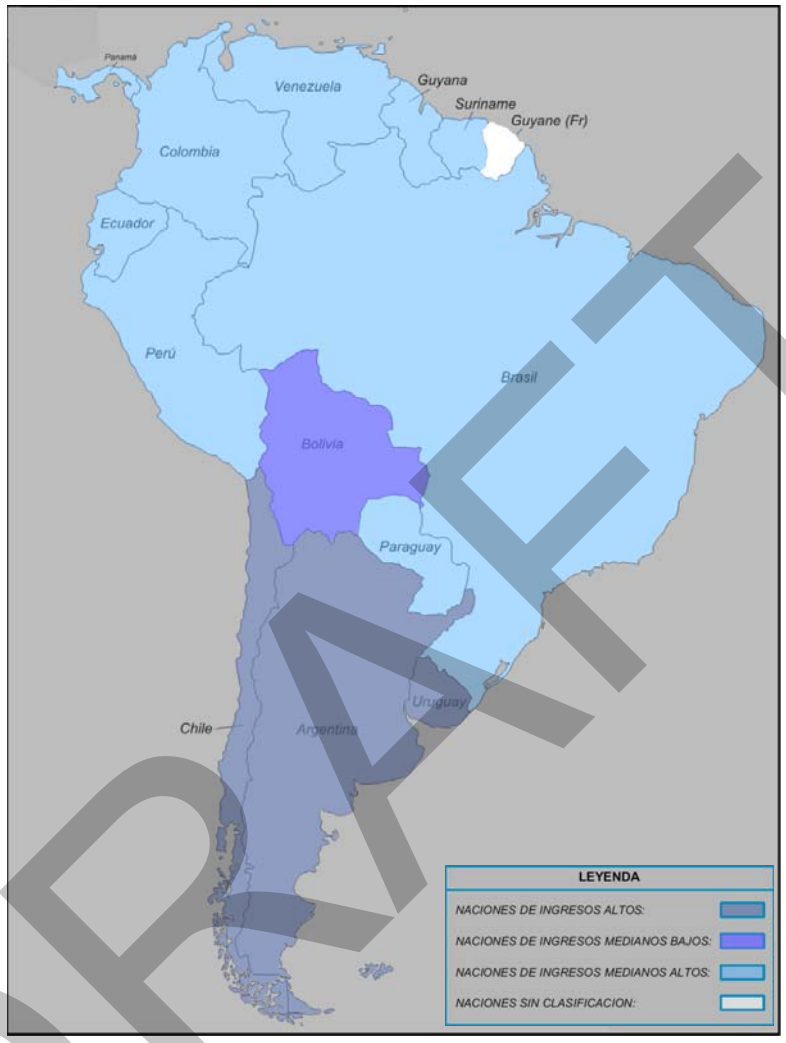
- Each State's power to reject the creation of airlines with a significant percentage of foreign ownership also limits a country's potential for connectivity, above all by obstructing the global airline market for mergers and consolidations in order to accede to economies of scale, reduce costs and take advantage of efficient operational platforms.

- In most cases, countries have multiple bilateral ASAs with different characteristics and restrictions that even go so far as to specify the authorized airlines and airports, as well as the number of frequencies and routes licensed for each specific case. If a new airline requests permission to fly within the context of an ASA or an airline already considered in an ASA signed by two countries wishes to fly a route with a new airport, for example, they cannot do so unless a new negotiation is carried out between the parties.

- In the case of developing countries with little developed aviation industries of their own, limitation on the origin of airline property ownership obstructs and disincentivates the injection of foreign capital and inhibits development of a given territory's full potential for connectivity.

3. Socio-economic conditions and situation of the aviation industry in the SAM Region

Figure 3.1 – Map of the SAM Region by income level, as classified by the World Bank



LEGEND: -High income nations -Lower middle-income nations -Higher middle-income nations -Unclassified nations
Source: WB (World Bank)

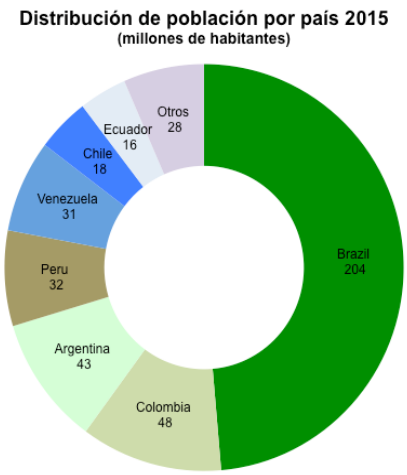
3.1. General Description

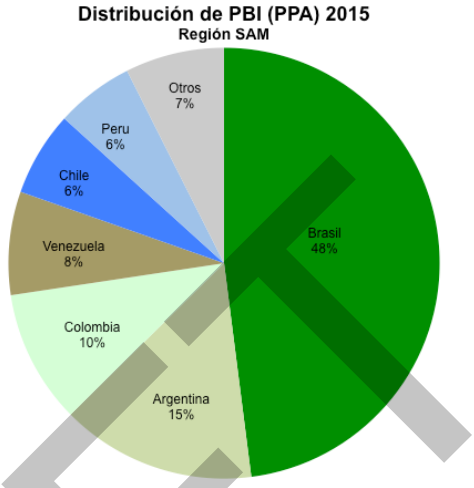
The SAM Region (South America), as defined by ICAO, is made up of 14 countries (13 States and 1 Territory): Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, French Guiana (French Territory), Panama, Paraguay, Peru, Suriname, Uruguay and Venezuela. These countries together account for 40.5% of the total area of the Americas and 13.5% of the world. Their total population is 420 million (5.7% of the world's population). Over one-half of the people live in Brazil (with 204 million inhabitants or 49%), followed by Colombia (48 million or 12%) and Argentina (43 million or 10%). In terms of their overall GDP (adjusted by PPP – Purchasing Power Parity[10]), 93% are

[10] Metodology used to compare each country's GDP using a common base (US $), adjusted for national differences in cost of living.

concentrated in only 6 of the 14 countries (Brazil, Argentina, Colombia, Venezuela, Chile and Peru), with Brazil alone accounting for 48%.

Charts 3.1.1 – Population and GDP distribution, by country





Population distribution in 2015, by country (millions of inhabitants): Brazil….Others 28
GDP distribution (PPP) in 2015 SAM Region: Brazil 48%...Others 7%

Source: IMF (International Monetary Fund). UNdata (United Nations) for the case of French Guiana

This is one of the world's most diverse regions in social, cultural and demographic terms. Originally occupied by an indigenous population, it was colonized by Spaniards and Portuguese, supplemented by a forced inflow of slaves from Africa and massive European and Asian immigration. With a highly varied geography, it possesses all types of climates and altitudes, from handsome beaches and deserts to the imposing Andes mountains and tropical Amazon jungle. Because of these characteristics and as host to 81 recognized UNESCO World Heritage sites, the SAM Region contains an attractive and varied proposal for many kinds of tourists.

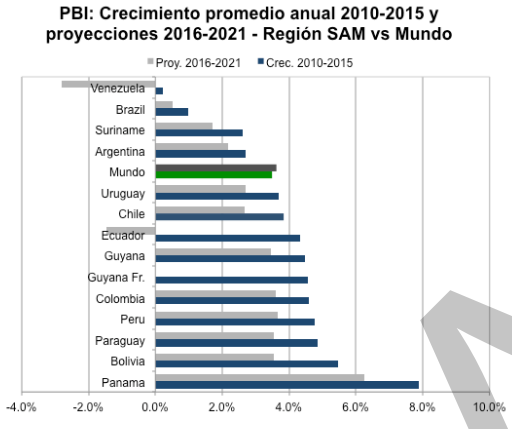
The region is made up for the most part of raw materials exporters, which are accordingly highly influenced by alterations in international commodity prices. According to the latest World Bank classification by income, the region consists primarily of upper middle-income economies, with the exception of Chile, Argentina[11] and Uruguay, which are ranked as being high income, and Bolivia, as lower middle-income. It should be added here that French Guiana, as a part of French territory, is not classified individually.

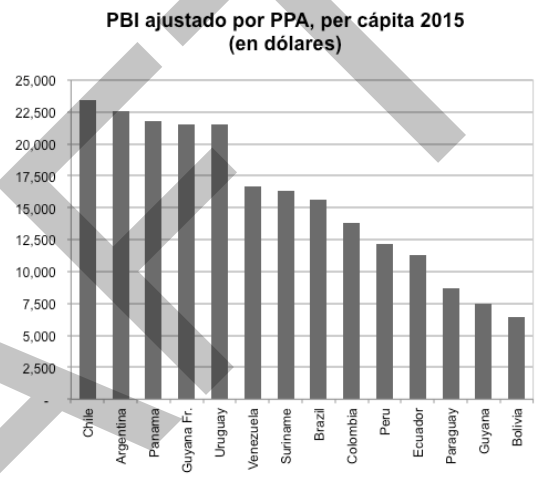
Economic policy-wise, a large variety of systems are applied. We have the case of countries with mostly capitalistic and free market systems, like Chile, Peru and Panama, mixed economies with different degrees of openness to trade and regulations for protection of their local industry, like Argentina, Uruguay and Brazil and heavily State regulated economies with a more nationalistic orientation, like Venezuela. Their combined GDP is US$ 3.6 trillion, or 4.9% of global GDP, while their per capita GDP is on the order of US$ 8.5 thousand (US$ 1.5 thousand less than the world average of US$ 10 thousand).

[11] Argentina is being evaluated for a possible reclassification.

Economic growth, prompted by a favourable world environment and domestic reforms carried out by each country's government, triggered an important economic and social change in the SAM Region during the past decade. Although the world macroeconomic environment is experiencing an economic slowdown, with a sizeable drop in commodity prices and reduction of the purchasing power of the developed economies, a large number of the SAM Region States achieved growth levels above the world average (3.5%). Panama and Bolivia led that growth with average annual GDP for 2010-2015 of over 5%. Paraguay, Peru, Colombia, Guyana, Ecuador, Chile and Uruguay have also outstripped average world growth. But Argentina, Suriname and, above all, Brazil and Venezuela have trailed far behind the global average, due mainly to the individual effects of dropping oil prices, political turbulence and economic slowdowns in each country.

Charts 3.1.2 – GDP and per capita GDP growth, by country





GDP: Average annual growth 2010-2015 and projections for 2016-2021 – SAM Region vs. the world
.Proj 2016-2021 .Growth 2010-2014 Venezuela…Argentina World…Fr. Guiana

Per capita GDP adjusted by PPP in 2015 (in dollars) .... Fr. Guiana

* The data for French Guiana corresponds to the most recent information available, 2010-2013
Source: IMF, INSEE (Institut national de la statistique et des études économiques) for figures for French Guiana, which are not adjusted by PPP and are shown for reference purposes only

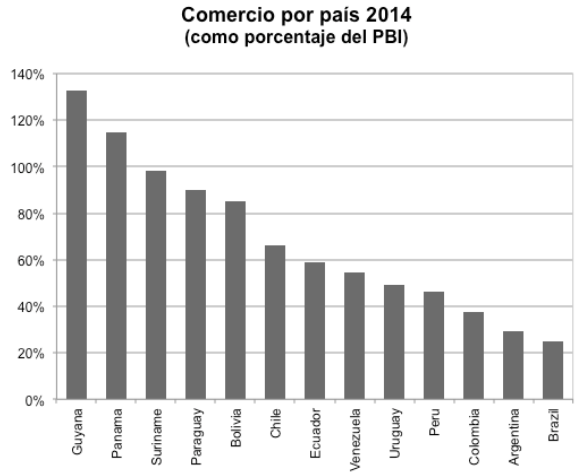
Purchasing power in the SAM Region ranges from US$ 6.5 thousand to US$ 23.5 thousand a year, depending on each territory. The countries with the highest per capita GDP (adjusted by PPP) are: Chile (US$ 23.5 thousand), Argentina (US$ 22.6 thousand), Panama (US$ 21.8 thousand) and Uruguay (US$ 21.5 thousand). Those with the lowest per capita GDP are Bolivia (US$ 6.5 thousand), Guyana (US$ 7.5 thousand) and Paraguay (US$ 8.7 thousand).

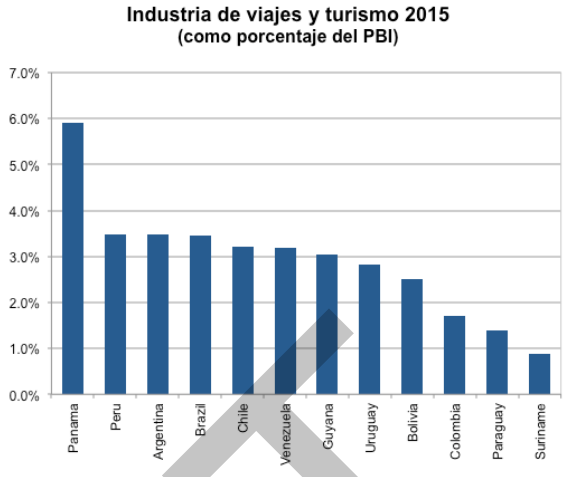
Charts 3.1.3 – Importance of trade, travel and tourism, by country

Trade in 2014, by country (as a percentage of GDP)

Travel and tourism industry in 2015 (as a percentage of GDP)

Source: WB for trade and WEF (World Economic Forum) for the travel and tourism industry. No information is available for French Guiana. Ecuador was not included in WEF's calculations because of a lack of data.





Trade between the SAM Region and the rest of the world and among its 13 countries and 1 territory constitutes one of the most important sources of each territory's development and wealth. International trade accounts for over 30% of GDP in 12 of the 14 States. As mentioned earlier, the region is a heavy raw materials exporter and the aviation industry plays a highly important role in that trade.

According to the World Bank, global spending on tourism in 2015 amounted to US$ 1.3 trillion, of which the SAM Region was responsible for 4.7% (US$ 63.1 billion)[12]. In this spending, Brazil represented 52%, followed by Argentina with 12% and Venezuela and Colombia with 9%. Furthermore, World Economic Forum (WEF) figures reveal that 7 countries in the region had travel and tourism industries that accounted for over 3% of their GDPs, led by Panama with 5.9%. At the same time, Suriname showed the lowest relative value of 0.9%.

3.2. Industry and Air Connectivity

Figure 3.2.1 – Map of the region's connectivity with the world

[12] The figures estimated by the World Bank do not include the territory of French Guiana

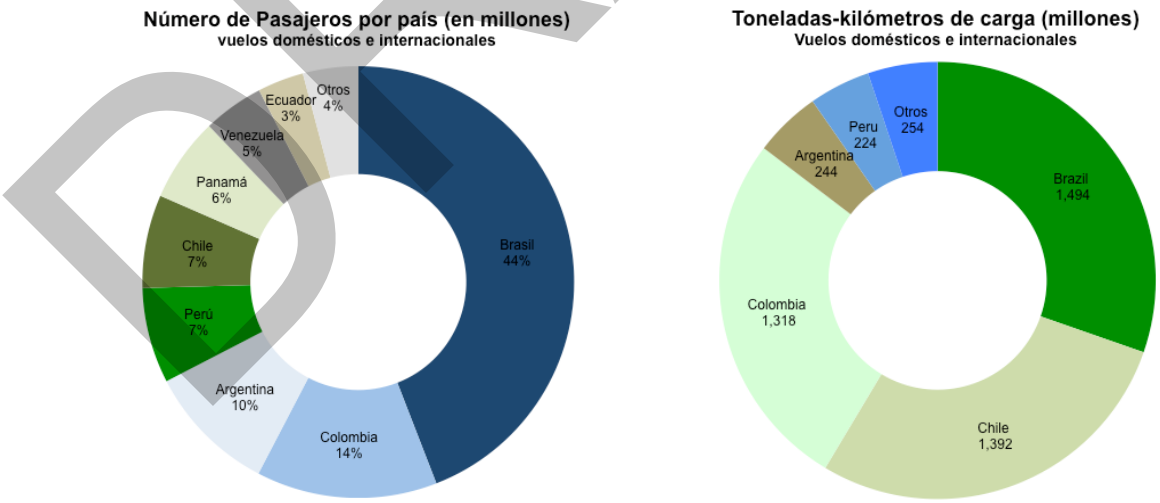
The shaded area shows all of the territories with which the region as a whole is connected. Source: IATA

IATA information reveals that in 2014, the SAM Region transported a total of 198.4 million passengers, amounting to approximately 6 to 7% of the world traffic. Of the total passengers transported in the region, Brazil, Colombia, Argentina and Peru accounted for 75%. At the same time, according to the World Bank, a total of 4,925 million tonne-kilometres of cargo were transported, with Brazil, Chile and Colombia responsible for 85%. Today, the region has a network consisting of about 300 airports (106 international) and more than 80 airlines authorized to operate. It should be added here that Panama, Bogota, Sao Paulo and Lima are examples of cities that have airport hubs in the SAM Region.

The region's most important airline groups have been consolidated in recent years by means of mergers and acquisitions, with the result that today there are 3 main actors, namely LATAM, Copa Airlines and Avianca. At the same time, the main international actors that regularly serve various countries in the region are: American Airlines, United Airlines, Delta, Iberia, KLM-Air France and Lufthansa.

Figure 3.2.2 – Map of the SAM Region's connectivity

Charts 3.2.1 – Passenger and cargo distribution, by country



Number of passengers, by country (in millions)
Domestic and international flights: Brazil…Peru…Panama…Others 4%

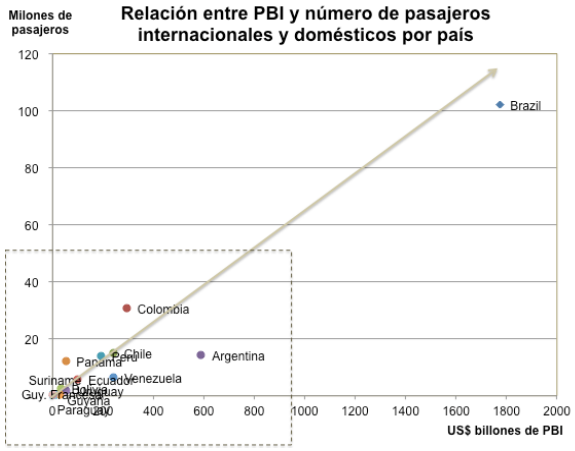
Freight tonne-kilometres (millions)
Domestic and international flights: Peru…Others 254

Source: IATA, WB

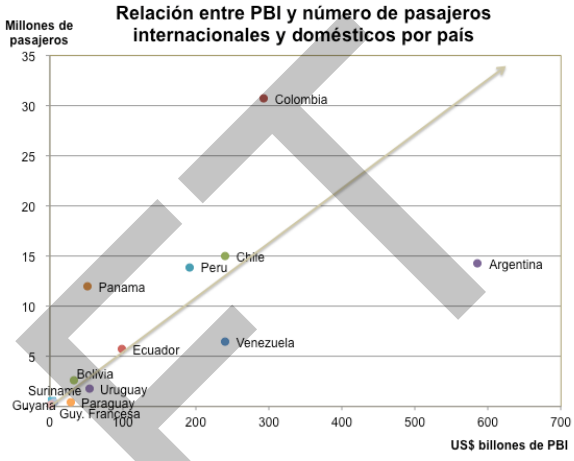
If we compare the total number of passengers transported with the size of each country's GDP, we will see that a positive ratio exists--in other words, countries in the

region with a larger GDP also transport more passengers. This reveals the existence of a positive ratio between greater aviation industry development and a country's economic prosperity. The two factors offer each other mutual feedback, with the result that the more developed the aviation industry, the greater the benefit for the country's GDP and the greater the people's purchasing power, the greater the demand for travel, thereby boosting the development of further connectivity.

Charts 3.2.2 – Passenger and cargo distribution, by country



Ratio of GDP to number of international and domestic passengers, by country
Millions of passengers US$ billions of GDP ...French Guiana



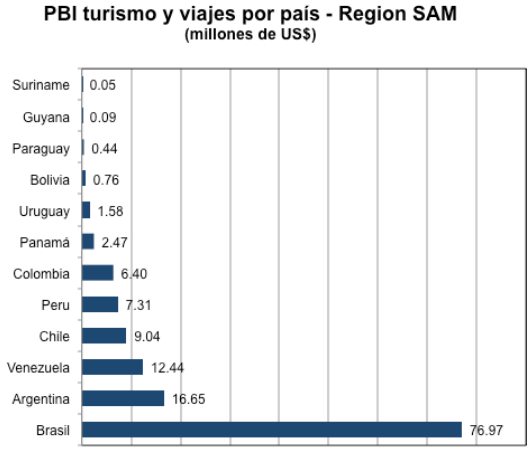
Ratio of GDP to number of international and domestic passengers, by country
Millions of passengers US$ billions of GDP ...French Guiana

Source: WB. IATA provided the data on passengers for French Guiana

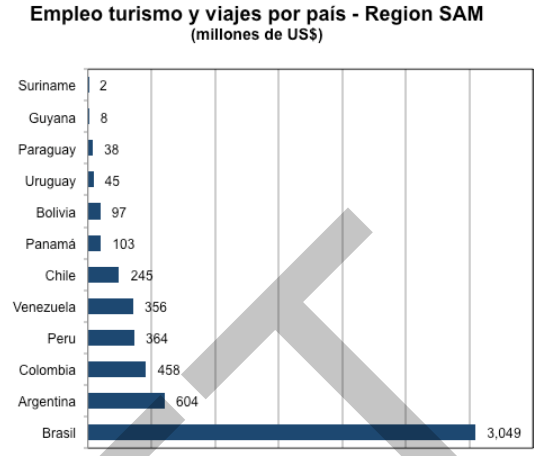
The World Economic Forum, a prestigious public-private organization for international cooperation has for the past 9 years included key persons and leading thinkers from the industry in its "*Aviation and Travel Industry Partnership Programme,*" through which an important analysis is made of the competitiveness of the travel and tourism industry in the world's most important countries. The "Travel and tourism competitiveness report 2015" measures a series of elements and policy measures that allow for the industry's sustainable development, thereby contributing to a country's economic development and competitiveness. The current report covers 141 countries, for which 14 pillars are judged and measured in terms of 90 indicators. The final score gauges the industry's degree of competitiveness and development by analyzing several different pillars like infrastructure quality, international openness, price competitiveness, labour industry qualification, regulatory environment and state policy, development of the tourism industry, cultural resources, business environment, safety, and access to basic services, among others. It also has individual scores and rankings for each pillar or indicator. The end purpose of the report is to provide countries with a strategic platform and comparative tool (benchmarking) for use by businessmen and politicians to secure appropriate development of the travel and tourism industry in each country.

That report estimates that the SAM Region's travel and tourism GDP amounts to US$ 134 billion. The industry also employs a total of 5.4 million people. It should be stated here that the territory of French Guiana is not a part of the sample that was analyzed. In addition and specifically for 2015, the report did not include Ecuador because information was lacking.

Charts 3.2.3 – Impact of the aviation industry on the SAM Region



Tourism and travel GDP, by country – SAM Region (millions of US$):... Panama...Brazil



Tourism and travel employment, by country – SAM Region (millions of US$):... Panama...Brazil

Source: World Economic Forum

The General Competitiveness Index of the Industry revealed that the SAM Region still has a great potential for development. In the 141 country sample, Brazil led the region and ranked among the top 30 economies in terms of the economic and social sustainability of its travel and tourism industry. Within the SAM Region, Brazil (position 28) and Panama (position 34) led the ranking, while Venezuela (position 110) and Paraguay (position 113) were the countries showing the least development of the industry and its environment.

Insofar as the specific quality of air transport infrastructure was concerned (ranging from 0 to 7, in which 7 is extensive and efficient and 0 extremely poorly developed), a large part of the region still showed plenty of room to work on air transport infrastructure quality and sufficiency. With the exception of Panama, which received a fairly promising score of over 6 and, to a lesser extent, Chile and Ecuador, with scores of more than 5, most countries in the region received an average infrastructure rating of 4 or less (see chart above).

Tables 3.2.1 – Competitiveness index of the industry and infrastructure quality

General Competitiveness Index of the industry
WEF Travel and Tourism Competitiveness Report 2015

Country	Score	Ranking
Brazil; Panama; …		

*Score range of 0 to 7. General average for 14 pillars.

Indicator of the quality of air transport infrastructure
WEF Travel and Tourism Competitiveness Report 2015

Country	Score	Ranking
Panama; …Brazil		

*Score range of 0 to 7, where 0 is extremely poorly developed and 7 is extensive and efficient

País	Puntaje	Ranking
Brasil	4.4	28
Panamá	4.3	34
Chile	4.0	51
Argentina	3.9	57
Peru	3.9	58
Colombia	3.7	68
Uruguay	3.7	73
Bolivia	3.3	100
Suriname	3.3	101
Guyana	3.3	104
Venezuela	3.2	110
Paraguay	3.1	113

País	Puntaje	Ranking
Panamá	6.1	7
Chile	5.0	45
Colombia	4.1	78
Peru	4.0	89
Uruguay	4.0	90
Guyana	3.8	97
Suriname	3.6	103
Argentina	3.6	106
Brasil	3.4	112
Bolivia	3.2	119
Venezuela	2.7	132
Paraguay	2.6	135

Source: WEF (World Economic Forum)

Tables 3.2.2 – Indicators of ASA openness and airport costs

ASA openness level indicator
WEF Travel and Tourism Competitiveness Report 2015

Country Score Ranking: Panama Brazil

País	Puntaje	Ranking
Panamá	19.3	15
Chile	17.7	18
Colombia	17.6	19
Peru	17.1	20
Argentina	16.1	23
Guyana	15.1	26
Brasil	14.4	30
Uruguay	14.1	35
Suriname	13.4	41
Paraguay	12.4	45
Bolivia	9.8	83
Venezuela	9.4	88

*Score range from 0 to 38, where 0 is more restricted and 38 more liberal

Indicator of airport taxes and charges
WEF Travel and Tourism Competitiveness Report 2015

Country Score Ranking: Panama Brazil

País	Puntaje	Ranking
Uruguay	91.4	15
Guyana	88.3	24
Chile	83.0	51
Venezuela	79.5	70
Panamá	77.9	75
Suriname	74.8	84
Brasil	73.8	88
Paraguay	68.9	107
Bolivia	62.9	111
Argentina	56.3	121
Colombia	54.1	124
Peru	38.7	134

*Score range of 0 to 100, where 0 is the highest cost and 100 the lowest

Source: WEF (World Economic Forum)

In the case of the regulatory environment, the specific index of the level of openness of each country's bilateral agreements (ASAs) also shows that domestic protectionism is still widespread within the region. On a scale of 0 to 38 (0 being more restricted and 38, more liberal) all of the region's countries scored below 20, Panama (in the 15th position at the global level) being the most liberal and Venezuela (in the 88th position), the most restrictive.

To conclude, it is important to mention the region's rating insofar as airfare ticket taxes and airport charges to consumers are concerned. The region is generally known for

having countries with high costs compared with the rest of the world (most occupy positions 70 and on up), except for Uruguay, Guyana and Chile, which occupy the 15th, 24th and 51st positions, respectively. Attention should be drawn to the case of Peru, which has the highest airfare ticket taxes and airport costs of the entire region and occupies one of the final positions in the ranking (position 134).

3.3. SWOT Analysis of Air Connectivity in the SAM Region

Below is a summary of the distinguishing characteristics of the aviation industry in the region, aspects to be improved and the possible negative or positive effect of the influencing environment:

Table 3.3.1 –SWOT Analysis

Strengths
Industry strengths at the global level • Most secure means of transport at the global level. In 2015, when 3.6 billion passengers were transported, the per passenger death rate was 0.0000002 (the likelihood of car or ship accidents is 50 times higher). • One of the most regulated industries at the global level, according to the Chicago and Montreal Conventions. • Continuous innovations in safety, speed, service improvements and reduction in the environmental impact enhance the population's well-being and State economic prosperity. • Adoption of a global commitment to fight climate change in favour of a sustainable industry. **SAM Region strengths** • Geographic location in relation to the other continents. • Social stability in almost all of the region's States. • The region's economic potential maintains positive growth prospects with projected GDP growth above the 3.6% global average for the period 2016-2021 in 10 of the 14 States. • Sustainable growth industry: over the past 20 years, the number of passengers transported in the region has expanded 3.5-fold for an annual average of 7.9%. (Source: World Bank) • Centres of tourist attraction contribute to economic growth and the creation of employment. SAM Region: travel and tourism industry GDP of approximately US$ 134 billion and 5.2 million jobs. (Source: WEF) • Centres of economic investment generate development and growth prospects that trigger foreign and domestic investment. • The region's biodiversity is an important asset for ecotourism development. • Five of the SAM States have shown the greatest openness to the development of national aviation with the participation of foreign capital. This has motivated the consolidation of important regional groups like LATAM, Avianca and Copa. • The operation of cargo flights in the region from/to the United States and Europe (FTA agreements) have increased in recent years and according

to the Boeing 2014-2015 report, bi-directional growth of 5% per annum is projected at 2032.

- Increase in interline agreements offer consumers better connections and fares.
- Partnerships between airlines of the same country and of the region (code sharing) optimize operations and improve the connectivity network.
- The entry of "low-cost" airlines promotes better fares and a better route and frequency offering and develops traffic between city pairs in secondary airports that are not viable within the conventional aircraft system.
- Existence of (certified) pilot schools in 7 States in the region facilitates the training of new pilot generations in the region.

Opportunities

- Growth of the global demand for tourism.
- Economic growth of States like China and India and of the Asia-Pacific Region.
- Trade globalization.
- Interest of foreign airlines in participating in the establishment of new national airlines within each State.
- New government policy context of greater openness to aviation.
- API (Advanced Passenger Information) technology for immigration processes using secure, coded electronic transmissions with a greater capacity for housing passenger data.
- Baggage drop-off service technology.
- More advanced technology for passenger pre-embarkation security controls (AVSEC).
- Simplification of Customs regulations (taking advantage of e-AWB + e-Freight).
- Context of greater openness to trade in most of the region's countries in order to review the ASAs (bilateral and multilateral).
- Incorporation of multimodal transport for air cargo.
- Different free trade agreements and partnerships inside and outside the region.
- Tourism agreements and integration with one or more of the Region's States to attract tourism from distant countries.

Weaknesses

- Region's "market share" (6.5% in 2014).

- Reduced penetration of the industry in comparison with other regions.
- Low airline profit margins.
- Airport costs and charges are high in most of the region's countries.
- Reactive rather than proactive management favoured in infrastructure development.
- Most of the countries still have airfare tickets subject to VAT (cases of Colombia, Ecuador, Peru and Argentina).
- Failure to update Airport Master Plans to cover the existing and projected passenger demand, particularly during "peak" hours, contributes to flight delays and limits the increase in new frequencies.
- Slow airport check-in, security, customs, immigration and embarkation processes. Existing technologies still require simplification and adoption through the FAL (Annex 9) and AVSEC (Annex 17) committees.
- The existence of consumer protection regulations additional to the international Air Transport Contract (Chicago and Montreal Conventions) hampers the commercial development of airlines by disincentivating low-cost promotions.
- Current customs procedures delay export and process management of aeronautical material deposits.
- Location of main airports in city centres, vehicle congestion and the poor state of road infrastructure.
- Bilateral and multilateral agreements (ASAs) continue to operate within an environment of regulatory protectionism and have not been brought into line with the new market conditions and characteristics of the present globalization process.

Threats

- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Citizen insecurity jeopardizes passenger assets and security and has a negative impact on traffic to the territory.
- Drug trafficking.
- Climate change and/or natural disasters.

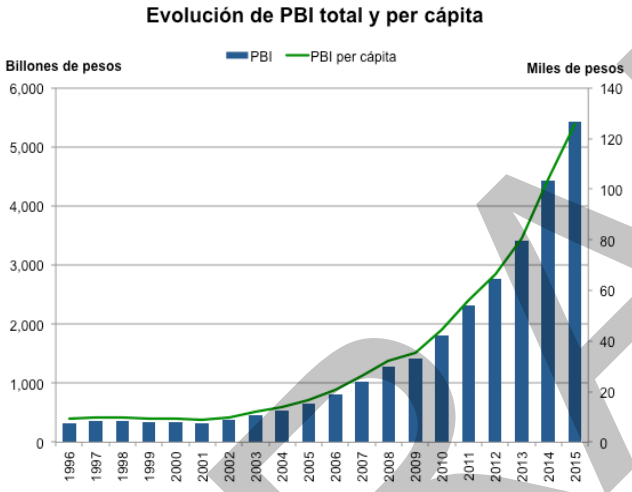
4. Socio-economic conditions and situation of the aviation industry, by State

4.1. Argentina

General Description

Argentina is one of the largest economies in the SAM Region, ranking third in terms of population (43 million inhabitants) and second in total GDP (US$ 586 billion). Its per capita GDP (US$ 13.6 thousand) situates it among the 3 countries in the SAM Region classified by the World Bank as "high-income" economies. Argentina and Brazil are the only countries in the region that belong to the G-20 Group[13]. Its natural and cultural wealth position it as one of the region's main tourist destinations. Argentina possesses 10 of UNESCO's recognized World Heritage sites (4 natural and 6 cultural). Furthermore, its population is also known to have one of the region's highest literacy rates.

Charts 4.1.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP
Billions of pesos -GDP -Per capita GDP **Thousands of pesos**

Source: IMF

Principal macroeconomic indicators

PBI (2015)	586	US$ billiones
Crecimiento PBI 2010-2015	2.7%	Promedio anual
PBI per cápita (2015)	13,589	US$ per cápita
Población (2015)	43	Millones
Tasa de desempleo (2014)	6.47%	
Inflación (2014)	23.9%	
Comercio internacional (2014)	29.3%	% de PBI
Gasto en turismo (2014)	7.0	US$ billones
Viajes y turismo (% de PBI)	3.5%	Reporte WEF 2015

GDP – US$ billion; GDP growth 2010-2015 – Annual average; Per capita GDP – US$ per capita; Population – Million; Unemployment rate (2014); Inflation (2014); International trade (2014) - % of GDP; Spending on tourism (2014) - US$ billion; Travel and Tourism (% of GDP) - WEF 2015 Report

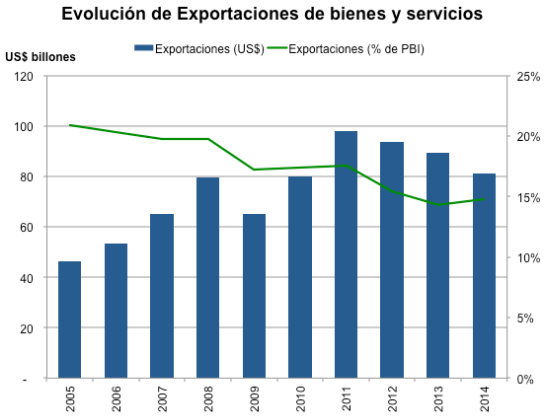
Its economy is underpinned by a broad array of natural resources with significant large-scale development of agriculture and stockbreeding. It is one of the world's largest exporters of meat, sunflowers, soybeans, lemons, apples, wheat, and wool, among other products. It is also a regional leader in the production of natural gas, oil and other minerals like lead, zinc and gold.

In 2014, according to the World Bank, Argentina's exports totalled US$ 81 billion (14.8% of its GDP), but since then have followed a decreasing trend. Global recession with dropping commodity prices, combined with Argentina's inflation of over 20% a year as a result of exchange rate differentials and high tax pressure together with greater regulation of foreign trade, are responsible in part for this decline in exports. At the same time, its total foreign trade (exports + imports) accounted for 29.3% of its GDP.

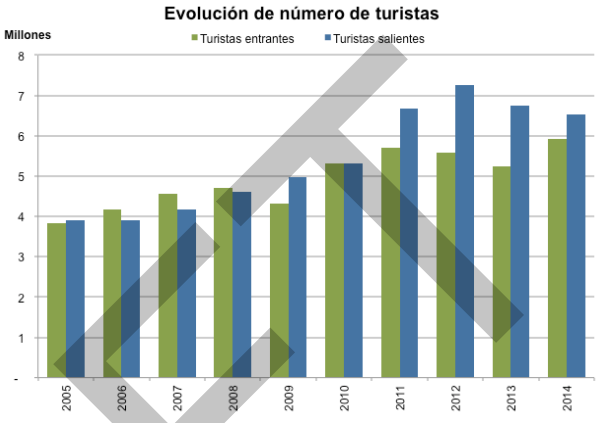
[13] International cooperation forum consisting of the world's 20 most industrialized and important economies whose purpose is to address policy, financial reform and global economic development issues.

According to the World Bank, spending on tourism in 2014 amounted to US$ 7 billion. Total inbound tourists were calculated at 5.9 million, up 13.1% on the figure for the previous year. Outbound tourists, for their part, totalled 6.5 million (-3.4% less than the previous year). IATA's Airlatin News (ALN) publication reveals that approximately 70% of the visitors came from South America.

Charts 4.1.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)



Evolution in number of tourists
Millions -Inbound tourists -Outbound tourists

Source: WB

Air Connectivity

Charts 4.1.3 – Main aviation industry data

Operational data – Aviation Industry in 2015

Número de aeropuertos	45
Aerolíneas con rutas directas (Set 2016)	29
Número de rutas internacionales*	84
Número de paises destino directos	26
Número de pasajeros	20.8 millones
Domésticos	9.8 millones
Internacionales	11 millones
Número de vuelos	194.8 mil
Región SAM (% de tráfico internacional)	53%

Number of airports 45
Airlines with direct routes (Sept 2016) 29
Number of international routes* 84
Number of countries of direct destination 26
Number of passengers 20.8 million
-Domestic 9.8 million -International 11 million
Number of flights 194.8 thousand
SAM Region (% of international traffic) 53%

* Includes direct routes with or without stops

Main airlines with flights inside and to/from Argentina

Map of Argentina's domestic connectivity

Aerolínea	Pasajeros 2015	% de part.
Aerolineas Argentinas	9,984,405	48.1%
LATAM Airlines Group	3,821,859	18.4%
Gol Transportes Aereos	964,202	4.6%
LATAM Airlines Brasil	847,636	4.1%
American Airlines	606,593	2.9%
Otros	4,545,326	21.9%
Total	**20,770,021**	**100.0%**

Airlines: Aerolineas….Others **Passengers in 2015** **% share**

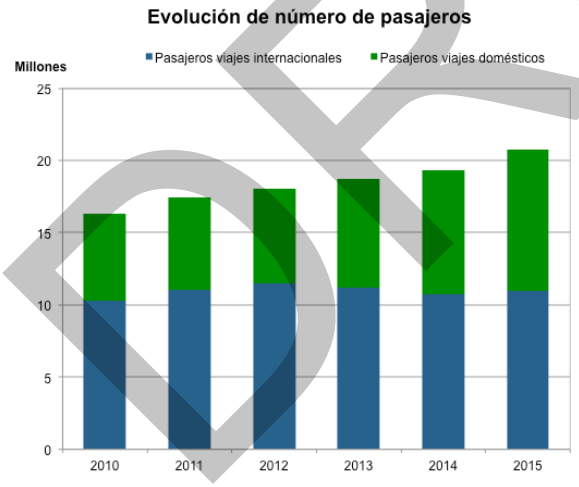
Source: IATA

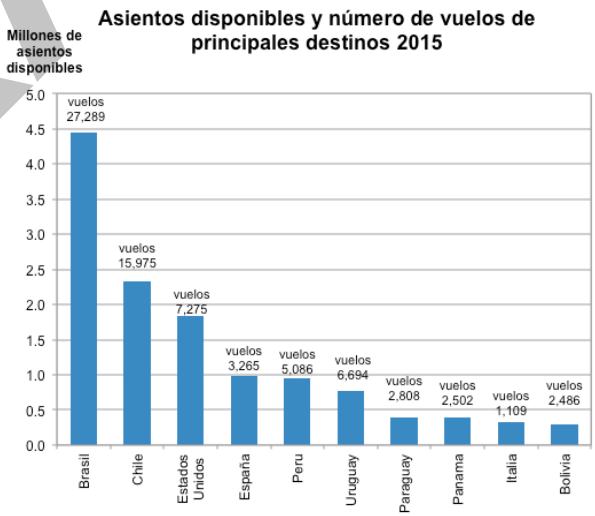
ICAO figures reveal that Argentina has 45 operating airports, 16 of which are international. Ministro Pistarini de Ezeiza (EZE) International Airport and Aeroparque Metropolitano Jorge Newbery (AEP), located in the capital city of Buenos Aires, concentrate the largest percentages of passenger traffic and accounted for 39% and 29%, respectively, in 2015. According to IATA, 89% of the tourists arrived by air (compared with the world average of 54%).

A total of 20.7 million passengers were transported over Argentina's domestic and international routes in 2015, or 7.4% more than the previous year. Over the past 5 years (2010-2015), the number of passengers has risen 4.9% on average per year.

The seating capacity in 2015 on routes to/from and inside Argentina was 28.5 million, which, considering the total number of passengers that flew direct and indirect routes (20.8 million), gave an occupancy rate of approximately 73%.

Charts 4.1.4 – Evolution in the number of passengers, flights and available seats





Evolution in the number of passengers

Millions -Passengers on international flights - Passengers on domestic flights

Source: IATA

Available seats and number of flights to principal destinations in 2015

Millions of available seats flights 27, 289…flights….

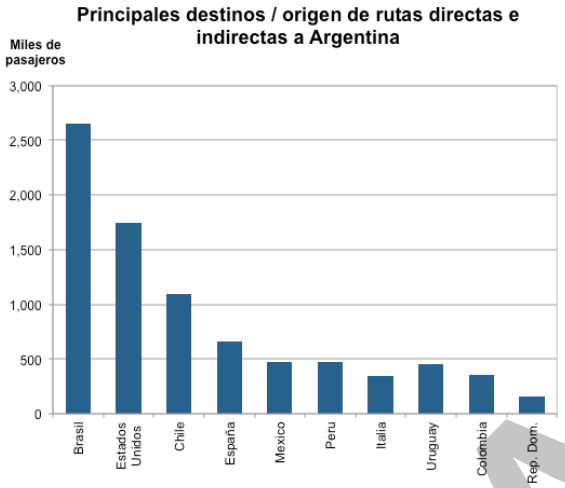
Brazil; Chile; United States; Spain; …Italy

IATA records show that in 2015 a total of 29 commercial airlines operated scheduled direct and indirect flights from/to and inside the country, with 74% of the traffic corresponding to direct flights or ones with immediate connections. Furthermore, 53% of

the traffic consisted of international flights and 47% of domestic flights. Traffic to the SAM Region accounts for 53% of total international traffic to/from Argentina.

Insofar as countries of destination are concerned, 26 were connected directly, with or without stops, to Argentina over 84 international routes. In the SAM Region, the country was directly connected non-stop with 77% of the States: Brazil, Bolivia, Chile, Colombia, Ecuador, Panama, Paraguay, Peru, Uruguay and Venezuela.

Charts 4.1.5 – Main countries connected with Argentina



Main destinations/origins of direct and indirect routes to Argentina

Thousands of passengers: Brazil; United States;...Spain; ...Italy; Dominican Republic

Main countries with direct routes to Argentina

Thousands of passengers: Brazil;...United States; Spain;....

Source: IATA

Out of the total international air traffic (direct and indirect), Brazil, the United States and Chile have the greatest connectivity with Argentina and accounted for 50% of the country's total air passenger traffic of 2015 (24.2%, 15.9% and 10.0% of total traffic in 2015, respectively). Considering direct routes only, Brazil, Chile and the United States constitute the main routes and together represented 60% of the total traffic on direct routes in 2015 (27.3%, 17.6% and 15.6%, respectively).

The main airlines with direct and indirect flights inside and outside Argentina are Aerolíneas Argentinas, which transported almost one-half of the total passengers in 2015 (48.1%), followed by LATAM Airlines Group[14] with 18.4% and trailed by GOL Transporte Aéreos in third place with 4.6%.

Figure 4.1.1. – Map of Argentina's passenger air transport connectivity with the world

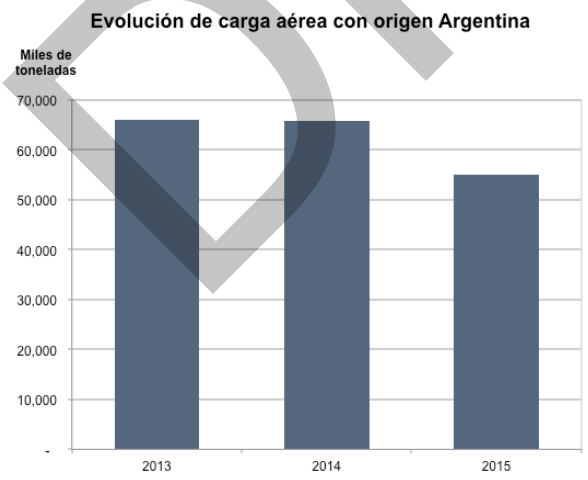
[14] Does not include all of the airlines associated with the LATAM Group. The database provided by IATA incorporates Chile and Peru under that heading (LATAM Airlines Group). The rest of the Group companies are registered individually.

Source: IATA. Prepared: In-house

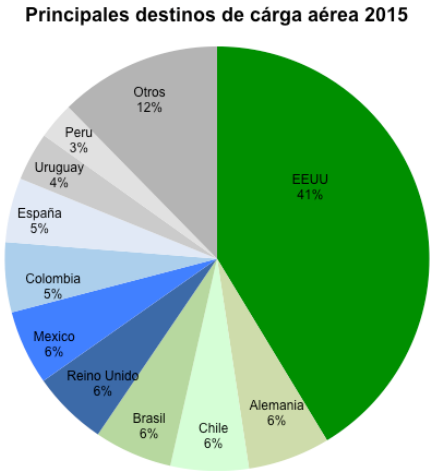
The map above shows all of Argentina's direct routes with the world. In order to be able to operate those routes, airlines require operating licenses to fly between the points of origin and destination for direct flights with or without stops. Direct non-stop routes are shown in blue and those with stops in red. Annex A lists all of the direct non-stop routes by airport.

In the case of international air cargo, according to data obtained from IATA, a total of 55 thousand tonnes (-16.2% less than the previous year) were transported. It should be stressed that those figures consider only the tonnes reported by airlines belonging to the CASS (Cargo Accounts Settlement Systems) programme. Its main trading partner in air transport terms is the United States, which accounted for 41%. The other destinations are more equally distributed among several countries, particularly Germany, Chile, Brazil, the United Kingdom and Mexico with 6% each.

Charts 4.1.6 – Main air cargo figures



Evolution of air cargo originating in Argentina
Thousands of tonnes



Main air cargo destinations in 2015
U.S. 41%; Germany 6%; ...Brazil 6%; United Kingdom 6%; ...Spain 5% ;...Others 12%

Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, Argentina occupied the 57th position out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries in 2015. A look at some individual indicators reveals that Argentina still shows room for improvement in the quality of its air transport infrastructure and domestic transport system, and in reducing its airport costs, which are high in comparison with other countries in the world.

Table 4.1.1. Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 57 de 141**
Indicadores especificos (rango de puntuacion)			
Priorización de la industria por parte del Gobiemo	1-7	4.6	102
Efectividad de marketing para atraer turistas	1-7	4.1	91
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turistica	1-7	4.6	55
Calidad de la infraestructura aérea	1-7	3.6	106
Calidad de la red doméstica de transporte	1-7	3.6	114
Requerimiento de visas	0-100	29.0	53
Apertura de acuerdos bilaterales ASA	0-38	16.1	23
Impuestos a boletos y cargos aeroportuarios	0-100	56.3	121

	Score range	Score	Ranking

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization of the industry by the government
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges

Source: WEF

SWOT Analysis –Argentina's Connectivity

Strengths
• Geographic location and territorial size. • New State policy permitting foreign investment in national airlines. • Decentralized operation of national and international flights from other cities in the country. (Rosario-Panama and Rosario-Lima, Salta –Lima, and Córdoba-Lima) • Centre of tourist attraction for the region and for the world. • Operations of hub airports in Buenos Aires and one soon to open in Córdoba. • Increase in Montevideo-Buenos Aires shuttle operations. • Operations of airline groups like Avianca and LATAM. • Agreements with countries in the region and in the rest of the world (Mexico, Canada) to increase passenger air traffic. • Aerolíneas Argentinas, a member of the Sky Team Alliance (13 airlines) has signed a code-sharing agreement with KLM/Air France and plans to increase its offering in Argentina. • Partnerships to strengthen connectivity between Argentina and Brazil. (Aerolíneas Argentinas-Gol) • Universities, study centres and pilot schools for the training of aviation professionals. • Signing of the Fortaleza Agreement containing an open skies policy in the region.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Greater passenger demand if taxes are reduced. • Interest of foreign airlines in investing in national aviation. • API (Advanced Passenger Information) technology for immigration processing using secure, encrypted electronic transmissions with a greater capacity for housing passenger information. • Industry technology to facilitate airport check-in, immigration and security control services. • Simplification of customs regulations (adoption of e-AWB + e-Freight). • Greater trade openness toward liberalization of the air. • Multimodal cargo transport. • Agreements and integration with one or more of the region's States to attract tourism from distant countries.

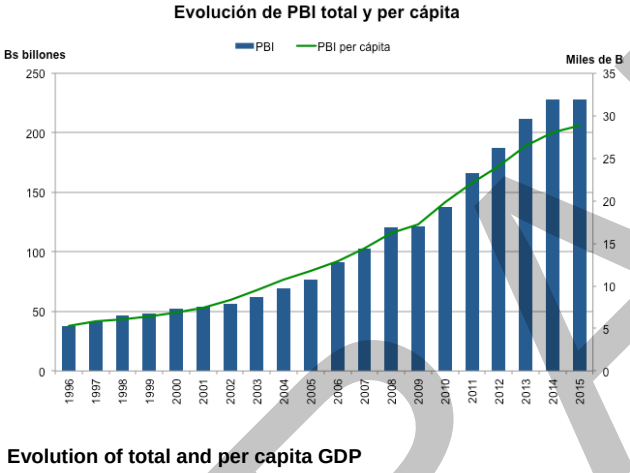
Weaknesses
• High airport charges and taxes • Airfare tickets are subject to VAT, passengers pay Airport User Charges and taxes for the development of infrastructure, security, customs and immigration. • Reactive, rather than proactive, management in the development of airport infrastructure that is reflected in Buenos Aires's main airports by a growing demand for more capacity. • Inefficient equipment, such as radio aids, in many of the country's airports, requiring replacement and sizeable State investments. • Sector policy coordination is needed for better development of airport master plans. • Improvements in air navigation technology for traffic management during "peak" hours. • Slow airport check-in, security, customs, immigration and embarkation processes. • Bilateral and multilateral (ASA) agreements continue to operate within an environment of regulatory protectionism that is not in line with current market conditions and the globalization process. • The World Trade Organization (WTO) attributed an Air Liberalization Index of 8.56 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization) to Argentina
Threats
• Unforeseeable acts of terrorism have a negative impact on the security of the industry. • Global economic crisis or recession, oil prices. • Communicable diseases. • Fluctuations in oil prices raise industry costs. • Climate change and natural disasters.

4.2. Bolivia

General Description

Bolivia, whose official name is the "Plurinational State of Bolivia," is geographically situated near the centre of the South American continent and has a population of 11 million people. Its GDP is US$ 33 billion and its per capita GDP is US$ 2.8 thousand, placing it in the World Bank's latest income classification in the category of "lower middle-income" economy. It should be stressed that thanks to a prudent economic policy and the high price of raw materials, Bolivia was among the region's countries with the most heavily growing GDPs (average annual growth in 2004-2014 of 4.9%, according to the World Bank). Furthermore, its natural and cultural wealth make it a major tourist attraction; it owns 7 of UNESCO's recognized World Heritage sites (6 natural and 1 cultural).

Charts 4.2.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP

Bs billions -GDP -Per capita GDP **BS thousands**

Source: IMF

Main macroeconomic indicators

PBI (2015)	33	US$ billiones
Crecimiento PBI 2010-2015	5.5%	Promedio anual
PBI per cápita (2015)	2,886	US$ per cápita
Población (2015)	11	Millones
Tasa de desempleo (2014)	2.70%	
Inflación (2014)	4.1%	
Comercio internacional (2014)	85.3%	% de PBI
Gasto en turismo (2014)	1.0	US$ billones
Viajes y turismo (% de PBI)	2.5%	Reporte WEF 2015

GDP (2015) - US$ billion; GDP growth 2010-2015 - Annual average; Per capita GDP (2015) – US$ per capita; Population (2015) – Million; Unemployment rate (2014); Inflation (2014); International trade (2014) - % of GDP; Spending on tourism (2014) – US$ billion; Travel and tourism (% of GDP) – WEF 2015 Report

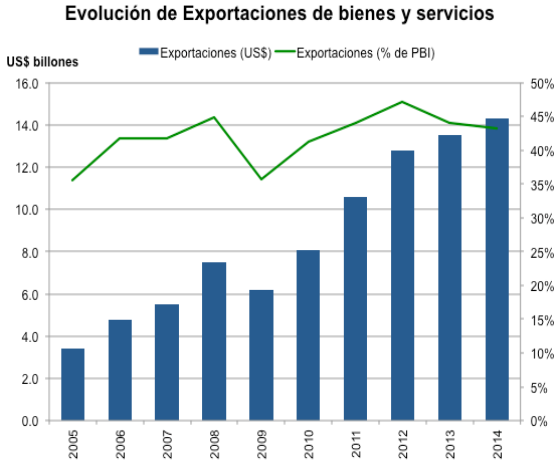
Source: IMF, WB and WEF. Latest available data

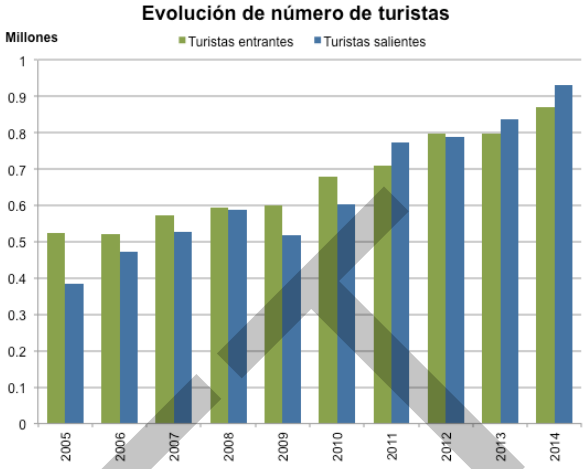
Its economy relies mostly on the extraction of raw materials, particularly minerals like tin, zinc, silver and copper. Furthermore, much of its income comes from the exploitation of one of the region's largest natural gas reserves, which is exported mainly to Brazil and Argentina. Attention should also be called to Bolivia's prominent position as one of the world's most developed microfinance centres.

According to information published by the World Bank, in 2014, Bolivia exported a total of US$14 billion, representing 43.3% of its GDP. In recent years, its exports have followed an important upward trend with average annual growth in 2010-2014 of 8.5%. Its total international trade (exports + imports), furthermore, accounts for 85.3% of its GDP.

Again according to the World Bank, the country's total spending on tourism in 2014 was US$ 1 billion. A total of 871 thousand people were inbound tourists, up 9.1% on the figure for the previous year, while the outbound tourists amounted to 932 thousand (11.4% more than in 2013).

Charts 4.2.2 – Exports and number of tourists





Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)
Source: WB

Evolution in number of tourists
Millions -Inbound tourists -Outbound tourists

Air connectivity

Charts 4.2.3 – Main aviation industry data

Operational data – Aviation Industry 2015

Número de aeropuertos	15
Aerolíneas con rutas directas (Set 2016)	15
Número de rutas internacionales*	36
Número de paises destino directos	11
Número de pasajeros	4.8 millones
Domésticos	3.3 millones
Internacionales	1.5 millones
Número de vuelos	69.9 mil
Región SAM (% de tráfico internacional)	60%

-Number of airports; -Airlines with direct routes (Sept 2016); -Number of international routes*; -Number of countries of direct destination; -Number of passengers million: -domestic million; -international million; -Number of flights thousand; -SAM Region (% of international traffic)
* Includes direct routes with or without stops

Map of Bolivia's domestic connectivity

Main airlines with flights inside and to/from Bolivia

Airline **passengers in 2011** **% share**
...Others

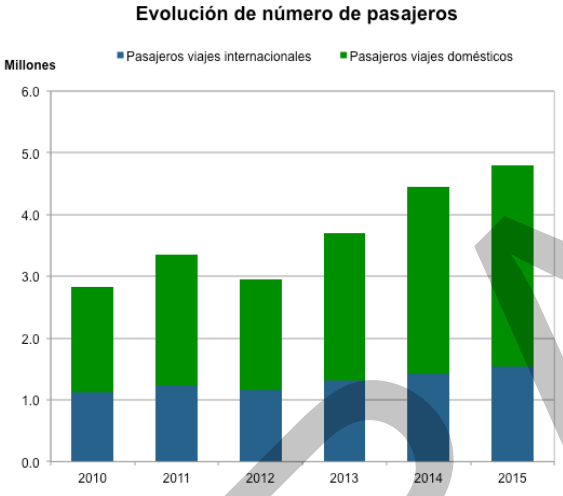
Aerolínea	Pasajeros 2015	% de part.
Boliviana de Aviacion (BoA)	2,621,260	54.6%
Amaszonas S.A.	642,484	13.4%
Linea Aerea Eco Jet	399,213	8.3%
AVIANCA	199,276	4.1%
LATAM Airlines Group	193,935	4.0%
Otros	747,226	15.6%
Total	**4,803,394**	**100.0%**

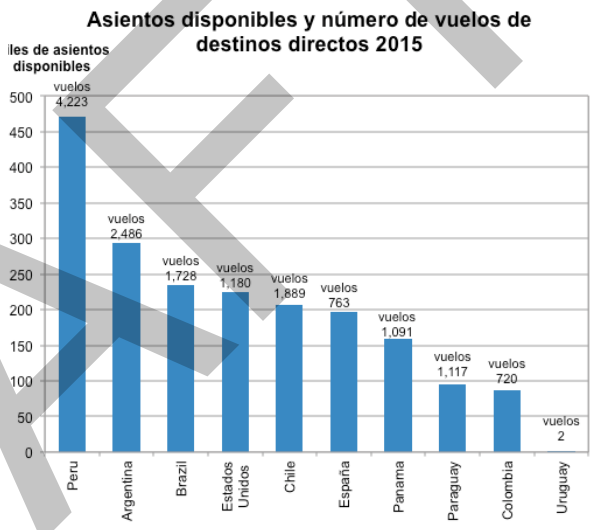
Source: IATA

Bolivia has a total of 15 operating airports, of which, according to ICAO, 3 are international airports. Viru Viru International Airport (VVI) in Santa Cruz and El Alto International Airport in La Paz concentrate the major share of passenger traffic, which amounted in 2015 to 34% and 32%, respectively.

A total of 4.8 million passengers were transported to Bolivian international and domestic destinations in 2015, for a growth of 8.2% compared with the previous year. Over the past 5 years (2010-2015), the number of passengers has risen an average of 11.1% per year. Insofar as available seats are concerned, in 2015, routes flown to/from and inside Bolivia had an available capacity of 6.7 million seats which, considering the total number of passengers on direct and indirect routes (4.8 million), revealed an occupancy rate of approximately 72%.

Charts 4.2.4 – Evolution in the number of passengers, flights and available seats





Evolution in the number of passengers
Millions -Passengers on international flights
-Passengers on domestic flights

Available seats and number of flights to direct destinations in 2015 **Thousands of available seats**
Flights; **...**United States;...Spain

Source: IATA

According to IATA records, in 2015, a total of 15 commercial airlines operated scheduled direct and indirect flights from/to and inside the country, with 83% of the traffic consisting of direct routes or ones with an immediate connection. Furthermore, 17% of the traffic corresponded to international flights and the remaining 83% to domestic flights. In terms of countries of destination, 10 were directly connected with Bolivia, with or without stops, over 36 international routes. In the SAM Region, which accounted for 60% of the total international traffic to/from Bolivia, the country is connected directly without stops with 54% of the States: Argentina, Brazil, Chile, Colombia, Peru, Panama and Paraguay.

Charts 4.2.5 – Main countries connected with Bolivia

Main destinations/origins of direct and indirect routes to Bolivia

Thousands of passengers

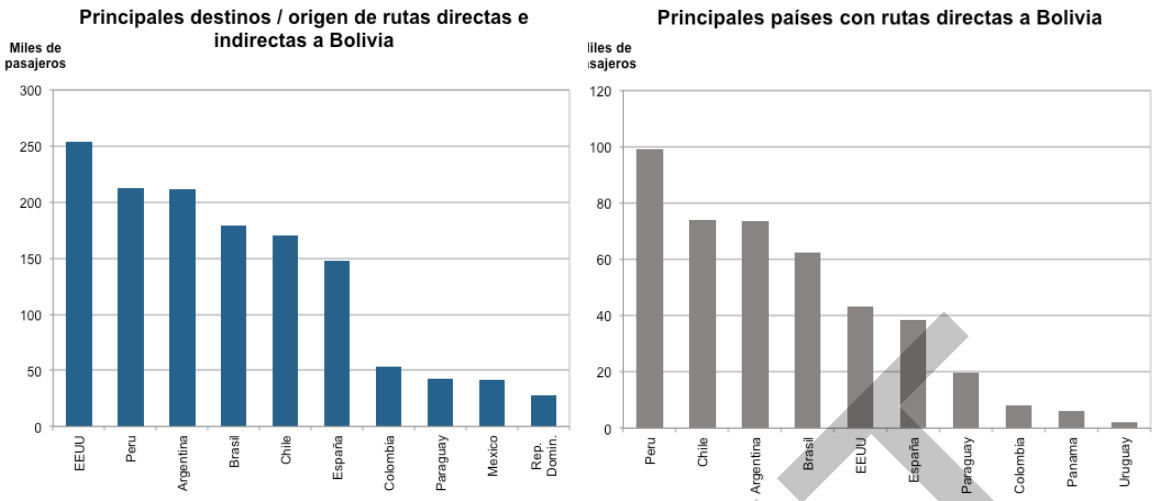
-U.S.;...Brazil;...Spain;...Dominican Republic

Main countries with direct routes to Bolivia

Thousands of passengers

Brazil; U.S.; Spain

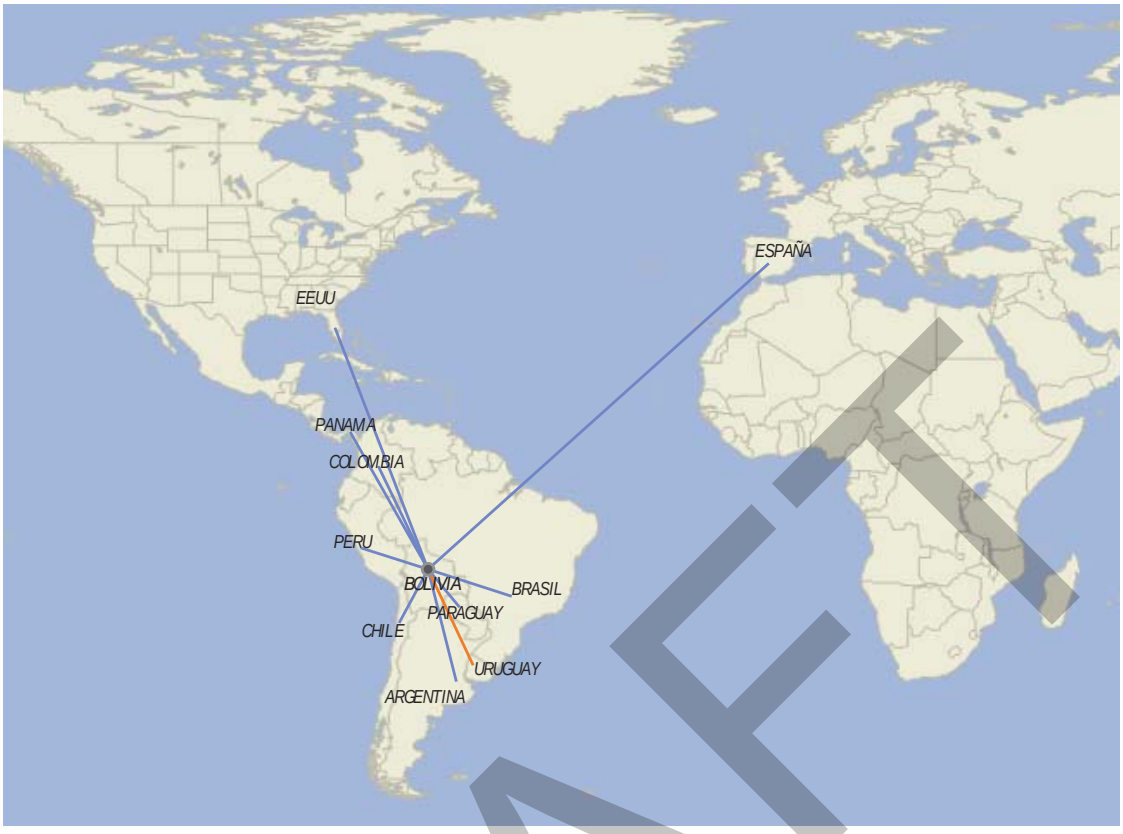
Source: IATA



Out of its total international (direct and indirect) air traffic, United States, Peru and Argentina are the countries with the most connectivity with Bolivia and accounted for over 44% of the country's total passenger air traffic in 2015 (16.5%, 13.8% and 13.7% of the total air traffic of 2015, respectively). Considering only the direct routes, Peru, Chile and Argentina represent the most important and together were responsible for more than 57% of the total traffic over direct routes in 2015 (23.1%, 17.2% and 17.2%, respectively).

The main airlines with direct and indirect flights inside and outside Bolivia are, first, Boliviana de Aviación with a share of over one-half the total passengers transported in 2015 (54.6%), second, Amazonas with 13.4% and third, Línea Aérea Eco jet with 8.3%.

Figure 4.1.1. – Map of Bolivia's passenger air transport connectivity with the world



Source: IATA. Preparation: In-house

The above map shows all of Bolivia's direct routes with the world. In order to be able to operate those routes, airlines require operating licenses to fly between the points of origin and destination for direct flights with and without stops. Direct non-stop flights are shown in blue and those with stops in red. Annex A lists all direct non-stop flights by airport.

Insofar as air cargo is concerned, according to data published by IATA, a total of 6 thousand tonnes were transported at both the domestic and international levels. It should be stressed that air connectivity is very important inside Bolivia because of its rugged terrain and lack of access to the ocean (97% of the cargo transported is domestic). In international terms, its principal trading partner is the United States, which accounts for 90%, followed by Peru with 4% and Chile in third place with 3%.

Charts 4.2.6 – Main air cargo figures

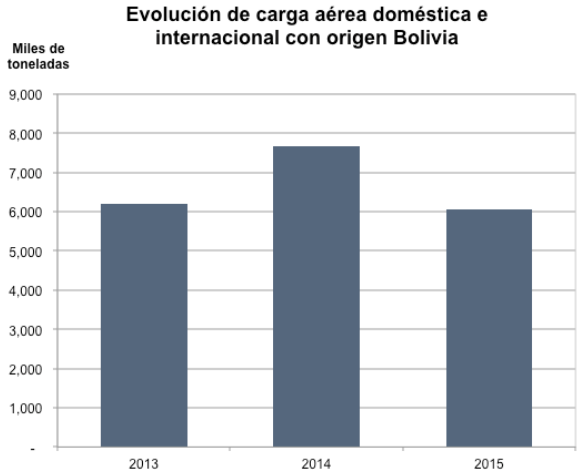
Evolution of domestic and international air cargo originating in Bolivia

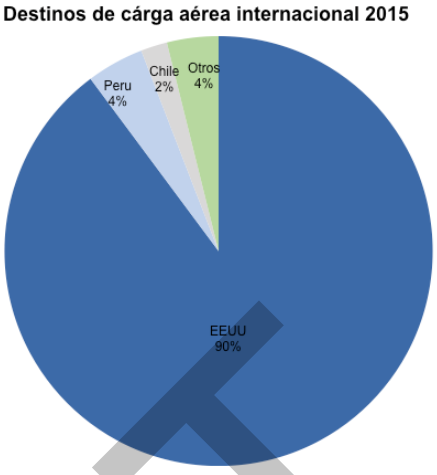
Thousands of tonnes

International air cargo destinations in 2015

U.S. 90%…..Others 4%

Source: IATA





Source: IATA

Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, in 2015, Bolivia occupied the 100th position out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries. Generally speaking, Bolivia is positioned below the median of the countries analyzed, except in regard to the visa requirement indicator, where it ranks 28th because of a greater openness to foreign visitors. The government's prioritization of the industry, marketing and branding to attract tourists, quality of air transport infrastructure and domestic transport network and level of airport charges are the areas requiring further efforts to improve its industry's competitiveness and connectivity.

Table 4.2.1. Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 100 de 141**
Indicadores especificos (rango de puntuacion)			
Priorización de la industria por parte del Gobiemo	1-7	3.6	134
Efectividad de marketing para atraer turistas	1-7	3.6	121
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turistica	1-7	3.1	99
Calidad de la infraestructura aérea	1-7	3.2	119
Calidad de la red doméstica de transporte	1-7	3.6	113
Requerimiento de visas	0-100	53.0	28
Apertura de acuerdos bilaterales ASA	0-38	9.8	83
Impuestos a boletos y cargos aeroportuarios	0-100	62.9	111

Score range **Score** **Ranking**

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization by the government of the industry
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges

Source: WEF

SWOT Analysis – Bolivia's Connectivity

Strengths
• Its geographic location at the centre of South America makes it highly dependent on the development of its air connectivity with adjacent countries in the Region and with the world. • Government policy for the development of aviation within a process of change and opening. • Entry of three national airlines into the market during the past decade. Two of them operate domestic flights and flights inside the Region and one airline belongs to the State and operates domestic flights and flights to the Region, the U.S. and Europe. • Operations in Santa Cruz without high altitude restrictions. • Arrival of foreign tourists by air because of the country's geographic diversity and cultural wealth. • Licensed pilot training centre. • Development plan for the hub airport in Santa Cruz, with investments for passenger and air cargo terminals that will offer connections between the Atlantic and Pacific coasts.
Opportunities
• Growth in the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Development of hub airports. • API (Advanced Passenger Information) technology for immigration processes using secure encrypted electronic transmissions that have a greater capacity for housing passenger data. • Industry technology that facilitates and simplifies passenger check-in and embarkation using rapid immigration and security control processes. • Alliances and partnerships with the region's airlines (code sharing) • Investment in technology and safety. • Multimodal cargo transport. • Cooperation (code-sharing) agreements with airlines of adjacent countries. • Integration agreements with one or more of the Region's States to jointly attract tourism from distant countries. • Navigation infrastructure to support PBM and GNSS precision approach operations.

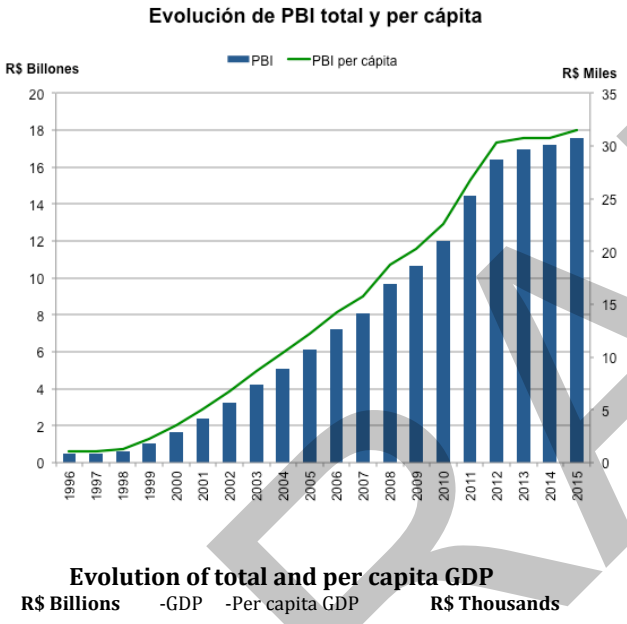
Weaknesses
• Air industry penetration is limited in high altitude airports. • Restrictions on various types of exports fail to encourage new cargo operations in the future Viru Viru International cargo terminal. • Need to prioritize a State policy that is nonexistent at this time and that would modernize and boost Bolivian tourism throughout the world. • International and domestic airfare tickets are subject to the payment of VAT and to airport charges. There is a departure tax on international flight tickets. (Source TTBS IATA) • Proposal to add passenger charges through a tourism tax and an increase in already existing charges and taxes. • Bilateral and multilateral air service agreements (ASAs) continue to operate within an environment of regulatory protectionism and have not been adjusted to new market conditions and characteristics of the ongoing globalization process that is leading to greater liberalization. • The World Trade Organization (WTO) attributed an "Air Liberalization Index" of 8-69 (2013) to Bolivia on a scale of 0-50 (the higher the index, the greater the liberalization). • The participation of State-owned commercial airlines fails to incentivate more private investment in new airlines.
Threats
• Unforeseeable terrorist acts have a negative impact on the security of the industry. • Global economic crisis or recession. • Communicable diseases. • Fluctuations in oil prices raise industry costs. • Drug trafficking. • Climate change and natural disasters.

4.3. Brazil

General Description

Brazil is the largest economy in the SAM Region and the fifth largest in the world in terms of area and has close to 50% of the population of the SAM Region, with 204 million inhabitants. Its total GDP is also the region's largest, at US$ 1,773 billion, and its per capita GDP (US$ 8.7 thousand) places it among the "upper middle-income" economies, according to the World Bank classification. Brazil and Argentina are also the only countries in the region that belong to the G-20 Group[15]. Its wide biodiversity and natural and cultural wealth position it among the region's primary tourist destinations, with 20 of the recognized UNESCO World Heritage sites (7 natural and 13 cultural).

Charts 4.3.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP
R$ Billions -GDP -Per capita GDP **R$ Thousands**

Source: IMF

Main macroeconomic indicators

PBI (2015)	1,773	US$ billiones
Crecimiento PBI 2010-2015	1.0%	Promedio anual
PBI per cápita (2015)	8,670	US$ per cápita
Población (2015)	204	Millones
Tasa de desempleo (2014)	6.8%	
Inflación (2015)	9.0%	
Comercio internacional (2015)	27.4%	% de PBI
Gasto en turismo (2014)	30.0	US$ billones
Viajes y turismo (% de PBI)	3.5%	Reporte WEF 2015

GDP (2015) - US$ billion; GDP Growth 2010-2015 Average annual; Per capita GDP (2015) US $ per capita; Population (2015) Million; -Unemployment rate (2014); Inflation (2015) ; International trade (2015) % of GDP ; Spending on tourism (2014) US$ billion; - Travel and tourism (% of GDP) WEF 2015 Report

Source: IMF, WB and WEF. Latest available data

Its economy is driven by several different sectors, among them agriculture, mining, manufacturing and services. Unlike many countries in the region, Brazil offers a sizeable component of manufactured or semi-manufactured exports. The Brazilian economy is widely diversified with significant development of sectors like motor vehicles, steel, petrochemicals, aeronautics and consumer durables in general.

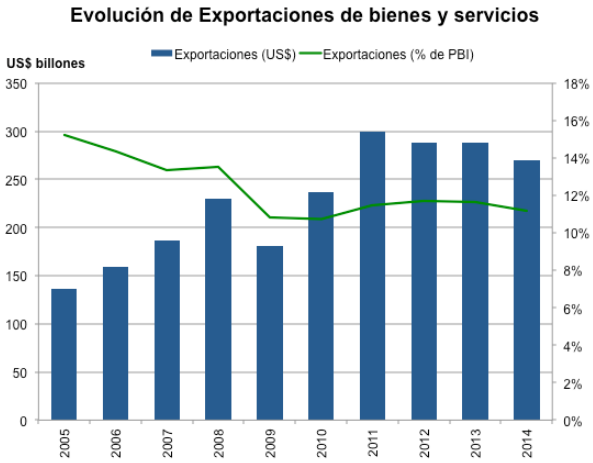
Since the opening of this decade, Brazil has been undergoing a recession and has experienced a continuing economic slowdown with average annual GDP growth over the period 2010-2015 of only 1.0%. Worsening that situation is a significant decline in investors' trust, significant exchange rate variations and inflation that reached 9% in the final year.

According to data published by the World Bank, in 2015, Brazil exported a total of US$231 billion, representing 13.0% of its GDP. Its total international trade (exports + imports) amounted to to 27.4% of its GDP. Total spending on tourism in 2014 was US$

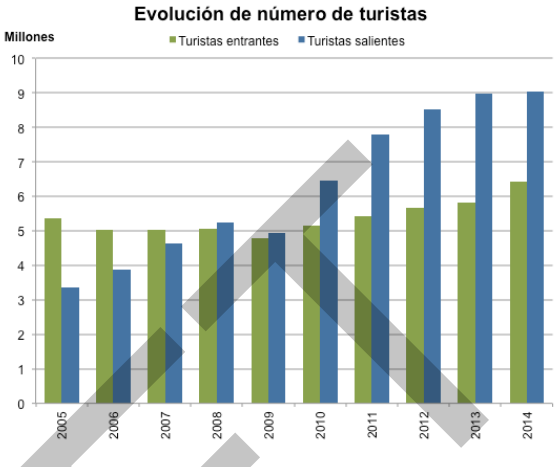
[15] International cooperation forum consisting of 20 of the most industrialized and important economies in the world that addresses policy issues, financial reforms and global economic development.

30 billion. Inbound tourists totalled 6.4 million, up 10.6% on the previous year, while outbound tourists numbered 9.0 million.

Charts 4.3.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)
Source: WB



Evolution in number of tourists
Millions -Inbound tourists -Outbound tourists

Air connectivity

Charts 4.3.3 – Main aviation industry data

Operational data – Aviation Industry 2015

Número de aeropuertos	107
Aerolíneas con rutas directas (Set 2016)	37
Número de rutas internacionales*	189
Número de países destino directos	42
Número de pasajeros	93.9 millones
Domésticos	74.7 millones
Internacionales	19.2 millones
Número de vuelos	1 millón
Región SAM (% de tráfico internacional)	30%

-Number of airports; -Airlines with direct routes (Sept 2016); Number of international routes*; -Number of countries of direct destination; -Number of passengers – million; : Domestic million; International million; -Number of flights 1 million; SAM Region (% of international traffic);
* Includes direct routes with and without stops

Map of Brazil's domestic connectivity

Main airlines with flights inside and to/from Brazil
Airline Passengers in 2015 % share
...Others

Aerolínea	Pasajeros 2015	% de part.
LATAM Airlines Brasil	26,272,892	28.0%
Azul Linhas Aereas Brasileiras	16,210,852	17.3%
Avianca Brazil	7,053,170	7.5%
American Airlines	2,371,739	2.5%
LATAM Airlines Group	1,630,947	1.7%
Otros	40,392,469	43.0%
Total	**93,932,069**	**100.0%**

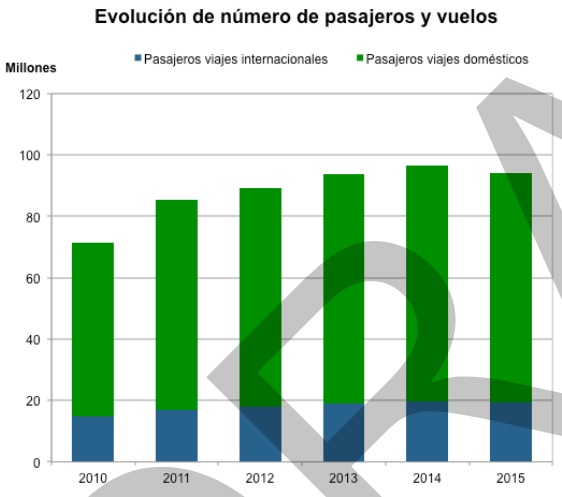
Source: IATA

Brazil has a total of 107 airports operating at the national level and, according to ICAO, 29 of these are international. São Paulo-Guarulhos (GRU) International Airport and Galeão (GIG) International Airport, located in Sao Paulo and Rio de Janeiro, respectively, concentrate the greater part of the passenger traffic and accounted in 2015 for 17% and 9%, respectively. Generally speaking, Brazil's air traffic is well decentralized, with its 6 main airports responsible for a little over 50% of the total passenger traffic in 2015.

A total of 93.9 million passengers were transported from Brazil to international and domestic destinations in 2015. Over the past 5 years (2010-2015), the number of passengers has risen 5.6% on overage per year. Nonetheless, in 2015 specifically the number was -2.6% smaller than the previous year.

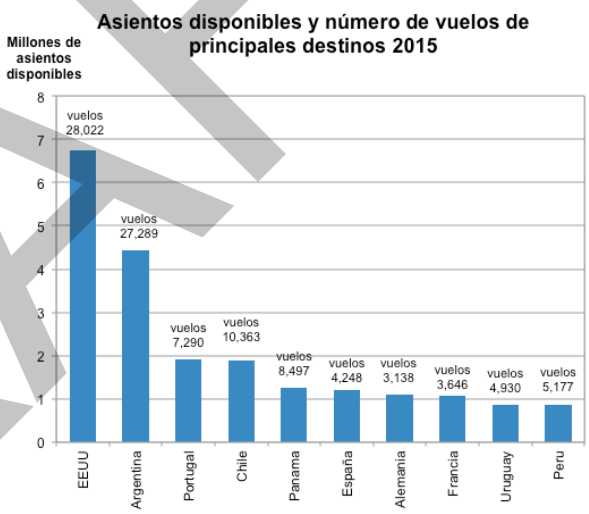
Insofar as available seats are concerned, in 2015, the routes flown to/from and inside Brazil had an available seating capacity of 158 million. Considering the total number of passengers (93.9 million) who flew direct and indirect Brazilian routes that year, the occupancy rate was approximately 59%.

Charts 4.3.4 – Evolution in the number of passengers, flights and available seats



Evolution in number of passengers and flights

Millions -Passengers on international flights
-Passengers on domestic flights



Available seats and number of flights to main destinations in 2015

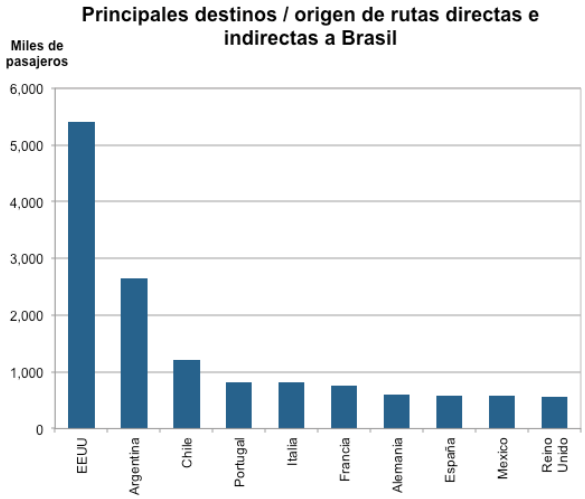
Millions of available seats -flights -U.S;...-Spain; -Germany; -France....

Source: IATA

According to IATA records, a total of 37 commercial airlines operated scheduled direct and indirect flights to/from and inside the country in 2015, of which 70% of the traffic corresponded to direct routes or ones with immediate connections. At the same time, 20% of the traffic consisted of international flights and 80%, of domestic flights. Traffic with the SAM Region accounts for 30% of the international traffic to/from Brazil.

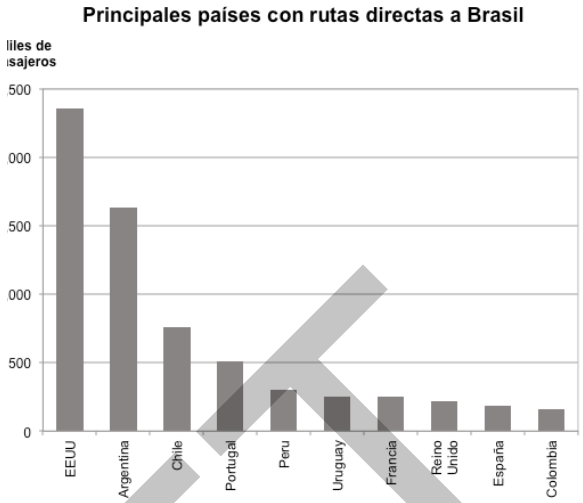
In terms of countries of destination, 42 were connected directly with Brazil, with or without stops, via 189 international routes. In the SAM Region, the country is connected directly without stops to 92% of the States: Argentina, Bolivia, Chile, Colombia, Ecuador, French Guiana, Suriname, Panama, Paraguay, Peru, Uruguay and Venezuela.

Charts 4.3.5 – Main countries connected with Brazil



Main destinations/origins of direct and and indirect routes to Brazil

Thousands of passengers -U.S.; ...-Italy; -France; -Germany; -Spain; ...-United Kingdom



Main countries with direct routes to Brazil

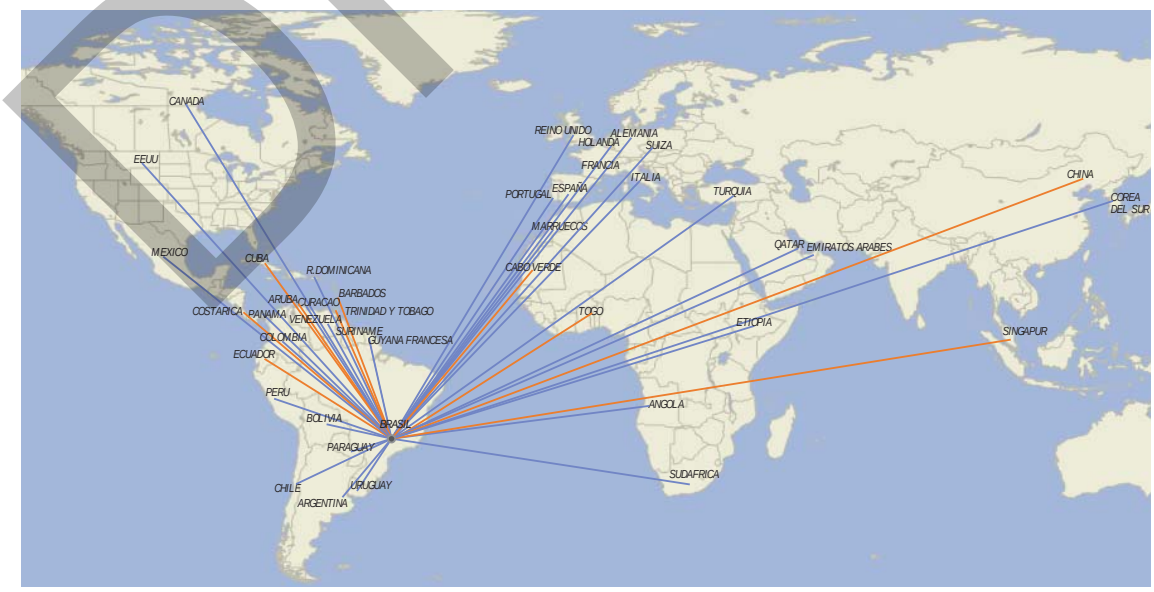
Thousands of passengers -U.S.; ...-France; -United Kingdom ; -Spain; -Colombia

Source: IATA

Out of its total (direct and indirect) international air traffic, the United States, Argentina and Chile have the most connectivity with Brazil and accounted for over 48% of total passenger air traffic in 2015 (28.1%, 13.7% and 6.3% of the total traffic of 2015, respectively). Considering the direct routes only, the same 3 countries represented the most important routes and together accounted for almost 60% of the total traffic over direct routes in 2015 (29.4%, 20.4% and 9.4%, respectively).

The main airlines with direct and indirect flights inside and outside Brazil are LATAM Airlines Brasil with a 28% share of the total passengers in 2015, followed in second place by Azul Linhas Aéreas Brasileiras with 17.3% and Avianca Brasil in third place with 7.5%.

Figure 4.1.1. – Map of Brazilian passenger air transport connectivity with the world

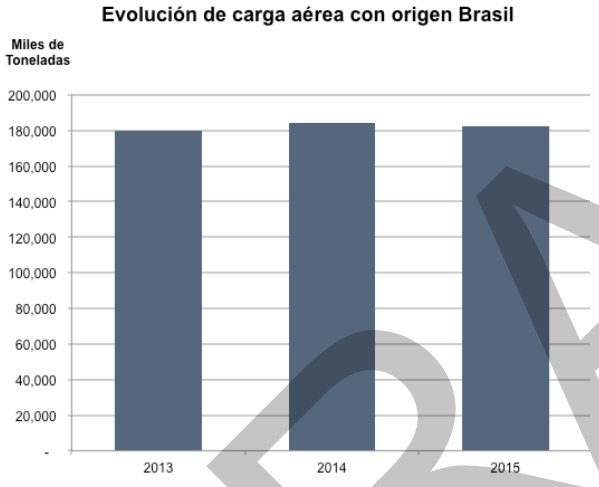


Source: IATA. Preparation: In-house

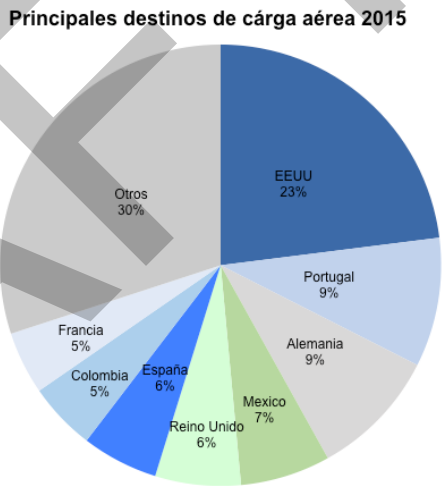
The map above shows all of Brazil's direct routes with the world. In order to be able to operate those routes, airlines need operating licenses to fly between the points of origin and destination for direct flights with and without stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all direct non-stop routes by airport.

Insofar as international air cargo is concerned, according to data revealed by IATA, a total of 182 thousand tonnes of air cargo were transported. It should be stressed that those figures consider only the tonnes reported by airlines belonging to the CASS (Cargo Accounts Settlement Systems) programme. Its most important trading partner in air terms is the United States, with a 23% share. The other destinations are more distributed among different countries, particularly Portugal, Germany, Chile, Mexico, the United Kingdom, Colombia, Spain and France.

Charts 4.3.6 – Main air cargo figures



Evolution of air cargo of Brazilian origin
Thousands of tonnes



Main air cargo destinations in 2015
-U.S. 23%; –Portugal; -Germany 9%; -Mexico; -United Kingdom 6%; -Spain 6%; -Colombia; -France 5%; -Others 30%

Source: IATA

Competitiveness of the Industry

According to the World Economic Forum competitiveness ranking, Brazil occupied the 28th position out of a total of 141 countries analyzed in regard to the competitiveness of their travel and tourism industries in 2015, making it the leader in the SAM Region. In terms of some individual indicators, we can see that Brazil has work to do to improve the quality of its air transport infrastructure and domestic transportation network and to review the level of its airport costs to be able to further improve its connectivity level.

Table 4.3.1. – Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 28 de 141**
Indicadores especificos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	4.3	119
Efectividad de marketing para atraer turistas	1-7	3.5	124
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turistica	1-7	4.7	51
Calidad de la infraestructura aérea	1-7	3.4	112
Calidad de la red doméstica de transporte	1-7	3.5	116
Requerimiento de visas	0-100	22.0	102
Apertura de acuerdos bilaterales ASA	0-38	14.4	30
Impuestos a boletos y cargos aeroportuarios	0-100	73.8	88

Score range **Score** **Ranking**

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization of the industry by the government
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges

Source: WEF

SWOT Analysis – Brazil's Connectivity

Strengths
• As South America's most extensive territory, its size and geographic location are privileged. • The largest and most populous State in the region with a potential market favourable to the growth of its connectivity. • Most of Brazil's cities are connected by air. • Known for its tourist attractions, which contribute to its socio-economic growth. • New airport services privatization plan, with more than 5 airports already under private concession, including Guarulhos in Sao Paulo, the largest airport in the SAM Region and the one with the heaviest traffic. • Alliances and partnerships among the region's and world airlines optimize operations and have added to Brazil's connectivity. • Entry of "low-cost" airlines. • Shared code agreements between domestic and international airlines (AV Brasil and Air Canada) • Agreement between Brazil and Uruguay to establish the first binational airport. • Contribution of commercial airlines that promote tourism and ecotourism in the world. • Pilot school that facilitates the training of new generations of professionals in the region.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Interest of foreign airlines in investing in national airlines. • New airport administration policy. • Electronic technology that is incorporated into terminal design (passenger check-in). • Multimodal air cargo transportation. • Expansion of national airlines. • Simplification of Customs regulations for "paperless" (e-AWB - e-Freight) transport.
Weaknesses
• High airport costs and charges. • No free WiFi in the main airports. • New terminal in the GRU airport (Sao Paulo) still has a still limited runway capacity; location of terminals and a lack of connection between them.

- The runway capacity has yet to be improved at CGH airport (Sao Paulo), with the principal operators recommending the handling of commercial aviation operations only.
- Location of the principal airports in the city centres, access to the road network and vehicle congestion.
- Little connectivity of the Brasilia airport.
- Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism.
- Drop in international trips of national airlines adversely affected by the economic situation.
- Infrastructure investments in airports belonging to the State depend upon the national budget.
- The WTO World Trade Organization attributes an Air Liberalization Index to Brazil of 10.17 (2013) in a range of 0-50 (the higher the index, the greater the liberalization).

Threats

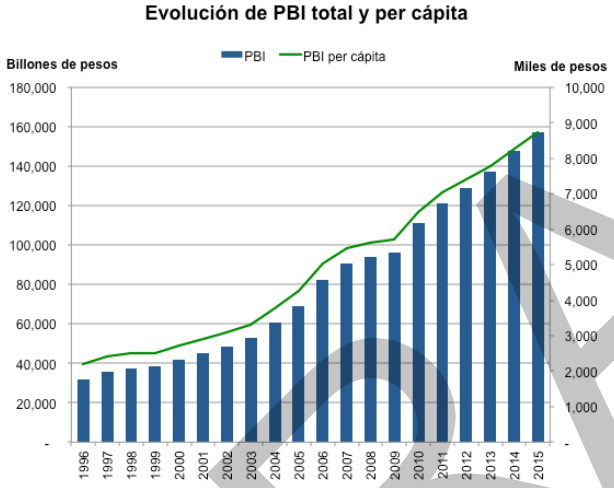
- Unforeseeable terrorist acts have a negative impact on the safety of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and natural disasters.

4.4. Chile

General Description

Chile is one of the most advanced and prosperous countries in the SAM Region. With a population bordering on 18 million, it has a total GDP of US$ 240 billion and its per capita GDP (US$ 13.3 thousand nominal) is the region's highest in relative terms adjusted by PPP. That prosperity situates the country among the 3 in the SAM Region classified by the World Bank as a "high-income" economy. It is also acknowledged to be a financially developed, free market country with a large international opening, making the country attractive to foreign investment. Today it has free trade and strategic commercial agreements in place with almost all of the countries in the Americas, China, various members of the European Union and Asia-Pacific economies, among others. In addition, it is the only country in the SAM Region that is a member of the OECD.[16]

Charts 4.4.1 – Main macroeconomic indicators and GDP evolution



Evolution of the total and per capita GDP
Billions of pesos -GDP -Per capita GDP **Thousands of pesos**

Main Macroeconomic Indicators

GDP (2015) – US$ billion; GDP growth 2010-2015 - Annual average; Per capita GDP (2015) - US$ per capita; Population (2015) - million; Unemployment rate (2014); Inflation (2015); International trade (2015) - % of GDP; Spending on tourism (2014) – US$ billion; Travel and tourism (% of GDP) WEF 2015 Report

Source: IMF, WB and WEF. Latest available data

PBI (2015)	240	US$ billiones
Crecimiento PBI 2010-2015	3.8%	Promedio anual
PBI per cápita (2015)	13,341	US$ per cápita
Población (2015)	18	Millones
Tasa de desempleo (2014)	6.40%	
Inflación (2015)	4.3%	
Comercio internacional (2015)	60.4%	% de PBI
Gasto en turismo (2014)	2.8	US$ billones
Viajes y turismo (% de PBI)	3.2%	Reporte WEF 2015

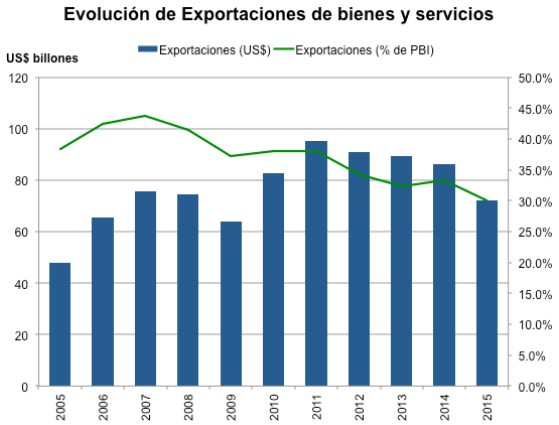
Chile's economy, like those of many countries in the region, in grounded in the production and marketing of raw materials. It is the world's largest copper producer and is also recognized globally for its variety of fruits, fishery products and wine, among other products.

According to data published by the World Bank, in 2015 Chile exported a total of US$ 72 billion, representing 30.1% of its GDP. Its total international trade (exports + imports), for its part, amounts to 60.4% of its GDP. As in the cases of many countries in the region, it experienced an economic slowdown attributable for the most part to a setback in mining brought on by the ending of the investment cycle, drop in copper prices and reduction in private consumption.

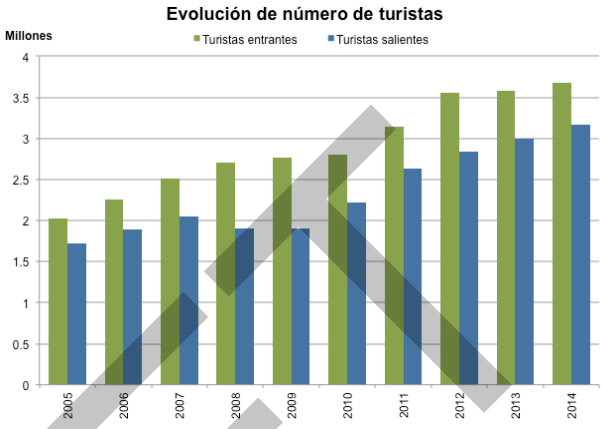
[16] The Organization for Economic Cooperation and Development (OECD) is an international cooperation institution made up of 34 states whose purpose is to coordinate their economic and social policies. Its membership consists for the most part of the world's largest and most developed economies.

According to the World Bank, total spending on tourism in 2014 was US$ 2.7 billion. Inbound tourists amounted to 3.7 million, 2.7% more than the previous year, while outbound tourists totalled 3.2 million (up 5.7% on the number in 2013).

Charts 4.4.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)
Source: WB



Evolution in the number of tourists
Millions -Inbound tourists -Outbound tourists

Air Connectivity

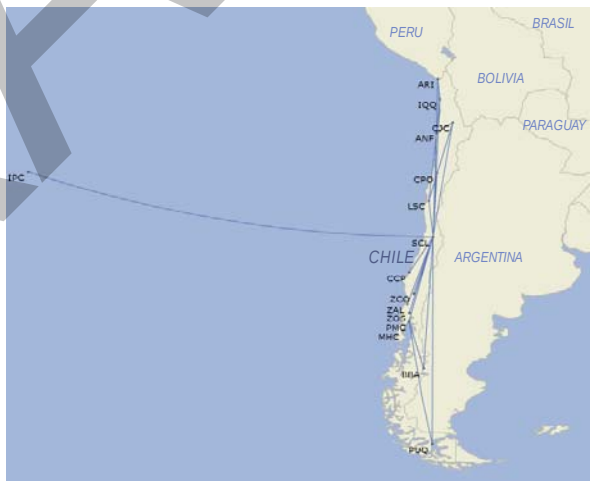
Charts 4.4.3 – Main aviation industry data

Operational Data – Aviation Industry 2015

Número de aeropuertos	16
Aerolíneas con rutas directas (Set 2016)	17
Número de rutas internacionales*	55
Número de países destino directos	24
Número de pasajeros	14.9 millones
Domésticos	8.1 millones
Internacionales	6.8 millones
Número de vuelos	133.4 mil
Región SAM (% de tráfico internacional)	58%

-Number of airports; -Airlines with direct routes (Sept 2016); -Number of international routes*; -Number of countries of direct destination; -Number of passengers -million: - Domestic million; -International million; - Number of flights - thousand; -SAM Region (% of international traffic)
* Includes direct routes with or without stops

Map of Chile's domestic connectivity



Main airlines with flights inside and to/from Chile

Aerolínea	Pasajeros 2015	% de part.
LATAM Airlines Group	8,941,880	54.6%
Sky Airline S.A.	2,837,791	13.4%
COPA	407,479	8.3%
LATAM Airlines Brasil	392,628	4.1%
AVIANCA	355,859	4.0%
Otros	1,935,177	15.6%
Total	**14,870,794**	**100.0%**

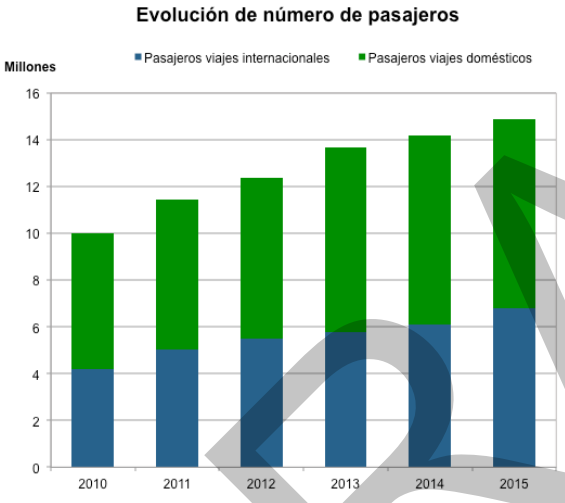
Airline **Passengers in 2015** **%share**
... Others
Source: IATA

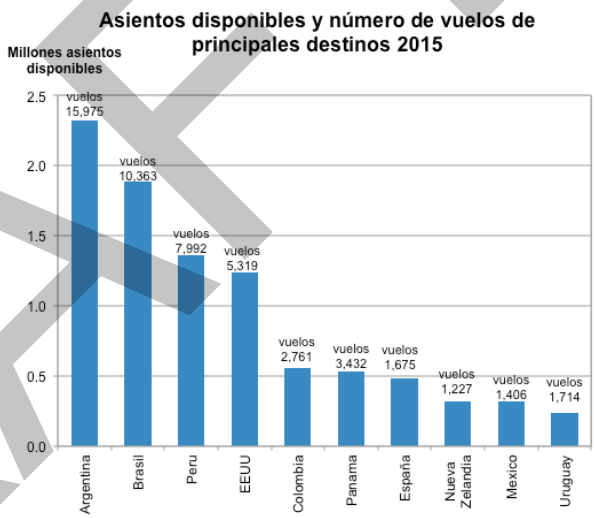
Chile has a total of 16 operating airports, of which, according to ICAO, 8 are international. In 2015, Arturo Merino Benítez (SCL) Airport in the capital city of Santiago concentrated the larger part of the passenger traffic, with a 67% share, followed by Andrés Sabella Airport (ANF) in Antofagasta, accounting for 6% of the total traffic.

A total of 14.9 million passengers were transported to international and domestic Chilean destinations in 2015, representing growth of 4.7% compared with the previous year. Passenger traffic has risen an average of 8.2% annually over the past 5 years (2010-2015).

Insofar as available seats are concerned, the routes flown to/from and inside Chile in 2015 had an available capacity of 21.5 million seats and considering the total number of passengers transported over direct and indirect Chilean routes (14.8 million), the occupancy rate was approximately 69%.

Charts 4.4.4 – Evolution in the number of passengers, flights and available seats





Evolution in the number of passengers

Millions -Passengers on international flights
-Passengers on domestic flights

Available seats and number of flights to principal destinations in 2015

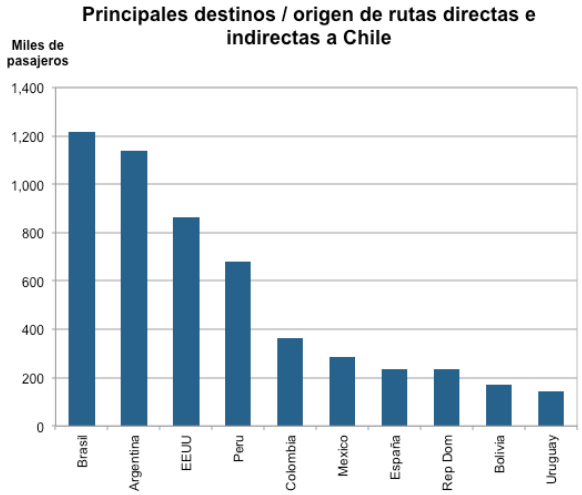
Millions of available seats
flights .....Brazil;...U.S.; ...Spain; New Zealand

Source: IATA

According to IATA records, a total of 17 commercial airlines operated scheduled direct and indirect flights from/to and inside the country in 2015, with 77% of the traffic on direct routes or ones with immediate connections. A breakdown shows that 46% of the traffic corresponded to international flights and 54% to domestic flights. Trafic to the SAM Region accounts for 58% of total international traffic to/from Chile.

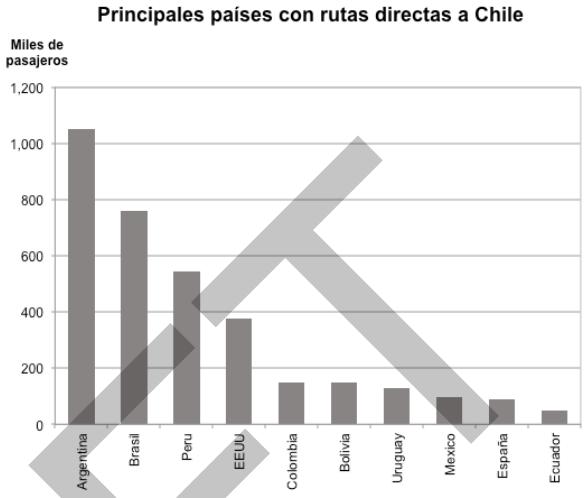
In terms of destination countries, 24 countries were directly connected with Chile, with or without stops, by 55 international routes. In the SAM Region, Chile was directly connected without stops with 77% of the States: Argentina, Brazil, Bolivia, Colombia, Ecuador, Panama, Paraguay, Peru, Uruguay and Venezuela (the latter ceased to operate in 2016).

Charts 4.4.5 – Main countries connected with Chile



Main destinations/origins of direct and indirect routes to Chile

Thousands of passengers: Brazil;…U.S;….Spain;…Dom.Rep.



Main countries with direct routes to Chile

Thousands of passengers: …Brazil;…U.S;….Spain

Source: IATA

Out of its total (direct and indirect) international traffic, Brazil, Argentina and the United States are the countries with the greatest connectivity with Chile and accounted for over 47% of total passenger traffic in 2015 (17.8%, 16.7% and 12.7% of the total traffic of 2015, respectively). Considering only the direct routes, Argentina, Brazil and Peru represented the most important and together concentrated over 64% of the total traffic on direct routes in 2015 (28.7%, 20.6% and 14.9%, respectively).

The main airlines operating in Chile are: LATAM Airlines Group[17] with a share of over 60% of the total passengers transported in 2015, followed by Sky Airline with 19.1% and COPA in third place with 2.7%.

Figure 4.4.1 – Map of Chilean passenger air transport connectivity with the world

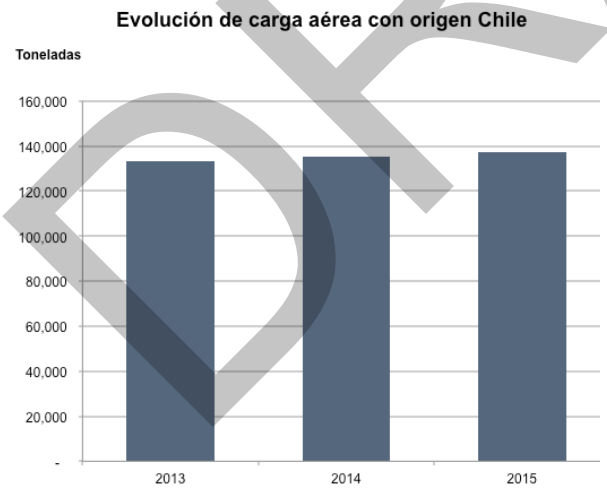
[17] This does not include all of the airlines associated with the LATAM Group. The database supplied by IATA incorporates Chile and Peru under this name (LATAM Airlines Group), while the rest of the Group companies are recorded individually.

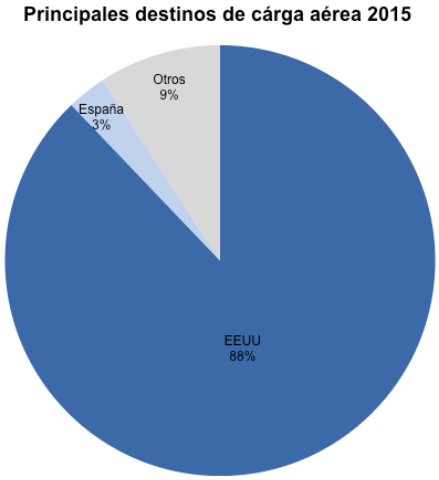
Source: IATA. Prepared: In-house

The above map shows all of Chile's direct routes with the world. In order to be able to operate those routes, airlines require operating licences between the points of origin and destination for direct flights with and without stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all direct non-stop routes by airport.

In the case of air cargo, IATA figures reveal that a total of 137 thousand tonnes of air cargo were transported. It should be stressed that those figures consider only the tonnes reported by airlines belonging to the CASS (Cargo Accounts Settlement Systems) programme. Its most important trading partner via air is the United States with an 88% share.

Charts 4.4.6 – Main air cargo figures





Evolution of air cargo originating in Chile
Tonnes
Source: IATA

Main air cargo destinations in 2015
U.S. 88%; Spain 3%; Others 9%

Competitiveness of the Industry

According to the World Economic Forum competitiveness ranking, Chile occupies the 51st position out of a total of 141 countries analyzed in terms of the competitiveness of their

travel and tourism industries in 2015. A look at some individual indicators reveals that Chile ranks above average in the global sampling in terms of the quality of its air transport infrastructure and domestic transportation system and openness in requirements for visas and bilateral agreements. Even so, it still has room for improvement in prioritization by the government of the industry and marketing of tourism.

Table 4.4.1. – Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 51 de 141**
Indicadores especificos (rango de puntuacion)			
Priorización de la industria por parte del Gobiemo	1-7	4.6	107
Efectividad de marketing para atraer turistas	1-7	4.2	88
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turistica	1-7	4.8	45
Calidad de la infraestructura aérea	1-7	5.0	45
Calidad de la red doméstica de transporte	1-7	4.9	42
Requerimiento de visas	0-100	33.0	45
Apertura de acuerdos bilaterales ASA	0-38	17.7	18
Impuestos a boletos y cargos aeroportuarios	0-100	83.0	51

Score range **Score** **Ranking**

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization by the government of the industry
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges

Source: WEF

SWOT Analysis –Chile's Connectivity

Strengths
• Leadership of LAN, the Chilean airline, in developing aviation in the region via alliances and mergers through which LATAM was formed. This has made it possible to create new national airlines in several South American countries, with the result that connectivity has been expanded. • Privileged position in its liberalization policy, making it the only country in the region with "open skies" for all commercial aviation. • Centres of tourist attraction that contribute to the development of greater connectivity. • Social and economic stability and a free market promoting the creation of new airlines. • Alliances, partnerships and/code-sharing agreements between Chilean, SAM Region and world airlines. • Operation of national cargo airlines. • Operation of "low cost" airlines. • Efficient development of safety technologies and air navigation services. • School for the professional training of pilots. • Implementation of the electronic air waybill and of processes that eliminate printed documents with "e-Freight". • International passenger and cargo airfare tickets are not subject to the payment of VAT. • The Santiago airport is equipped to receive long-haul and large-capacity aircraft; it is now being operated under a new concession, which must implement improvements in the model in order to reach the capacity projected at 2020. • Free WiFi since April 2016 in the Santiago airport; this is to be extended to the rest of the airports in the near future. • Proactive State role in the development of airport infrastructure. • Traffic growth projection at 2050, and new AMB concession handed over to ADP, ensuring the construction of a second terminal in Santiago; work is expected to start in 2016, which will make it possible to operate with a sufficient offering up until 2025. • The World Trade Organization (WTO) granted Chile an Air Liberalization Index of 16.08 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization), which is the highest in the SAM Region.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Free trade agreements (FTA), APEC, Pacific Alliance, Trans Pacific Partnership (TPP). • Industry technology to facilitate airport check-in, security and embarkation services and make them more efficient.

- Integration and agreements with one or more of the Region's States to attract tourism from distant countries.

Weaknesses

- High airport costs and charges. 50% increase at the Santiago airport.
- Some of the airport check-in, security, immigration and embarkation processes have not been fully automated.
- Location of the main airports far from the cities, with poor road connections and public transport.
- Ministerial officials without clearly-established leadership lines participate in strategic and operational management decisions.
- VAT charged on domestic airfare tickets, airport facilitation charges.

Threats

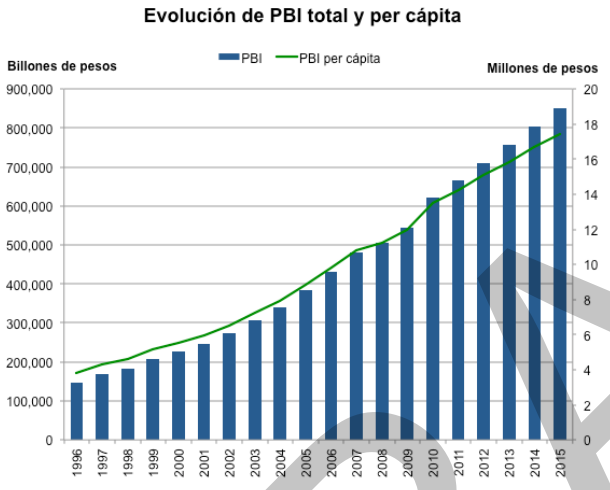
- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and/or natural disasters.

4.5. Colombia

General Description

Colombia is one of the SAM Region's most prosperous and important economies, ranking second in population (48 million inhabitants) and third in total GDP (US$ 293 billion). Its per capita GDP (US$ 6.0 thousand) makes it an "upper middle-income" economy, according to the World Bank classification. One of the world's most biodiverse countries, after Brazil, its natural and cultural wealth position it as a major tourist destination in the region, with 8 recognized UNESCO World Heritage sites (2 natural and 6 cultural). Furthermore, its geographic position within the region makes it a point of access to other countries.

Charts 4.5.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP

Billions of pesos -GDP -Per capita GDP **Millions of pesos**

Source: IMF

Main Macroeconomic Indicators

PBI (2015)	293	US$ billiones
Crecimiento PBI 2010-2015	4.6%	Promedio anual
PBI per cápita (2015)	6,084	US$ per cápita
Población (2015)	48.2	Millones
Tasa de desempleo (2014)	10.1%	
Inflación (2015)	5.0%	
Comercio internacional (201.	39.0%	% de PBI
Gasto en turismo (2014)	5.2	US$ billones
Viajes y turismo (% de PBI)	1.7%	Reporte WEF 2015

GDP (2015) US$ billion; GDP Growth 2010-2015 Annual average; Per capita GDP (2015) US$ per capita; Population (2015) Million; Unemployment rate (2014); Inflation (2015); International Trade (201?) % of GDP; Spending on tourism (2014) US$ billion; Travel and tourism (% of GDP) WEF 2015 Report

Source: IMF, WB and WEF. Latest available data

Its economy, like in most countries in the SAM Region, depends mainly on agriculture, stockbreeding and mining. The global economic slowdown and drop in oil prices reduced Colombia's growth rate from over 4% during the period of 2011-2014 to 3.1% en el 2015. The service, agricultural and manufacturing sectors, however, started to recover towards the end of 2015, moving once again toward growth.

According to World Bank data, in 2015, Colombia exported a total of US$ 43 billion, equivalent to 14.7% of its GDP, while its total international trade (exports + imports) represented 39% of its GDP. In the case of tourism, total spending for 2014 was US$ 5 billion. Inbound tourists numbered 2.6 million, up 12.1% on those of the previous year, while outbound tourists totalled 3.9 million (8.5% more than in 2013).

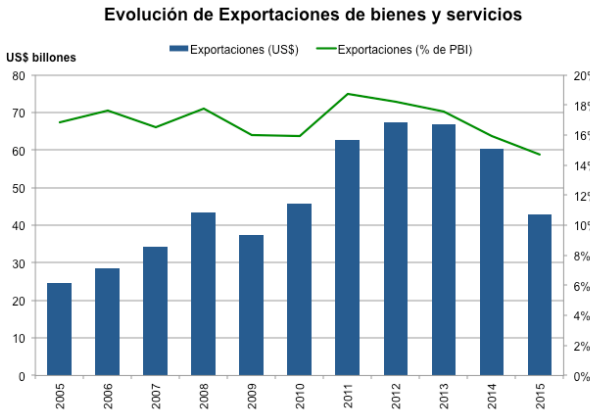
Charts 4.5.2 – Exports and number of tourists

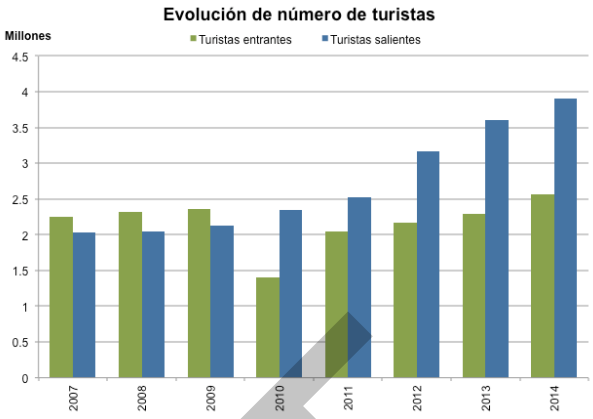
Evolution of exports of goods and services

US$ billions -Exports (US$) -Exports (% of GDP)

Evolution in number of tourists

Millions -Inbound tourists -Outbound tourists





Source: WB

Air Connectivity

Charts 4.5.3 – Main aviation industry data

Operational data – Aviation Industry in 2015

Número de aeropuertos	54
Aerolíneas con rutas directas (Set 2016)	28
Número de rutas internacionales	103
Número de países destino directos	26
Número de pasajeros	28.8 millones
Domésticos	19.1 millones
Internacionales	9.8 millones
Número de vuelos	340 mil
Región SAM (% de tráfico internacional)	34%

* Includes direct routes with or without stops

Number of airports; Airlines with direct routes (Sept 2016); Number of international routes; Number of countries of direct destination; Number of passengers 28.8 million: Domestic 19.1million, International 9.8 million; Number of flights 340 thousand; SAM Region (% of international traffic)

Map of Colombian domestic connectivity

Main airlines with flights inside and to/from Colombia

Airline Passengers 201? % share

Aerolínea	Pasajeros 2015	% de part.
AVIANCA	16,702,380	54.6%
LATAM Airlines Group	4,216,946	13.4%
COPA	1,940,818	8.3%
VivaColombia	1,606,204	4.1%
Servicio Aereo a Territorios Nacion (SATENA)	1,044,351	4.0%
Otros	3,328,850	15.6%
Total	**28,839,549**	**100.0%**

Others

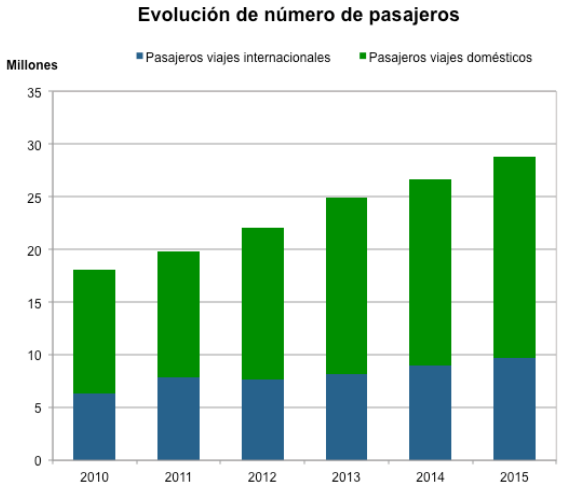
Source: IATA

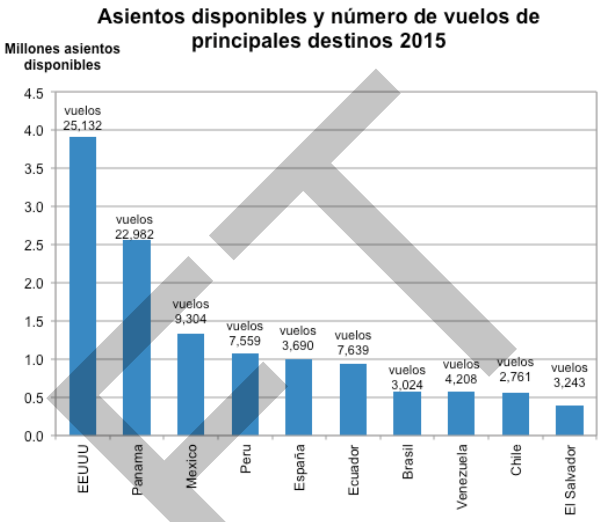
Colombia has a total of 54 operating airports, of which 11 are international, according to ICAO. El Dorado International Airport (BOG) and Aeroparque Internacional José María Córdova (MDE), located in the capital city of Bogotá and in Antioquia, respectively, account for the greater part of the country's passenger traffic, which amounted in 2015 to 48% and 13%, respectively.

A total of 28.8 million passengers were transported over Colombian international and domestic routes in 2015, or 8.1% more than the previous year. The number of

passengers has risen an average of 9.8% per annum over the past 5 years (2010-2015). The available seating capacity in 2015 on the routes flown to/from and inside Colombia was 43.5 million seats. Considering the total number of passengers on the country's direct and indirect routes (28.8 million), the occupancy rate was approximately 66%.

Charts 4.5.4 – Evolution of passengers, flights and available seats





Source: IATA

Evolution in the number of passengers

Millions -Passengers on international flights; -Passengers on domestic flights

Available seats and number of flights to principal destinations in 2015

Millions of available seats flights….flights…U.S;…Spain;…Brazil

According to IATA records, a total of 28 commercial airlines operated scheduled direct and indirect flights to/from and inside the country in 2015, with 79% of the traffic consisting of direct flights or flights with immediate connections. A further breakdown shows that 34% were international flights and the remaining 66%, domestic. Traffic to the SAM Region accounted for 34% of the total international traffic to/from Colombia. Insofar as destination countries are concerned, 26 countries were directly connected with Colombia, with or without stops, via 103 international routes. In the SAM Region, Colombia was directly connected without stops to 62% of the region's States: Argentina, Brazil, Bolivia, Chile, Ecuador, Panama, Peru and Venezuela.

Charts 4.5.5 – Main countries connected with Colombia

Main destinations/origins of direct and indirect routes to Colombia

Thousands of passengers

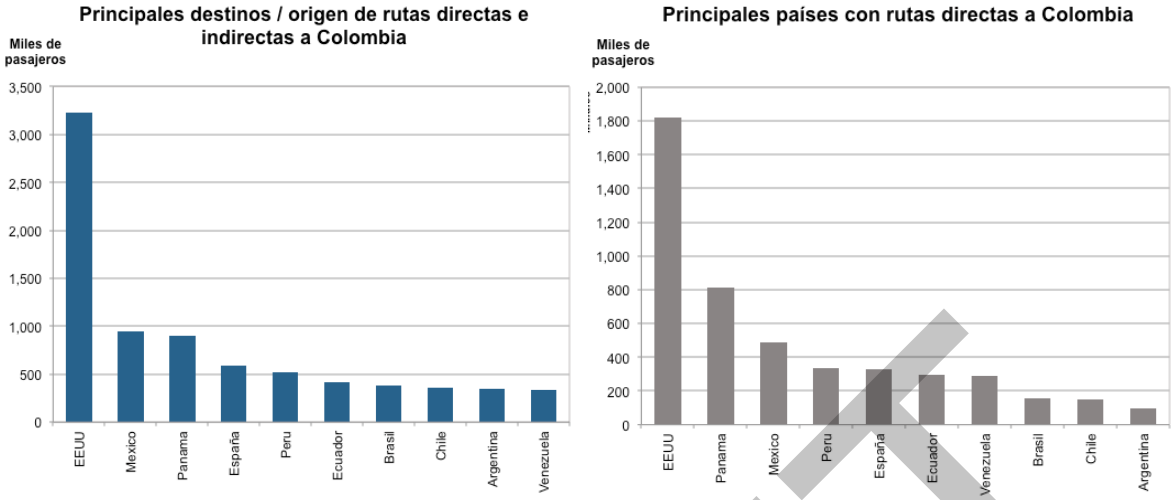
U.S.; …Spain; … Brazil

Main countries with direct routes to Colombia

Thousands of passengers

U.S.; …Spain; …Brazil

Source: IATA

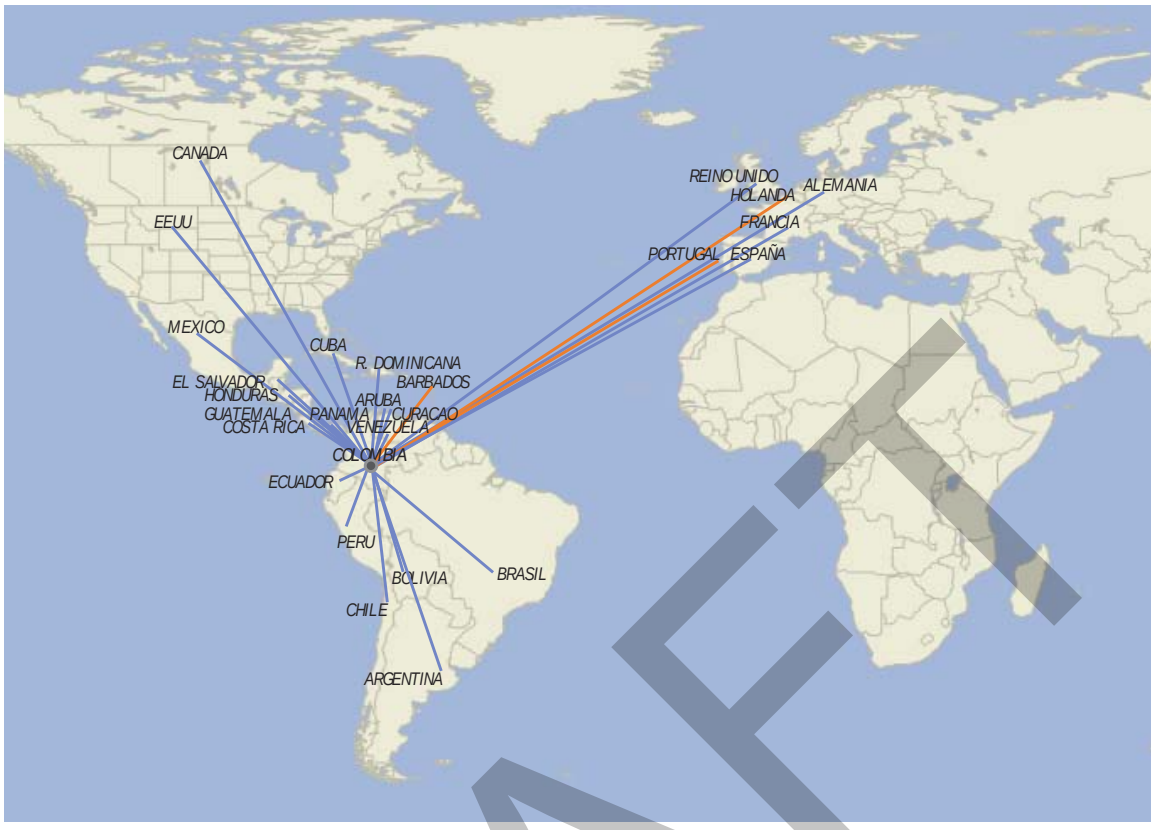


Out of its total international air traffic (direct and indirect), the United States, Mexico and Panama are the countries with the greatest connectivity with Colombia and accounted in 2015 for over 52% of the total passenger traffic (33.1%, 9.7% and 9.3%, respectively). Considering direct routes only, the United States, Panama and Mexico represent the major routes and together concentrated over 58% of the total traffic on direct routes in 2015 (34.3%, 15.3% and 9.2%, respectively).

The main airlines operating in Colombia in 2015 were Avianca with over one-half of the total passengers transported (54.6%), followed by LATAM Airlines Group[18] with 13.4% and COPA in third place with 8.3%.

Figure 4.5.1. Map of Colombian passenger air transport connectivity with the world

[18] Does not include all of the airlines associated with the LATAM Group. IATA's database incorporates Chile and Peru under this heading (LATAM Airlines Group), while the rest of the Group companies are registered individually.



Source: IATA. Preparation: In-house

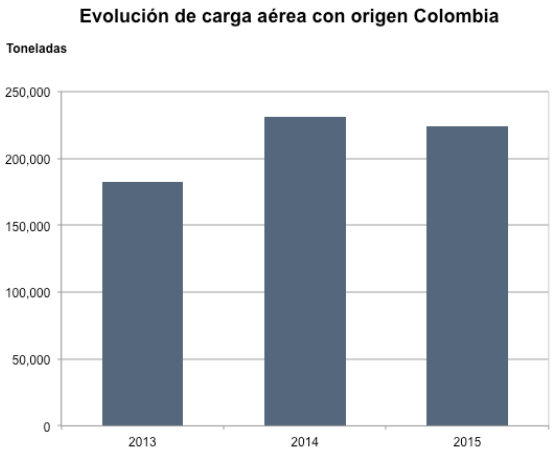
The above map shows all of Colombia's direct routes to the world. In order to be able to operate those routes, airlines require licenses to fly between the points of origin and destination for direct flights with or without stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all of the direct non-stop routes by airport.

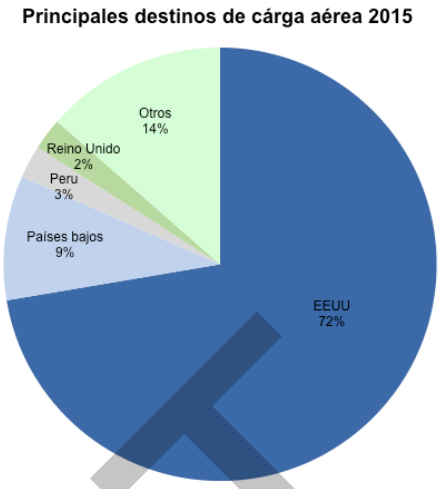
In the case of air cargl, according to IATA figures, a total of 224 thousand tonnes were transported. It should be stressed that these figures consider only the tonnes reported by airlines belonging to the CASS (Cargo Accounts Settlement Systems) programme. Its most important trading partner was the United States, with a 72% share, followed in second place by the Netherlands with 9% and Peru in third with 3%.

Charts 4.5.6 – Main air cargo figures

Evolution of air cargo originating in Colombia
Tonnes

Main air cargo destinations in 2015
U.S. 72%; Netherlands 9%; …United Kingdom 2%; Others 14%





Source: IATA

Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, Colombia occupied the 68th position out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries in 2015. A look at some individual indicators reveals that Colombia is relatively well-positioned in its openness to the requirement for visas and bilateral agreements, but shows considerable room for further work on the quality of its air transport infrastructure and domestic transportation system, as well as on the reduction of its airport charges in comparison with the rest of the world's countries.

Table 4.5.1 – Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 68 de 141**
Indicadores especificos (rango de puntuacion)			
Priorización de la industria por parte del Gobiemo	1-7	5.0	86
Efectividad de marketing para atraer turistas	1-7	4.9	52
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turistica	1-7	3.6	90
Calidad de la infraestructura aérea	1-7	4.1	78
Calidad de la red doméstica de transporte	1-7	3.5	118
Requerimiento de visas	0-100	67.0	20
Apertura de acuerdos bilaterales ASA	0-38	17.6	19
Impuestos a boletos y cargos aeroportuarios	0-100	54.1	124

	Score range	Score	Ranking

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization by the government of the industry
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges

Source: WEF

SWOT Analysis – Colombia's Connectivity

Strengths
• Geographic location on the Pacific and Caribbean coast in the northern part of the region. • Strong domestic aviation market. • Most national airlines report continuous growth of passenger and cargo traffic despite the crisis and dollar devaluation. • Centres of tourist attraction are being consolidated with the signing of the domestic peace agreement. • Economic investment centres. • Biodiversity and ecotourism development. • The airport infrastructure and the need to cover the demand with efficient installations are a priority for Colombian government officials, who have promoted the preparation and updating of airport master plans and an investment plan for remodelling and modernization, with new projects and maintenance work. • Government investment in the modernization of Bogota airspace. • Increase in domestic airlines that have contributed to greater direct connectivity on unserved routes. • Direct connectivity for international flights at different points in the country. • Bogota's El Dorado airport enjoys the heaviest cargo movement in South America and the largest number of cargo operations (45), 80% of the shipments consisting of fresh flowers. • "Low-cost" airline participation has produced a larger offering of national and international routes and frequencies and growth of the market base. • Development of the Bogota airport as a SAM Regional hub. • Use of API (Advanced Passenger Information) technology. • The existence of a certified pilot school facilitates the training of new generations of professionals from the region.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Different agreements (FTAs) and the Pacific Alliance. • Decentralized development of connectivity. • Industry technology that facilitates and simplifies passenger check-in and embarkation, with rapid immigration and security control processes. • Partnerships and agreements with SAM Region airlines (code sharing)

- Customs facilitation for passengers and cargo.
- Agreements and integration with one or more of the Region's States to attract tourism from distant countries.
- Cargo Accounts Settlement System (CASS) efficiencies.

Weaknesses

- Airfare tickets subject to the payment of VAT, Tourism Tax and Airport Charges.
- Regulator standards and regulations that are incompatible with the needs of the industry, thereby affecting sector and connectivity development.
- Despite the investment in and orientation toward infrastructure development, a coordinated general vision is lacking for aviation and its long-term development.
- Tax burden that fails to boost sector growth. (Oversight tax that affects all State transport).
- High costs of aeronautical infrastructure.
- Slow airport customs and immigration processes.
- Bureaucratic customs formalities.
- Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism and have not been updated to conform to new market conditions and the characteristics of the current globalization process.
- The World Trade Organization (WTO) granted Colombia an Air Liberalization Index of 8-55 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization).

Threats

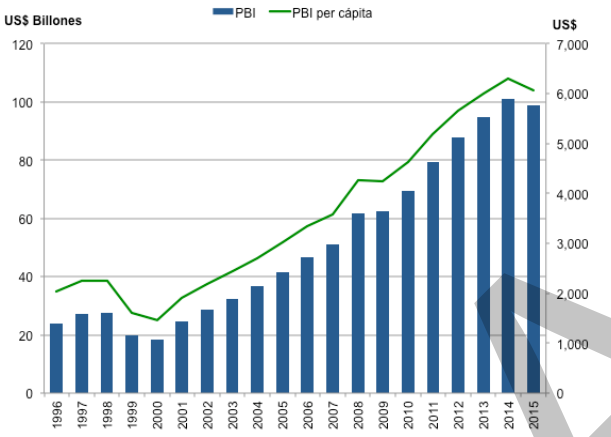
- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Citizen insecurity threatens passenger assets and security and has a negative impact on traffic to the territory.
- Drug trafficking.
- Climate change and/or natural disasters.

4.6. Ecuador

General Description

Ecuador is one of the smallest territories in the SAM Region area-wise, but is seventh in terms of its total population (16 million inhabitants) and seventh, as well, in total GDP (US$ 99 billion). Its per capita GDP (US$ 6.1 thousand) makes it an "upper middle-income" economy in accordance with the World Bank classification. It possesses a total of 5 recognized UNESCO World Heritage sites (2 natural and 3 cultural).

Charts 4.6.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP
US$ billions -GDP -Per capita GDP **US$**

Source: IMF

Main Macroeconomic Indicators

PBI (2015)	99	US$ billiones
Crecimiento PBI 2010-2015	4.3%	Promedio anual
PBI per cápita (2015)	6,071	US$ per cápita
Población (2015)	16.1	Millones
Tasa de desempleo (2014)	4.6%	
Inflación (2015)	4.0%	
Comercio internacional (2015)	45.1%	% de PBI
Gasto en turismo (2014)	1.0	US$ billones
Gasto turismo (% de PBI)	1.0%	

GDP (2015) US$ billion; GDP Growth 2010-2015 Annual average; Per capita GDP (2015) US$ per capita; Population (2015) Million; Unemployment rate (2014); Inflation (2015); International trade (2015) % of GDP; Spending on tourism (2014) US$ billion; Spending on tourism (% of GDP)

Source: IMF, WB and WEF. Latest available data

Agriculture is very important to the Ecuadorean economy. The country leads the world in the production and export of bananas and its output of shrimps, sugarcane, rice, cotton, corn, hearts of palm, coffee and flowers is also significant. It further possesses a sizeable wealth of eucalyptus, pine and cedar.

According to data published by the World Bank, Ecuador exported a total of US$21 billion in 2015, amounting to 21.1% of its GDP. Furthermore, its level of international trade (exports + imports) is equivalent to 45.1% of its GDP. In terms of tourism, total spending for 2014 was US$ 1 billion. Inbound tourists numbered 1.6 million, for growth of 14.1% over the previous year, while outbound tourists amounted to 1.3 million (12.3% more than in 2013).

Charts 4.6.2 – Exports and number of tourists

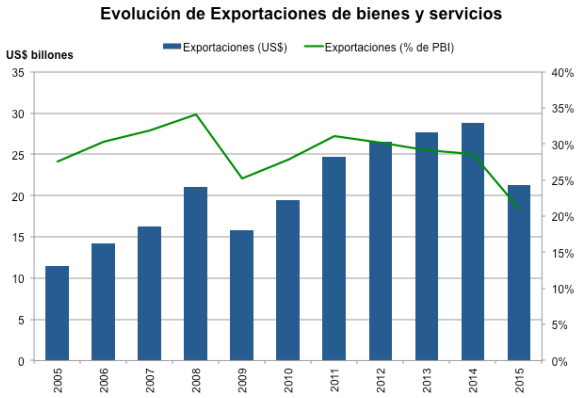
Evolution of exports of goods and services

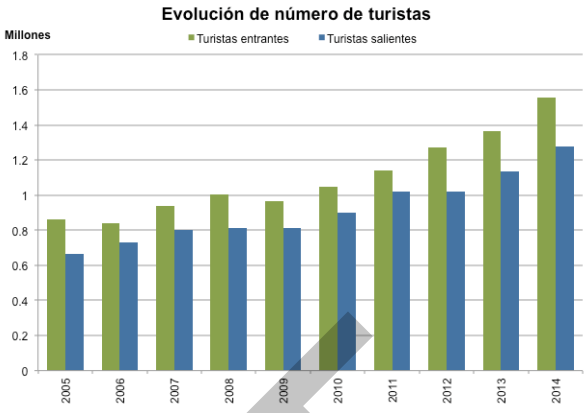
US$ billions -Exports (US$) -Exports (% of GDP)

Evolution in number of tourists

Millions -Inbound tourists -Outbound tourists

Source: WB





Air Connectivity

Charts 4.6.3 – Main aviation industry data

Operational Data – Aviation Industry 2015

Número de aeropuertos	16
Aerolíneas con rutas directas (Set 2016)	19
Número de rutas directas internacionales	47
Número de países destino directos	17
Número de pasajeros	7.4 millones
Domésticos	3.5 millones
Internacionales	3.8 millones
Número de vuelos	74.7 mil
Región SAM (% de tráfico internacional)	35%

* Includes direct routes with or without stops

Number of airports; Airlines with direct routes (Sept 2016); Number of direct international routes; Number of countries of direct destination; Number of passengers 7.4 million: Domestic 3.5 million, International 3.8 million; Number of flights 74.7 thousand; SAM Region (% of international traffic)

Map of Ecuadorean domestic connectivity

Main airlines with direct flights inside and to/from Ecuador

Airline **Passengers in 201?** **% share**

...Others

Aerolínea	Pasajeros 2015	% de part.
Tame Linea Aerea Del Ecuador	2,339,494	31.8%
AVIANCA	1,436,783	19.5%
LATAM Airlines Ecuador	1,148,576	15.6%
COPA	691,317	9.4%
American Airlines	474,859	6.4%
Otros	1,276,139	17.3%
Total	**7,367,168**	**100.0%**

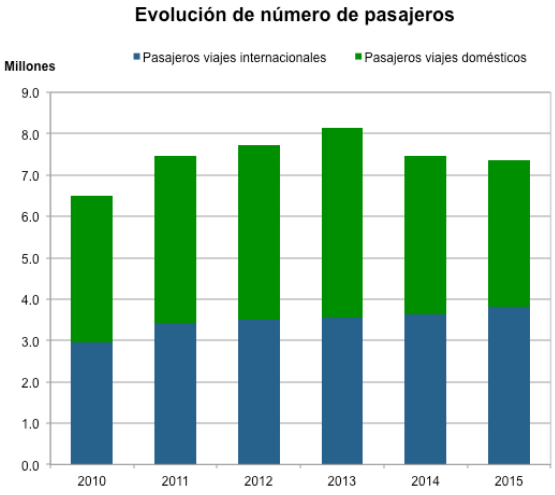
Source: IATA

Ecuador has a total of 16 operating national airports, of which 4 are international, according to ICAO. Mariscal Sucre International Airport (UIO) and José Joaquín de Olmedo International Airport (GYE), located in the capital city of Quito and in Guayaquil, respectively, concentrated the greater part of the passenger traffic, with shares of 49% and 37%, respectively, in 2015.

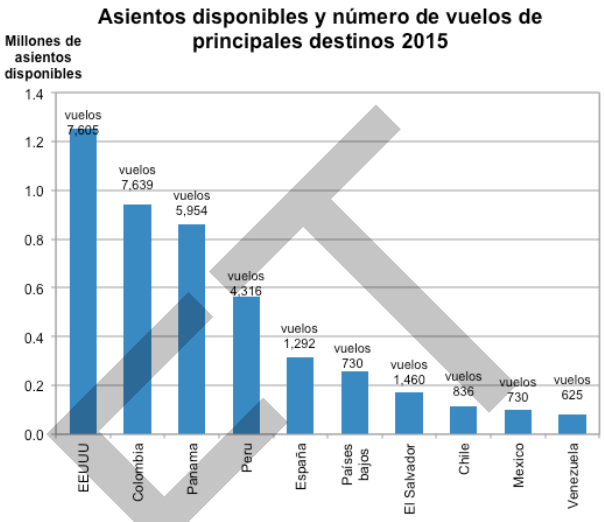
A total of 7.4 million passengers were transported to international and domestic destinations in 2015, slightly -1.2% less than the previous year, but over the past 5 years (2010-2015) the number of passengers rose an average of 2.5% a year. In terms of

available seating, in 2015, the available capacity on routes to/from and inside Ecuador amounted to 9.8 million seats. Considering the total number of passengers on direct and indirect flights (7.4 million), the occupancy rate was of approximately 75%.

Charts 4.6.4 – Evolution in the number of passengers, flights and available seats



Evolution in the number of passengers



Available seats and number of flights to principal destinations in 2015

Millions -Passengers on international flights
-Passengers on domestic flights

Millions of available seats ...flights U.S;...Spain; Netherlands.

Source: IATA

According to IATA records, in 2015, a total of 19 commercial airlines operated scheduled direct and indirect flights from/to and inside the country, with 69% of the traffic consisting of direct flights or ones with immediate connections. A breakdown of the traffic also shows that 52% consisted of international flights and 48% of domestic flights. The SAM Region accounts for 35% of the total traffic to/from Ecuador. In terms of destination countries, 16 countries were connected directly, with or without stops, to Ecuador via 47 international routes. In the SAM Region, Ecuador was connected directly without stops with 54% of its States: Argentina, Brazil, Chile, Colombia, Panama, Peru and Venezuela.

Charts 4.6.5 – Main countries connected with Ecuador

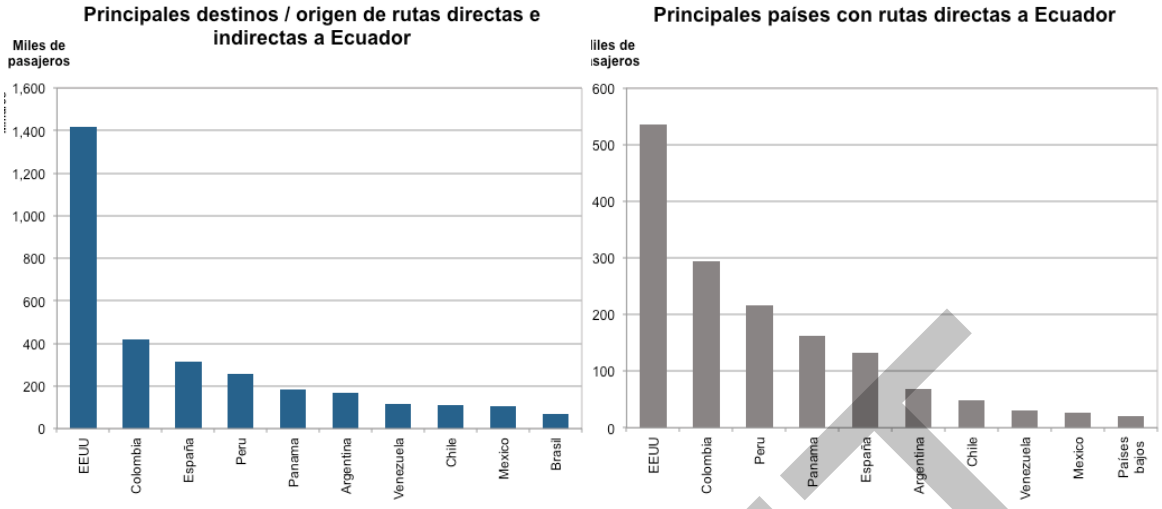
Main destinations/origins of direct and indirect routes to Ecuador

Thousands of passengers
U.S;….Spain;…Brazil

Main countries with direct routes to Ecuador

Thousands of passengers
U.S;….Spain;…Netherlands

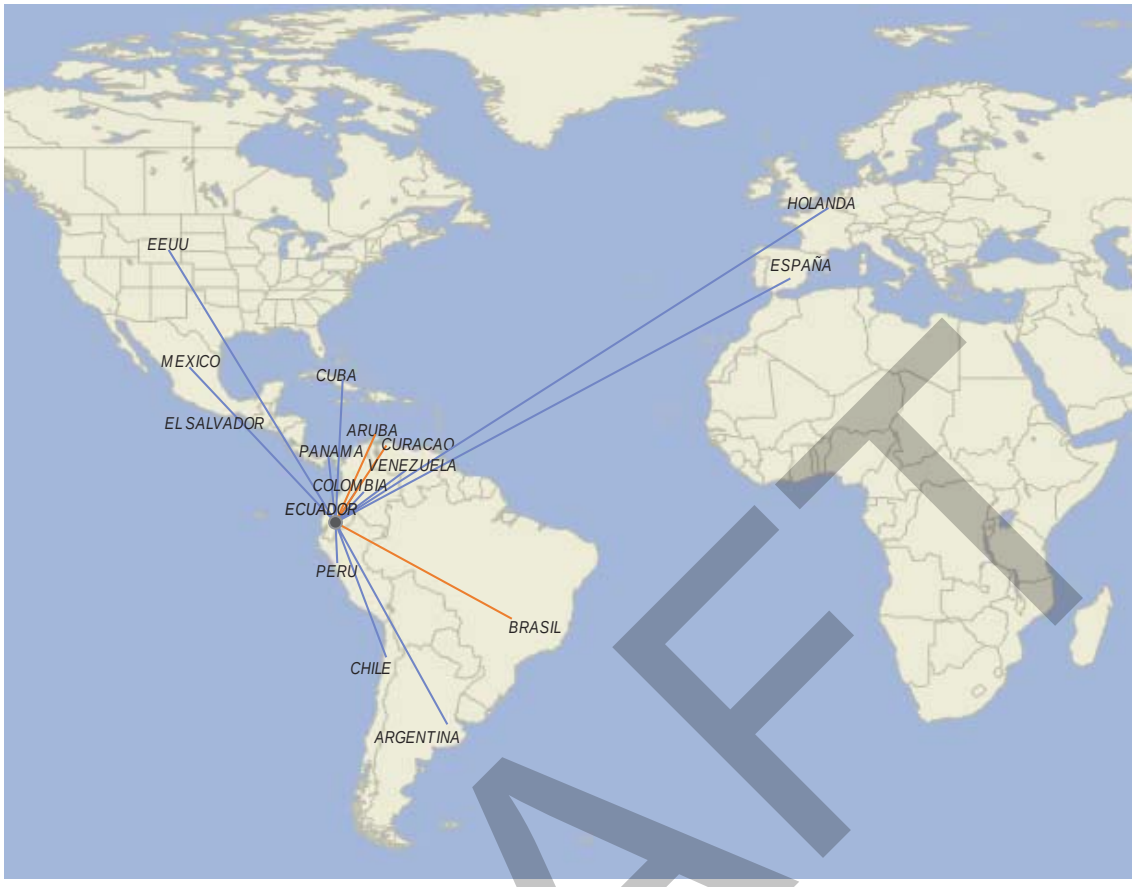
Source: IATA



Out of its total international air traffic (direct and indirect), the United States, Colombia and Spain have the greatest connectivity with Ecuador and were responsible for over 56% of the total passenger air traffic in 2015 (37.1%, 11.0% and 8.2%, respectively). In the case of direct routes only, the United States, Colombia and Peru account for the most important of these, which in 2015 added up to over 66% of the total traffic on direct routes (33.9%, 18.5% and 13.7%, respectively).

The major airlines with direct and indirect flights inside and outside Ecuador are Tame, with a share of almost one-third of the total passengers transported in 2015 (31.8%), followed in second place by Avianca with 19.5%, with LATAM Airlines Ecuador coming in third with 15.6%.

Figure 4.6.1 – Map of Ecuador's passenger air transport connectivity with the world



Source: IATA. Preparation: In-house

The map above shows all of Ecuador's direct routes with the world. In order to be able to operate those routes, airlines require operating licences between the points of origin and destination for direct flights with or without stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all of the direct non-stop routes by airport.

In the case of air cargo, according to IATA data, a total of 120 thousand tonnes of air cargo were transported (3.0% with respect to the previous year). It should be pointed out that those figures consider only the tonnes reported by airlines belonging to the CASS (Cargo Accounts Settlement Systems) programme. Its most important trading partner in terms of air transport is the United States, with a 90% share of that trade, followed by Spain with 5%.

Charts 4.6.6 – Main air cargo figures

Evolution of air cargo originating in Ecuador

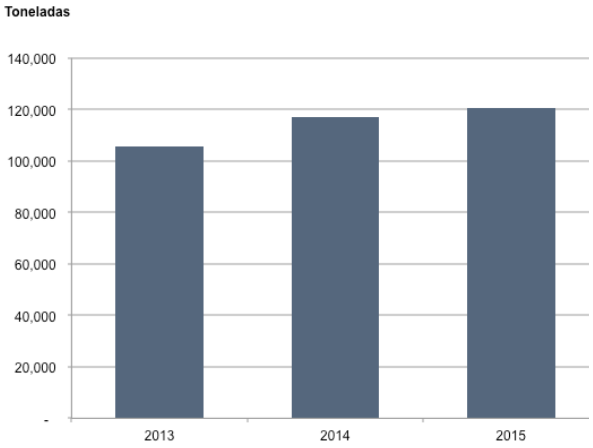
Tonnes

Main air cargo destinations in 2015

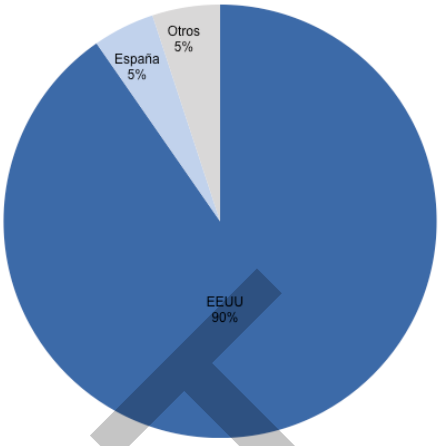
U.S. 90%; Spain 5%; Others 5%

Source: IATA

Evolución de carga aérea con origen Ecuador



Principales destinos de cárga aérea 2015



SWOT Analysis – Ecuador's Connectivity

Strengths
• Geographic location at the centre of the northern Pacific coast. • Social and economic stability. • Centres of tourist attraction. • Economic investment centres. • Biodiversity for the development of ecotourism. • Operation of both traditional and "low-cost" airlines • Infrastructure for air cargo carriers based on potential exports of perishable products. • Shared code agreements between national airlines and the Region's airlines • Agreement and treaties for air transport development (Canada). • Implementation of API technology for immigration, customs and State institutions
Opportunities
• Growth in the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Government policy allowing for greater openness to aviation. • Industry technology facilitating and simplifying passenger check-in and embarkation, with rapid immigration and security control processes. • Partnerships and agreements with the Region's airlines (code sharing) • Simplification of customs regulations. • Revision of ASAs (bilateral and multilateral). • Tourism agreements and integration with one or more of the Region's States to attract tourism from distant countries.
Weaknesses
• Increase in the tourism charge. • High passenger taxes and charges: Airfare tickets subject to the payment of VAT, airport tax, ecological tax, infrastructure tax, and security tax. • 12% VAT on fuel for domestic flights, with aircraft fuel subject to a 5% DGAC tax. • Reactive, rather than proactive, management in infrastructure development; the new Quito terminal has a low capacity in terms of the

potential demand, and access roads in poor condition.
- Slow airport check-in, security, customs, immigration and embarkation processes.
- Bilateral and multilateral air services agreements (ASA) continue to operate within an environment of regulatory protectionism and have not been brought into line with the new market conditions and characteristics of the current globalization process.
- The World Trade Organization (WTO) attributed an Air Liberalization Index of 10.06 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization) to Ecuador.

Threats

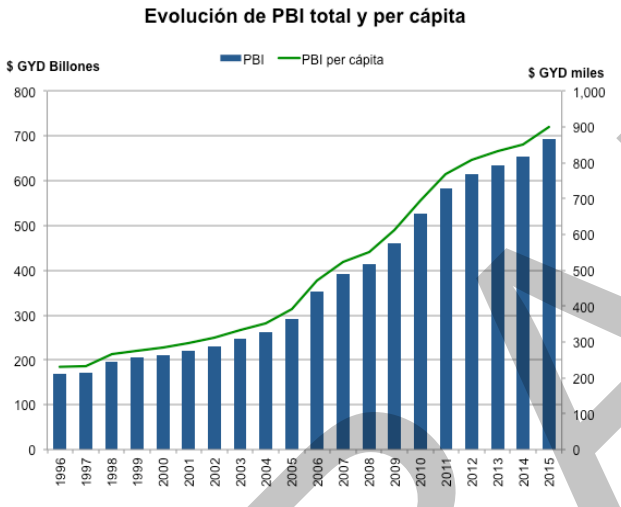
- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and/or natural disasters.

4.7. Guyana

General Description

Guyana is one of the smallest countries in the SAM Region with a population bordering on 767 thousand inhabitants and a GDP in 2015 of approximately US$ 3.2 billion. Its per capita GDP (US$4.1 thousand) places it in the World Bank category of "upper middle-income" economy. Its territory is very rich in natural resources, over 80% consisting of tropical jungle. According to the World Bank, approximately 90% of Guyana's forests are untouched, with one of the world's lowest deforestation rates, making it a great attraction for ecotourism.

Charts 4.7.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP
$ Billions of GYD -GDP -Per capita GDP **$ thousands of GYD**
Source: IMF

Main Macroeconomic Indicators

PBI (2015)	3.2	US$ billiones
Crecimiento PBI 2010-2015	4.5%	Promedio anual
PBI per cápita (2015)	4,125	US$ per cápita
Población (2015)	767	Miles
Tasa de desempleo (2014)	11.1%	
Inflación (2015)	0.9%	
Comercio internacional (201	121%	% de PBI
Gasto en turismo (2014)	77	US$ millones
Viajes y turismo (% de PBI)	3.0%	Reporte WEF 2015

GDP (2015) US$ billion; GDP Growth 2010-2015 Annual average; Per capita GDP (2015) US$ per capita; Population (2015) thousand; Unemployment rate (2014); Inflation (2015); International trade (201?) % of GDP; Spending on tourism (2014) US$ million; Travel and tourism (% of GDP) WEF 2015 Report

Source: IMF, WB and WEF. Latest available data

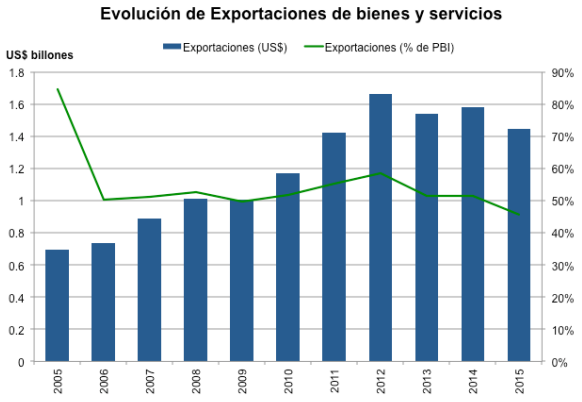
Agriculture is Guyana's most important economic activity and its main agricultural exports are sugar, rice, cacao and coffee. Bauxite and gold mining are another important activity. The country also possesses a sizeable supply of timber trees and exports large quantities of fresh water shrimp. According to the World Bank, the country's agricultural, fishery, forestry and mining sectors accounted for 28% of its total GDP in 2015.

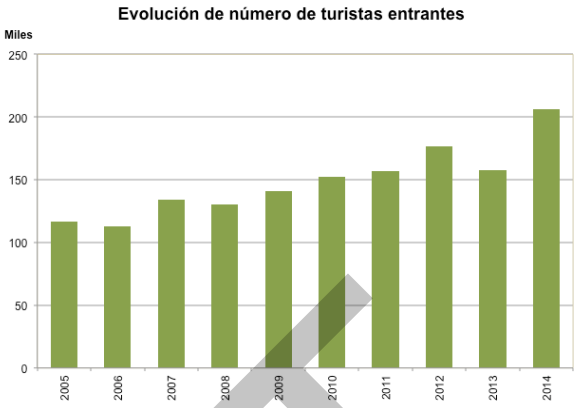
In 2015 Guyana exported a total of US$1.4 billion (46% of its total GDP), of which bauxite, sugar, rice, gold and lumber were responsible for 83%. Its international trade (exports + imports) represented 121% of its GDP, reflecting a significant level of imports. At the same time, spending on tourism in 2014 amounted to US$ 77 million, with inbound tourists reaching a figure of 206 thousand.

Charts 4.7.2 – Exports and number of tourists

Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)

Evolution in the number of inbound tourists
Thousands





Source: WB. The World Bank does not record information about outbound tourists.

Air Connectivity

Charts 4.7.3 – Main aviation industry data

Operational data – Aviation Industry in 2015

Número de aeropuertos internacionales	2
Aerolíneas con rutas directas	9
Número de rutas internacionales*	19
Número de países destino directos	16
Número de pasajeros internacionales	493 miles
Número de vuelos	6.8 mil
Región SAM (% de tráfico internacional)	8%

Number of international airports; Airlines with direct routes; Number of international routes*; Number of countries of direct destination; Number of international passengers 493 thousand; Number of flights 6.8 thousand; SAM Region (% of international traffic)
* Includes direct routes with or without stops

Source: IATA

Main airlines with flights inside and to/from Guyana

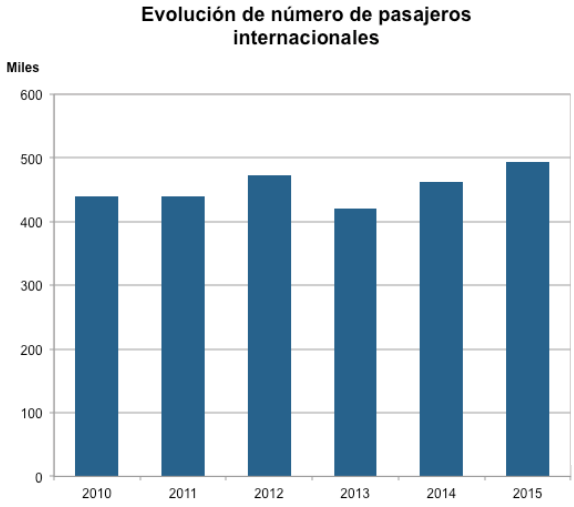
Aerolínea	Pasajeros 2015	% de part.
Caribbean Airlines	311,278	63.1%
Fly Jamaica Airways	62,029	12.6%
LIAT	41,588	8.4%
COPA	25,714	5.2%
Insel Air International B.V.	18,615	3.8%
Otros	33,820	6.9%
Total	**493,054**	**100.0%**

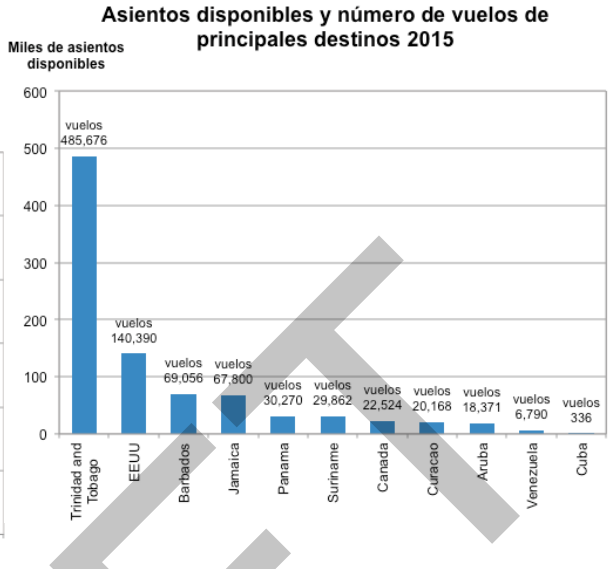
Airline	**Passengers in 201?**	**% share**
...Others		

Guyana has a total of 2 operating airports for international flights. Of these, Cheddi Jagan International Airport (GEO) handled most of the international air traffic (91%) while Ogle Airport (OGL) was responsible for the remaining 9% in 2015. It should be added that today Ogle Airport is in charge of concentrating the domestic traffic.

In 2015, a total of 493 thousand passengers were transported to international destinations, up 6.9% over the previous year. The number of passengers has risen an average of 2.3% per annum over the past 5 years (2010-2015). Insofar as available seating is concerned, in 2015, the direct and indirect routes to Guyana had an available capacity of 891 thousand seats. Considering the total number of passengers transported in 2015 (493 thousand), the occupancy rate was about 55%.

Charts 4.7.4 – Evolution of passengers, flights and available seats





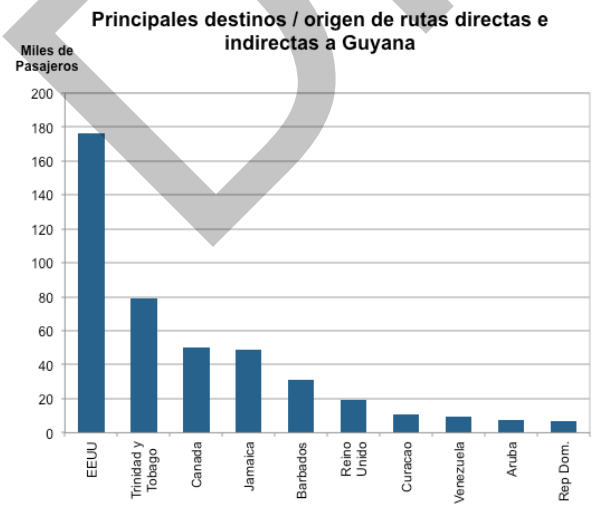
Evolution in the number of international passengers
Thousands

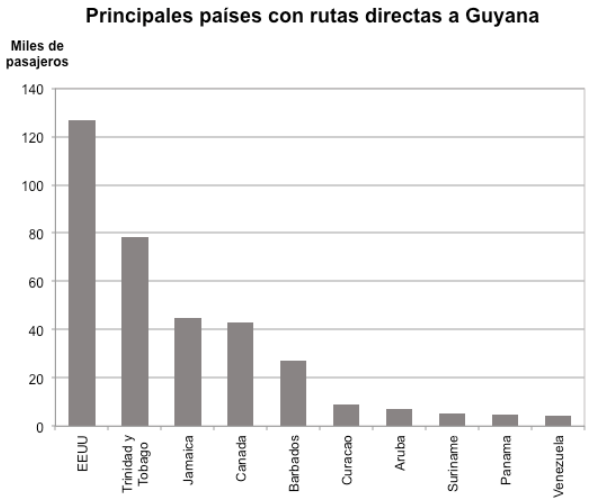
Available seats and number of flights to the main destinations in 2015
Thousands of available seats Flights….flights
…U.S….

Source: IATA

According to IATA records, in 2015, a total of 9 commercial airlines operated scheduled direct and indirect routes from/to and inside the country, with 72% of the traffic corresponding to direct routes or those with immediate connections. Traffic with the SAM Region accounted for 8% of international traffic to/from Guyana. In terms of countries of destination, Guyana was directly connected, with or without stops, with 16 countries over 19 international routes. In the SAM Region, Guyana had direct non-stop connections with 23% of the States: Panama, Suriname and Venezuela (the latter ceased operating in 2016).

Charts 4.7.5 – Main countries connected with Guyana





Main destinations/origins of direct and indirect routes to Guyana
Thousands of passengers

Main countries with direct routes to Guyana
Thousands of passengers

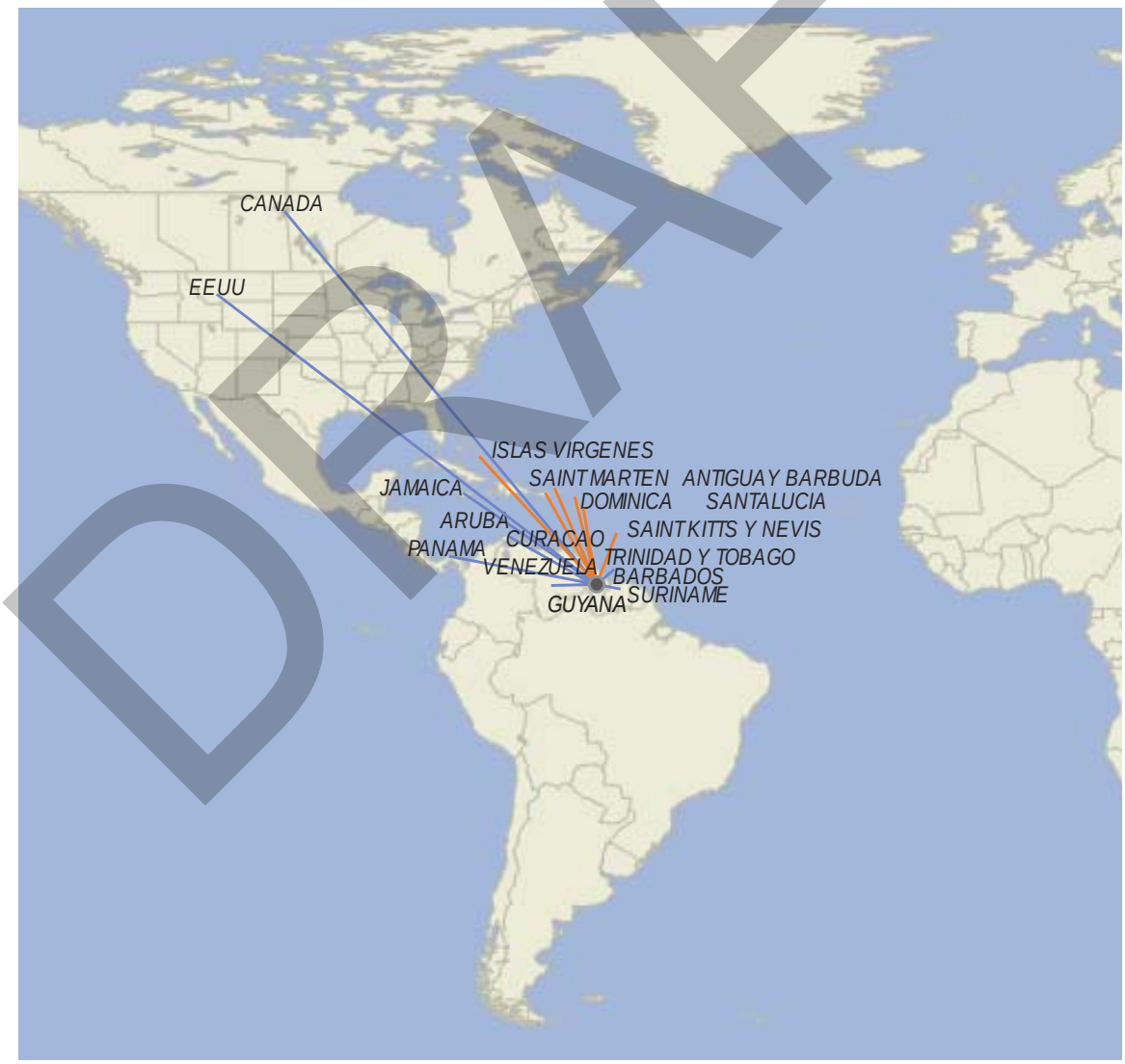
U.S.; Trinidad & Tobago;...United Kingdom;...Dom. Rep U.S. ; Trinidad & Tobago ....

Source: IATA

Out of its total international (direct and indirect) air traffic, Guyana enjoys the greatest connectivity with Trinidad and Tobago, Canada, and Jamaica, which accounted for over 56% of its passenger air traffic in 2015 (25.0%, 15.9% and 15.4% of the total, respectively). Considering the direct routes only, Trinidad and Tobago continues to lead, followed by Jamaica and then Canada, which together were responsible for more than 73% of the total traffic over direct routes in 2015 (34.5%, 19.8% and 18.9%, respectively).

The main airlines with direct and indirect flights inside and outside Guyana are Caribbean Airlines, which in 2015 accounted for over 60% of the total passengers transported (63.1%), followed in second place by Fly Jamaica Airways with 12.6% and in third by LIAT with 8.4%.

Figure 4.7.1 – Map of Guyana's passenger air transport connectivity with the world



Source: IATA. Preparation: In-house

The map above shows all of Guyana's direct routes with the world. In order to be able to operate those routes, airlines require licenses to fly between the points of origin and destination for direct flights with or without stops. The direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all of the country's direct non-stop routes by airport.

Air Cargo

According to the World Bank, over 90% of its commercial cargo is transported to/from Guyana by sea and overland. Inasmuch as air cargo accounts for very little, no relevant figures are available. Furthermore, the country is not a participant in IATA's CASS (Cargo Accounts Settlement Systems) programme.

Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, Guyana occupied the 104th position in terms of the competitiveness of its travel and tourism industry within the 141 countries analyzed in 2015. A look at some of the individual indicators reveals that Guyana is relatively well positioned in terms of the openness of its visa requirements and bilateral service agreements, quality of its domestic transport infrastructure, and airfare ticket taxes and airport charges. Even so, it still has room to improve the quality of its air transport and tourist service infrastructure and to enhance the government's prioritization of the industry and the marketing of its tourist attractions.

Table 4.7.1 – Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 104 de 141**
Indicadores especificos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	4.6	104
Efectividad de marketing para atraer turistas	1-7	4.1	94
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turistica	1-7	2.2	135
Calidad de la infraestructura aérea	1-7	3.8	97
Calidad de la red doméstica de transporte	1-7	4.6	56
Requerimiento de visas	0-100	76.0	6
Apertura de acuerdos bilaterales ASA	0-38	15.1	26
Impuestos a boletos y cargos aeroportuarios	0-100	88.3	24

	Score range	Score	Ranking
Travel and tourism competitiveness index			
Specific indicators (score range)			
Prioritization by the government of the industry			
Effectiveness of marketing and branding to attract tourists			
Number of regional trade agreements in force			
Tourist service infrastructure quality			
Air transport infrastructure quality			
Quality of the domestic transport network			
Visa requirements			
Openness of bilateral service agreements (ASAs)			
Airfare ticket taxes and airport charges			

Source: WEF

SWOT Analysis –Guyana's Connectivity

Strengths
• Geographic location the State hopes to take advantage of to interconnect the region with countries in the rest of the world. • Centres of tourist attraction that contribute to economic growth, job creation and the development of connectivity. • The region's significant biodiversity is an important asset for the development of ecotourism. • Favourable environment for investments. • First nation in the region to ratify the Trade Facilitation Agreement (TFA), qualifying it to be the 53rd member of the WTO. • It is the policy of the State to support the development of aviation, increase the country's connectivity and improve the situation of its flights to/from Brazil, Suriname, Venezuela and Guyana. • Participation in Unasur and Celac has altered the State's interests and initiatives and reinforced the need to become part of the economies of the SAM Region. • In broadening the capacity of the Civil Aviation Authority, plans for airport infrastructure will be implemented, thereby reinforcing the programme for upgrading the airports in the country's interior.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • API (Advanced Passenger Information) technology for immigration processes using secure, encrypted electronic transmissions with a greater capacity for housing passenger data. • Industry technology that facilitates and simplifies passenger check-in and embarkation, with rapid immigration and security control processes. • Partnerships and agreements with States in the SAM Region for the development of traffic links. • Partnerships and agreements between airlines in the SAM Region. • Agreements and integration with one or more of the region's States for the attraction of tourism from distant countries.
Weaknesses
• Reactive, more than proactive, management in the development of airport infrastructure and master plans. • Airport check-in, security, customs, immigration and embarkation require new technology. • SAM Region requirement for tourist visas limits the development of tourism (except in the cases of Brazil and Argentina) • Application of VAT to airfare tickets, international airport charge, and domestic and international facilitation tax.

- Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism and have not been brought into line with the new market conditions and the characteristics of the current globalization process.
- Most exports are shipped by sea.

Threats

- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and natural disasters.

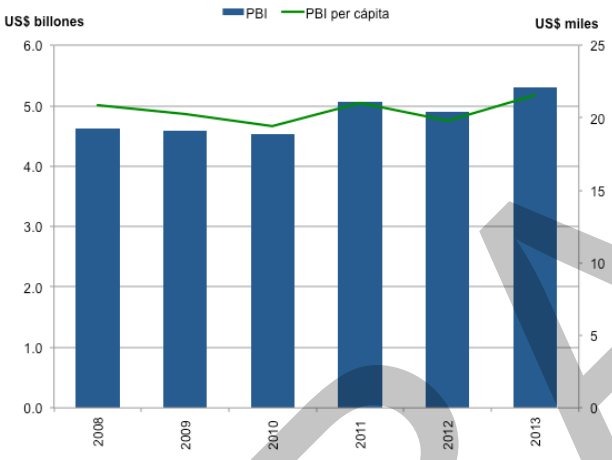
4.8. French Guiana

General Description

The territory of French Guiana is a region and political department of France. Although geographically situated in South America, it belongs to the European Union as an ultra-peripheral region. A small territory with a population estimated at 276 thousand people, according to the United Nations, it has a total GDP of $5.3 billion, one of the smallest in the SAM Region, but its per capita GDP, at US$ 21.5 thousand, is one of the highest, placing it close to the World Bank's classified "high-income" economies[19]. It has been estimated that over 98% of its total area consists of forestland, giving it a great potential for ecotourism in the region.

Charts 4.8.1 – Main macroeconomic indicators and GDP evolution

Evolución de PBI total y per cápita



Evolution of total and per capita GDP

US$ billions -GDP -Per capita GDP **US$ thousands**

Main Macroeconomic Indicators

PBI	5.3	US$ billones
PBI per cápita	21,527	US$
Población	276	mil
Tasa de desempleo	22.7%	estimado
Turistas entrantes	185	mil

GDP US$ billion; Per capita GDP US$; Population 276 thousand; Unemployment rate -estimated; Inbound tourists 185 thousand
Source: INSEE, UNdata

Note: Access to individualized and official information about French Guiana is limited, given its status of French territory and political department. The World Bank database has no individual data for French Guiana.

Its economy depends primarily on fishing, mining and forestry. It also has a space station (Kourou Space Centre) that contributes almost one-quarter of the nation's GDP and employs over 1,500 people.

Air connectivity

Charts 4.8.2 – Main aviation industry data

Operational data – Aviation Industry in 2015

Número de aeropuertos internacionales	1
Aerolíneas con rutas directas*	7
Número de rutas internacionales	7
Número de países destino directos	7
Número de pasajeros internacionales	387 miles
Número de vuelos	2.9 mil
Región SAM (% de tráfico internacional)	3%

Number of international airports; Airlines with direct routes*; Number of international routes; Number of

Main airlines with flights inside and to/from French Guiana

Airline Passengers in 201? % share

.... Others

Aerolínea	Pasajeros 2015	% de part.
Air France	253,778	65.6%
Air Caraibes	103,052	26.6%
CAIRE dba Air Antilles Express	11,398	2.9%
Surinam Airways Ltd	7,996	2.1%
Azul Linhas Aereas Brasileiras	6,186	1.6%
Otros	4,543	1.2%
Total	**386,953**	**100.0%**

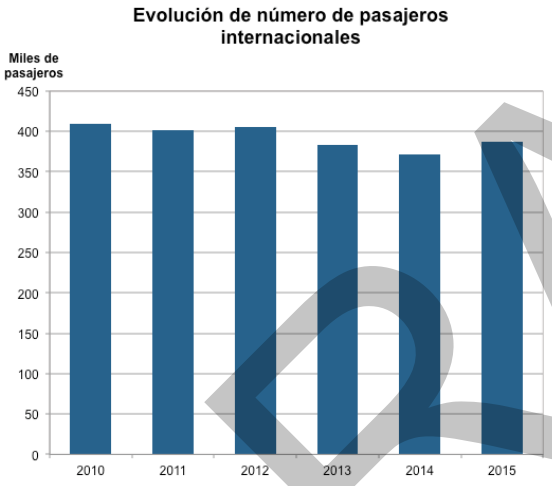
[19] The World Bank does not include French Guiana in its ranking by income level.

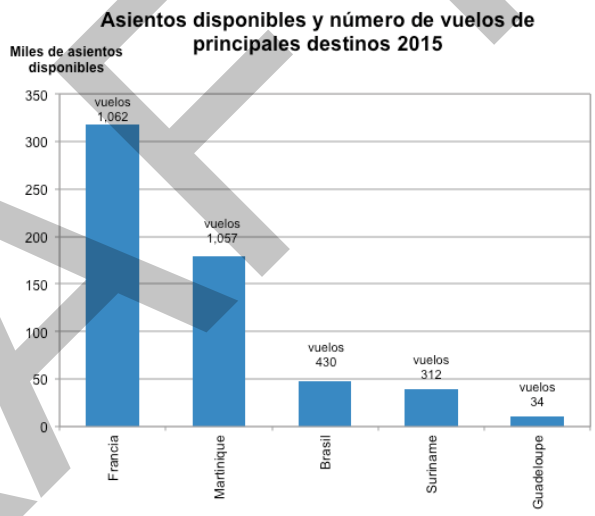
countries of direct destination; Number of international passengers 387 thousand; Number of flights 2.9 thousand; SAM Region (% of international traffic)
* Includes routes with or without stops

Source: IATA

French Guiana has 1 operating airport for international flights, that of Cayenne-Rochambeau located in the capital city of Cayenne. A total of 387 thousand passengers were transported in 2015 between French Guiana and domestic and international destinations, amounting to 4.3% more than the previous year. The number of passengers has declined slightly over the past 5 years (2010-2015) by an average of -1.1% per annum. Insofar as available seating is concerned, routes flown to/from French Guiana in 2015 had 596 thousand seats available. Considering the total number of passengers arriving in or departing from French Guiana directly or indirectly (387 thousand), the occupancy rate was of approximately 65%.

Charts 4.8.3 – Evolution in number of passengers, flights and available seats





Evolution in number of international passengers

Thousands of passengers

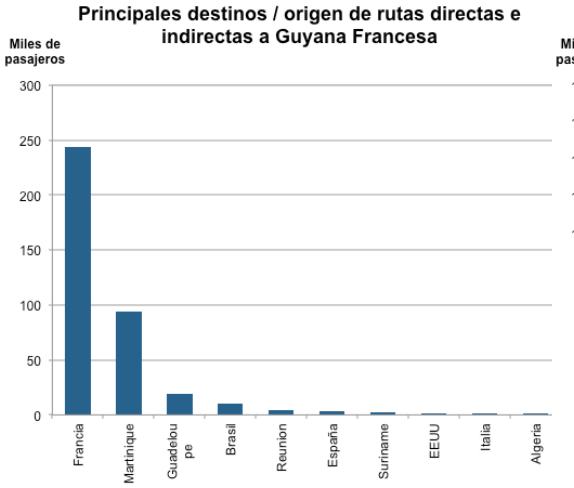
Available seats and number of flights to the principal destinations in 2015

Thousands of available seats flights France;...Brazil

Source: IATA

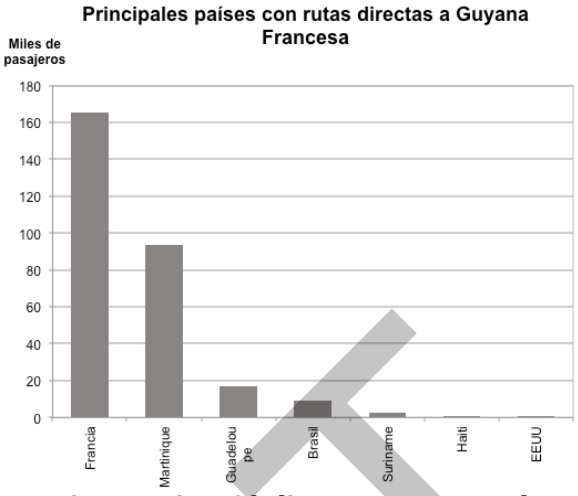
IATA records show that in 2015 a total of 7 commercial airlines operated direct and indirect routes from/to the territory, of which 75% of the traffic consisted of direct routes or ones with immediate connections. Traffic to the SAM Region accounted for 3% of the total international traffic to/from French Guiana. In terms of countries of destination, 7 countries were directly connected, with or without stops, with French Guiana over 7 international routes. In the SAM Region, French Guiana was connected directly non-stop with 15% of the States: Suriname and Brazil.

Charts 4.8.4 – Main countries connected with French Guiana



Main destinations/origins of direct and indirect routes to French Guiana

Thousands of passengers France;...Brazil;...Spain;...U.S.; Italy



Main countries with direct routes to French Guiana

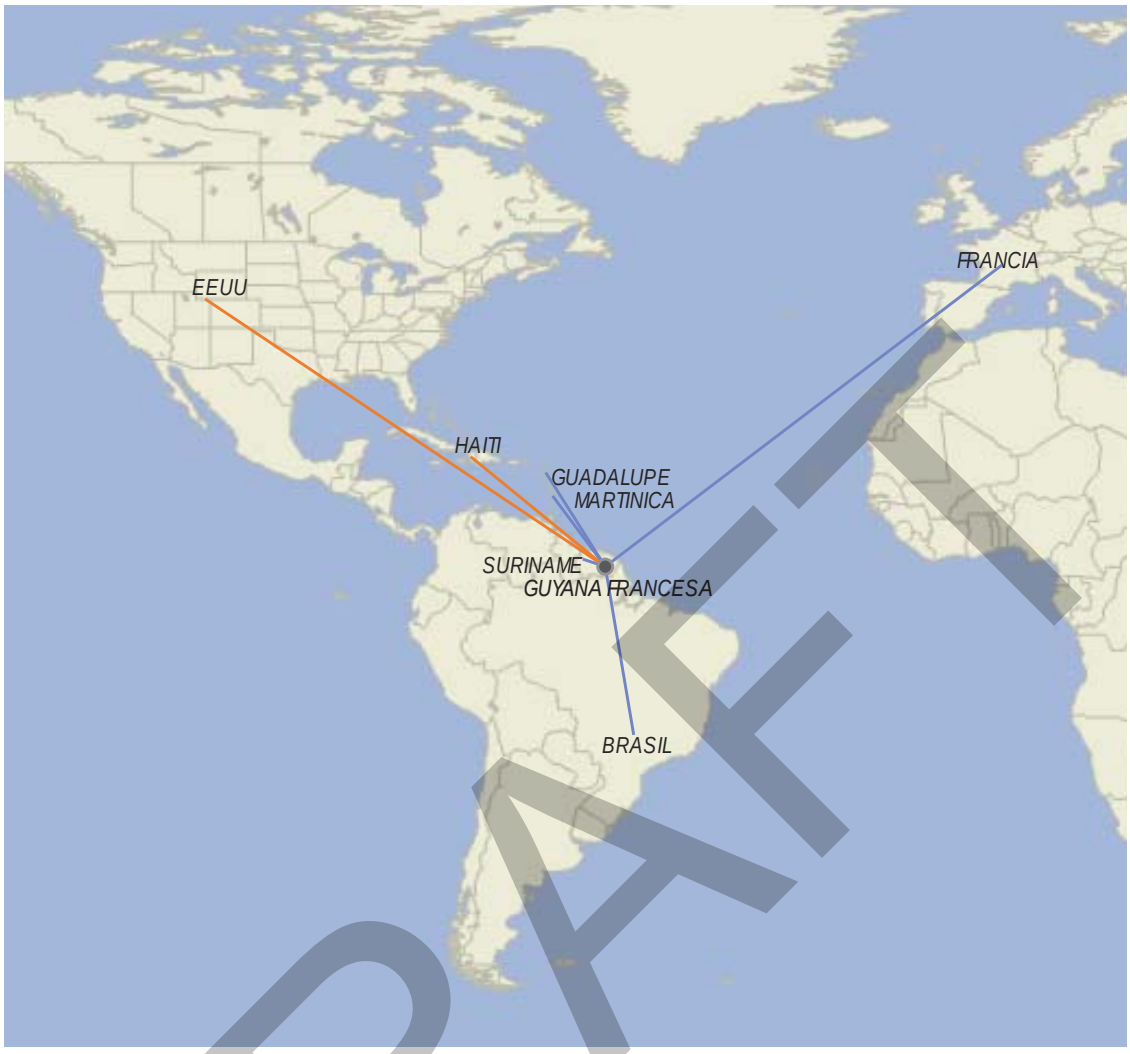
Thousands of passengers France;...Brazil;...U.S.

Source: IATA

Out of its total (direct and indirect) international air traffic, Martinique, Guadeloupe and Brazil are the countries with the most connectivity with French Guiana and accounted in 2015 for over 86% of its total passenger air traffic (65.6%, 13.6% and 7.1% of the total, respectively). If we consider direct routes only, the same countries are responsible for the main routes and together represented 97% of the total traffic on direct routes in 2015 (76.2%, 13,7% and 7.3%, respectively).

The main airlines with direct and indirect flights inside and to/from French Guiana are Air France with a share of over one-half of the total passengers transported in 2015 (65.6%), followed in second place by Air Caraibes with 26.6% and third by CAIRE dba Air Antilles Express with 2.9%.

Figure 4.8.1 – Map of French Guiana's passenger air connectivity with the world



Source: IATA. Preparation: In-house

The map above shows all of French Guiana's routes with the world. In order to be able to operate those routes, airlines require operating licenses to fly between the points of origin and destination for direct flights with or without stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all of the direct non-stop routes by airport.

Air Cargo

Very little cargo is transported by air to/from French Guiana and for that reason no significant figures are available. Most commercial cargo is shipped by sea. Furthermore, as a French territory, it does not report individualized data within the SAM Region and does not belong to IATA's CASS programme.

SWOT Analysis – French Guiana's Connectivity

Strengths
• Geographic location on the Atlantic coast in northern South America • Close relationship with the Government of Brazil in developing trade and connectivity. • Centres of tourist attraction that contribute to economic growth and the creation of employment. • Biodiversity that favours ecotourism. • The main airports are located in Saint-Laurent du Maroni and Cayenne, where the heaviest passenger traffic and tourism are concentrated.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • API (Advanced Passenger Information) technology for immigration processes, with secure, encrypted electronic transmissions and a larger capacity to house passenger data. • Industry technology that facilitates and simplifies passenger check-in and embarkation, with rapid immigration and security control processes. • Partnerships and agreements with the region's airlines. • Signing of new bilateral and multilateral Transport Services Agreements (ASAs). • Shared code partnerships and agreements within the region. • Agreements and integration with one or more of the region's States to attract tourism from distant countries.
Weaknesses
• Reactive, rather than proactive, management in the development of infrastructure. • Passenger taxes: Civil Aviation Tax, Solidarity Tax, and airport taxes (2). • Airport check-in, security, customs, immigration and embarkation processes. • Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism and have not been brought into line with the new market conditions and the characteristics of the current globalization process.

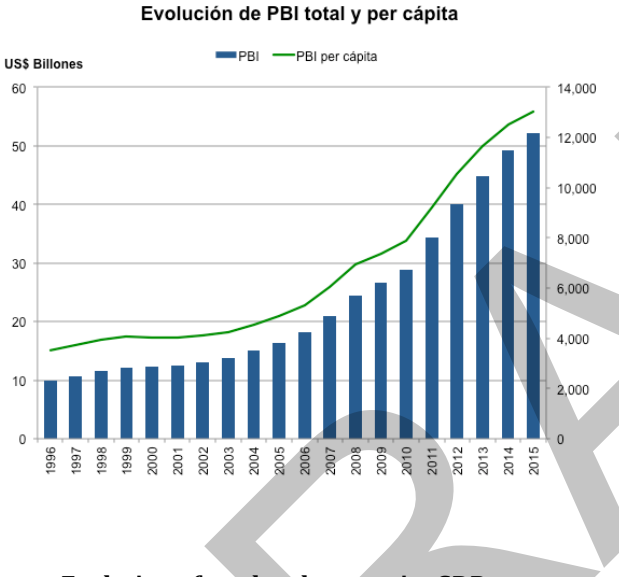
Threats
• Unforeseeable terrorist acts have a negative impact on the security of the industry. • Global economic crisis or recession. • Communicable diseases. • Fluctuations in oil prices raise industry costs.

4.9. Panama

General Description

Panama is one of the most prosperous economies in the SAM Region and in recent years its economic growth has been prominent at the global level, with an average annual GDP growth rate for the period 2001-2013 of 7.2% and annual growth rates of 6.2% and 5.8% in 2014 and 2015, respectively. With a population of 4 million and a total GDP of US$ 52 billion, its per capita GDP of US$ 13.0 thousand places it in the World Bank classification among the "middle higher-income" economies. It also possesses a total of 5 recognized UNESCO World Heritage sites (3 natural and 2 cultural).

Charts 4.9.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP
US$ billions -GDP -Per capita GDP

Main Macroeconomic Indicators

PBI (2015)	52.1	US$ billiones
Crecimiento PBI 2010-2015	7.9%	Promedio anual
PBI per cápita (2015)	13,013	US$ per cápita
Población (2015)	3.9	Millones
Tasa de desempleo (2014)	4.3%	
Inflación (2015)	2.6%	
Comercio internacional (2015)	115%	% de PBI
Gasto en turismo (2014)	1.1	US$ billones
Viajes y turismo (% de PBI)	5.9%	Reporte WEF 2015

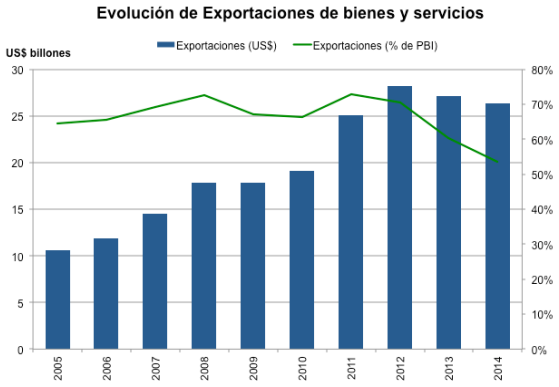
GDP (2015) US$ billion; GDP growth 2010-2015 Annual average; Per capita GDP (2015) US$ per capita; Population (2015) 3.9 million; Unemployment rate (2014); Inflation (2015); International trade (2015) 115 % of GDP; Spending on tourism (2014) 1.1 US$ billion; Travel and tourism (% of GDP) WEF 2015 Report

Source: IMF, WB and WEF. Latest available data

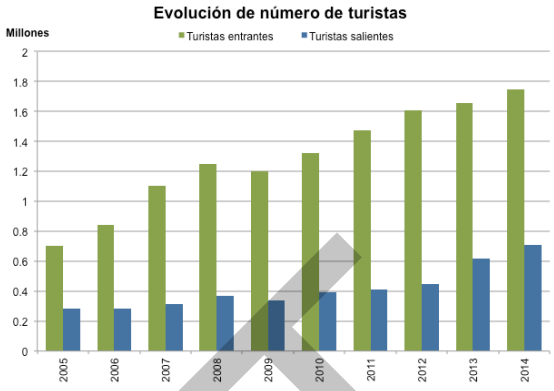
The country has been able to take advantage of its strategic geographic location to position itself as one of the world's most important hubs and to offer a significant platform of maritime, commercial, real estate, financial and other services. Tourism is one of the country's foremost economic activities, not only because of the people interested in becoming acquainted specifically with Panama and its beaches and tourist attractions, but also because of the business travellers who visit the territory and in-transit passengers who decide to make a stop to see the country.

World Bank information reveals that in 2015, Panama exported a total of US$26 billion, equivalent to 54% of its GDP. Furthermore, its international trade (exports + imports) represents 115% of its PBI, showing the importance of its level of imports. A total of US$ 1 billion was spent on tourism in 2014, for its part. The number of inbound tourists reached 1.7 million, or 5.2% more than the previous year, while outbound tourists amounted to 706 thousand (an increase of 14.1% over the figure for 2013).

Charts 4.9.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)
Source: WB



Evolution in the number of tourists
Millions -Inbound tourists -Outbound tourists

Air Connectivity

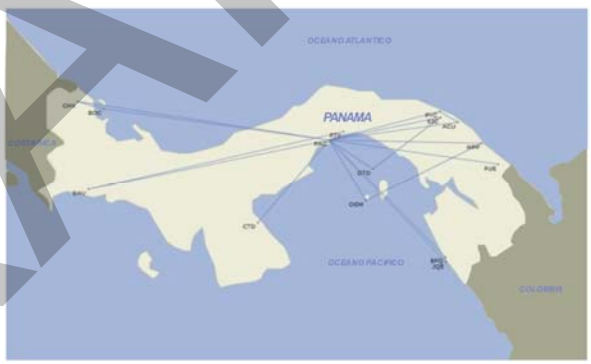
Charts 4.8.3 – Main aviation industry data

Operational Data – Aviation Industry in 2015

Número de aeropuertos	18
Aerolíneas con rutas directas (Set 2016)	26
Número de rutas internacionales (2016)*	85
Número de países destino directos	37
Número de pasajeros	13.4 millones
Embarcados / desembarcados	4.3 millones
En tránsito	9.1 millones
Número de vuelos	140.8 mil
Región SAM (% de tráfico internacional)	42%

Number of airports; Airlines with direct routes (Sept 2016); Number of international routes (2016)*; Number of countries of direct destination; Number of passengers 13.4 million: Embarked/disembarked 4.3 million; In-transit 9.1 million; Number of flights 140.8 thousand; SAM Region (% of international traffic)
* Includes direct routes with or without stops

Map of Panama's domestic connectivity



Main airlines with flights inside and to/from Panama

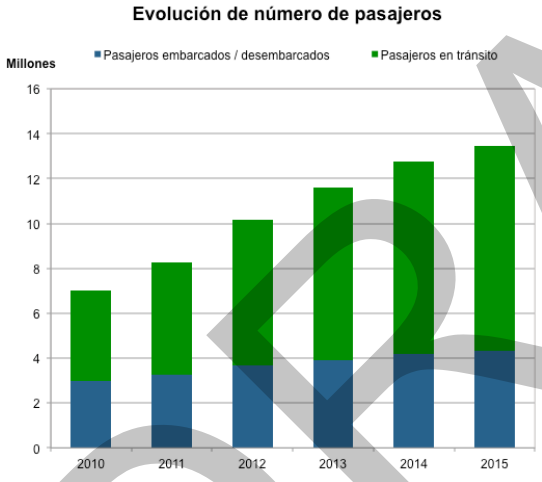
Aerolínea	Pasajeros 2015	% de part.
COPA	9,500,588	70.7%
Aero República	1,654,627	12.3%
United Airlines	383,497	2.9%
American Airlines	279,470	2.1%
KLM	225,921	1.7%
Otros	1,390,570	10.4%
Total	**13,434,673**	**100.0%**

Airline **Passengers in 2015** **% share**
…Others
Source: Tocumen International Airport

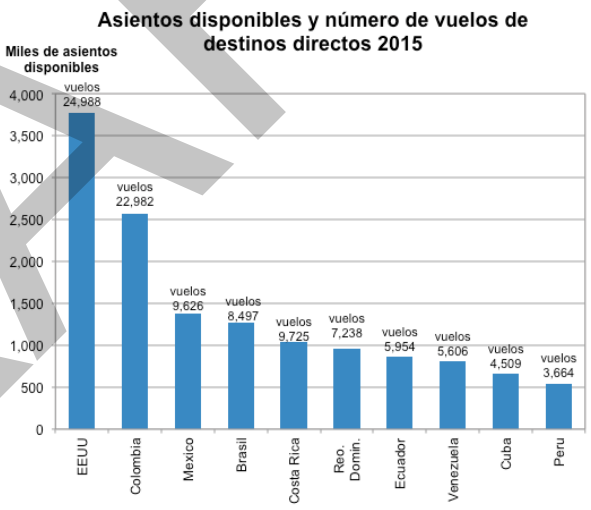
Panama has 18 operating airports, of which 6 are international, according to ICAO. Tocumen International (PTY) in Panama City concentrates the greater part of the passenger traffic, with a 91% share of total passengers embarked and disembarked in 2015.

According to data supplied by Tocumen International Airport, the airport handled total passenger airline traffic of 13.4 million people. Of these, 32% corresponded in 2015 to passengers with a flight origin or final destination in Panama, amounting to 4.3 million, or 4.3% more than the previous year. This number has risen an average of 7.9% annually over the past 5 years (2010-2015). It should be stressed that Panama is an important hub in the SAM Region and that its in-transit traffic is greater than the total number of passengers embarking/disembarking from or to its territory. In 2015, passengers in-transit through Panama totalled 9.1 million (68% of the total traffic), showing a dynamic growth of 5.5% over the previous year, and a cumulative growth of 17.7% over the 2010-2015 period. Insofar as available seats are concerned, according to IATA, the routes flown in 2015 to/from, in-transit or inside Panama showed an available capacity of 18.2 million seats. Considering the total number of passengers embarked/disembarked in the country and in-transit (13.4 million), the occupancy rate was of approximately 74%.

Charts 4.9.4 – Evolution in the number of passengers, flights and available seats



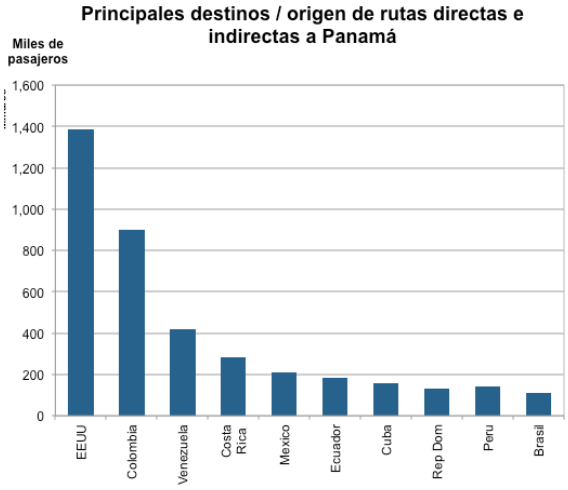
Evolution in the number of passengers
Millions -Passengers embarked/disembarked -Passengers in-transit



Available seats and number of flights to direct destinations in 2015
Thousands of available seats flights
U.S;….Brazil;…Dom.Rep.

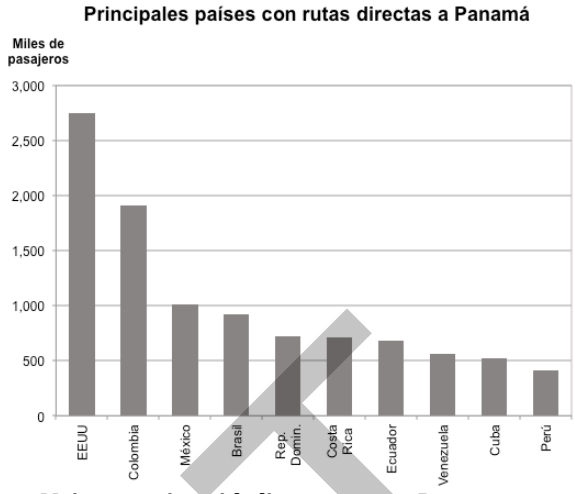
Source: IATA, Tocumen International Airport

Charts 4.9.5 – Main countries connected with Panama



Main destinations/origins of direct and indirect routes to Panama

Thousands of passengers U.S;….Dom.Rep.;…Brazil



Main countries with direct routes to Panama

Thousands of passengers U.S;. …Brazil; Dom.Rep; …Peru

Source: IATA, Tocumen International Airport

IATA records show that in 2015, a total of 26 airlines operated regular direct and indirect routes from/to and inside the country. According to Tocumen International Airport, less than 1% of the total traffic consisted of domestic flights. Traffic to the SAM Region represents 42% of the total international traffic to/from Panama. Insofar as countries of destination are concerned, 37 are connected directly with or without stops with Panama over 85 international routes (the route to Turkey was opened in 2016). In the SAM Region, Panama was connected directly and non-stop with 85% of the States: Argentina, Brazil, Bolivia, Chile, Colombia, Ecuador, Guyana, Panama, Paraguay, Peru, Uruguay and Venezuela.

Furthermore, according to IATA, out of the total international air traffic originating or ending in Panama (direct and indirect), the United States, Colombia and Venezuela are the countries with the most connectivity with Panama and accounted in 2015 for more than 51% of the total air passenger traffic (25.9%, 17.7% and 8.2%, respectively). A look at only the direct routes (including in-transit passengers) reveals that, according to Tocumen International Airport, the United States, Colombia and Mexico represent the most important routes and together accounted for more than 42% of the total traffic over the most important routes in 2015 (20.4%, 14.2% and 7.5%, respectively).

Data supplied by Tocumen International Airport reveals that the main airlines with direct flights in and outside Panama (including in-transit passengers) are Copa, with a share of almost three-quarters of the total passengers transported in 2015 (70.7%), followed in second place by Aero República with 12.3% and United Airlines in third with 2.9%.

Figure 4.9.1 – Map of Panama's passenger air transport connectivity with the world

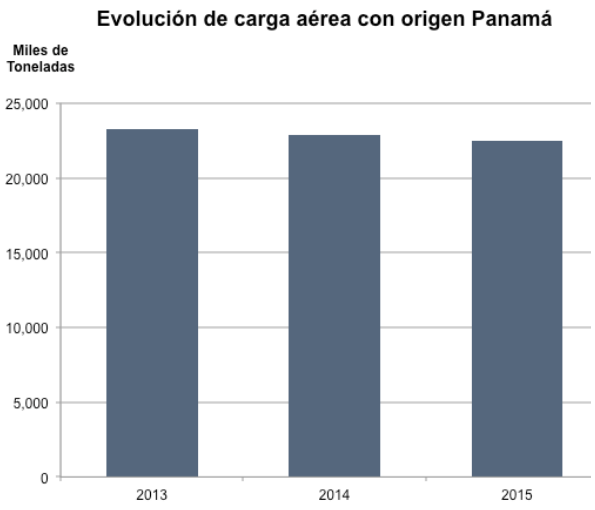
Source: IATA. Preparation: In-house

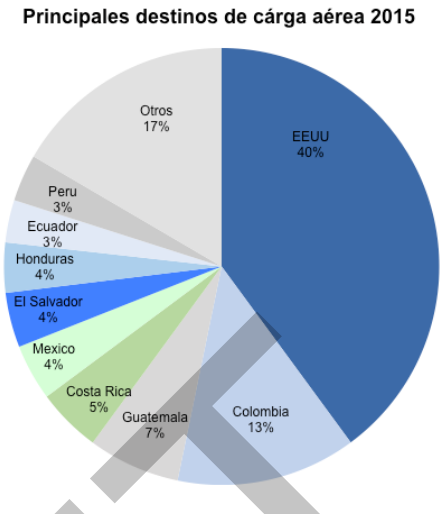
The map above shows all of Panama's direct routes with the world. In order to be able to operate those routes, airlines require operating licenses to fly between the points of origin and destination for direct flights with and without stops. Direct non-stop flights are shown in blue and direct flights with stops, in red. Annex A lists the total direct non-stop flights by airport.

Cargo

According to IATA, a total of 22 thousand tonnes of cargo were transported by air. It should be explained that these figures consider only the tonnes reported by airlines belonging to the CASS (Cargo Accounts Settlement Systems) programme. Its most important trading partner in terms of air cargo is the United States with a share of 40%, followed by Colombia with 13% and Guatemala in third place with 7%. Furthermore, according to Tocumen International Airport, 74% of the total cargo is flown by cargo companies and 23% by commercial airlines.

Charts 4.9.6 – Main air cargo figures





Evolution of air cargo originating in Panama
Thousands of tonnes
Source: IATA

Main air cargo destinations in 2015
US. 40%; ...Others 17%

Competitiveness of the Industry

According to the World Economic Forum ranking, Panama occupies the 34th position--the SAM Region State with the second highest global ranking—out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries in 2015. A look at some individual indicators reveals that the country is well-positioned as to the quality of its air transport and tourism infrastructure and the marketing of its tourist attractions. Even so, there is still room for improvement in other areas like the quality of its domestic transport system, the number of regional agreements in effect and the level of its airport costs in comparison with those of the rest of the world's countries.

Table 4.10.1 –Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 34 de 141**
Indicadores especificos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	5.8	39
Efectividad de marketing para atraer turistas	1-7	5.5	18
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turistica	1-7	5.5	27
Calidad de la infraestructura aérea	1-7	6.1	7
Calidad de la red doméstica de transporte	1-7	4.4	71
Requerimiento de visas	0-100	32.0	46
Apertura de acuerdos bilaterales ASA	0-38	19.3	15
Impuestos a boletos y cargos aeroportuarios	0-100	77.9	75

Score range **Score** **Ranking**

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization by the government of the industry
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network

Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges

Source: WEF

SWOT Analysis – Panama's Connectivity

Strengths
• Privileged geographic location compared with the rest of the continents. Key point for flight connections and traffic from/to South America and the world. • Liberal economic model. • Panama has an international banking centre that receives visitors from across the world. • Centres of tourist attraction (culture, natural resources and business tourism) • Partnerships among the region's airlines. • Tocumen airport was the first hub to be developed in the region and it is there that COPA has established its centre for connections with the rest of the world. • COPA leads the increase in operations from/to Panama with new destinations in the SAM Region. • Operation of over 16 air cargo carriers that transport imports to the Colon Free Trade Zone principally from Japan, China, South Korea and the U.S. and interconnect perishable sea cargo reaching the southern part of the region with the US and EUROPE. • Proactive government policy for developing infrastructure for the Tocumen airport, with expansion and modernization projects to cover the projected traffic demand. • Easy access routes to the airport. • Pilot training school supported by COPA.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Industry technology facilitates Panama departure check-ins and in-transit processing, with rapid processes including immigration formalities and security controls.

- Partnerships and agreements among countries in the SAM Region; interline commercial agreements.
- Simplification of customs regulations.
- Greater openness to trade on the part of most States in the region in order to offer more air liberalization (ASAs).
- Different free trade agreements and partnerships inside and outside the region.
- Agreements and integration with one or more of the region's states to attract tourism from distant countries.

Weaknesses

- High airport costs and charges. $50 departure tax from Panama.
- Airfare tickets subject to the payment of VAT and tax charges for embarkation, security, facilitation and the sector's development.
- Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism on the part of the States or of one of the States, that has not been brought into line with the new market conditions and characteristics of the present globalization process.
- The World Trade Organization (WTO) granted Panama an Air Liberalization Index of 11.75 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization).

Threats

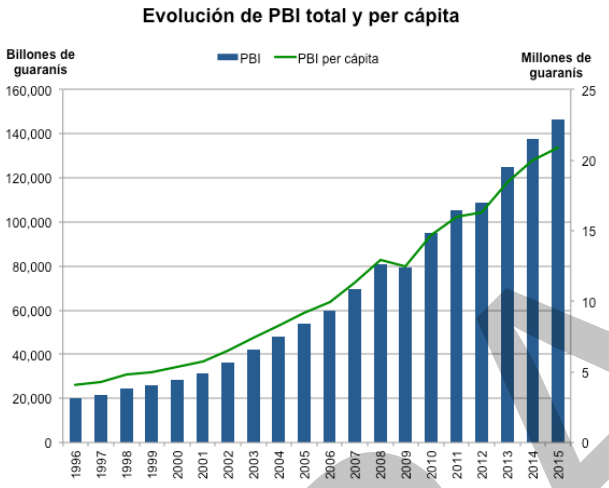
- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and/or natural disasters.

4.10 Paraguay

General Description

Paraguay is one of the smallest territories in the SAM Region, with a total population of about 7 million and a GDP of US$28 billion. Its per capita GDP (US$ 4.0 thousand) places it among the "higher middle-income" economies, according to the World Bank classification. It possesses 1 recognized UNESCO World Heritage cultural site.

Charts 4.10.1 – Main macroeconomic indicators and GDP evolution



Evolution of total and per capita GDP
Billions of guaranis -GDP -Per capita GDP **Millions of guaranis**

Main Macroeconomic Indicators

PBI (2015)	28.1	US$ billiones
Crecimiento PBI 2010-2015	4.9%	Promedio anual
PBI per cápita (2015)	4,010	US$ per cápita
Población (2015)	7	Millones
Tasa de desempleo (2014)	4.5%	
Inflación (2015)	2.6%	
Comercio internacional (201	82%	% de PBI
Gasto en turismo (2014)	449	US$ millones
Viajes y turismo (% de PBI)	1.4%	Reporte WEF 2015

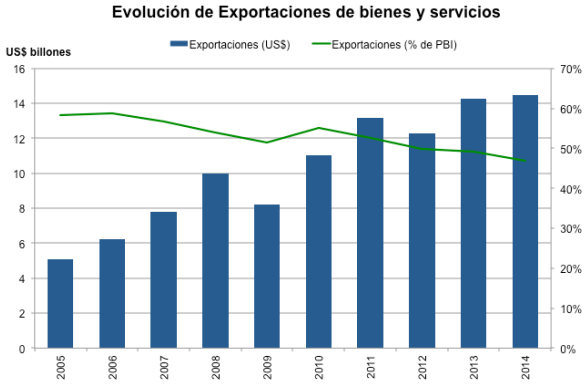
GDP (2015) – US$ billion; GDP growth 2010-2015 – Annual average; Per capita GDP (2015) - US$ per capita; Population (2015) – Million; Unemployment rate (2014); Inflation (2015); International trade (201?) - % of GDP; Spending on tourism (2014) – US$ Million; Travel and tourism (% of GDP) - WEF 2015 Report

Source: IMF, WB and WEF. Latest available data.

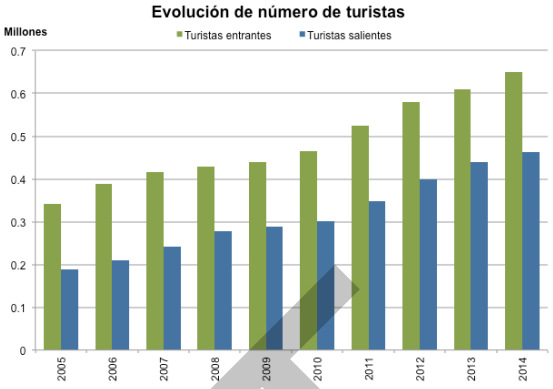
Agriculture, stockbreeding and the production of hydroelectric energy are its economic drivers and, according to the World Bank, are responsible for over 60% of its total exports.

World Bank figures reveal that in 2014 Paraguay exported a total of US$14.5 billion, amounting to 47% of its GDP. Furthermore, its international trade (exports + imports) is equivalent to 82% of its GDP. Insofar as tourism is concerned, total spending in 2014 was US$ 449 million. The number of inbound tourists was 649 thousand, up 6.4% on the previous year, while outbound tourists totalled 462 thousand (5.0% more than the previous year).

Charts 4.10.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)



Evolution in the number of tourists
Millions -Inbound tourists -Outbound tourists

Source: WB

Air Connectivity

Charts 4.10.3 – Main aviation industry figures

Operational data – Aviation Industry 2015

Número de aeropuertos	2
Aerolíneas con rutas directas (Set 2016)	11
Número de rutas internacionales*	14
Número de países destino directos	10
Número de pasajeros	894 miles
Domésticos	12 miles
Internacionales	882 miles
Número de vuelos	10.7 mil
Región SAM (% de tráfico internacional)	67%

Number of airports
Airlines with direct routes (Sept 2016)
Number of international routes*
Number of countries of direct destination
Number of passengers 894 thousand
Domestic 12 thousand
International 882 thousand
Number of flights 10.7 thousand
SAM Region (% of international traffic)
* Includes direct routes with or without stops

Map of Paraguay's domestic connectivity

Main airlines with flights inside and to/from Paraguay

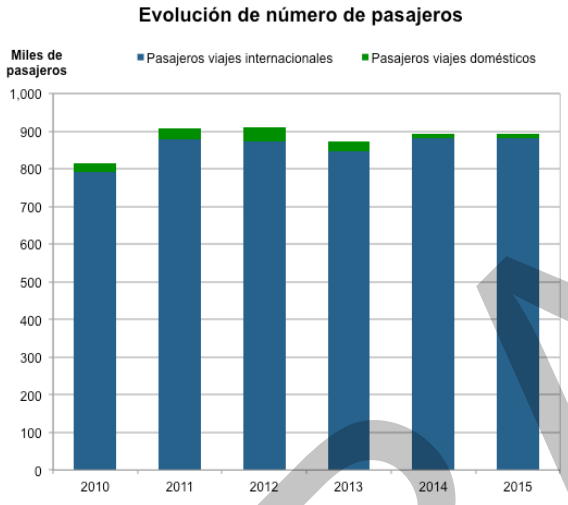
Airline	Passengers in 201?	% share
Aerolínea	Pasajeros 2015	% de part.
LATAM Airlines Brasil	161,717	18.1%
Aerolineas Argentinas	122,294	13.7%
Aeromexico	188	0.0%
Air Berlin	0	0.0%
Air Canada	1,840	0.2%
Otros	608,223	68.0%
Total	**894,262**	**100.0%**

...Others
Source: IATA

Paraguay has 2 operating airports for international flights; of these, Silvio Pettirossi International Airport (ASU) located in the city of Luque near Asuncion concentrates almost all of the passenger traffic, with a share in 2015 of 98%.

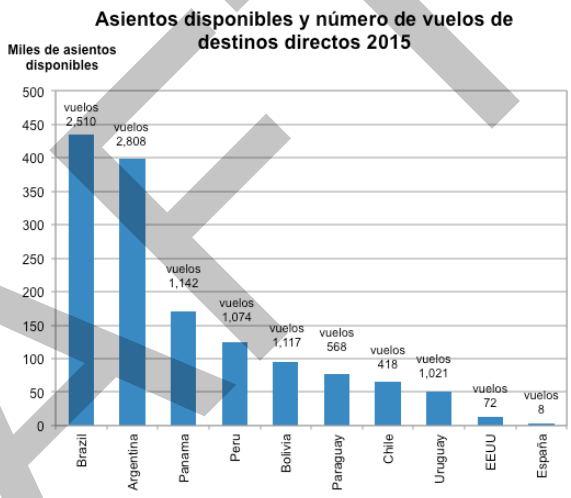
A total of 894 thousand passengers were transported to international and domestic destinations in 2015, a minimum increase of 0.05% over the previous year. The number of passengers has risen an average of 1.9% per annum over the past 5 years (2010-2015). Insofar as available seats are concerned, routes to/from and inside Paraguay in 2015 had an available seating capacity of 1.4 million which, compared with the total number of passengers flying direct and indirect routes (894 thousand), revealed an occupancy rate of approximately 62%.

Charts 4.10.4 – Evolution in the number of passengers, flights and available seats



Evolution in the number of passengers

Thousands of passengers -Passengers on international flights -Passengers on domestic flights



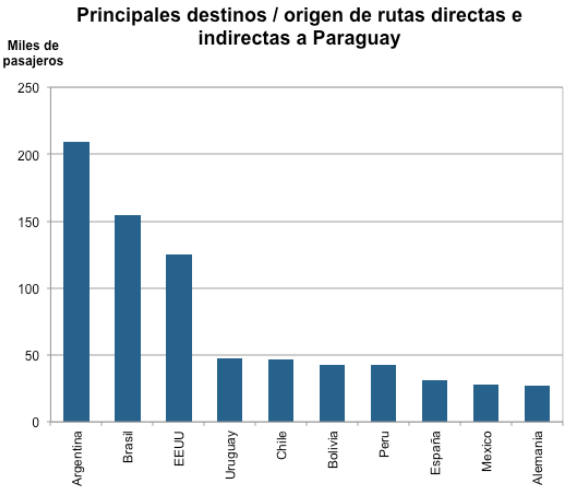
Available seats and number of flights to direct destinations in 2015

Thousands of available seats flights Brazil; ...U.S.; Spain

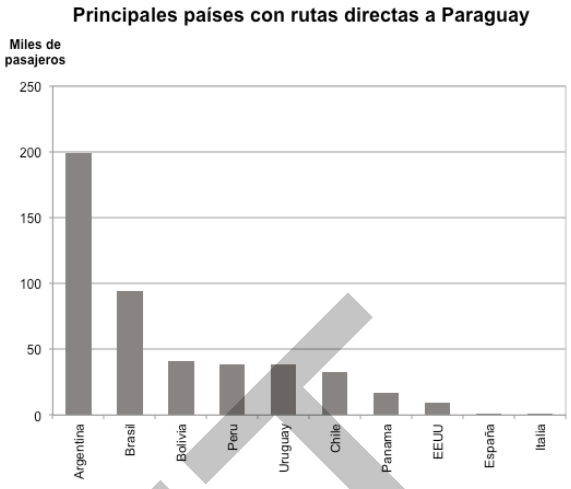
Source: IATA

According to IATA records, a total of 11 commercial airlines operated scheduled direct and indirect flights from/to and inside the country in 2015, of which 54% corresponded to direct flights or flights with immediate connections. Furthermore, 99% of the traffic consisted of international flights and 1% of domestic flights. A breakdown by countries of destination reveals 10 countries to be directly connected with or without stops with Paraguay over 14 international routes. Traffic to the SAM Region accounted for 67% of the total international air carrier traffic to/from Paraguay, which is directly connected with 54% of the region's States: Argentina, Brazil, Bolivia, Chile, Panama, Peru and Uruguay.

Charts 4.10.5 – Main countries connected with Paraguay



Main destinations/origins of direct and indirect routes to Paraguay
Thousands of passengers: …Brazil; U.S.; …Spain;…Germany



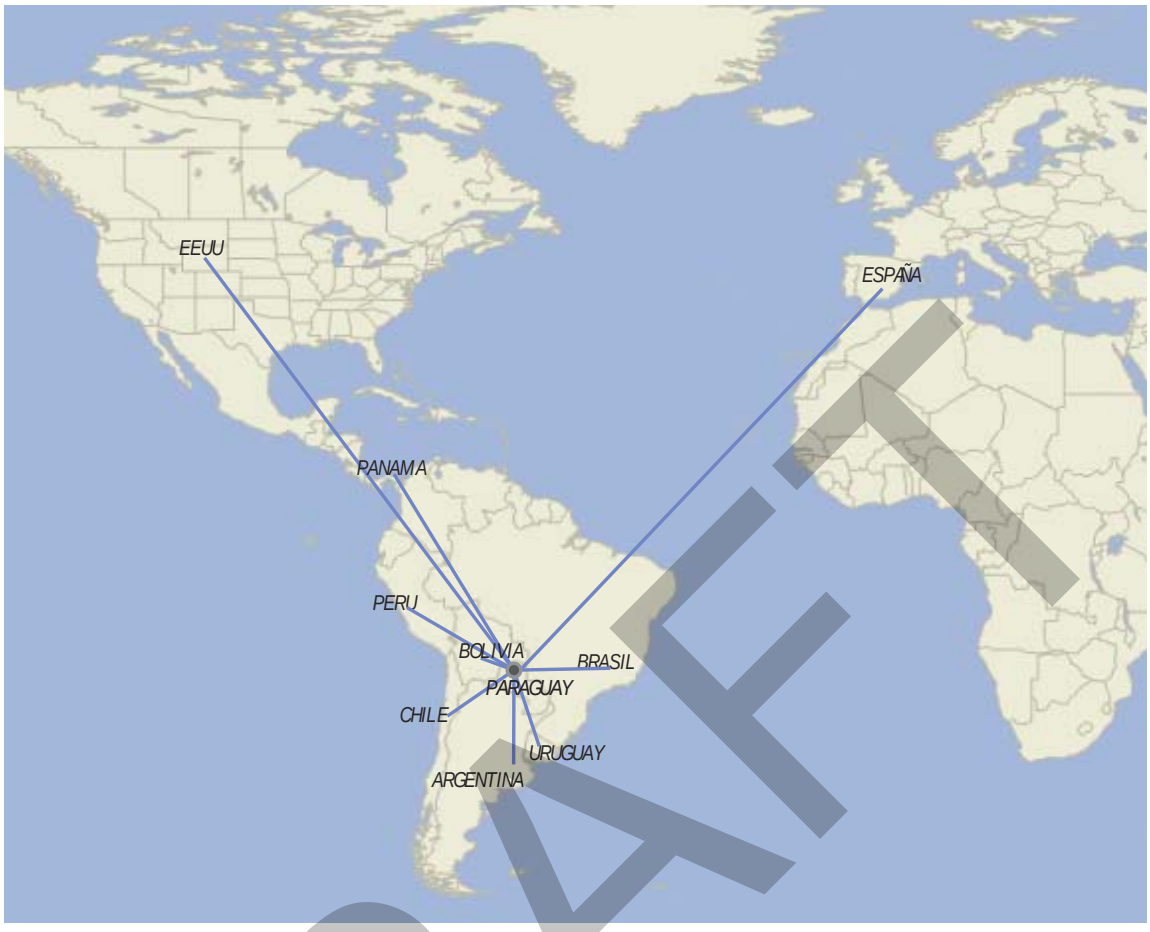
Main countries with direct routes to Paraguay

Thousands of passengers: …Brazil;…U.S.; Spain; Italy

Source: IATA

Out of its total international air traffic (direct and indirect), Argentina, Brazil and the United States are the countries with the greatest connectivity with Paraguay and were responsible for over 55% of the total passenger air traffic in 2015 (23.7%, 17.5% and 14.2%, respectively). A look at the direct routes only reveals that Argentina, Brazil and Bolivia enjoy the highest degree of connection with Paraguay and accounted together for over 71% of the total traffic on direct routes in 2015 (42.3%, 20.1% and 8.7%, respectively). The main airlines with direct and indirect flights inside and to/from Paraguay are LATAM Airlines Brasil with a share of 18.1%, followed in second place by LATAM Airlines Paraguay with 17.9% and Copa in third place with14.5%.

Figure 4.10.1 – Map of Paraguay's passenger air transport connectivity with the world



Source: IATA. Preparation: In-house

The map shows all of Paraguay's direct routes with the world. In order to be able to operate those direct routes, airlines require operating licenses from the point of origin to the destination for direct flights, whether non-stop or with stops. It should be stressed that in this case all are non-stop routes. Annex A lists all of the direct non-stop routes by airport.

Main Cargo Figures

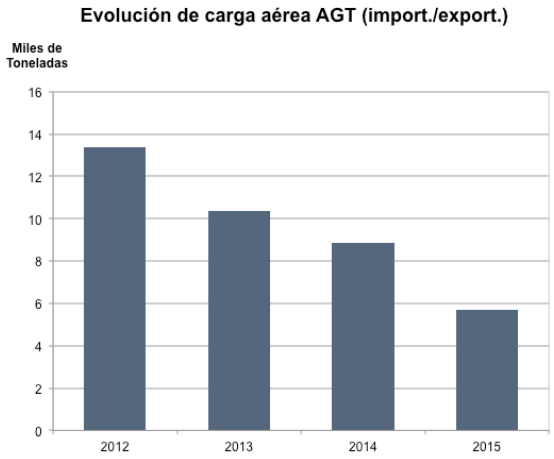
According to Paraguay's Civil Aviation Administration, a total of 5.7 thousand tonnes of cargo were transported in 2015 from/to AGT airport (-36% less than the previous year) and 12.2 thousand tonnes of cargo from/to ASU airport (+11% more than in 2014) on all-cargo and scheduled flights. Of these, 93% and 84%, respectively, corresponded exclusively to imports. It should be added here that Paraguay is not registered with IATA's CASS (Cargo Accounts Settlement Systems) programme.

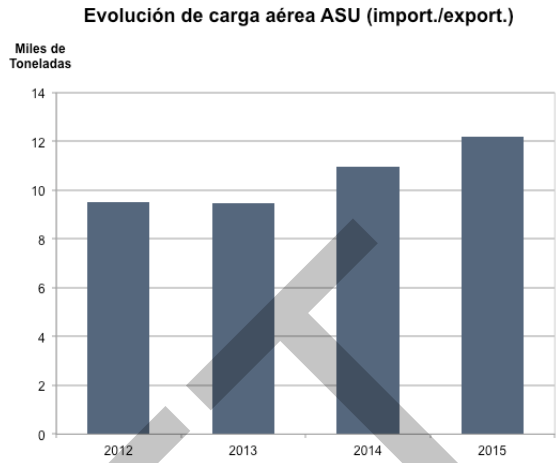
Charts 4.10.6 – Main air cargo figures

Evolution of air cargo at AGT (import/export)
Thousands of tonnes

Evolution of air cargo at ASU (import/export)
Thousands of tonnes

Source: Paraguayan Civil Aviation Administration





Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, Paraguay occupies the 113rd position out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries in 2015. The analysis of certain individual indicators reveals that Paraguay needs to work above all on improving its air transport and tourism infrastructure and domestic transport system, in addition to prioritizing government attention to the industry to ensure its appropriate development.

Table 4.10.1 – Competitiveness of the travel and tourism industry in 2015

	Score range	Score	Ranking
	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 113 de 141**
Indicadores específicos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	4.2	123
Efectividad de marketing para atraer turistas	1-7	3.7	116
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turística	1-7	3.7	87
Calidad de la infraestructura aérea	1-7	2.6	135
Calidad de la red doméstica de transporte	1-7	2.9	132
Requerimiento de visas	0-100	26.0	66
Apertura de acuerdos bilaterales ASA	0-38	12.4	45
Impuestos a boletos y cargos aeroportuarios	0-100	68.9	107

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization by the government of the industry
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges

Source: WEF

SWOT Analysis – Paraguay's Connectivity

Strengths
• Social stability and free market economy. • Centres of tourist attraction and a decade of sustained growth. • Economic investment centres. • Development of national aviation with the unrestricted participation of foreign capital. • Commercial partnerships with SAM Region airlines. • Operation of "low-cost" airlines. • Paraguay has tariff deregulation and an open skies policy. • Elimination of taxes on aviation fuel. • Agreements with Argentina, Uruguay and Brazil to avoid double taxation. • Agreement with Spain to develop air traffic. • Creation of Amaszonas Paraguay as a national airline. • Competitive rates and rapidity in cargo transportation in comparison with the cost of ground transportation over the same route.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Interest of foreign airlines in entering into the creation of new airlines. • API (Advanced Passenger Information) technology for immigration processes using secure, encrypted electronic transmissions with a

greater capacity for housing passenger data.

- Industry technology that facilitates and simplifies passenger check-in and embarkation, with rapid immigration formalities and security controls.
- Tourism agreements and integration with one or more of the region's States to attract tourism from distant countries.
- Increase in cargo connectivity.

Weaknesses

- Reactive over proactive management in developing infrastructure.
- Airfare tickets subject to the payment of a 10% VAT on domestic tickets and 10% of 25% of the value of international tickets, and transport taxes and charges for airport use.
- Slow airport check-in, security, customs, immigration and embarkation processes.
- The World Trade Organization (WTO) granted Paraguay an Air Liberalization Index of 10.00 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization).
- Application of reciprocity in visa applications, when the country has policies in place to eliminate trade barriers.
- No plans are being considered for expanding the cargo terminals at the Asuncion airport.

Threats

- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and/or natural disasters.

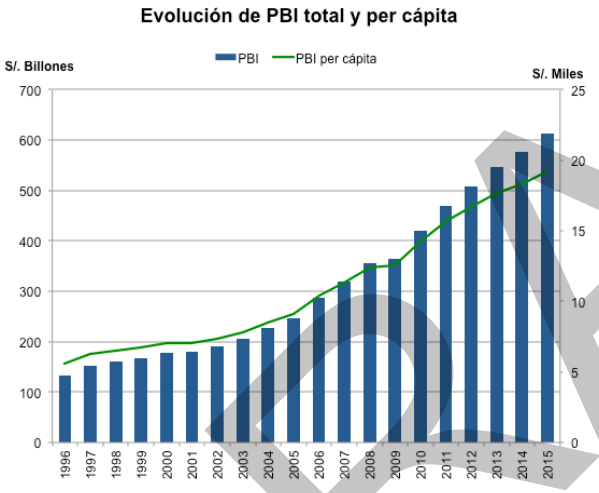
4.11 Peru

General Description

Peru today is one of the most prosperous and promising economies in the SAM Region, with a population of 32 million and a total GDP of US$ 192 billion. Its per capita GDP (US$ 6.0 thousand) places it among the "upper middle-income" economies, according to the World Bank classification. At the same time, the country's natural and cultural wealth make it one of the foremost tourist destinations in the region, with a total of 12 recognized UNESCO World Heritage sites (2 natural, 8 cultural and 2 mixed). Furthermore, its geographic location within the region makes it a privileged point of access to other countries.

Charts 4.11.1 – Main macroeconomic indicators and GDP evolution

Evolution of total and per capita GDP
S/. **billions** -GDP -Per capita GDP **S/. Thousands**



Main Macroeconomic Indicators

GDP (2015) US$ billion; GDP Growth 2010-2015 Annual average; Per capita GDP (2015) US$ per capita; Population (2015) 32 million; Unemployment rate (2014); Inflation (2015); International trade (201?) 45% of GDP; Spending on tourism (2014) 2.1 US$ billion; Travel and tourism (% of GDP) WEF 2015 Report

PBI (2015)	192.1	US$ billiones
Crecimiento PBI 2010-2015	4.8%	Promedio anual
PBI per cápita (2015)	6,021	US$ per cápita
Población (2015)	32	Millones
Tasa de desempleo (2014)	4.2%	
Inflación (2015)	3.6%	
Comercio internacional (201	45%	% de PBI
Gasto en turismo (2014)	2.1	US$ billones
Viajes y turismo (% de PBI)	3.5%	Reporte WEF 2015

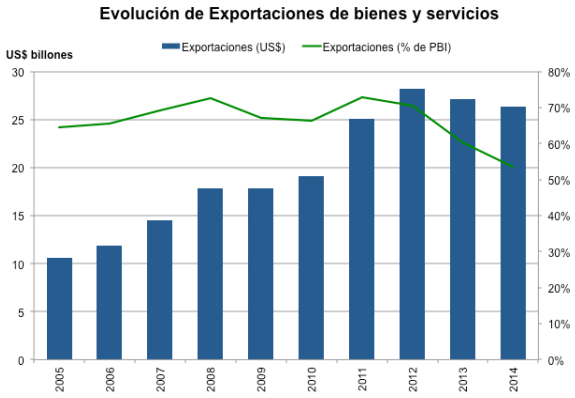
Source: IMF, WB and WEF. Latest available data

Peru's economy, like many of those in the region, rests on the exploitation of its natural resources and the marketing of raw materials. Mining, gas, agriculture, fishing, and stockbreeding are some of the main sectors that drive its economy. The country's significant economic growth in recent years, combined with prudent fiscal and monetary management fostered the formation of a scenario of low inflation and high growth, positioning the country as a highly attractive territory for foreign and local investors.

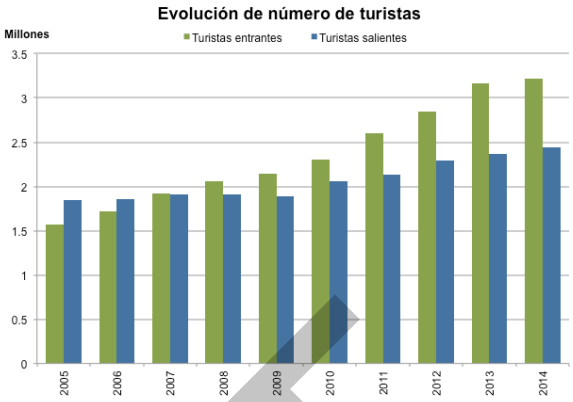
According to data published by the World Bank, in 2014 Peru exported a total of US$45 billion, amounting to 22% of its GDP. At the same time, its international trade (exports + imports) is equivalent to 45% of its GDP.

In the case of tourism, total spending in 2014 amounted to US$ 2 billion. It had a total of 3.2 million inbound tourists, up 1.6% on the previous year's figure, while outbound tourists totalled 2.4 million (3.3% more than the previous year).

Charts 4.11.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)



Evolution in the number of tourists
Millions -Inbound tourists -Outbound tourists

Source: WB

Air Connectivity

Charts 4.11.3 – Main aviation industry figures

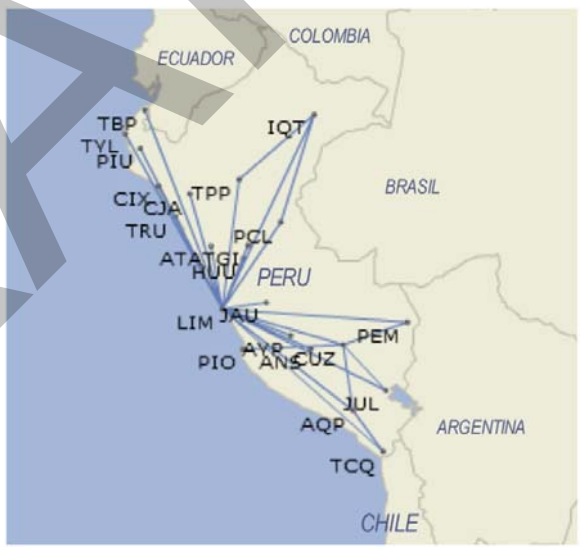
Operational data – Aviation Industry in 2015

Número de aeropuertos	22
Aerolíneas con rutas directas (Set 2016)	27
Número rutas internacionales (Set 2016)*	46
Número países destino directos (Set 2016)	22
Número de pasajeros	15.2 millones
Domésticos	8.8 millones
Internacionales	6.5 millones
Número de vuelos	161.5 mil
Región SAM (% de tráfico internacional)	45%

Number of airports; Airlines with direct routes (Sept 2016); Number of international routes (Sept 2016)*; Number of countries of direct destination (Sept 216); Number of passengers 15.2 million; Domestic 8.8 million; International 6.5 million; Number of flights 161.5 thousand; SAM Region (% of international traffic)

* Includes direct routes with or without stops

Map of Peru's domestic connectivity



Main airlines with flights inside and to/from Peru

Airline **Passengers in 201?** **% share**

Aerolínea	Pasajeros 2015	% de part.
LATAM Airlines Group	7,390,524	48.5%
AVIANCA	2,406,005	15.8%
Peruvian Air Line S.A.	1,338,222	8.8%
Star Peru, Star Up	615,398	4.0%
LC Busre SAC	604,120	4.0%
Otros	2,884,450	18.9%
Total	**15,238,719**	**100.0%**

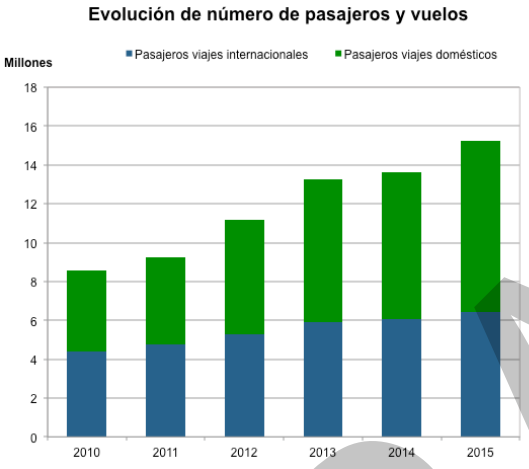
Others; **Total**
Source: IATA

Peru has 22 operating airports, of which 8 are international, according to ICAO. Jorge Chávez International Airport (LIM) located in the city of Lima and Alejandro Velasco

Astete International Airport in the city of Cusco are the most important and account jointly for over 76% of the passenger traffic (65% and 11%, respectively).

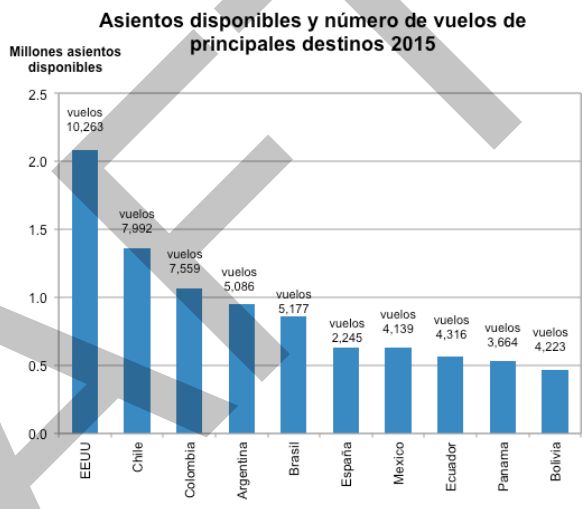
A total of 15.2 million passengers were transported in 2015 to international and domestic destinations, for a growth of 11.9% over that of the previous year. The number of passengers transported over the past 5 years (2010-2015) has grown an average of 12.2% per annum (+78% cumulative growth for this 5-year period). In the case of available seats, routes flown to/from and inside Peru in 2015 had an available seating capacity of 22.5 million. Considering the 15.2 million passengers that flew direct or indirect routes, the occupancy rate was of approximately 68%.

Charts 4.11.4 – Evolution in number of passengers, flights and available seats



Evolution in number of passengers and flights

Millions -Passengers on international flights
-Passengers on domestic flights



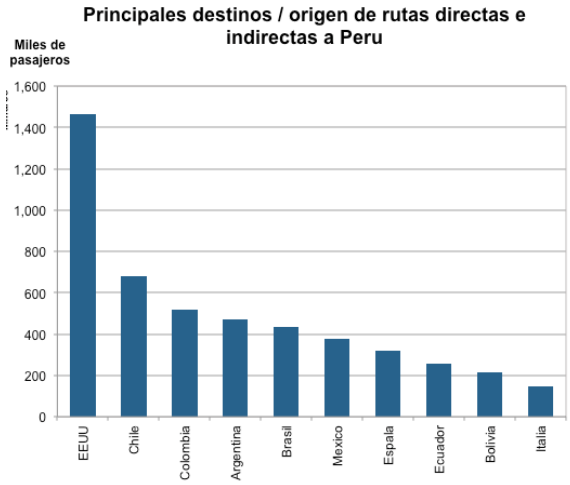
Available seats and number of flights to main destinations in 2015

Millions of available seats flights
U.S; Chile;....Brazil Spain....

Source: IATA

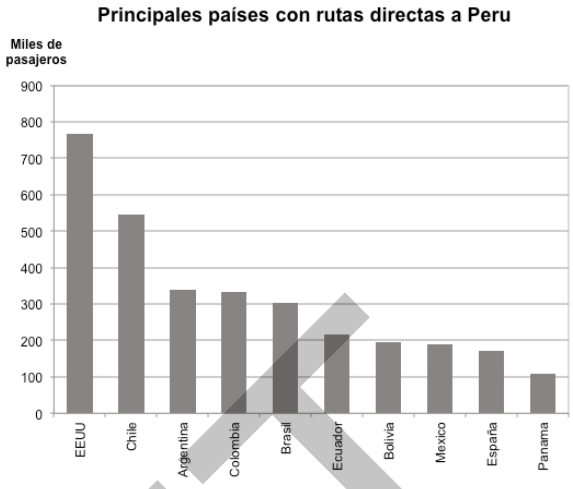
IATA records reveal that 27 commercial airlines operated scheduled direct and indirect routes from/to and inside the country in 2015, with 80% of the flights corresponding to direct routes or routes with immediate connections. At the same time, 42% of the traffic consisted of international flights and 58% of domestic flights. Traffic to the SAM Region accounts for 45% of the total international traffic to/from Peru. In terms of countries of destination, 22 were directly connected with Peru, whether non-stop or with stops (routes with the U.K. and South Africa have been operating since 2016) over 46 international routes. In the SAM Region, it had direct non-stop connections with 77% of the States in the region: Argentina, Brazil, Bolivia, Chile, Colombia, Ecuador, Panama, Paraguay, Uruguay and Venezuela.

Charts 4.11.5 – Main countries connected with Peru



Main destinations/origins of direct and indirect routes to Peru

Thousands of passengers U.S;...Brazil;...Spain;...Italy



Main countries with direct routes to Peru

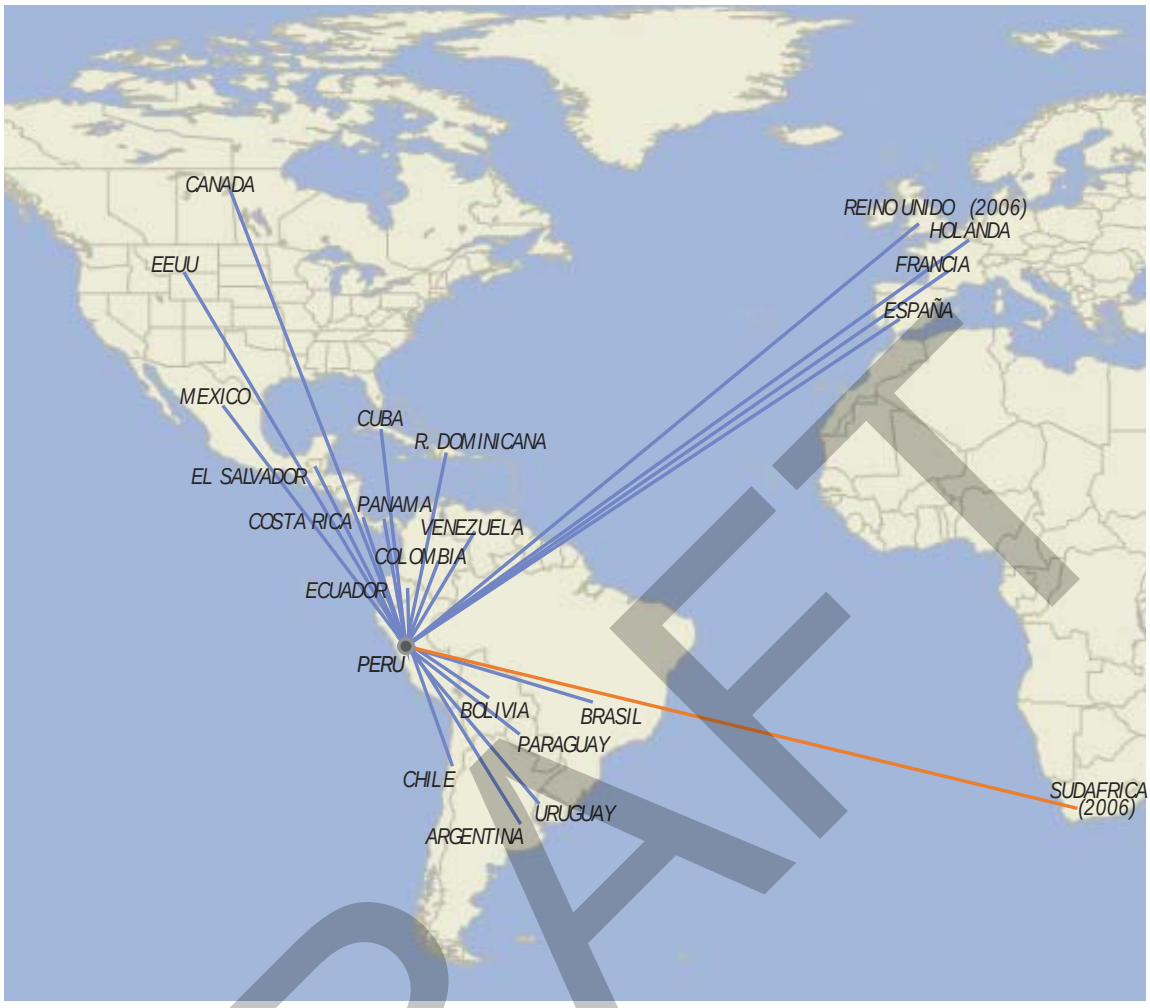
Thousands of passengers U.S.;...Brazil;...Spain

Source: IATA

Out of its total international air traffic (direct and indirect), the United States, Chile and Colombia are the countries with the greatest connectivity with Peru, accounting for over 40% of the total passenger air traffic of 2015 (22.7%, 10.5% and 8.0%, respectively). Considering only the direct routes, the United States, Chile and Argentina represent the most important and were together responsible for more than 46% of the total traffic over direct routes in 2015 (21.6%, 15.3% and 9.5%, respectively). The principal airlines with direct and indirect flights inside and outside Peru in 2015 were LATAM Airlines Group[20] with a 48.5% share of the total passengers transported, followed by Avianca with 15.8% and Peruvian in third place with 8.8%.

Figure 4.11.1 – Map of Peru's passenger air transport connectivity with the world

[20] Does not include all of the airlines associated with the LATAM Group. The database provided by IATA incorporates Chile and Peru under its heading (LATAM Airlines Group), while the rest of the Group companies are recorded individually.

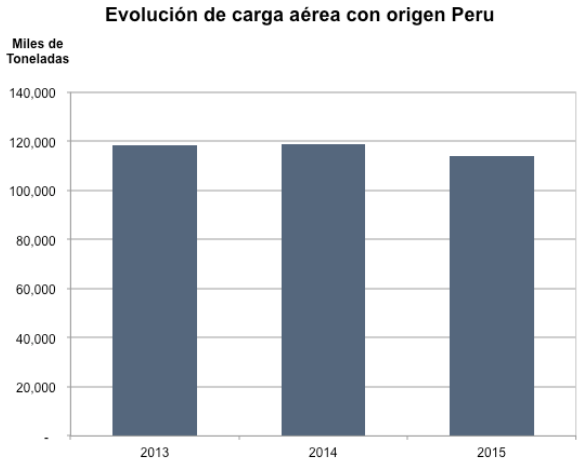


Source: IATA. Preparation: In-house

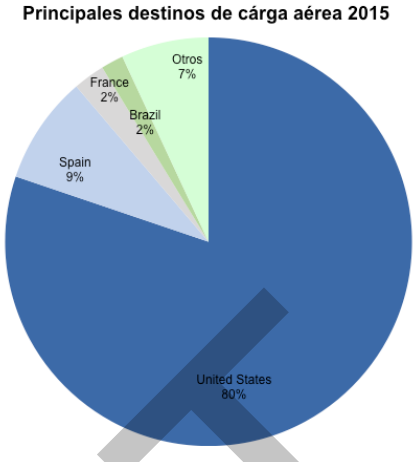
The map above shows all of Peru's direct routes with the world. In order to be able to operate those routes, airlines require operating licenses between the points of origin and destination for direct flights, whether non-stop or with stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all of the direct non-stop routes by airport.

According to Peru's General Directorate for Civil Aviation (DGAC), a total of 205 thousand tonnes of air cargo were transported in 2015. IATA, for its part, estimates that the amounts recorded for Peru in the CASS (Cargo Accounts Settlement Systems) programme represent approximately 55% (114 thousand tonnes) of the total. According to that information, the United States was its main trading partner with an 80% share, followed by Spain with 9% and France in third place with 3%.

Charts 4.11.6 – Main air cargo figures



Evolution of air cargo originating in Peru
Thousands of Tonnes



Main air cargo destinations in 2015
……France 2% Brazil 2% Others 7%

Source: IATA

Competitiveness of the Industry

According to the World Economic Forum competitiveness ranking, Peru occupied position number 58 out of a total of 141 countries analyzed as to the competitiveness of their travel and tourism industries in 2015. In terms of individual indicators, it ranked a noteworthy 19th in the effectiveness of its marketing and branding to attract tourists, reflecting its positioning as an important tourist destination in the SAM Region. There is still room to work on the quality of its domestic transport network and air transport infrastructure, as well as on its high level of airport charges.

Table 4.11.1 –Competitiveness of the travel and tourism industry in2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 58 de 141**
Indicadores específicos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	5.3	60
Efectividad de marketing para atraer turistas	1-7	5.5	19
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turística	1-7	4.7	48
Calidad de la infraestructura aérea	1-7	4.0	89
Calidad de la red doméstica de transporte	1-7	3.3	127
Requerimiento de visas	0-100	34.0	44
Apertura de acuerdos bilaterales ASA	0-38	17.1	20
Impuestos a boletos y cargos aeroportuarios	0-100	38.7	134

Score range **Score** **Ranking**

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization by the government of the industry
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)
Airfare ticket taxes and airport charges
Source: WEF

SWOT Analysis – Peruvian Connectivity

Strengths
• Privileged geographic location at the centre of South America. • Centres of tourist attraction in the country's three regions; history and culture, biodiversity and ecotourism. • Economic investment centres. • Cargo operations from/to the U.S., South Korea and Europe, supporting its exports. • Code-sharing agreements between national airlines and those of States in the SAM Region and the world. • Operation of "low-cost" airlines in the national and international markets. • Beginning of direct international flights to/from the Chiclayo and Cusco airports (decentralization from Lima). • Development plan for a hub airport in Chiclayo that will improve direct connectivity with northern, central and southern Peru. • Openness to investments of up to 75% foreign capital in national airlines (Civil Aeronautics Law and its regulations) • Construction of the Chinchero–Cusco airport projected to cover a demand for direct flights from abroad three or four times the size of the current demand. (2021) • The start of operations is being expedited in Pisco (2016), which is prepared to accommodate international cargo carriers and low-cost airlines with national and international flights. • Operation of a certified pilot training school in Pisco.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Interest of foreign airlines in national aviation. • Development of a model Master Plan and certification of airports • Signing of the Fortaleza agreement.

- API (Advanced Passenger Information) technology for immigration processes using safe, encrypted electronic transmissions with a greater capacity for housing passenger data.
- Investment in security and air navigation systems.
- Industry technology that facilitates and simplifies passenger check-in and embarkation with rapid immigration and security control processes.
- Partnerships and agreements with SAM Region airlines.
- Different free trade agreements and partnerships signed by Peru. (FTA-TPP-APEC and Pacific Alliance)
- Integration agreements with one or more SAM Region States to attract tourism from distant countries.
- Tourist visa policy.

Weaknesses

- High airport costs and charges (AIJCH) that are not competitive and do not facilitate the development of aviation and of the expected hub.
- The approach to infrastructure development and the strengthening of a hub must focus on capacity, quality and leading the region in cost competitiveness.
- Reactive, rather than proactive management in the development of airport infrastructure, lack of expeditious State processes allowing for investments to be made when the demand so requires.
- Cumbersome and complicated response to infrastructure problems in AIJCH-Lima airport because of the contract and its limitations.
- Process for the approval and execution of road maintenance work in Chiclayo and Trujillo limits cargo operations.
- Airports in the city centre and unresolved problems of the road system and citizen safety.
- Airfare tickets subject to the payment of VAT (18%), tourism tax and charges for airport use.
- Slow airport (long waiting lines) check-in, security, customs, immigration and embarkation processes.
- Existence of consumer protection standards that work against the sector's commercial development.
- Customs formalities and airline AMD (Aeronautical Materials Deposit) management delay export processes.
- Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism and

have not been brought into line with the new market conditions of the current globalization process that favours air liberalization.

- The World Trade Organization (WTO) granted Peru an Air Liberalization Index of 10.93 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization).
- Policy of charging VAT on overflight rates.
- Failure of the tax authority to accept and recognize general agents (GSAs) of international airlines that use their Tax Registry (RUC) for "offline operations", thus limiting the development of aviation in Peru.

Threats

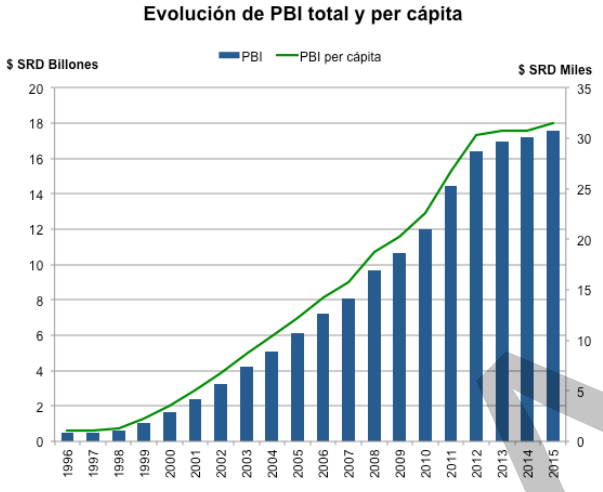
- Unforeseen terrorist acts have an impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Citizen insecurity threatens passenger assets and safety and has a negative impact on traffic to the territory.
- Drug trafficking.
- Climate change and/or natural disasters.

4.12 Suriname

General Description

Suriname is the independent country with the smallest population in the SAM Region, amounting to 558 thousand inhabitants. With a total GDP of US$ 5.2 billion, its per capita GDP (US$ 9.3 thousand) places it in the category of "upper middle-income" economies, according to the World Bank classification. It possesses 2 recognized UNESCO World Heritage Sites (1 natural and 1 cultural).

Charts 4.12.1 – Main macroeconomic indicators and GDP evolution



Main Macroeconomic Indicators

PBI (2015)	5.2	US$ billiones
Crecimiento PBI 2010-2015	2.6%	Promedio anual
PBI per cápita (2015)	9,306	US$ per cápita
Población (2015)	558	miles
Tasa de desempleo (2014)	5.6%	
Inflación (2015)	6.9%	
Comercio internacional (201	91%	% de PBI
Gasto en turismo (2014)	90.0	US$ millones
Viajes y turismo (% de PBI)	0.9%	Reporte WEF 2015

GDP (2015) US$ 5.2 billion; GDP Growth 2010-2015 2.6% Annual average; Per capita GDP (2015) US$ 9,306 per capita; Population (2015) 558 thousand Unemployment rate (2014); Inflation (2015); International trade (201?) 91% of GDP; Spending on tourism (2014) US$ 90.0 million; Travel and tourism (% of GDP) WEF 2015 Report

Source: IMF, WB and WEF. Latest data available

Evolution of total and per capita GDP

$ SRD billions -GDP -Per capita GDP **$ SRD thousands**

Its economy is heavily grounded in the extractive sectors (gold, oil and bauxite) and is dependent on the external market. As a result, fluctuations in commodity prices strongly impact its economic performance.

According to World Bank data, Suriname's exports in 2014 totalled US$2.3 billion, representing 45% of its GDP, while its international trade (exports + imports) was equivalent to 91% of its GDP. Spending on tourism, for its part, amounted in 2014 to US$ 90 million. There were 252 thousand inbound tourists, 1.2% more than the previous year.

Charts 4.12.2 – Exports and number of tourists

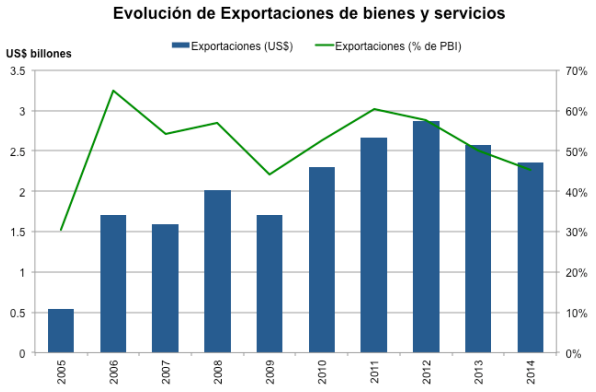
Evolution of exports of goods and services

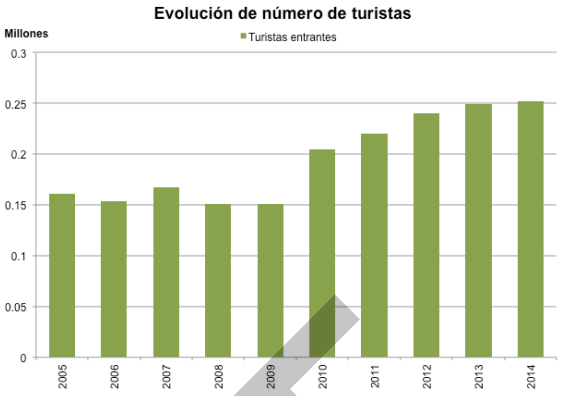
US$ billions -Exports (US$) -Exports (% of GDP)

Evolution in the number of tourists

Millions -Inbound tourists

Source: WB. The World Bank does not record data about outbound tourists.





Air Connectivity

Charts 4.12.3 – Main aviation industry figures

Operational data – Aviation Industry in 2015

Número de aeropuertos internacionales	1
Aerolíneas con rutas directas	6
Número de rutas internacionales*	9
Número de países destino directos	8
Número de pasajeros internacionales	457 miles
Número de vuelos	3.5 mil
Región SAM (% de tráfico internacional)	11%

Number of international airports
Airlines with direct routes
Number of international routes*
Number of countries of direct destination
Number of international passengers 457 thousand
Number of flights 3.5 thousand
SAM Region (% of international traffic)

* Includes direct routes with or without stops
Source: IATA

Main airlines with flights inside and to/from Suriname

Aerolínea	Pasajeros 2015	% de part.
Surinam Airways Ltd.	209,630	45.9%
KLM Royal Dutch Airlines	136,101	29.8%
Insel Air International B.V.	55,182	12.1%
Caribbean Airlines	32,737	7.2%
Insel Air Aruba	14,864	3.3%
Otros	8,586	1.9%
Total	**457,100**	**100.0%**

Airline **Passengers in 2015** **% share**
....
Others

Suriname has 1 operating international airport, Johan Adolf Pengel International Airport (PBM). A total of 457 thousand passengers were transported between Suriname and international destinations in 2015, the number having increased by an average of 3.7% per annum over the past 5 years (2010-2015). Insofar as available seating is concerned, in 2015, the routes flown to/from Suriname had an available capacity of 622 thousand seats. Considering the total number of passengers who arrived in or left Suriname directly or indirectly (457 thousand), the occupancy rate was of approximately 73%.

Charts 4.12.4 – Evolution in the number of passengers, flights and available seats

Evolution in the number of international passengers

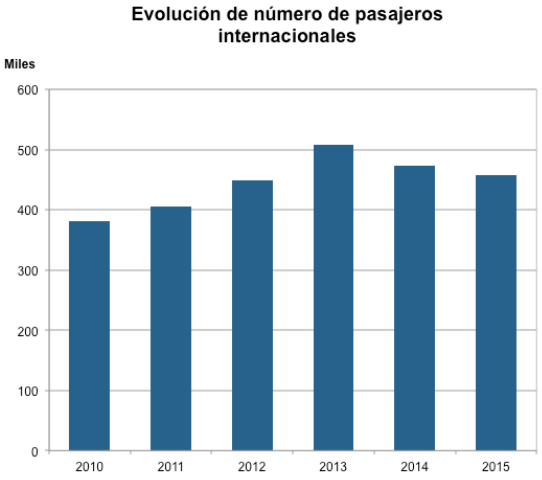
Thousands

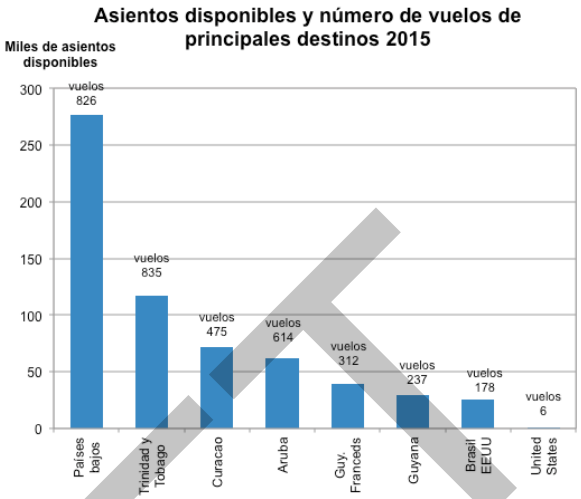
Source: IATA

Available seats and number of flights to principal destinations in 2015

Thousands of available seats flights

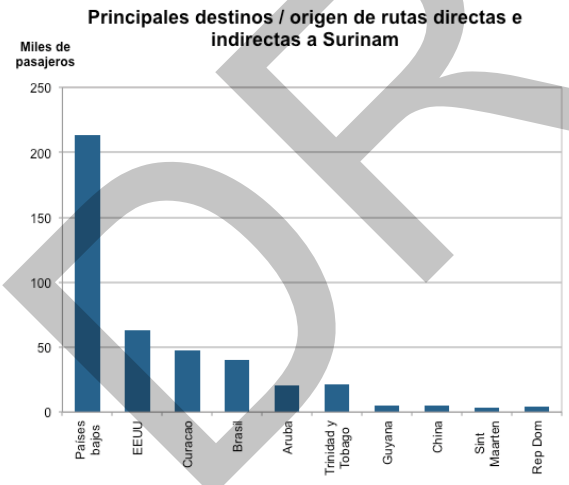
Netherlands; Trinidad & Tobago;…French Guiana;…Brazil; U.S.

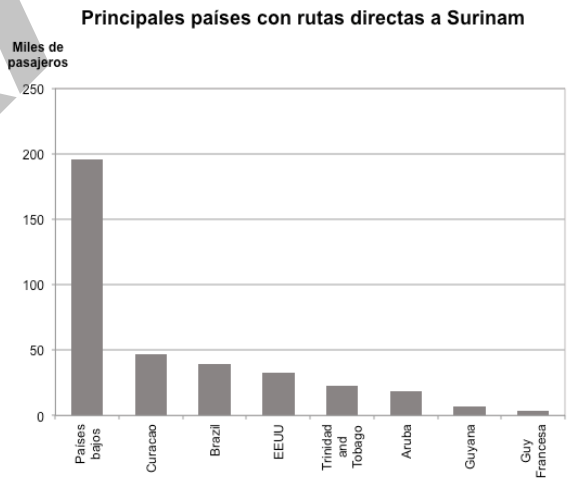




According to IATA records, 6 commercial airlines operated scheduled direct and indirect flights from/to the country in 2015, with 83% of the traffic corresponding to direct routes or routes with immediate connections. Traffic to the SAM Region represented 11% of the total international traffic to/from Suriname. In terms of countries of destination, 8 were directly connected, with or without stops, with Suriname over 9 international routes. In the SAM Region, the country was directly connected non-stop with 23% of the States: Brazil, Guyana and French Guiana.

Charts 4.12.5 – Main countries connected with Suriname





Main destinations/origins of direct and indirect Suriname routes to

Thousands of passengers

Netherlands; U.S.; .... Brazil; ... Trinidad & Tobago;... St. Martin; Dom.Rep

Main countries with direct routes to Suriname

Thousands of passengers

Netherlands;...U.S.;.....French Guiana

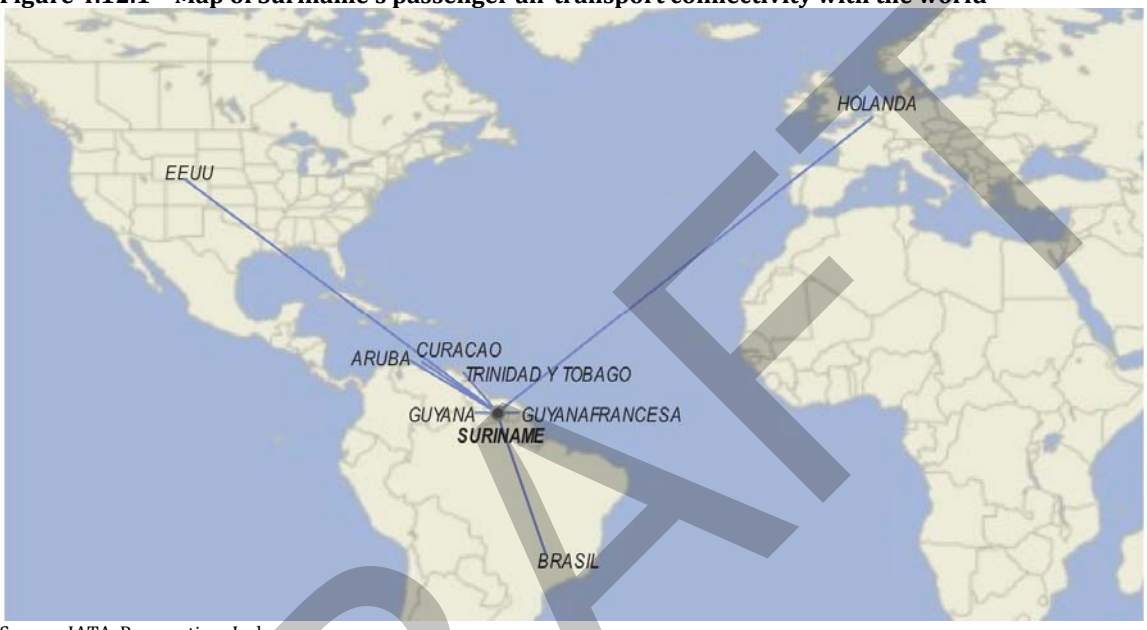
Source: IATA

Out of its total international air traffic (direct and indirect), the Netherlands, United States and Curacao are the countries with the most connectivity with Suriname and were responsible for over 71% of the total airline passenger traffic in 2015 (46.7%, 13.8% and

10.4%, respectively). A look at the direct routes only reveals that the Netherlands, Curacao and Brazil were the most important, accounting jointly for over 46% of the total traffic on direct routes in 2015 (51.6%, 12.4% and 10.4%, respectively).

The main airlines with direct and indirect flights inside and outside Suriname are Surinam Airways with a share of almost one-half of the total passengers transported in 2015 (45.9%), followed by KLM with 29.8%, with Insel Air International in third place with 12.1%.

Figure 4.12.1 – Map of Suriname's passenger air transport connectivity with the world



Source: IATA. Preparation: In-house

The map above shows Suriname's total direct routes with the world. In order to be able to operate those routes, airlines require operating licenses from the point of origin to that of destination for direct flights with or without stops. It should be stressed that in this case all are non-stop routes. Annex A lists all of the non-stop direct routes by airport.

Air Cargo

Since very little air cargo is transported to/from Suriname, there are no relevant figures available. Most of the commercial cargo is transported by sea. Furthermore, the country does not belong to IATA's CASS (Cargo Accounts Settlement Systems) programme.

Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, Suriname occupies the 101st position out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries in 2015. A look at the individual indicators reveals that the country still has room to work on bettering conditions that will promote more connectivity and produce the subsequent economic benefits. Work is needed above all on improving the air transport infrastructure and the domestic transport network, as well as on the prioritization of investment by the government of the industry.

Table 4.11.1 – Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 101 de 141**
Indicadores específicos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	4.2	125
Efectividad de marketing para atraer turistas	1-7	3.6	122
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turística	1-7	3.7	85
Calidad de la infraestructura aérea	1-7	3.6	103
Calidad de la red doméstica de transporte	1-7	3.3	128
Requerimiento de visas	0-100	17.0	117
Apertura de acuerdos bilaterales ASA	0-38	13.4	41
Impuestos a boletos y cargos aeroportuarios	0-100	74.8	84

	Score range	**Score**	**Ranking**
Travel and tourism competitiveness index			
Specific indicators (score range)			
Prioritization by the government of the industry			
Effectiveness of marketing and branding to attract tourists			
Number of regional trade agreements in force			
Tourist service infrastructure quality			
Air transport infrastructure quality			
Quality of the domestic transport network			
Visa requirements			
Openness of bilateral service agreements (ASAs)			
Airfare ticket taxes and airport charges			

Source: WEF

SWOT Analysis – Suriname's Connectivity

Strengths
• Geographic location on the north Atlantic coast of the SAM Region makes it possible to develop traffic to/from the world, taking advantage of the region's connections. • U.S. and European social stability and foreign investment generate business traffic. • Tourist attraction centres stemming from its natural wealth. • Air traffic operating out of its two principal airports: Johan Adolf Pengel International Airport and Zorg & Hoop domestic airport.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • API (Advanced Passenger Information) technology for immigration processes using secure, encrypted electronic transmission signals with a greater capacity for housing passenger data. • Industry technologies that facilitate and simplify passenger check-in and embarkation, with rapid immigration formalities and security controls. • Partnerships and agreements with airlines in the region. • Agreements and integration with one or more States in the region to attract tourism from distant countries. • Liberalization of aviation at the regional level and in the rest of the world.
Weaknesses
• Reactive, rather that proactive management in the development of infrastructure and of master plans for airports. • Slow airport check-in, security, customs, immigration and embarkation processes. • Airfare tickets subject to the payment of VAT, and charges for security, facilitation and goods and services.

- Bilateral and multilateral air services agreements (ASAs)
- State economic policy measures that limit the development of exports and the use of customs formalities with limited technological capacity act as barriers to the development of exports.

Threats

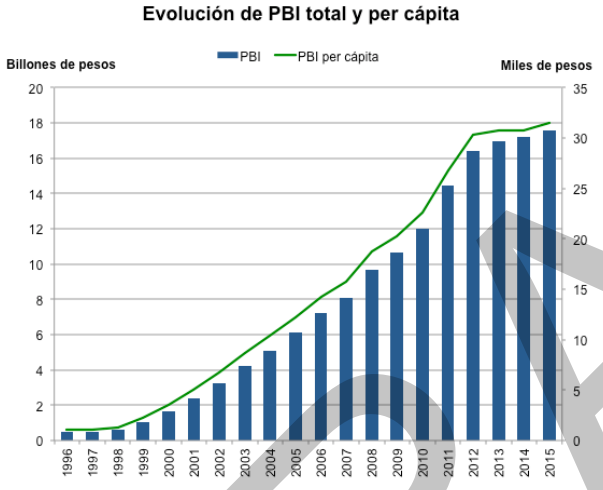
- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and/or natural disasters.

4.13 Uruguay

General Description

Uruguay, having eliminated extreme poverty and being endowed with a strong middle class, is recognized internationally by institutions like the United Nations and the World Bank as being one of the most equitable countries in terms of the distribution of wealth. With a population bordering on 3 million and a total GDP of US$ 54 billion, its per capita GDP (US$ 15.7 thousand) places it in the World Bank category of "upper-income" economies. It possesses two recognized UNESCO Cultural World Heritage sites. It is also one of the countries with the lowest levels of corruption in the region and at the global level.

Charts 4.13.1 – Main macroeconomic indicators and GDP evolution



Main Macroeconomic Indicators

PBI (2015)	53.8	US$ billiones
Crecimiento PBI 2010-2015	3.7%	Promedio anual
PBI per cápita (2015)	15,748	US$ per cápita
Población (2015)	3	Millones
Tasa de desempleo (2014)	7.0%	
Inflación (2015)	8.7%	
Comercio internacional (201	45%	% de PBI
Gasto en turismo (2014)	1.6	US$ billones
Viajes y turismo (% de PBI)	2.8%	Reporte WEF 2015

GDP (2015) US$ 53.8 billion; GDP Growth 2010-2015 Annual average; Per capita GDP (2015) US$ 15,748 per capita; Population (2015) 3 million; Unemployment rate (2014); Inflation (2015); International trade (201?) 45% of GDP; Spending on tourism (2014) US$ 1.6 billion; Travel and tourism (% of GDP) WEF 2015 Report

Source: IMF, WB and WEF. Latest available data

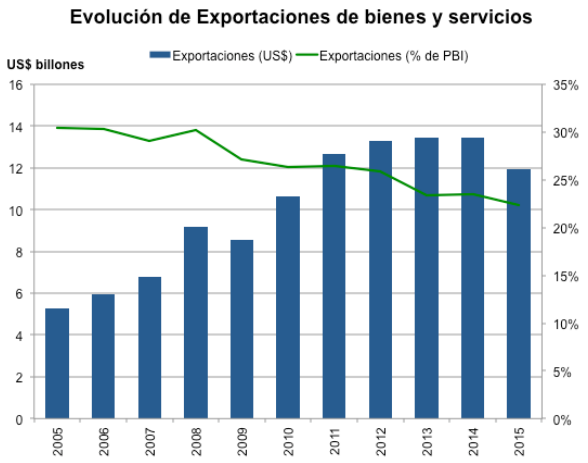
Evolution of total and per capita GDP
Billions of pesos -GDP -Per capita GDP **Thousands of pesos**

Uruguay has an important agricultural and livestock sector oriented largely toward agroexport (rice, wheat, corn, meat, wool, and leather, among other products), together with a highly developed industrial sector (cold storage, textiles, fertilizers, and oil and gas refining, among others).

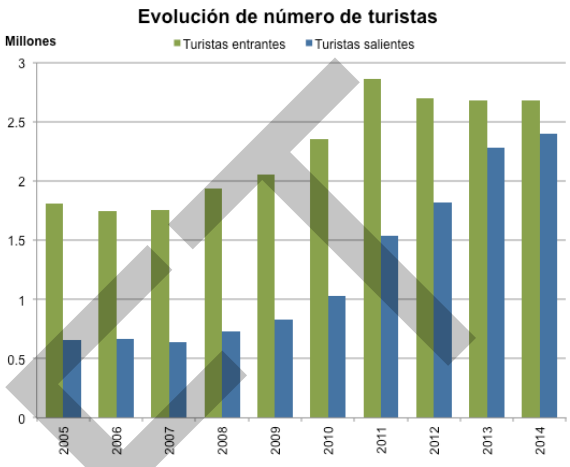
According to data published by the World Bank, in 2014 Uruguay exported a total of US$12 billion, amounting to 22% of its GDP, while its international trade (exports + imports) is equivalent to 45% of its GDP. Total spending in 2014 on tourism, for its part,

amounted to US$ 1.6 billion. There were 2.7 million inbound tourists, a level similar to that of the previous year, while outbound tourists numbered 2.4 million (up 5.0% on those of 2013).

Charts 4.13.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)



Evolution in the number of tourists
Millions -Inbound tourists -Outbound tourists

Source: WB

Air Connectivity

Charts 4.13.3 – Main aviation industry figures

Operational data – Aviation Industry 2015

Número de aeropuertos	3
Aerolíneas con rutas directas	16
Número de rutas internacionales	22
Número de países destino directos	10
Número de pasajeros internacionales	1.8 milones
Número de vuelos	17.7 mil
Región SAM (% de tráfico internacional)	64%

Number of airports
Airlines with direct routes
Number of international routes
Number of countries of direct destination
Number of international passengers 1.8 million
Number of flights 17.7 thousand
SAM Region (% of international traffic)

* Includes direct routes with or without stops

Map of Uruguay's domestic connectivity

Main airlines with flights inside and to/from Uruguay

Airline **Passengers in 2015** **%share**

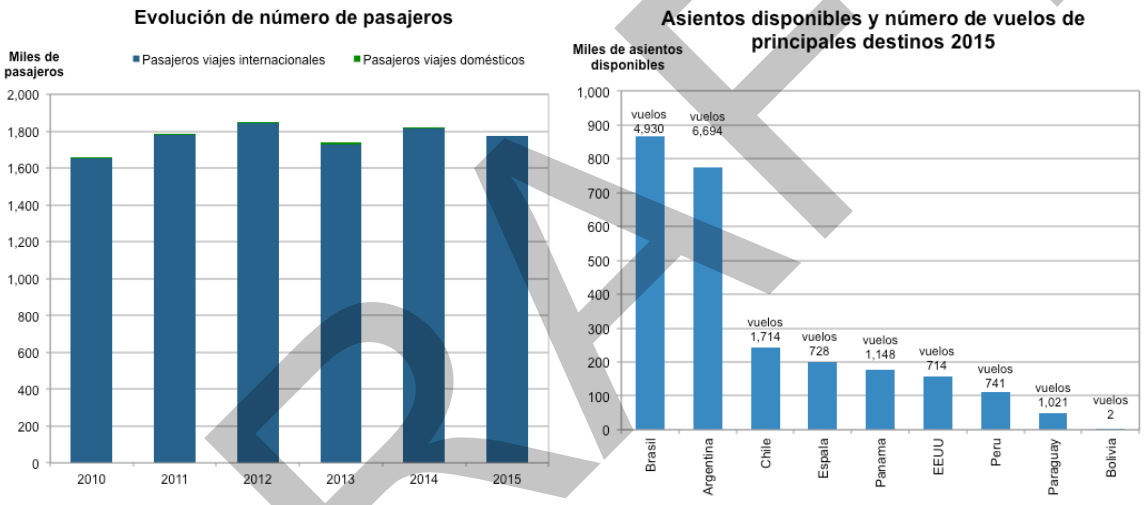
Aerolínea	Pasajeros 2015	% de part.
Aerolineas Argentinas	329,000	18.6%
LATAM Airlines Brasil	322,163	18.2%
LATAM Airlines Group	238,134	13.4%
Gol Transportes Aereos	202,066	11.4%
COPA	135,877	7.7%
Otros	545,607	30.8%
Total	**1,772,847**	**100.0%**

...Others
Source: IATA

Uruguay has 2 operating airports for international flights, of which Carrasco International Airport (MVD) located in the capital city of Montevideo concentrates almost all of the international air traffic (94%).

According to data recorded by IATA, over the past 5 years (2010-2015), the number of passengers has grown an average of 1.4% per year, with a total of 1.8 million travelling to/from Uruguay to international destinations in 2015. Insofar as available seating is concerned, routes travelled to/from Uruguay in 2015 had an available capacity of 2.5 million seats. Considering the total number of passengers who arrived in or departed from Uruguay directly or indirectly (1.8 million), the occupancy rate was of approximately 69%.

Charts 4.13.4 – Evolution in the number of passengers, flights and available seats



Evolution in the number of passengers

Thousands of passengers

-Passengers on international flights -Passengers on domestic flights

Available seats and number of flights to principal destinations in 2015

Thousands of available seats flights

Brasil;...Spain;...U.S. ...

Source: IATA

IATA records reveal that in 2015, 16 commercial airlines operated scheduled direct and indirect routes to/from the country, of which 53% corresponded to direct routes or routes with immediate connections. Traffic in the SAM Region represents 64% of the total international traffic to/from Uruguay. Insofar as countries of destination are concerned, 10 were connected directly with Uruguay, with or without stops, over 22 international routes. In the SAM Region, Uruguay was connected directly non-stop with 46% of the States: Argentina, Brazil, Chile, Panama, Paraguay and Peru.

Charts 4.13.5 – Main countries connected with Uruguay

Main destinations/origins of direct and indirect routes to Uruguay

Thousands of passengers

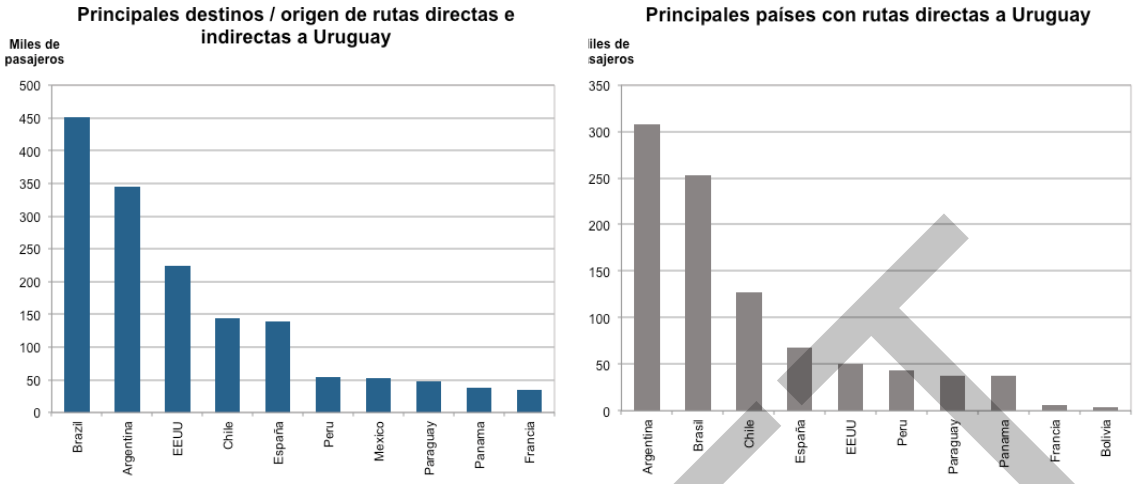
Brazil;…U.S; ...Spain;…France

Main countries with direct routes to Uruguay

Thousands of passengers

…Brazil;…Spain; U.S. ;...France

Source: IATA

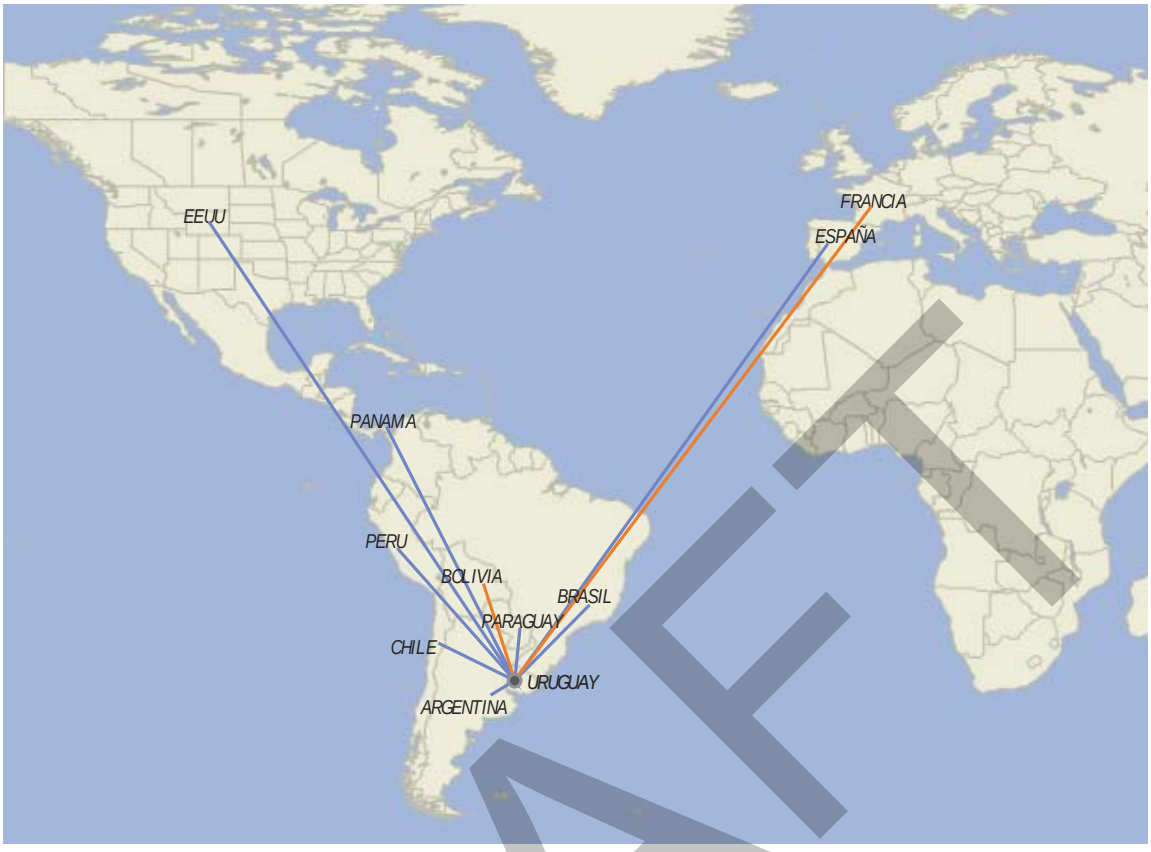


Out of its total international air traffic (direct and indirect), Brazil, Argentina and the United States are the countries with the most connectivity with Uruguay and accounted for over 57% of the total air passenger traffic in 2015 (25.4%, 19.5% and 12.6%, respectively). In the case of direct routes, the neighbouring countries of Argentina, Brazil and Chile represented the most important ones and together were responsible for over 74% of the traffic on direct routes in 2015 (32.9%, 27.0% and 13.6%, respectively).

The main airlines with direct and indirect flights in Uruguay are Aerolíneas Argentinas with 18.6%, LATAM Airlines Brasil with 18.2% and LATAM Airlines Group21 with 13.4%.

Figure 4.13.1 – Map of Uruguay's air passenger transport connectivity with the world

[21] Does not include all of the airlines associated with the LATAM Group. IATA's database incorporates Chile and Peru under this heading (LATAM Airlines Group), while the rest of the Group companies are registered individually.



Source: IATA. Preparation: In-house

The map above shows all of Uruguay's direct routes with the world. In order to be able to operate those routes, airlines require operating licenses from the points of origin to those of destination for direct flights with or without stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all of the direct non-stop routes by airport.

Insofar as air cargo is concerned, according to IATA figures, a total of 4 thousand tonnes of air cargo were transported. The country's most important trading partner is the United States with a 30% share, followed by Chile with 21% and Brazil in third place with 16%. It should be stressed that these figures consider only the tonnes reported by the airlines in the CASS (Cargo Accounts Settlement Systems) programme.

Charts 4.13.6 – Main air cargo figures

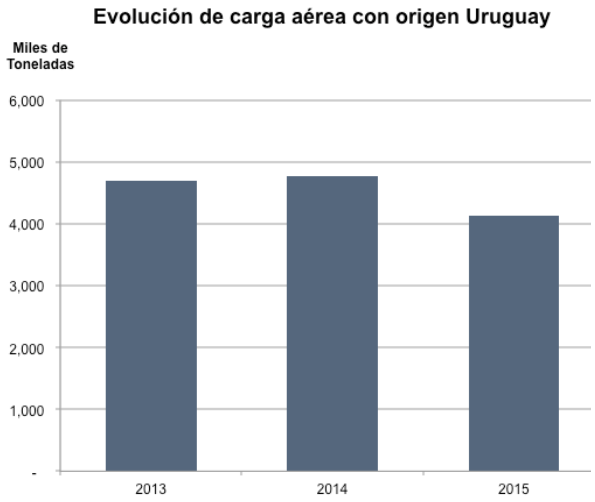
Evolution of air cargo originating in Uruguay

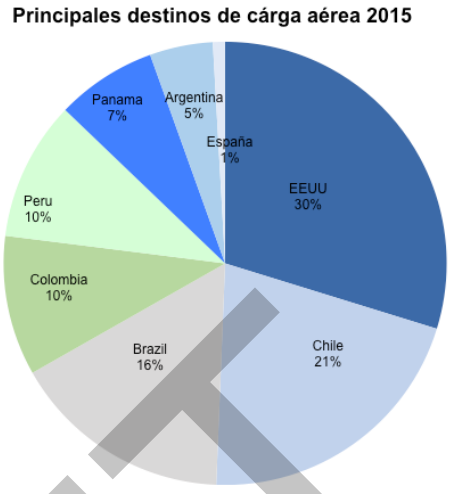
Thousands of tonnes

Main destinations of air cargo in 2015

U.S. 30%; …Spain 1%

Source: IATA





Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, Uruguay occupies the 73st position out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries in 2015. An examination of the individual indicators reveals that Uruguay still has room to work on improving the country's connectivity conditions, particularly in the area of the quality of its domestic transport network and of its air transport infrastructure.

Table 4.13.1 – Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 73 de 141**
Indicadores específicos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	5.8	41
Efectividad de marketing para atraer turistas	1-7	5.2	33
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turística	1-7	4.1	76
Calidad de la infraestructura aérea	1-7	4.0	90
Calidad de la red doméstica de transporte	1-7	4.1	82
Requerimiento de visas	0-100	28.0	58
Apertura de acuerdos bilaterales ASA	0-38	14.1	35

	Score range	**Score**	**Ranking**

Travel and tourism competitiveness index

Specific indicators (score range)
Prioritization by the government of the industry
Effectiveness of marketing and branding to attract tourists
Number of regional trade agreements in force
Tourist service infrastructure quality
Air transport infrastructure quality
Quality of the domestic transport network
Visa requirements
Openness of bilateral service agreements (ASAs)

Source: WEF

SWOT Analysis –Uruguay's Connectivity

Strengths
• Socio-economic stability • Centres of tourist attraction • Economic investment centres; third ranking country in the region with the most foreign investment favouring the creation of new airlines. (Source Gob. UY) • Designation of Montevideo's Carrasco International Airport as a Free Zone Airport. Cargo does not require formalities or permits. • 4 cargo air carriers operate out of Carrasco airport. • Government policy favouring the establishment of maintenance shops, (23) with plans to attract the region's airlines. • National and regional operations of Alas Uruguay and Amaszonas Uruguay. • Aeronautical Training Institute (IAA) for commercial and private pilots and air controllers. • Facilitation and rapidity of immigration formalities with up-to-date "Easy Airport" biometric technology for Uruguayan citizens. • Alas Uruguay, Sky Airline, Azul, and Amaszonas Uruguay have announced an increase in the number of flights in their operations and possible shared code agreements to develop connectivity within the SAM Region.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization. • Interest of foreign airlines in creating new national airlines in each State. • API (Advanced Passenger Information) technology for immigration formalities using secure, encrypted electronic transmissions with a greater capacity for housing passenger data. • Industry technology that facilities and simplifies passenger check-in and embarkation, with rapid immigration formalities and security control processes.

- Partnerships and agreements with the region's airlines (code sharing)
- Agreements and integration with one or more of the region's States to attract tourism from distant countries.

Weaknesses

- Airport check-in, security, immigration and embarkation processes require more automation.
- Government policy of greater openness to aviation.
- The World Trade Organization (WTO) granted Uruguay an Air Liberalization Index of 10.47 (2013) on a scale of 0-50 (the higher the index, the greater the liberalization).
- Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism on the part of the States or of one of the signatory States, that has not been brought into line with the new market conditions and current globalization favouring Air Liberalization.

Threats

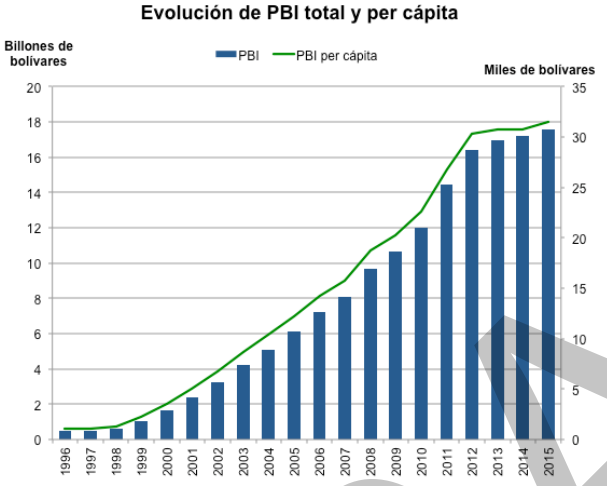
- Unforeseeable terrorist acts have an impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Climate change and/or natural disasters.

4.14 Venezuela

General Description

With a huge wealth of natural resources and the world's largest proven oil reserves, Venezuela is a megadiverse country with a population estimated at 31 million and a total GDP of US$ 240 billion. Its per capita GDP (US$ 7.7 thousand) places it the World Bank's category of "upper middle-income" economies. It boasts 3 of UNESCO's recognized World Heritage sites (1 natural and 2 cultural) and its geographic location within the region positions it favourably as a point of access to other countries.

Charts 4.14.1 – Main macroeconomic indicators and GDP evolution



Main Macroeconomic Indicators

PBI (2015)	239.6	US$ billiones
Crecimiento PBI 2010-2015	0.2%	Promedio anual
PBI per cápita (2015)	7,745	US$ per cápita
Población (2015)	31	Millones
Tasa de desempleo (2014)	8.6%	
Inflación (2015)	121.7%	
Comercio internacional (2013)	54%	% de PBI
Gasto en turismo (2013)	5.4	US$ billones
Viajes y turismo (% de PBI)	3.2%	Reporte WEF 2015

GDP (2015)	US$ billion
GDP Growth 2010-2015	Average annual
Per capita GDP (2015)	US$ per capita
Population (2015)	million
Unemployment rate (2014)	
Inflation (2015)	
International trade (2013)	% of GDP
Spending on tourism (2013)	US$ billion
Travel and tourism (% of GDP)	WEF 2015 Report

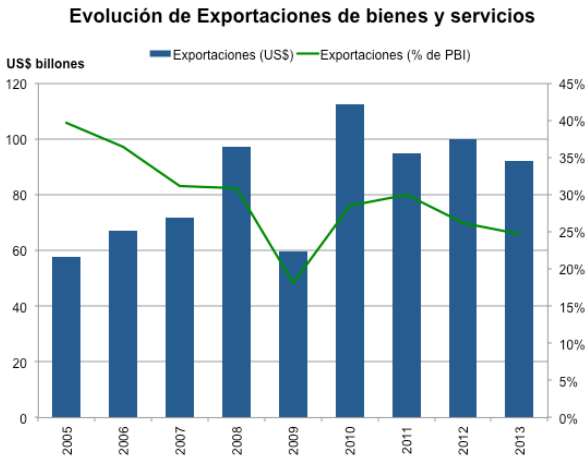
Source: IMF, WB and WEF. Latest available data

Evolution of total and per capita GDP
Billions of bolivars -GDP -Per capita GDP **Thousands of bolivars**

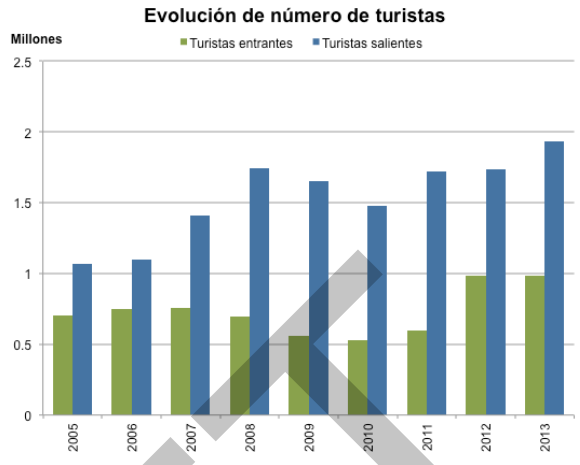
Venezuela's economy is highly dependent upon its oil revenues (96% of its exports, according to the World Bank). For many years, the country benefitted from high oil prices that covered the fiscal spending on different social and development programmes. A number of companies operating in different sectors were nationalized and investments were made in social programmes in order to redistribute the resources to favour excluded population groups. Unfortunately, the drop in oil prices exerted a heavy toll on the country's economic performance, with the result that today the country is in the throes of an economic recession and is lacking in some basic resources.

According to the latest information available from the World Bank, in 2013 Venezuela exported a total of US$92 billion, constituting 25% of its GDP and its international trade (exports + imports) was equivalent to 54% of its GDP. At the same time, a total of US$ 5 billion was spent on tourism in 2013. There were 986 thousand inbound tourists at that time, while outbound tourists totalled 1.9 million.

Charts 4.14.2 – Exports and number of tourists



Evolution of exports of goods and services
US$ billions -Exports (US$) -Exports (% of GDP)



Evolution in the number of tourists
Millions -Inbound tourists -Outbound tourists

Source: WB

Air Connectivity

Charts 4.14.3 – Main air industry figures

Operational Data – Aviation Industry 2015

Número de aeropuertos	26
Aerolíneas con rutas directas (Set 2016)	27
Número de rutas internacionales*	60
Número de países destino directos	24
Número de pasajeros	9.7 millones
Domésticos	5.7 millones
Internacionales	3.9 millones
Número de vuelos	98 mil
Región SAM (% de tráfico internacional)	32%

Number of airports
Airlines with direct routes (Sept 2016)
Number of international routes*
Number of countries of direct destination
Number of passengers million
Domestic million
International million
Number of flights thousand
SAM Region (% of international traffic)

* Includes direct routes with or without stops

Map of Venezuela's domestic connectivity

Main airlines with flights inside and to/from Venezuela

Airline **Passengers in 2015** **% share**

Aerolínea	Pasajeros 2015	% de part.
CONVIASA	1,626,641	16.8%
Aserca Airlines	1,582,819	16.3%
LASER, Linea Aerea de Servicio Ejecutivo Regional Laser	1,456,245	15.0%
Aeropostal Alas de Venezuela C.A.	1,160,956	12.0%
Avior Airlines C.A	680,076	7.0%
Otros	3,181,006	32.8%
Total	**9,687,743**	**100.0%**

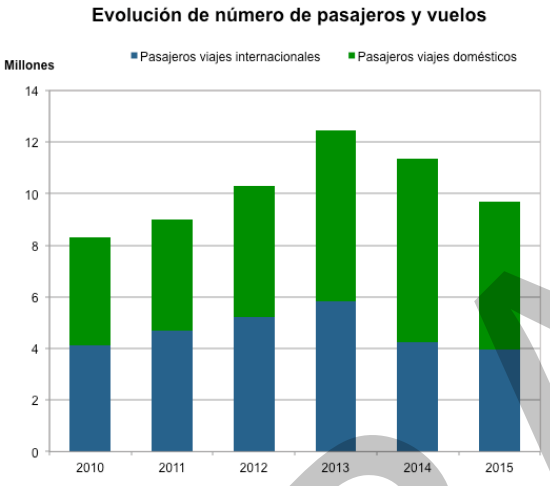
...Others...
Source: IATA

Venezuela has a total of 26 operating airports, of which, according to ICAO, 11 are international. The Maiquetía Simón Bolívar International Airport (CCS) in the capital city

handles over 50% of the total passenger air traffic. Since 2013, the number of passengers transported has dropped almost 30%. In 2015, a total of 9.7 million passengers were transported to international and domestic destinations, down -14.8% from the previous year's figure. Since 2013, the total number of passengers transported has dropped by almost 30%.

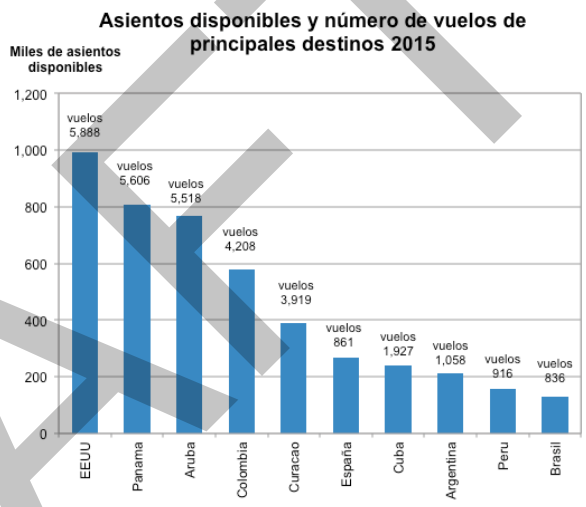
Insofar as available seating is concerned, in 2015, the routes flown to/from and inside Venezuela had an available capacity of 13.2 million seats, which, compared with the total number of passengers who arrived in or departed from Venezuela directly or indirectly (9.7 million), revealed an occupancy rate of approximately 73%.

Charts 4.14.4 – Evolution in number of passengers, flights and available seating



Evolution in the number of passengers and flights

Millions -Passengers on international flights
-Passengers on domestic flights



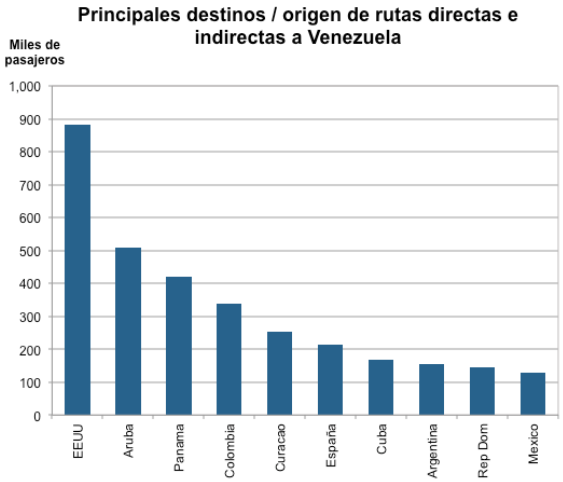
Available seats and number of flights to principal destinations in 2015

Thousands of available seats flights
U.S.; ...Spain;...Brazil

Source: IATA

IATA records reveal that in 2015 a total of 27 commercial airlines operated scheduled direct and indirect flights from/to and inside the country, with 84% of the traffic corresponding to direct routes or routes with immediate connections. Furthermore, 41% of the traffic consisted of international flights and 59% of domestic flights. A total of 32% of the international traffic to/from Venezuela is to the SAM Region. In terms of countries of destination, 25 countries were directly connected with Venezuela, with or without stops, over 60 international routes. In the SAM Region, Venezuela was directly connected without stops with 62% of the States: Argentina, Brazil, Colombia, Ecuador, Panama, Peru, Chile and Guyana (the latter 2 ceased to operate in 2016, bringing that percentage down to 46%).

Charts 4.14.5 – Main countries connected with Venezuela



Main destinations/origins of direct and indirect routes to Venezuela
Thousands of passengers
U.S.;…Spain;…Dom. Rep.
Source: IATA

Main countries with direct routes to Venezuela

Thousands of passengers
U.S.;…Spain;…Dom. Rep.

Out of its total international air traffic (direct and indirect), the United States, Aruba and Panama are the countries with the most connectivity with Venezuela and accounted in 2015 for over 45% of the total passenger air traffic (22.3%, 12.8% and 10.6%, respectively). Concentration on the direct routes only reveals that the same 3 countries represented the most important routes and together were responsible for almost 50% of the total traffic over direct routes in 2015 (18.5%, 18.0% and 13.1%, respectively).

The main airlines with direct and indirect routes inside and outside Venezuela are CONVIASA with a share of 16.8%, followed by Aserca Airlines with 16.3%, and in third place LASER with 15.0%.

Figure 4.14.1 – Map of Venezuela's passenger air transport connectivity with the world

Source: IATA. Includes destinations recently suspended that were operating in 2015. Preparation: In-house

The map above shows all of Venezuela's direct routes with the world. In order to be able to operate those routes, airlines require operating licenses between the points of origin and of destination for direct flights, with or without stops. Direct non-stop routes are shown in blue and direct routes with stops, in red. Annex A lists all of the direct non-stop routes by airport.

Air Cargo

There is very little up-to-date official information about the transport of air cargo to/from Venezuela. Furthermore, the country is not involved in IATA's CASS (Cargo Accounts Settlement Systems) programme.

Competitiveness of the Industry

In the World Economic Forum competitiveness ranking, Venezuela occupies the 110th position out of a total of 141 countries analyzed in terms of the competitiveness of their travel and tourism industries in 2015. A closer look at the individual indicators reveals that the quality of its air transport infrastructure and the condition of its domestic transport network are some of the country's main obstacles, in addition to its ranking at the lowest levels in comparison with the rest of the world insofar as its policy for prioritization of the industry and the attraction of tourists is concerned.

Table 4.11.1 – Competitiveness of the travel and tourism industry in 2015

	Rango de puntuación	Puntuación	Ranking
Indice de competitividad de la industria de viajes y turismo	**1-7**	**3.9**	**Puesto 110 de 141**
Indicadores específicos (rango de puntuacion)			
Priorización de la industria por parte del Gobierno	1-7	2.5	140
Efectividad de marketing para atraer turistas	1-7	1.8	141
Número de acuerdos de comercio regionales vigentes	0 - 46	5.0	81
Calidad de infraestrcutura turística	1-7	3.1	100
Calidad de la infraestructura aérea	1-7	2.7	132
Calidad de la red doméstica de transporte	1-7	2.7	134
Requerimiento de visas	0-100	27.0	62
Apertura de acuerdos bilaterales ASA	0-38	9.4	88
Impuestos a boletos y cargos aeroportuarios	0-100	79.5	70

	Score range	Score	Ranking
Travel and tourism competitiveness index			
Specific indicators (score range)			
Prioritization by the government of the industry			
Effectiveness of marketing and branding to attract tourists			
Number of regional trade agreements in force			
Tourist service infrastructure quality			
Air transport infrastructure quality			
Quality of the domestic transport network			
Visa requirements			
Openness of bilateral service agreements (ASAs)			
Airfare ticket taxes and airport charges			

Source: WEF

SWOT Analysis –Venezuela's Connectivity

Strengths
• Privileged geographic location; for several decades, commercial aviation planned its operations with connections via Caracas to/from South America to the rest of the world. • Centres of tourist attraction on the coast and in the jungle, together with significant biodiversity for ecotourism supported by a marketing plan that has produced positive results. • National aviation has taken off over the past decade with the establishment of 12 airlines that have been operating domestically and on some international routes in America and to other continents. • AVIOR airline is planning new flight routes and operations to the SAM Region. • Conviasa is the national airline that flies to Madrid and permits the purchase of air tickets in bolivars.
Opportunities
• Growth of the global demand for tourism. • Economic growth of States like China and India and of the Asia-Pacific Region. • Trade globalization, development of air cargo exports. • Openness to the development of aviation within the ongoing globalization process. • API (Advanced Passenger Information) technology for immigration formalities using secure, encrypted electronic transmissions with a greater capacity for housing passenger data. • Industry technology to facilitate, simplify and enhance the efficiency of airport check-in, immigration formalities and security control processes. • Fleet updating. • Modernization of the customs organization and procedures. • Agreements and integration with one or more States in the region to attract tourism from distant countries. • Incentives for the return of international airlines to the Venezuelan market.

Weaknesses

- Regulations governing airline remittances abroad have negatively impacted on the profitability of the operations to/from Venezuela and for that reason several airlines have suspended their flights until the situation is settled. The contribution of commercial aviation to Venezuela's socio-economic development is impaired at the present time.
- International airline flights continue to be reduced and are estimated to drop to 40% in 2016.
- Reactive, rather than proactive management in the development of infrastructure
- Airfare tickets are subject to the payment of VAT, airport charges, taxes for bio-security, INAC Civil Aviation, and taxes on luxury products.
- Airport master plans have not been updated to reflect the implementation of more efficient infrastructure.
- Slow airport check-in, security, customs, immigration and embarkation processes.
- Location of the Maiquetía airport and security threats on the highway to the city.
- Bilateral and multilateral air services agreements (ASAs) continue to operate within an environment of regulatory protectionism and have not been brought into line with the new market conditions and characteristics of the ongoing globalization process.
- National aircraft require constant maintenance and spare parts that are priced in foreign currency.

Threats

- Unforeseeable terrorist acts have a negative impact on the security of the industry.
- Global economic crisis or recession.
- Communicable diseases.
- Fluctuations in oil prices raise industry costs.
- Citizen insecurity threatens passenger assets and security and has a negative impact on traffic to the territory.
- Climate change and/or natural disasters.

5 Vision of Aviation Industry connectivity development at 2035

5.10 SAM Region air connectivity optimization approach

The plan for sustained air transport growth in the SAM Region considers the optimization of the air connectivity network as a key element for the region's development, together with air navigation, security and environmental protection plans.

As stated in the first chapter of this module, appropriate connectivity development depends as much on quantitative (number of direct routes, target market size and frequencies) as on qualitative factors (embarkation/disembarkation processes, development of air navigation systems, controls and connection times).

In recent years, the SAM region has witnessed the consolidation of its main airline groups through a series of mergers, acquisitions and commercial partnerships carried out to expand their air transport offering and strengthen operations within the region. While this is indicative of their vision and trust in the potential for air transport growth in the SAM Region, the steady and long-term expansion of that network will depend upon the joint capacity of all aeronautical stakeholders for meeting passenger and cargo supply and demand projections.

Advancing connectivity in the region does not depend merely on promoting growth of the demand for passenger/cargo transport and of the capacity for supplying the air transport (number of routes, flights and frequencies offered by air carriers) to meet that demand. Work will also be necessary on three fronts to develop and increase connectivity:

(iv) Regulatory liberalization

Aeronautical regulation is a core element for defining the scope of action of air carriers. The more open the skies of a State, the greater the opportunity for making the most of its tourism and trade potential and the probability of opening new routes and of the presence of different operators, helping to build a competitive environment that will benefit all consumers. Some of the main obstacles that could limit a State's connectivity offering are, among others: restrictions on air carrier ownership, number of routes and access to secondary airports, and imposition of surcharges or taxes on airfare tickets and of visa requirements.

(v) Infrastructure expansion and modernization

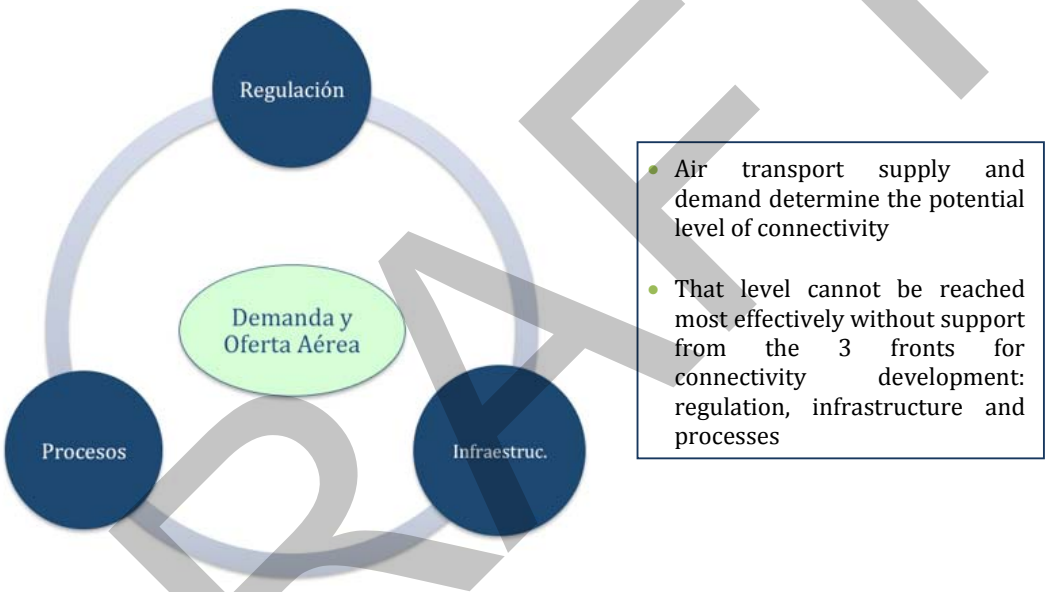
Air carriers cannot open more routes or increase flight frequencies to satisfy a growing demand for connectivity unless infrastructure is available to accommodate the greater air traffic flows. There are two ways to expand infrastructure capacity: 1) by increasing the number and physical size of terminals, runways, boarding gates, and aircraft parking areas, among other things; and/or 2) investing in new technology that would make it possible to use existing infrastructure, but would speed up air traffic management to save time and/or permit operations not previously possible using the old technology. For example, inadequate aviation infrastructure can create obstacles to increased connectivity by causing aircraft congestion, leading to delays and inefficient flight schedules and adding to the time passengers and cargo must spend on their trip, which, in the end, creates indirect costs in terms of people's business opportunities, well-being and social development. The PBN (Performance-Based Navigation) programme and RNAV/RNP systems adopted by the Peruvian State for operations at the Cusco airport

have made it possible to extend the authorized flight operation period from no later than 2 p.m. every day to the entire day and up until 8 p.m. for aircraft certified for this approach, landing and take-off procedure.

(vi) Process efficiency

As stated previously in this connectivity module, the flow of the procedures to which passengers and cargo must submit in order to be transported from one point to another affects the quality of the connectivity offered by a State. Simpler and more rapid information technology procedures with fewer bottlenecks contribute to an orderly and well-managed traffic flow, giving room to accommodate a larger supply and demand for flights. Such procedures include all passenger and cargo services like check-in, security, baggage handling, customs, embarkation and disembarkation.

Figure 5.1.1 – Air connectivity development fronts



Preparation: In-house

Air Transport Supply and Demand -Regulation -Infrastructure -Processes

Responsibility for acting on those fronts lies above all with all aviation industry stakeholders: States, airlines, air navigation system providers and airports, which must work in coordination with each other for the industry's best possible development. Sustainable growth of air connectivity at 2035 will depend largely on the efficiency with which the following actions are taken by each of the stakeholders involved:

- States: As part of their regulatory, supervisory and control responsibilities, State agencies require that the necessary measures be taken to optimize the capacity and operation of airports and air navigation systems. Their main objective is to optimize use of the installed capacity and enhance seamless operation in order to allow for an increase in the traffic flow and ensure, together with the rest of the stakeholders involved, the safety of air operations.

  At the same time, each country's air traffic rules and regulations (bilateral agreements, air operation standards, consumer protection, etc.) have a decisive

impact on the decision and capacity of new air carriers to enter a market and on the opening of new flight routes and destinations and the increase in flight frequencies. The Peruvian State tried out an interesting strategy during the 2013 World Routes fair by approaching a group of airlines that was showing the strongest interest in opening new international routes (Lufthansa, Alitalia, and Turkish Airlines, among others),[22] in order to promote the country's attractions and explain its air traffic regulations and the facilities offered.

- Commercial airlines: evaluate the possibilities for expansion by making a cost-benefit analysis of their aviation operations and services in the region. Furthermore, on starting up, they also generate a supply and promote a demand by opening up new routes at competitive fares, in order to boost traffic in an initial stage. Shared code agreements are another interesting strategy that contributes to greater connectivity, under which two or more air carriers join together to open new, cost-efficient routes. By way of example, LATAM Brasil and Cathay Pacific signed a shared code agreement this year to develop more flight connections between South America and Asia (Air Latin News, 11 October 2016).

- Airports: managed by States or under private concession agreements, should include in their operating plans the necessary action to be taken and priority investments to be made to accommodate the expected increase in demand for airline traffic, particularly during peak hours when the provision of airport services to users is key for optimizing adequate connectivity.

  When a State undergoes a stage of air traffic growth, ACC (Airport Consultative Committee) meetings are called, coordinated by IATA with its airports and in which airlines participate. The State and providers involved in ACC matters are convened so that the airport expansion plans and problems identified by operators can be presented. The purpose of these meetings is to move toward a consensus for appropriate ground infrastructure development. Most airports also hold regular meetings one-on-one with the main air operators to collect information about their short-term business plans and determine the need for better planning.

  To conclude, regular consultation of the manuals prepared by ICAO and IATA in keeping with international standards on, among other things, economic and technical matters and efficient operation, is important. ICAO has published a number of documents like its "Airport Economics Manual" and "Manual on Air Navigation Services Economics," which provide guidance to States, airports and air navigation services providers on more efficient management. IATA's Airport Development Reference Manual (prepared jointly with ACI) is also a reference tool for improving airport management of passenger and cargo traffic, operations and services offered, in order to optimize air traffic flow and make the most of the connectivity of each of the States in the region.

To sum up, in order to maximize air connectivity in the SAM Region, it is necessary for States, airport concession holders, airlines and air navigation system providers to coordinate in making decisions and implementing plans for appropriate operation of the

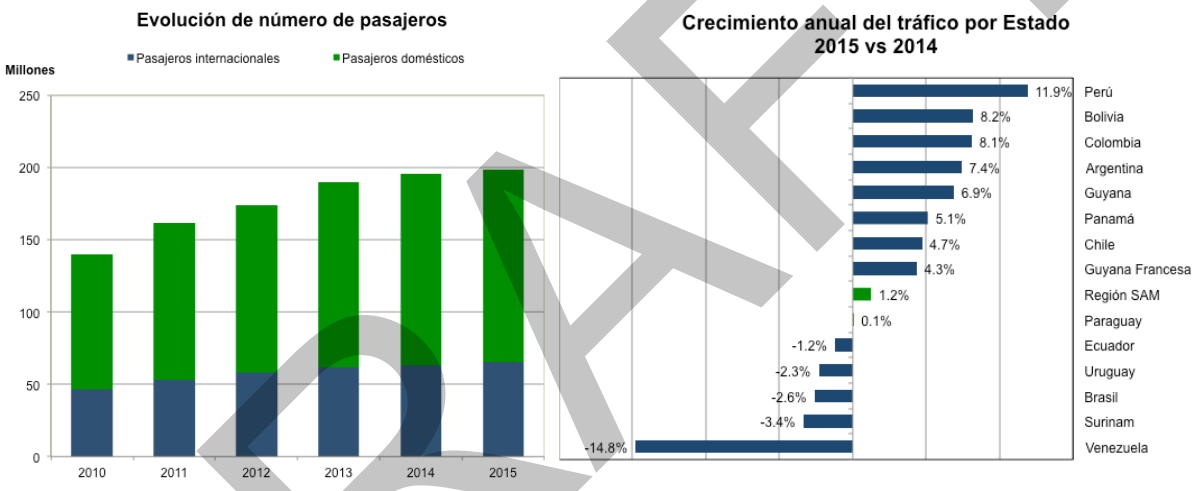
[22] "Competitividad de la aviación en América Latina y posicionamiento Perú y análisis de mercado" (Aviation competitiveness in Latin America and Peru's positioning and market analysis) – ALG y T&L (commissioned by Mincetur)

current connectivity network and in taking advantage of existing possibilities for its expansion. Only in this way can the ultimate purpose of expediting the economic and social development of the region's 14 countries be achieved.

5.11 Main figures and characteristics of airline traffic in the SAM Region

Overall, the SAM Region, according to IATA, has a total of 328 operating airports within its 14 States that handle domestic and international flights. Of these, ICAO places the number of international airports at 106. The total passenger flow transported to/from and inside the region in 2015, according to data supplied by IATA, reached a figure of 198.4 million (see **Annex B** for data broken down by State). This is barely 1.2% more than the previous year, due mainly to the reduction in Brazilian (-2.6%) and Venezuelan passenger traffic (-14.8%).

Charts 5.2.1 – Evolution of air traffic in the SAM Region



Evolution in the number of passengers
Millions -International passengers -Domestic passengers

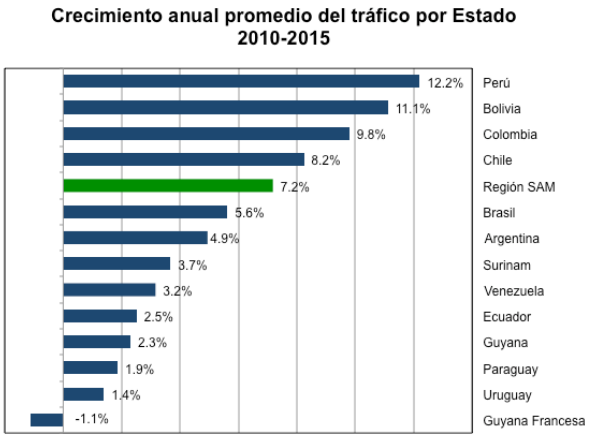
Annual growth in traffic by State, 2015 vs. 2014
Peru…Panama…French Guiana SAM Region …Brazil Suriname

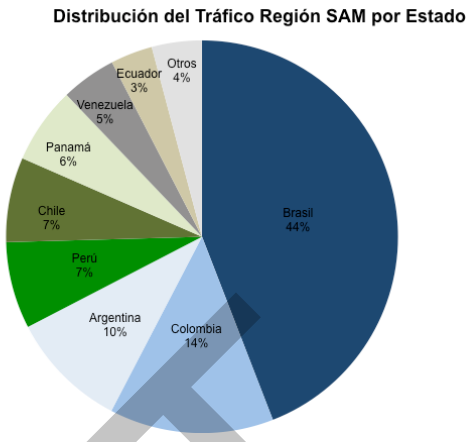
Source: IATA and Tocumen International Airport. Preparation: In-house

It should be added here, however, that air traffic growth in the region in past years surpassed 7% (except in 2014, when it dropped to 3.2%), placing average annual growth for 2010-2015 at 7.2%. During that period, Panama, Peru, Bolivia, Colombia and Chile spearheaded the growth of air traffic in the region with average annual rates over 2010-2015 of 13.9%, 12.2%, 11.1%, 9.8% and 8.2%, respectively.

At the same time, Brazil, Colombia, Argentina and Peru are the countries with the most passenger traffic, accounting in 2015 for over 75% of the total. Brazil alone is responsible for 46% of the total.

Charts 5.2.2 – Composition and annual growth of passenger air traffic by State





Average annual growth in traffic, by State 2010-2015

Peru;...SAM Region; Brazil;...Suriname;...French Guiana

Traffic distribution in the SAM Region, by State

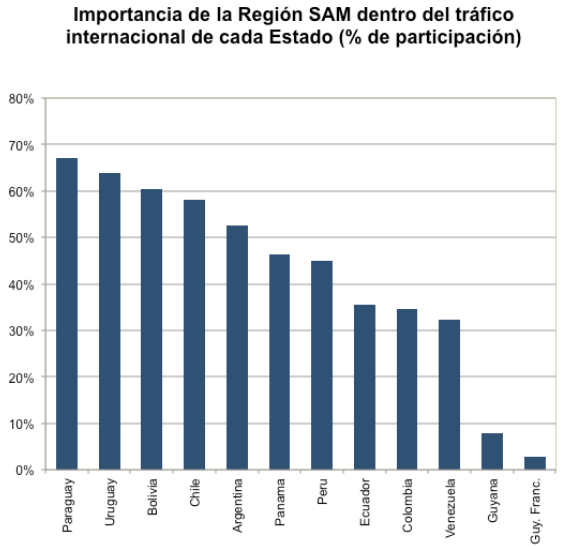
Brazil 44%;...Peru 7%;...Panama 6%; ...Others 4%

Source: IATA and Tocumen International Airport. Preparation: In-house

In terms of flight destinations, 70% of the air traffic in the SAM Region consists of domestic flights within each of the 14 States. The remaining 30% corresponds to international flights, of which 7% were intra-regional between States in the SAM Region. As a result, 77% of the total air traffic consists of domestic and international passenger traffic within the SAM Region.

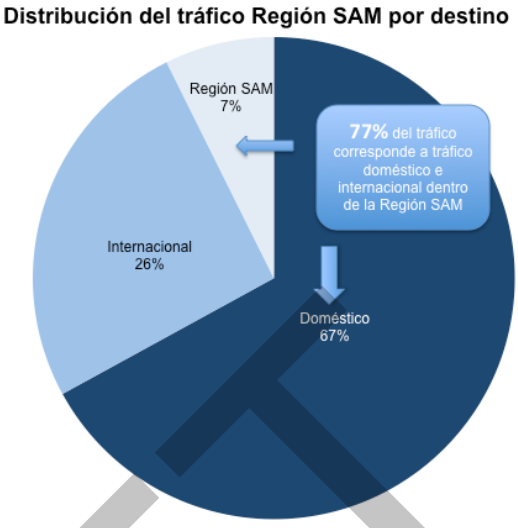
While intra-regional traffic varies State-by-State, it should be stated that 11 of the 14 States are responsible for more than 30% of the international traffic with the rest of the countries in the SAM Region. That indicator measures each State's total traffic and its percentage of total trips within the region--in other words, it gives a relative idea of the importance of the SAM Region within each country's international traffic. As a result, although Brazil and Argentina are the countries with the largest number of passengers, in absolute terms, travelling within the region (approximately 5.8 million passengers each), Paraguay and Uruguay, in terms of total traffic, receive a larger percentage of visitors and make trips within the SAM Region--in other words, their passenger traffic depends heavily upon their tourism and business relations with other countries in the SAM Region.

Charts 5.2.3 – Distribution of air traffic and importance of intra-regional traffic



Importance of the SAM Region within each State's international air traffic (% share)

Paraguay;...French Guiana

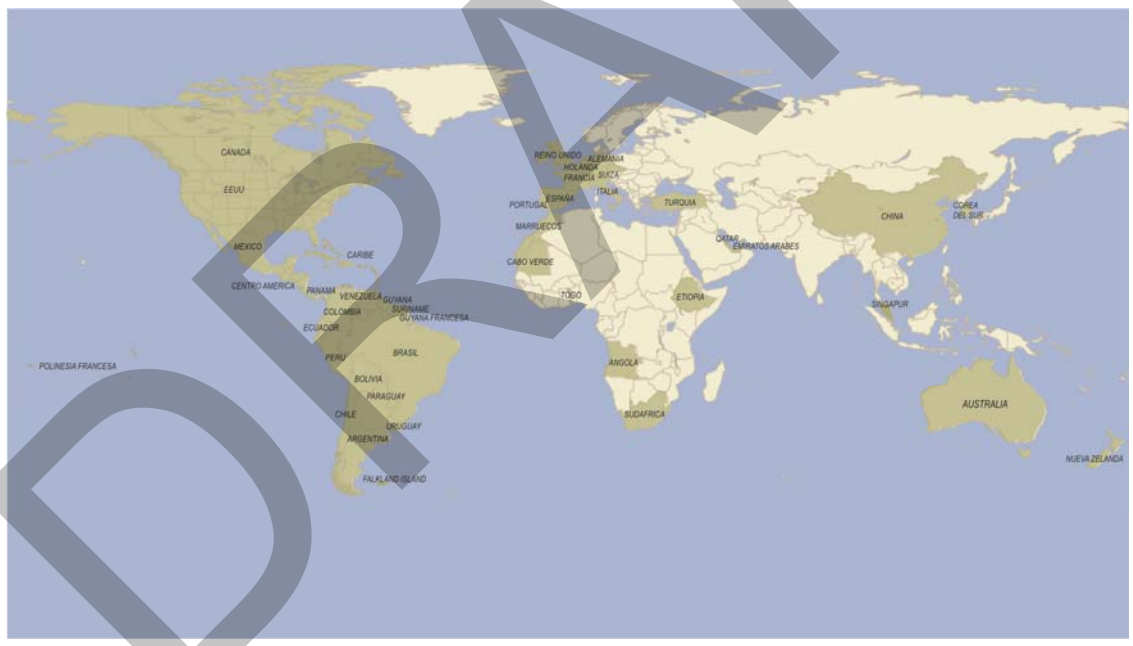


Distribution of the SAM Region's air traffic, by destination

Domestic 67%; International 26%; SAM Region 7%; [77% of the traffic corresponds to domestic and international traffic within the SAM Region]

Source: IATA. Preparation: In-house

Map 5.2.1 – Countries of destination connected via direct routes with the SAM Region



Source: IATA

A total of 67 countries have direct connections with the SAM Region (including its 14 member States) via 773 international routes, of which 519 are direct non-stop routes (a total of 52 countries with non-stop connections).

As for the air operators, below is a summary table broken down by State, showing the most important SAM Region and international operators and differentiating between conventional and low-cost carriers.

Table 5.2.1 - Main airlines with a direct presence in the SAM Region (Source: IATA)

Region														
LATAM	☑	☑	☑	☑	☑	☑				☑	☑		☑	
Avianca	☑	☑	☑	☑	☑	☑			☑		☑		☑	☑
Copa Airlines	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑		☑	☑
Aerolíneas Argentinas	☑	☑	☑	☑	☑					☑	☑		☑	☑
Avior					☑	☑			☑					☑
Conviasa					☑		☑		☑					☑
BoA	☑	☑	☑											
tame			☑			☑					☑			☑
Surinam Airways			☑				☑	☑				☑		

World														
AA	☑	☑	☑	☑	☑	☑			☑	☑	☑		☑	☑
United Airlines	☑		☑	☑	☑	☑			☑		☑			☑
DELTA	☑		☑	☑	☑	☑	☑		☑		☑			☑
Air Canada			☑		☑				☑		☑			
AeroMexico	☑		☑	☑	☑	☑			☑		☑			
IBERIA	☑		☑	☑	☑	☑			☑		☑		☑	☑
AIRFRANCE KLM	☑		☑	☑	☑	☑		☑	☑		☑	☑		☑
Lufthansa	☑		☑		☑				☑					
British Airways	☑		☑								☑			
Alitalia	☑		☑	☑										
AirEuropa	☑	☑	☑							☑	☑		☑	☑
QATAR	☑		☑											
South African Airways			☑											
Emirates	☑		☑											
Turkish Airlines	☑		☑						☑					

Low-cost														
jetBlue					☑	☑					☑			
SKY Airline	☑			☑	☑						☑		☑	
InselAir			☑		☑	☑	☑					☑		☑
GOL	☑	☑		☑						☑		☑	☑	
VivaColombia					☑	☑			☑		☑			
Azul	☑		☑	☑				☑			☑		☑	☑
spirit airlines					☑				☑		☑			
AeroGal		☑			☑	☑			☑		☑			

5.12 The SAM Region's current level of connectivity

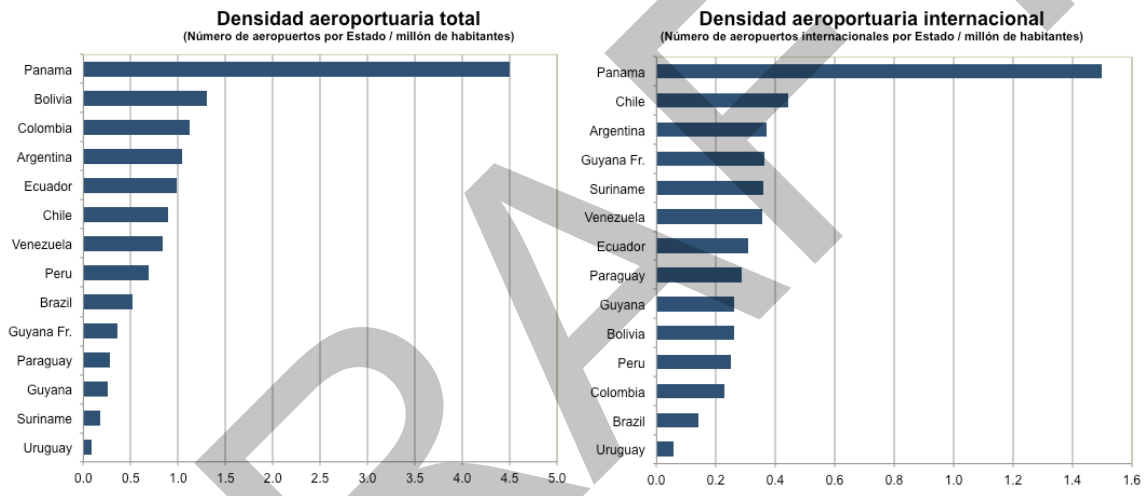
5.12.1 Metrics of the SAM Region's connectivity level

The purpose of this document is to assess and measure the connectivity of the SAM Region in order to give an idea of the degree of its development and be able to follow up on its evolution. Below are a series of comparative metrics for the connectivity level of each State in the SAM Region:

Airport density

Airport density measures the total number of airports per one million inhabitants and is an indicator of the level of availability of air traffic infrastructure to a country's population. That metric is presented below measured in terms of total airports (domestic and international) and then of international airports exclusively.

Charts 5.3.1 – Airport density by State



Total airport density (Number of airports per State/one inhabitants)
…French Guiana…

International airport density (Number of million international airports per State/one million inhabitants)
…French Guiana…

Source: IATA, ICAO (CAR/SAM Air Navigation Plan). Preparation: In-house

It is obvious that Panama leads the ranking with a ratio of 4.5 airports per one million inhabitants in the case of total airports and of 1.5 in that of international airports per one million inhabitants. The second and third places vary according to the indicator used. This is exemplified in the cases of Bolivia and Colombia, which, although they have a larger number of total airports available per inhabitant, rank lower within the rest of the region in the specific case of international airports. That situation reflects the centralized distribution of international air traffic within those countries among a smaller number of airports (only about 20% of their total airports are international in the case of both countries). Chile is a case apart, showing a sizeable improvement in position vis-à-vis the rest of the region's countries, for 50% of its airports can handle international traffic.

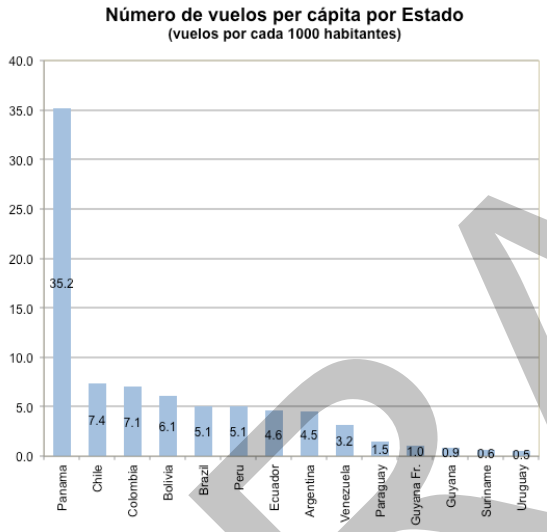
Brazil, for its part, although the most connected country in terms of number of passengers, airlines and airports, still shows ample room for further decentralization of its air traffic, given its large land area and population. Although Sao Paulo and Rio de Janeiro are highly connected, cities like the capital, Brasilia, do not show the same level

of connectivity and account for less than 7% of the total air traffic. The country's broad connectivity offering does not reach all of its inhabitants, a fact that is reflected in its international airport density metric, which is among the region's lowest.

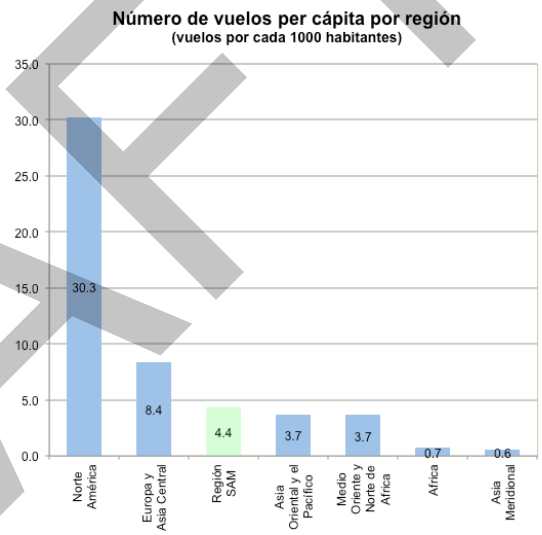
Number of flights per capita

The indicator of the number of flights divided among a State's total population gives an idea of the people's tendency to travel and possibilities for doing so. A nominal comparison of the number of flights among different States is a frequently inadequate indicator, for it fails to consider the size and purchasing power of each country's population. The number of flights per capita indicator does give an idea of the population's purchasing power and degree of development when combined with the offered degree of available air connectivity. The higher the metric, the greater the connectivity.

Charts 5.2.5 – Number of flights per capita



Number of flights per capita, by State (flights per 1,000 inhabitants)
....French Guiana...



Number of flights per capita, by region (flights per 1,000 inhabitants)
North America; Europe and Central Asia; SAM Region; East Asia and the Pacific; Middle East and North Africa; Africa; South Asia

Source: IATA, World Bank. Prepared: In-house

Panama is the country with the largest number of flights in terms of its population. It stands far apart from the rest of the countries mainly for two reasons: 1) Although its population is relatively small in comparison with those of other countries in the region, it is one of the countries with the largest number of routes and flights; and 2) In operating as a hub for the region, it accommodates a large percentage of in-transit passengers (approximately 60% of its total passengers). Regionally speaking, the average number of flights per capita in the SAM Region, for its part, is similar to those of the Middle East, North Africa, East Asia and the Pacific, but lower than those of North America and Europe, still giving it sizeable room for development.

Routes, destinations and operators

The number of direct international routes measures how many airports each country is connected with at the global level. The larger the number of direct routes a State possesses, the greater its connectivity with the world's aviation network. Those direct

routes owe their existence to bilateral agreements between the countries on each route --in other words, an operating license is needed to be able to embark and disembark passengers between all pairs of interconnected cities. Furthermore, the decision to operate a direct route, whether non-stop or not, will also depend upon the preference of the consumers and the analysis made of its commercial feasibility and profitability by each authorized airline.

Charts 5.2.6 – Direct international routes

Number of direct international routes by State

-Non-stop routes -Routes with stops

...French Guiana

Countries of destination with direct routes,

-Non-stop routes -Routes with stops

...French Guiana

Source: IATA Preparation: In-house

From the above, it is clear that Brazil and Panama are the region's countries with the most international connections. It should be stressed that in Panama's case, although the number of its direct routes is slightly larger than that of Colombia, in terms of countries/territories of destination, Panama has connections to 12 territories more than Colombia, showing that despite their similar number of direct routes, Panama is more diversified in geographic terms, while Colombia is probably interconnected with several cities in the same country.

To conclude, another way to determine a country's degree of connectivity is to analyze the variety of its destinations and air operators by region. This will reveal which regions each State is more or less connected with, in order to be able to identify where the possibility exists for opening up new routes. In addition, the interest and presence of foreign operators is also an indicator of each country's air connectivity potential.

Charts 5.2.7 – Countries of destination and air operators, by region

Number of destinations, by region

-SAM Region -Rest of America -Europe -Africa Middle East and Central Asia -East Asia and the Pacific

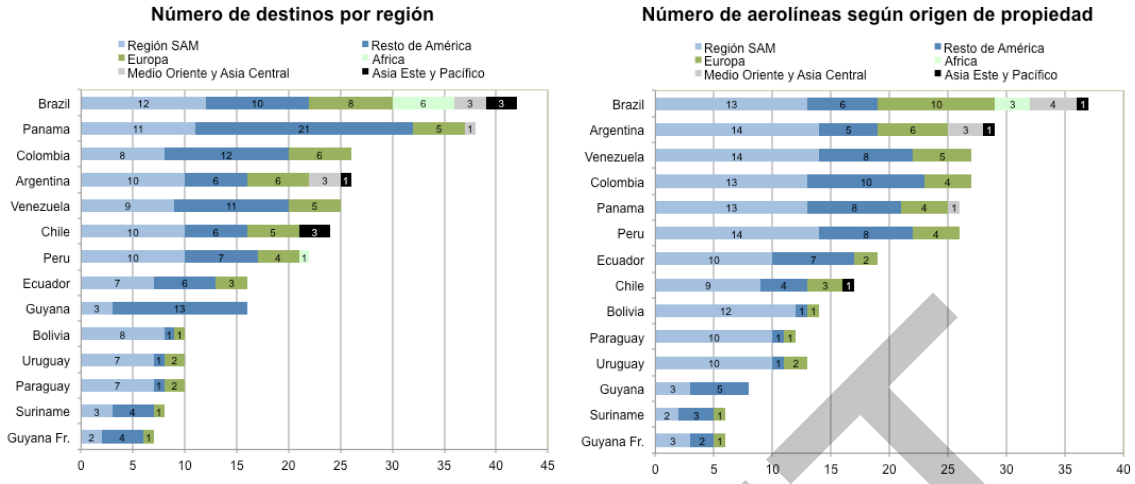
…French Guiana

Number of airlines, by ownership origin

-SAM Region -Rest of America -Europe -Africa -Middle East and Central Asia -East Asia and the Pacific

…French Guiana

Source: IATA (data), World Bank for the classification of destinations by region. Preparation: In-house



Brazil is seen to be the country with the widest variety of air connections and the largest presence of foreign operators, making it feasible to operate those routes. It is the only country in the region with direct routes to countries in East Asia and the Pacific, specifically Singapore, South Korea and China. It also (together with Peru) offers direct flights to Africa, with connections with 6 countries in that continent. For further details on the city pairs and airline operators, by State, see **Annexes A and C,** respectively.

Generally speaking, most countries in the SAM Region show great, still unexplored potential for connections with other regions like Asia and the Pacific, Africa, Eastern Europe and the Middle East. Countries like India, Japan, Israel, Greece and Egypt are some of the world's well-positioned destinations that still have no direct scheduled routes to countries in the SAM Region. At the same time, countries of great economic importance for tourism and trade, like China, Singapore, the Emirates, Qatar, South Korea and Turkey have very few routes operating with barely 1 or 2 countries in the region, leaving considerable room for the rest of the States to consider establishing direct connections with them. By way of example, according to Boeing[23], the SAM Region currently accounts for less than 2% of the total air trade with the Middle East, Asia and the Pacific.

An analysis of the ownership origin of the airlines operating within each State would reveal behaviour along similar lines. The market for Middle Eastern, African and Asian and Pacific operators, while highly developed globally, is extremely small within the region. There are airline operators that are very important worldwide, like Korean Air, which, for example, has approached Peru's authorities and currently operates non-scheduled cargo flights to several countries in the region and has plans to add passenger flights in the future. In addition, Japan's All Nippon and Japan Airlines, while still not having revealed any plans to enter the region, do represent a very important partner insofar as tourism is concerned. El Al Israel Airlines, Hong Kong Airlines, Etihad Airways, China Southern and Turkish Airlines are air carriers that, as members of IATA, have requested information about the requirements for entering some of the region's countries. They have also made familiarization visits to look into the possibility of opening offices and participating in the local market in order to boost the demand for and offering of flights to/from their respective regions of origin. During the initial phase, those airlines make sales indirectly through a GSA (General Sales Agent) under inter-

[23] "World Air Cargo Forecast 2014-2015" – The Boeing Company

carrier agreements until they have familiarized themselves with the market and decided whether or not they can operate directly.

It is also important to mention the low-cost airline market that is booming in the region. It is contributing heavily to the development of secondary airports and the introduction of more competitive fares that will make air travel more accessible to a larger percentage of the population, contributing in that way to the prosperity of a broader segment of the economy.

In the case of domestic markets, Brazil, and to a lesser extent Chile and Colombia, show evidence of the important penetration of low-cost airlines in their respective markets, with shares estimated at 2016 of 57%, 30% and 12%, respectively[24]. In the case of intra-regional international flights, however, the traffic of low-cost airlines is concentrated for the most part in Argentina, Brazil, Chile and Uruguay and has shown growth of only 1% over the past 5 years (reaching an 8% share of the total traffic). As a result, it is necessary to promote more flexible regulations in order to strengthen existing operators and permit the entry of new ones in order to further boost the market's development. Air carriers like Germany's Cóndor Flugdienst, the United Kingdom's Easy Jet, and Spain's Vueling are important world-class operators that could be interested in entering the region. It should be added that Ireland's Ryanair has expressed an interest in participating and forming partnerships with the region's airlines in order to build up low-cost domestic and international air traffic.

In short, the SAM Region still has a chance to continue increasing its regional connectivity and building up its domestic industries and economies. But, in order to convince new conventional and low-cost operators from different regions of the world to enter the SAM market, it will be essential to adopt regulations that allow for greater openness to foreign capital, accompanied by the provision of adequate infrastructure capable of handling the increased air traffic in the main airports of each State.

[24] "Viva la Revolución of LCCs? Not quite yet…" – Carlos R. Ozores

5.12.2 Indicators of the connectivity level and quality in the SAM Region

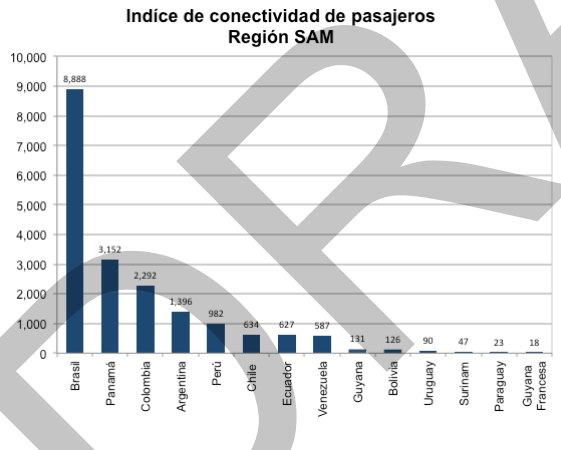
The use of economic indicators or indexes makes it possible to create different measurements that give an idea of the relative magnitude of a variable under assessment. In the case of this study, we have focused on an analysis of the level and quality of connectivity in the SAM Region. We have accordingly created and collected the following data for its two main fronts: passengers and cargo. The results of the analysis, both quantitative and qualitative, of the level of connectivity of each State in the SAM Region are presented below.

a) Passenger connectivity level index

The purpose of this indicator is to analyze the level of connectivity of a territory in accordance with the total number of passengers of each State, but weighted and taking into consideration the economic importance and relevance of each country of destination with which it is connected; this is to say that destinations with a greater capacity for connectivity with the rest of the world will be weighted more heavily in the valuation. As a result, this indicator considers not only the total number of passengers going to each destination, but also that the connectivity of States connected with the more developed countries and hubs will bear greater weight in relative terms. For further details about the calculation of the indicator see **Annex D**.

The results for each State in the region are set out below:

Charts 5.2.8 – SAM Region passenger connectivity indexes



SAM Region passenger connectivity index

Brazil; Panama;...Peru;...Suriname;...French Guiana

Domestic and international passengers per 1 billion US$ of GDP

North America; Europe and Central Asia; SAM Region; East Asia and the Pacific; Middle East and North Africa; Africa; Southern Asia

Source: IATA, World Bank. Preparation: In-house

Brazil is seen to be the region's leader in connectivity at the level of air traffic, accounting for 46% of the total passengers. It is the country with the largest number of international airports (29) and of airline operators (37) and, therefore, with the largest number of direct routes (189), which are most widely diversified among the various regions of destination (it is the only country that reaches Asia and the Pacific and has a sizeable number of routes with the Middle East and Africa). It should be added here, however, that this indicator has been calculated at the country level and therefore does

not consider the distribution and availability of air services within each State; in other words, it represents the total level of connectivity of the country's passengers and does not account for differences in connectivity and distribution levels among Brazil's various cities.

On a second level of importance are Colombia, Argentina, Panama and Peru, countries with a large potential for tourism and business and whose territories serve as hubs for some of the region's most important air carrier operators. The lowest positions are occupied by the smallest States in the region, a fact that is not surprising given that they have fewer passengers, but also because of the smaller size of their economies and populations.

In order to situate the SAM Region as a whole in comparison with other regions, and given the limited availability of up-to-date global information, we have made use of a second metric or useful, easily calculated indicator, to show the region's positioning in terms of other regions of the world: number of passengers per one billion dollars of GDP (adjusted by Purchasing Power Parity or PPP). That indicator allows us to establish the dimensions of each region's air traffic depending upon the size of its economy, in order to situate the level of its passengers in terms of its GDP. It should be added here that in calculating that indicator, we have drawn on data published by the World Bank that is broken down by region.

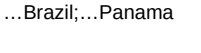
It can be seen in the second chart to the right of 5.2.8. that North America is the undisputed leader at the world level, with approximately 45 thousand passengers per one billion dollars of GDP. The SAM Region occupies a mid-level position with 28.6 thousand passengers per one billion dollars of GDP, above Africa, South Asia and the Middle East, but below North America, Europe, Central Asia and East Asia and the Pacific. That positioning reveals the potential that still exists for aviation development in the SAM Region.

b) Cargo connectivity level index

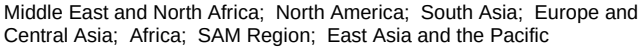
The cargo connectivity level index was prepared in the same way as the passenger connectivity level index, by considering the total number of tonnes transported for export by each country, but weighting each destination according to the size of its GDP and, therefore, of its global economic importance. In that way, cargo connectivity is given a relative weight in accordance with the benefits conferred on the international trade of each of the region's territories by each connection point. For further details about the calculation, see **Annex D**. The results are as follows:

Charts 5.2.9 – SAM Region cargo connectivity indexes

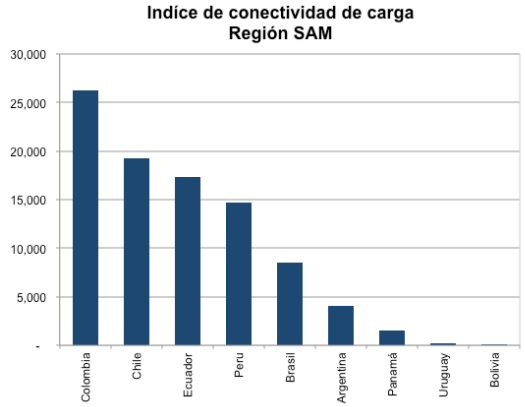
SAM Region cargo connectivity index

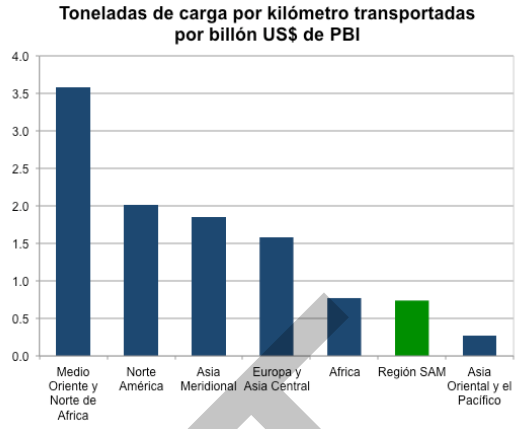


Cargo tonnes per km transported per one billion US$ of GDP



Source: IATA, World Bank. No official cargo data by destination is available for Guyana, French Guiana, Suriname, Paraguay and Venezuela and for that reason no cargo connectivity indicator could be prepared for those territories. Preparation: In-house





Colombia is the country with the largest degree of cargo connectivity. It is also the State that trades the most with the SAM Region's foremost trading partner. Chile is another country that trades heavily with more developed and economically important States, with the result that its index is the second most important one in the region. Ecuador and Peru also show significant connectivity indexes, given their levels of trade with North America and important European countries like France and Spain.

Given the limited availability of global data, another simple indicator for evaluating the level of SAM Region air cargo connectivity in comparison with that of other regions of the world is the tonnes of cargo transported per kilometer per US$ one billion of GDP. That indicator was prepared using World Bank data published by region. The SAM Region can be seen to show among the lowest levels of air trade, considering the size of its economy, surpassing only those of East Asia and the Pacific. As noted previously, SAM Region trade is limited for the most part to 3 regions (North and Central America, the SAM Region itself and Europe). That situation is indicative of major, yet unexplored, opportunities that could result in great economic benefits for the States.

c) Indicators of passenger and cargo connectivity quality

This section presents indicators prepared by the World Economic Forum (WEF) in regard to the quality of passenger and cargo air connectivity. The indexes and rankings were developed by analyzing various different characteristics of the sector, while taking into consideration the opinions and knowledge of governments, organizations, business people and top aviation industry enterprises.

Aviation Infrastructure quality

The capacity and condition of its air transport infrastructure is one of the key variables for determining the quality of a territory's connectivity. As stated in previous sections of this module, WEF, as part of its "Report on the Competitiveness of the Travel and Tourism Industry," makes an analysis of air transport infrastructure, by State. The chart below shows the different factors involved in setting a value on that indicator and each State's resulting ranking in terms of it:

Diagram and Table 5.2.9 – Factors included and WEF ranking of air transport infrastructure quality

Air transport infrastructure quality

País	Puntaje	Ranking
Panamá	4.5	18
Brasil	3.6	41
Guyana	3.2	49
Chile	2.8	66
Colombia	2.7	70
Argentina	2.6	75
Perú	2.4	83
Surinam	2.2	98
Bolivia	2.2	99
Uruguay	2.1	100
Venezuela	2.1	101
Paraguay	1.6	137

Air transport infrastructure quality -Weekly seat availability; -Number of flights; -Quality of airports and their passenger services; -Airport density, by population; -Number of air operators **Country:** Panama; Brazil; ...Peru; Suriname; **Score Ranking**

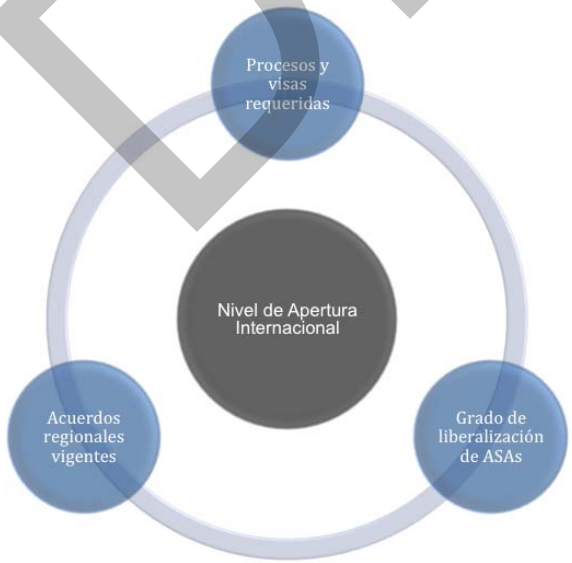
*The Report does not include French Guiana and Ecuador within its sampling of territories. Source: WEF Preparation: In-house

Panama leads the ranking and occupies the 18th position at the world level and, together with Brazil and Guyana, is among the top 50 economies studied. The other countries rank from mid-level on down, revealing that much still needs to be done in the region to improve air transport infrastructure quality and expand its capacity. Countries like Colombia, Peru and Argentina, despite enjoying a high level of connectivity, must invest further in upgrading their infrastructure if they intend to take maximum advantage of their potential for connectivity.

Level of International Openness

Another important indicator used for the analysis included in that report is the level of international openness of States in the SAM Region. The factors considered in the analysis and ranking of results for each State in the SAM Region are shown below:

Diagram and table 5.2.10 – Infrastructure quality and international openness indexes



Level of international openness

País	Puntaje	Ranking
Chile	4.7	2
Colombia	4.3	8
Perú	4.2	15
Panamá	4.1	23
Guyana	3.7	51
Bolivia	2.8	82
Argentina	2.8	84
Uruguay	2.7	86
Brasil	2.6	91
Paraguay	2.5	98
Surinam	2.3	108
Venezuela	2.2	112

Level of International Openness: **Country:** ...Peru; Panama; ...Brazil; ...Suriname **Score** **Ranking**
-Required processes and visas; -Degree of ASA liberalization;
-Regional agreements in force

*The Report does not include French Guiana and Ecuador within its sampling of territories.
Source: WEF. Preparation: In-house

According to WEF, Chile is one of the economies most open to the international market, occupying the 2nd position at the global level for that indicator. Colombia also ranks among the top 10 worldwide (8th position). Attention should be drawn, as well, to the cases of Peru, Panama and Guyana, which show a relative degree of openness in comparison with the world's other countries, occupying positions 15, 23 and 51. The other economies, compared with the rest of the world, show evidence of inflexibility and heavy regulation that limit or obstruct opportunities for maximizing their territories' connectivity.

Facilitation of international trade

The World Economic Forum, exclusively in terms of air cargo, regularly updates "The Global Enabling Trade Report," in which it makes a detailed analysis of the level and quality of infrastructure, policy, institutions and services for facilitating world trade. The latest report was published for 2014 and includes an evaluation of 138 countries that account for 98.8% of the world's total GDP and 98.3% of its total trade in goods.

One of the most important indicators found in that report, which we will use for reference purposes in evaluating the level of trade facilitation and connectivity quality for cargo transport in the SAM Region, is the level of border administration efficiency and transparency. Although the report prepared by WEF is not limited exclusively to air cargo, we consider that the evaluation of the general state of a territory's border administration is applicable to all means of transport.

It should be stressed that this indicator is extremely important in terms of trade connectivity, for if a country wishes to export/import products to/from another territory, it must first evaluate the cost and available options for transporting those goods. This will involve considering the quality and capacity of the air transport infrastructure at the places of origin and destination. Therefore, although the air transport infrastructure will determine just how much cargo can be transported from one territory to another, a further important element a company must consider in its decision of whether or not to export/import is the level of complexity and costs of customs formalities and other services in the foreign territory. Inefficiency in the management of those services will discourage the export/import of goods to/from the country in question.

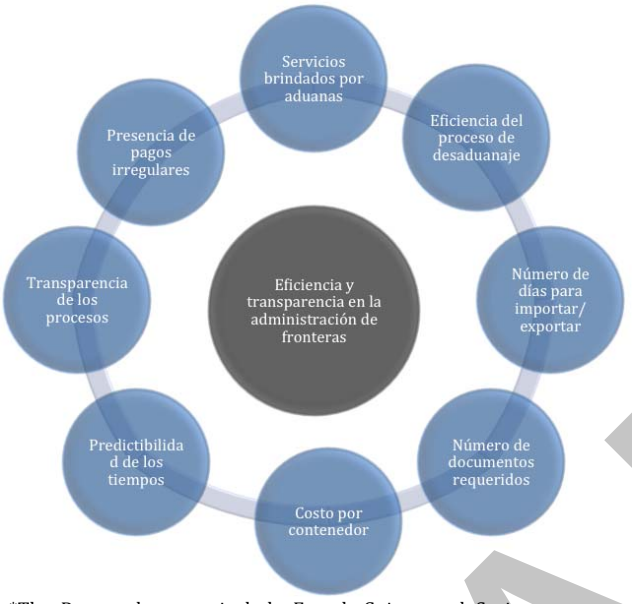
The WEF indicator of the efficiency and transparency of border administration includes a series of factors that are enumerated below, together with a summary of that indicator, broken down by country:

Diagram and table 5.2.2 – Indicator of the level of border administration efficiency and transparency

Border administration efficiency and transparency **Border efficiency and transparency**

-Customs services -Efficiency of customs clearance -Number **Ranking** of days required to import/export -Number of documents required -Cost per container -Predictability of time periods -Transparency of the processes -Presence of irregular payments

Country: …Peru; Panama; …Brazil **Score**



Eficiencia y transparencia de fronteras

País	Puntaje	Ranking
Chile	5.1	8
Perú	4.3	51
Panamá	4.3	52
Uruguay	4.2	60
Ecuador	4.1	65
Colombia	4.0	73
Bolivia	3.7	81
Brasil	3.8	86
Argentina	3.7	95
Guyana	3.6	104
Paraguay	3.5	113
Venezuela	2.8	137

*The Report does not include French Guiana and Suriname among its sampling of territories.
Source: WEF. Preparation: In-house

To sum up, the connectivity level and quality of States in the SAM Region varies in accordance with the openness, capacity and efficiency of their processes. The Region as a whole ranks globally at the mid-level, leaving room for improvement.

In order to take advantage of the region's potential for growth and development, work must be done simultaneously on three facilitation fronts: **(i) regulatory liberalization, (ii) capacity and uptodateness of infrastructure quality, and (iii) process efficiency (for further details about the importance of those fronts for connectivity, see 2.4 "What factors determine a country's degree of connectivity?")** However, as mentioned earlier, the effort must be a joint one among all stakeholders involved (State, air carriers, airport concession holders and providers of air navigation services); only in that way can an effective strategy be coordinated to produce sustainable results in the long term.

5.13 Projected passenger and cargo traffic at 2035

International organizations like the World Bank and the International Monetary Fund foresee that over the next few years countries in the SAM Region will continue to follow a rising trend of annual growth figures topping the world average (3.5%). It is expected that the current economic slowdown of some of the most important States like Brazil, Venezuela and Argentina, due mainly to the drop in oil prices and the effects of their domestic political situation, will be short-lived (until the close of 2017), to be followed by their recovery and a return to more promising GDP growth rates on a par with those of the rest of the countries in the region.

Given that assumption, the top aviation industry organizations and stakeholders foresee continuous growth of the passenger and cargo industry of between approximately 4% and 6% per annum over the next 20 years (table 5.3.1.). It should be added that these regional projections are not limited to South America and take in all of the Latin American and Caribbean territories.

Table 5.3.1 – Average annual growth projections

	Pasajeros	Carga
IATA	3.7% (2016.2035)	-
ATAG	4.7% (2014-2034)	-
Boeing	5.8% (2015-2035)	5.5% (2014-2034)
Airbus	4.7% (2014-2034)	4.0% (2013-2034)
	Passengers	**Cargo**

Source: IATA, ATAG, Boeing and Airbus

Passengers

This section presents IATA's detailed projection specifically for the SAM Region of the total number of passengers by State and at the regional level over the next 20 years (2016-2035). That projection is part of an IATA programme conducted jointly with Tourism Economics to provide and update biannually annual global projections with a 20-year horizon. The methodology applied for the projection includes both short- and long-term factors, current economic conditions, per capita income, tendency to fly, population size, demographic changes and the expected trend in the real cost of air transport in the future.

According to IATA's figures, average annual air traffic growth is projected at 3.9% for the period 2016-2035. This means that the SAM Region's current traffic of 198.4 million passengers would grow to over 430[25] million by 2035, or 2.2 times that of 2015. It should be added that the projected growth figures do not take into consideration any major changes in the existing regional traffic structure or in the economies of the States involved.

According to Airbus, at present, 4 regions (SAM domestic-intraregional, North America, Central America and Europe) are responsible for more than 90% of air traffic. As a result, the possibility of adding further to regional connectivity and surpassing those expectations will depend upon the capacity of the region (and of each individual State) to create new routes toward underexplored destinations and increasing the flows on already existing routes. Furthermore, that expansion should move ahead hand-in-hand with advancing international openness and updating air transport infrastructure and processes.

The table below summarizes the annual projections by SAM State for the period 2016-2035 (see Annex E for further details):

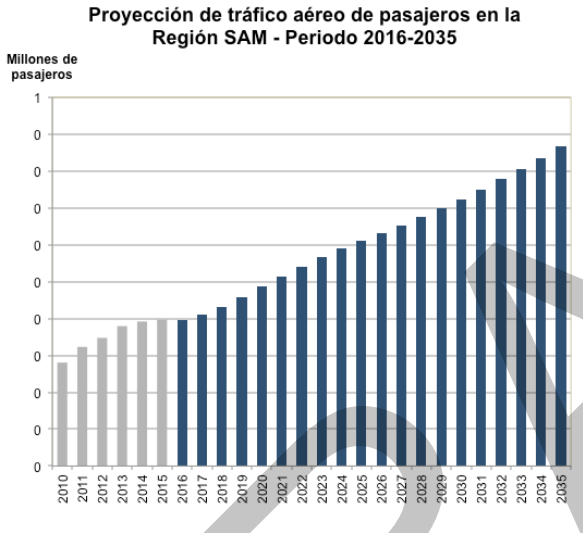
Table 5.3.2 – Annual growth projections, by State

[25] It should be added that the totals for the Region consider a 6.7% adjustment for cross traffic between States (according to the historical data), in order to keep from duplicating passengers whose origin is recorded in one State and destination in another.

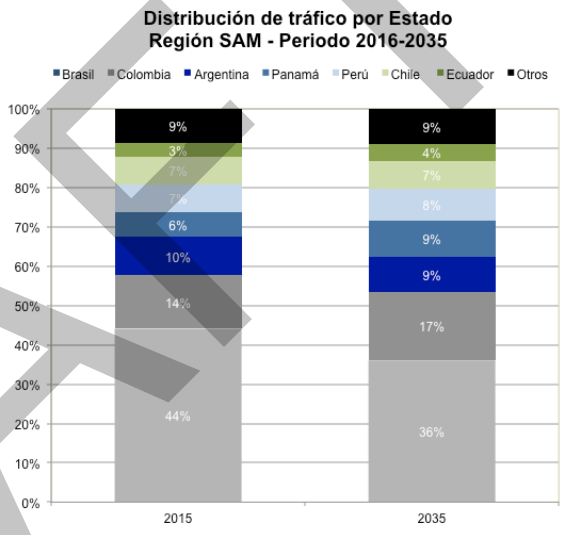
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022-2035
Argentina	3.8%	3.2%	7.4%	4.8%	0.4%	5.2%	7.6%	5.9%	4.2%	3.0%
Bolivia	25.3%	20.0%	8.2%	6.6%	7.8%	6.6%	6.5%	6.0%	5.7%	5.9%
Brasil	5.2%	2.8%	-2.6%	-8.1%	-2.0%	2.8%	5.4%	6.8%	6.3%	3.2%
Chile	10.2%	4.0%	4.7%	10.7%	5.7%	6.3%	5.8%	4.7%	3.9%	3.1%
Colombia	12.5%	7.2%	8.1%	8.5%	5.3%	6.2%	6.5%	6.1%	5.7%	4.8%
Ecuador	5.2%	-8.4%	-1.2%	1.2%	5.0%	5.6%	5.8%	5.5%	4.9%	4.9%
Guyana	-10.8%	9.6%	6.9%	7.5%	3.7%	5.5%	5.5%	4.5%	3.9%	3.4%
Guy. Francesa	-5.6%	-3.1%	4.3%	2.0%	2.0%	3.0%	3.0%	3.5%	3.5%	3.5%
Panamá	13.9%	10.3%	5.1%	9.8%	11.3%	9.5%	11.5%	9.1%	7.3%	4.4%
Paraguay	-4.2%	2.5%	0.1%	9.7%	6.0%	8.7%	9.3%	8.3%	7.0%	4.2%
Perú	18.4%	2.7%	11.9%	8.3%	4.1%	4.3%	4.8%	4.5%	4.2%	4.3%
Surinam	13.1%	-7.0%	-3.4%	8.1%	14.8%	12.1%	9.8%	8.5%	7.0%	2.7%
Uruguay	-5.8%	4.2%	-2.3%	10.4%	9.4%	10.3%	9.9%	8.7%	6.8%	3.9%
Venezuela	20.8%	-8.7%	-14.8%	-11.5%	-3.5%	-2.6%	5.9%	6.3%	6.5%	3.3%
Región SAM	**9.2%**	**3.2%**	**1.2%**	**-0.3%**	**1.9%**	**4.6%**	**6.4%**	**6.4%**	**5.7%**	**3.8%**

...Brazil;...French Guiana; Panama; Paraguay; Peru; Suriname; ... **SAM Region**

Charts 5.3.2 – Evolution in the number of passengers and composition, by State



Projected passenger air traffic in the SAM Region
In the 2016-2035 period
Millions of passengers



Distribution of traffic, by SAM State
in the 2016-2035 period
Brazil;...Panama; Peru;...Others

Source: IATA, Preparation: In-house

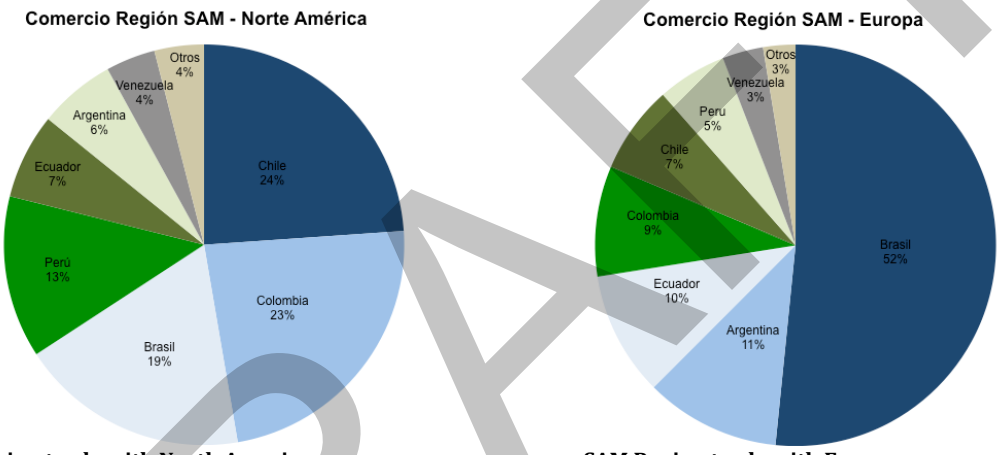
Bolivia and Panama can be seen to lead the region's growth, with annual rates averaging 6.1% and 6.0%, respectively for the 2016-2035 period. Panama shows more aggressive growth in the initial years, with rates topping 9% for the first five years, then stabilizing at more moderate rates of approximately 4%. Bolivia, on the other hand, maintains virtually unchanging growth rates approaching 6% a year over the entire period. Brazil and Venezuela, for their part, will show the slowest growth rates, with annual figures of 2.7% and 2.3%, respectively, for the 2016-2035 period. Both States will experience significant drops in the next 2–3 years, later recovering to stabilize at rates approaching 3% per annum.

Insofar as the air traffic composition by State is concerned, it is estimated that by the end of the 20-year projection period, Brazil's weight will have declined from a 44% to a 36% share of the region's total passengers, given the relative increase experienced by countries like Colombia and Panama, whose shares of 14% and 6%, respectively, in 2015 would increase by 3% each to levels of 17% and 9%, respectively, in 2035. Argentina, Peru and Chile are other countries with significant shares that would represent 9%, 8% and 7%, respectively, of the region's total traffic at 2035.

Cargo

According to Boeing[26], the cargo traffic of the SAM Region can be broken down into two main markets: (i) SAM – North America commercial trade and (ii) SAM – Europe commercial traffic. The SAM – North America market consists of roughly 1.1 million tonnes of cargo, with Chile, Colombia, Brazil and Peru accounting for almost 80% of the total volume transported. The SAM–Europe market, for its part, amounts to approximately 600 thousand tonnes and Brazil, Argentina and Ecuador are responsible for over 70% of the total transported. Considering that these two markets total 1.7 thousand tonnes and applying an annual growth projection figure of between 4% and 5.5%, the total air cargo of the SAM Region with those regions could expand to roughly between 3.1 and 3.9 million tonnes all told.

Charts 5.3.2 – Composition of the air cargo transported to North America and Europe



SAM Region trade with North America
Chile; Colombia; Brazil; Peru; Ecuador; Argentina; Venezuela; Others

SAM Region trade with Europe
Brazil; Argentina; Ecuador; Colombia; Chile; Peru; Venezuela; Others

Source: "World Air Cargo Forecast 2014-2015", Boeing. Preparation: In-house

There has been a noticeable trend in the SAM Region in recent years toward the signing of bilateral and regional agreements and partnerships for decontrolling borders and expanding relations among countries. Several free trade and cooperation agreements have been signed with the United States, Europe and Asia. An example is the Trade Agreement between Colombia and Peru with the European Union, signed in Brussels in 2012, which, according to the European Commission, could save EU exporters 270 million euros in customs duties, contribute to greater openness on the part of both parties and foster greater trade stability and predictability. Likewise, the recent signing of the Trans-Pacific Partnership (TPP) among 12 members of the Asia Pacific Economic Cooperation (APEC) Forum, which includes Chile and Peru (and will add Colombia shortly), reaffirms a policy of trade opening. It is expected that over the next few years, the consolidation of those benefits, combined with the adoption of trade facilitation policies by States in the region, could trigger the growth of trade within already existing markets and with new destinations like Asia and the Pacific that show a huge potential.

[26] "World Air Cargo Forecast 2014-2015" – The Boeing Company

5.14 Development strategies

The vision of the region at 2035 holds a great potential for growth in which air traffic will more that double its current value. In order to reach that development and expansion of connectivity, however, all of the stakeholders involved (States, air carriers, airports and air navigation providers) will have to cooperate in boosting the region's economic and social prosperity. Below are the key elements--inter-related and offering mutual feed-back--for the development and facilitation of better and more efficient connectivity, which have been identified specifically for the SAM Region:

Diagram 5.3.1 – Key elements for the development of SAM Region connectivity

Key elements for the development of air connectivity in the SAM Region
Hub airports; Air transport infrastructure; Airport processes; Air regulation; New routes; National airlines; Regional tourism; Interline alliances and agreements; Low-cost airlines

Preparation: In-house

❖ Further liberalization of air transport regulations

"Freedom of the air" is practiced in very few of the region's States. These States need to study the long-term benefits of liberalizing their airspace and avoiding the application of protectionist measures, in order to achieve better market conditions that would spur the demand for air trade and the connectivity of each State inside and outside the region. This would result in more economic and social development for the territory.

ASA over-regulation of the entry of new air carriers and restrictions on the number of flight frequencies and routes of existing air carriers not only reduces each territory's potential for connectivity, but also hampers the operation of a more competitive market that could benefit final consumers with lower fares or service offerings.

The requirement for visas and complexity in obtaining them could further limit the results of tourism and business promotion and dissemination efforts in each territory. Regionally-speaking, attention should be drawn to the cases of States like Argentina, Brazil, Colombia, Peru, Ecuador, Chile, Venezuela and Bolivia, which maintain

partnerships for opening their borders to each other without any need for a visa. That policy could be extended to all of the SAM Region States, thereby facilitating connectivity at the regional level. Some States in the SAM Region even require visas from countries whose demand for air transport is steadily growing, like India and China. Those distant markets, which have no direct routes to the region and could significantly increase traffic to it, could be discouraged not only by the cost of having to resort to indirect routes, but also by the complexity and additional cost of obtaining visas.

Lastly, attention should be drawn to the importance of the signing of cooperation and free trade agreements between countries in the region and with other territories in the world. The reduction of customs duties, elimination of visas and promotion of trade would lead the way to a true liberalization of air transport regulations for the benefit of all interested groups: governments, consumers and enterprises.

❖ **Strengthening of flag carriers**

National airlines can be publicly or privately-owned, but often neither the State, nor local investors have the level of expertise and capital necessary to build a strong national air carrier that would not only help develop the transport market within its territory, but would also gain a prominent position for itself at the regional and even the international level. Regulations of the region's States restrict foreign investment in national airlines, discouraging consolidated foreign groups from entering the territory, acceding to economies of scale, reducing costs and taking advantage of efficient operating platforms in order to provide local consumers with better service at a lower price.

❖ **Optimization of air transport infrastructure**

As stated previously, the installed capacity of airports and air navigation systems for accommodating expected passenger and cargo flows is an essential element without which neither airlines, nor States can expand the connectivity of the region and of its component territories. ICAO's planning of air navigation infrastructure at the world level is considered in the Global Air Navigation Plan (GANP V 2016 edition).

The GANP consists of strategic methodology renewable at 15 years that takes advantage of existing technology and foresees future advances in terms of operational objectives agreed by States and the aviation industry. The improvements by blocks are organized into six-year periods that do not overlap and run from 2013 up until 2031 and even later. This structured approach offers a basis for ensuring the security of strategic investment and will create a commitment on the part of States, equipment manufacturers, operators and service providers.

A performance-based implementation plan (PBIP) has been developed at the SAM Region level with a strategy for implementation of air navigation infrastructure in the SAM Region in line with the GANP that initially covers the period from 2013 to 2018. (Further details can be found in the SAM Plan air navigation section.)

The timing for increasing the number of flight routes and/or frequencies in a given airport will depend upon several factors like: the capacity and number of runways, the size and number of terminals, the number of embarkation ports, the size of the aircraft parking and maintenance spaces, the capacity for management of a given number of flights per hour, and the outlining of route charts, among other services provided to air operators. Consequently, it is the airport concession holder and air navigation service providers that in the end will make it possible to effectively increase connectivity by

expanding the installed operating capacity and/or implementing technological innovations for speeding up air traffic, reducing operating times and costs and optimizing security, seamlessness, orderliness and efficiency of ground and air operations.

❖ **Simplification of airport processes**

It is important to stress that seamless air traffic flow depends upon the speed and simplicity of check-in, security, immigration, customs, embarkation and disembarkation processes. Airports in the SAM Region still maintain a large number of practices that result in long waiting times, queues and bottlenecks that work against air connectivity. Those shortcomings need to be identified and, insofar as possible, the use of computer programmes implemented to simplify passenger services and the registration of their personal information for use by the different stakeholders involved. The good international practices of the most efficient airports, like those implemented in the airports of Las Vegas, Amsterdam and Seoul, should be imitated.

ICAO, through the Aviation Safety and Facilitation Group, has put forward a proposal for development of procedures for a One-Step Security System (OSS) to facilitate air traffic management in the SAM Region. This system will make it possible to optimize transit control process times in which the passenger and cabin and hand baggage are checked at the point of departure and will not require further baggage checks during transit to another airport in the region. While this will require the signing of bilateral agreements between States, it is very important that all States in the SAM Region adopt that programme. (Further information can be found in the section on aviation security and facilitation.)

Another recommendable practice for standardizing customs export and import processes among all of the States would be to foster a regional agreement so that the same standards, regulations and requirements would be applied to the transport of cargo in all of the States. That would give foreign countries a single, clearly-defined set of requirements and processes to be fulfilled, allowing them to file the same documents with each State through which their goods pass. This would simply the processes and spur foreign interest in developing heavy trade with the region.

❖ **Optimization of the level of charges and taxes**

In recent years, airports, in order to recover their investments, and governments, to finance their passenger services, have created charges and taxes that passengers or cargo must pay, thereby making air transport more expensive, to the detriment of connectivity.

Most of the Region's States apply a VAT to the international airfares of departing passengers. That practice is questionable because most of the service is provided in international airspace, with only a minimum percentage being supplied within the State. Another example of costs that should be re-evaluated is the charging of VAT on overflight services, still practiced by some States in the region. The trend at the international level is to eliminate or reduce taxes on air traffic, for better regulation and the reduction of such taxes would have a direct impact on those States' demand for connectivity. ICAO, in its global recommendations, maintains a position in favour of having States examine the situation.

To conclude, the complexity and cost of customs procedures act as a brake on a country's capacity for international trade. The review and reduction of taxes and charges levied on trade in goods and the application of information technology to customs procedures in keeping with OMA recommendations and guidelines will benefit export and import processes by promoting the flow of goods and capital to/from each territory for the benefit of consumers and of the local producers that exploit their comparative advantages.

❖ **Promotion of new routes**

As can be seen from the above analysis of the SAM Region's level of connectivity, there are still very few direct routes to the Middle East, Africa and Asia and the Pacific. This is especially noticeable in the case of air cargo, where less than 2% of the total trade of those regions is with the SAM Region. New routes should be promoted from the vantage point of both sides of the market: supply and demand. On the one hand, States should work closely with airlines to promote the adoption of favourable regulations and infrastructure for facilitating the opening of new routes and/or the entry into the market of new competitors. On the other, the local tourist industry and business need promotion and strengthening in order to boost the creation of a demand for destinations that would ensure the sustainability of those routes in the long term.

❖ **Establishment of a regional tourism partnership**

The global demand for tourism is rising in the markets of China, India and Asia Pacific, regions whose connections with the SAM Region are still very limited. In order to reach the region, those tourists must take indirect routes, make very long trips and purchase very expensive airline tickets, thereby restricting the demand for connectivity from those points of origin. Therefore, one possibility for attracting those tourists is for States in the SAM Region to join together in groups to create visa-free multiple-destination tourist programmes covering visits to several territories, and thereby enhance the attraction of the region's tourist offering.

❖ **Consolidation of hub airports**

The airlines that operate in the region analyze the geographic locations of its various airports and, together with the States, determine the feasibility of establishing hub operations in major and/or secondary airports in order to concentrate and distribute air traffic inside and outside the region.

While the principal airports of Brazil, Colombia, Panama and Peru currently operate as centres for connection at the regional level, some still show signs of inflexible or inefficient management of passenger and cargo flows. These make it impossible to properly maximize their respective levels of connectivity and make the most of their potential. ICAO, with the support of the States, has developed improvements in air navigation and aviation security. (More details can be found in the air navigation and aviation security sections of the SAM plan):

- **ATFM (Air Traffic Flow Management):** aimed at efficient air traffic flow management while respecting existing security levels.
- **ACDM (Airport-Collaboration Decision Making):** with a view to ensuring the efficiency of the ATFM programme, it groups together air traffic controllers, airport operators, air carriers and ground personnel, appropriately coordinated for the exchange of data while respecting communication standards.

- **API (Advance Passenger Information):** as stated previously in the analysis of this task, this document optimizes the immigration control of passengers both entering and leaving a State. This standard technology is electronic and is transmitted hours before the arrival/departure of a flight and contains personal information about each passenger. This makes it possible to speed up the process and its electronic and coded nature contributes to the security of the transmissions.

Airports and air navigation systems need to be optimized in order to equip them with appropriate physical and technological infrastructure capable of handling the expected level of air traffic. The efficiency of passenger control processes also needs reviewing in order to reduce queues and processing periods and facilitate the formalities of local and in-transit passengers.

It should be added here that the benefit of the hubs' operation is not limited to the economic boost they give the States used for that purpose; the rest of the States in the region also benefit from the better operation provided by regional hubs in allowing for and facilitating the opening of indirect routes to spur both passenger and cargo connectivity between city pairs whose direct link-up is not yet economically viable. As a result, the consolidation and efficiency of hub airport operations is of interest to all States, for they contribute to the growth of air traffic and trade within the region, promote the opening of new routes and spark the interest of new international players and their entry into the market.

There is still room today in the SAM Region for the creation of new hub airports that (i) could serve as the basis for connections among a State's domestic routes and operate as a distribution centre for passenger and cargo traffic; or (ii) could participate in the distribution of international routes to other States and with domestic connections. It is the airport operators that should coordinate the strategies for attracting a given air carrier to start point-to-point operations and then move on to connections. Proximity to other hub airports that are oversaturated frequently offers a good opportunity to develop infrastructure and promote better connections with minimum connection periods. Another interesting alternative is to develop airports with connections for intermodal transport. This is a mixed air-ground model that attracts different types of consumers whose decision is to combine transport methods. It should also be mentioned that it is important for an airport to develop services and shops that are attractive to in-transit passengers during their connection periods. The Bolivian State, for example, has currently entered into a partnership with Asian investors to set up a hub airport in Santa Cruz that would make it possible to distribute cargo traffic via connections at the 4 latitudes (Source: Air Latin News).

In any of the foregoing cases, a hub airport should, first, make the necessary studies of the traffic, passenger flow, routes and connections, and draw up the master plan for the ground architecture and coordination for the air navigation systems needed for a hub. The airlines will decide whether or not to centralize their operations, depending upon the availability of economies of scale, advanced air navigation technology, and shorter flight times, while always ensuring safety.

❖ **Entry into and development of the low-cost airline market**

The worldwide appearance of low-cost airlines has spurred the level of connectivity between neighbouring countries and of domestic traffic within a single State. The

presence of these operators enhances connectivity because more routes and frequencies are made available at prices accessible to a larger population group.

High-cost airport services in primary airports (landing, take-off, passenger pick-up and aircraft parking charges, etc.) reportedly limit those operators to concentrating their flights in secondary airports that economically validate their operating system of charging lower airfares to the public. That situation reduces the potential for development of connectivity that could result from the operation of those air carriers in major airports or hubs for domestic and international routes.

❖ **Promotion of interline partnerships and agreements**

The global trend is toward cooperation and the establishment of partnerships among airlines to jointly operate routes that are not viable individually. Those agreements promote a greater demand for connectivity because they offer the possibility of acceding to indirect routes that are simpler and more reliable (a single check-in and baggage delivery at the starting point), together with other benefits like passenger loyalty programmes. The region's air operators have not remained unaffected by those trends and are constantly seeking opportunities for joint operations and synergies that would optimize their operating costs and enable them to offer users competitive airfares, with a view toward increasing their passenger flows. It should be added here that the successful operation of those alliances requires strong government support and cooperation and favourable air regulations.

5.15 Link between the United Nations SDGs and ICAO SOs

According to ICAO, its current Strategic Objectives (SOs) are closely related to 13 of the 17 United Nations Sustainable Development Goals (SDGs). The organization is committed to working hand-in-hand with the States and other important bodies for the achievement and oversight of those targets.

Furthermore, and specifically in terms of connectivity, the expansion of SAM Region air connectivity over the next 15 years is a key element that would contribute to boosting the economic and social development of the countries and, therefore, is in line with the achievement of a large percentage of the United Nations Sustainable Development Goals. The 10 goals in which connectivity development plays an important role are discussed in detail below:

Diagram 5.6.1 – Sustainable Development Goals influenced by better connectivity

1 NO POVERTY; 3 GOOD HEALTH AND WELL-BEING; 4 QUALITY EDUCATION; 5 GENDER EQUALITY; 8 DECENT WORK AND ECONOMIC GROWTH; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 10 REDUCED INEQUALITIES; 12 RESPONSIBLE PRODUCTION AND CONSUMPTION; 13 CLIMATE ACTION; 17 PARTNERSHIPS FOR ATTAINING THE GOALS

The operation of a global market that would offer opportunities for prosperity to all people is the final purpose for linking up the various territories that comprise the region, both with each other and with the world, through the joint efforts of governments and the private sector.

Inter-connecting cities inside and outside the region brings prosperity to countries, leading to millions of jobs, gross domestic product growth and investment in infrastructure development within and outside the aviation sector, thanks to the catalytic effect produced on various activities associated with the industry (like tourism and trade). The economic and social development fostered in the countries contributes to the fight against poverty and improves the population's access to basic services like education and health, offering people greater possibilities for employment and adding to the resources received by governments for subsequent investment in social programmes and the strengthening of institutions that serve the people.

Air connectivity also offers developing countries an opportunity to join in the economic development of other, more advanced nations and to take advantage of their comparative advantages and the resources of their local producers to break into a larger market with more purchasing power, share technology and innovations and enter a more competitive market for the benefit of all consumers. The aviation industry also makes it possible for communication and connection with towns and communities that are remote and located in rugged terrains that would otherwise find themselves bypassed by economic progress or with limited access to basic health and education services. Air connectivity reduces inequalities among countries and allows for the joint economic development of different kinds of nations and industries.

The aviation industry is recognized as being one of the pioneering sectors that from the very outset has offered various opportunities for employment and valued the role of women as professionals. Gender equality can be found along the entire length of the production chain, where both men and women occupy positions in airlines, airports, travel agencies, hotels and tourism, among other businesses. In recent years, women have even entered the market for airline pilots inside and outside the region.

It is also important to mention the explicit commitment of the aviation industry to the fight against climate change. While this is not a direct objective of the increase in air connectivity, it is important to consider that the global aviation industry has committed to invest in technology and innovation in order to reduce its carbon emissions despite the projected increase in its operations and, by 2050, to reduce its carbon emissions to

50% of net emissions levels of 2005, making it an industry that is sustainable in the long term.

To conclude, it should be mentioned that all of these global goals are possible thanks to the levels of integration and globalization resulting from the interconnection of the world's different economies and nations. Connectivity of itself makes it possible for the operation of multilateral institutions like the United Nations and ICAO, in which the governments of different countries cooperate to improve the living standards and development of the world as an interlinked unit, thanks largely to the contribution of the aviation industry and its connectivity network.

6 Tactical measures to optimize SAM Region connectivity

6.10 General Framework

This module has developed a detailed analysis of the importance and level of connectivity of each State in the SAM Region. It has also put forward the vision and development strategies for improving that connectivity in benefit of the sustainable development and well-being of the population in each of the region's territories. It should be stressed that that analysis is closely aligned with ICAO's mission and general vision, as presented below:

ICAO

Vision

- **To achieve the sustainable growth of the global civil aviation system**

Mission

- **To serve as the global forum of States for international civil aviation. ICAO develops policies and standards, undertakes compliance audits, performs studies and analyses, provides assistance and creates aviation capacity through many other activities and the cooperation of the Member States and other stakeholders**

ICAO, it should also be stated, points up the importance of the role played by air transport as a safe and efficient medium that contributes to the development of each State's social and economic priorities. As a result, the key or focal point of any action framework should be to ensure the safety of air operations and maintain a high level of Safety and Air Navigation capacity and efficiency.

Objectives, areas of action and metrics for improving and maximizing the connectivity of each and every one of the SAM Region States are listed below. Each one of the connectivity development strategies identified earlier for the specific case of the SAM Region will be addressed for that purpose. As is to be inferred, adequate support and commitment on the part of each of the States will be crucial for guaranteeing the success of the measures to be undertaken.

6.11 Objectives to be achieved

The table below summarizes the specific objectives within each SAM Region connectivity development strategy. Some of the objectives, it should be stressed, fit within more than one strategy, but have been included under the most representative one:

	Strategy	Objectives

	Strategy	Objectives
A	Liberalization of air transport regulations	Take measures to achieve more openness and flexibility in the following areas: 16. International traffic rights (freedoms of the air) 17. Immigration control policy (visas)
B	Strengthening of national airlines	18. Permit foreign investment in order to reinforce the operation and sustainability of national airlines
C	Optimization of air transport infrastructure	19. Remove the principal restrictions on capacity in the ground and air zones of each State's most important airports
D	Simplification of airport processes	20. Update airport processes to secure more seamless passenger and cargo traffic 21. Facilitate and simplify security controls for in-transit passengers
E	Optimization of the level of charges and taxes	22. Reduce charges for and/or eliminate taxes on air transport 23. Make improvements in the control of operating charges applied by airports to air carrier operators
F	Promotion of new routes	24. Expand the existing direct route network to achieve more intra-regional connectivity 25. Enter new extra-regional destinations and markets of countries with a great potential for growth
G	Establishment of a regional tourism partnership	26. Jointly attract travellers from distant countries and regions with a reduced presence in the SAM Region, like Asia and the Pacific, the Middle East and Oceania
H	Consolidation of hub airports	27. Strengthen the operation of existing and potential regional and domestic hubs to ensure that each State has at least one efficient hub airport
I	Entry into and development of the low-cost airline market	28. Foster an increase in the supply of flights and routes at more competitive prices in order to bring about the inclusion of a larger percentage of each State's population 29. Promote secondary airports in order to boost traffic development in cities with little connectivity
J	Promotion of interline partnerships and agreements	30. Establish a favourable regulatory framework for the entry/operation of new airlines through partnerships

6.12 Main measures, specific activities and compliance metrics

Within the present plan of action, each objective described above is accompanied by a series of principal measures and activities and specific metrics for guiding and facilitating its appropriate compliance. It should be stressed that the list includes short- and medium-term targets that could serve as foundations for the expected growth at 2035. Below is a detailed explanation of each measure proposed together with suggested delivery dates:

Objective 1: Greater openness of international traffic rights

The ASAs in the SAM Region, whether bilateral or multilateral, are limited, with very few "open skies" exceptions in some States. Most of the ASAs still adhere to the Bermuda model established as a standard over 50 years ago, which considers neither changes nor the current state of relations among countries and the importance of facilitating the globalization process.

Action 1: Review the contents and number of ASAs on air traffic rights signed by each State, put forward a proposal with a list of countries to sign addenda or new agreements, and move ahead with those changes.		
Specific activities and compliance metrics:	**Target**	**Date**
• Review and presentation of proposals	100% of the States	2020
• Signing of new agreements or addenda with all States in the SAM Region	100% of the States	2023
• Signing of new agreements or addenda with States in other regions where traffic and trading operations are already underway	100% of the States	2030

Objective 2: Make immigration (visa) policy more flexible

The institution of more flexible immigration policy and control is a frequent practice that is gaining ground at the global level in benefit of greater global connectivity. Some States in the region today do not require visas to enter countries in the European Union and similar processes are being negotiated with the United States and Canada. Regionally-speaking, although a large percentage of the States are exempt from the requirement to obtain visas to enter each other, this opening is not 100% complete.

Action 2: Secure visa exemptions or, otherwise, eliminate restrictions and complex visa requirements for purposes of tourism, transit and business, among other activities.		
Specific activities and compliance metrics:	**Target**	**Date**
• Exemption from/elimination of visa requirements between States in the SAM Region	100% of the States	2020
• Revision of agreements, elimination and/or facilitation of the visa process for States in other regions where visas are still required	100% of the States	2025

Objective 3: Permit foreign investment in order to reinforce the operation and sustainability of national airlines

The expertise acquired by airlines whose operation is already consolidated inside and outside the SAM Region can play a key role in ensuring adequate investment in and development and sustainability of aviation in each State. Partnerships with established airlines wishing to invest in a given territory can offset limitations in the capital, operational capacity and/or experience of local private or State-owned airlines. Regulatory opening to such possibilities would contribute to the development of further connectivity for the people's benefit.

Action 3: Make regulations governing foreign capital investment in commercial aviation more flexible		
Specific activities and compliance metrics:	**Target**	**Date**
• Permit all airlines originating in the SAM Region to acquire majority shareholdings (at least 51%) in the national airlines of each State	50% of the States 75% of the States	2022 2028
• Secure a greater opening to the entry of foreign capital from one or more international regions in order to gradually (by stages) reach a 51% shareholding	75% of the States	2035

Objective 4: Remove the main restrictions on capacity in the ground and air zones of each State's most important airports

Significant growth in the existing level of infrastructure will be needed to sustain the expected major increase in flights, passengers and cargo, if the region is to double its total traffic by 2035. As a result, States, airport operators, providers of air navigation services and airlines will need to work together and perform an ongoing analysis of the existing installed capacity and improvements needed to reach that connectivity improvement target.

Action 4: Ensure that each of the region's airports has the operating plans recommended by ICAO and complies with certain operational efficiency standards[27]		
Specific activities and compliance metrics:	**Target**	**Date**
• Check to see that each of the region's airports has a Master Plan, Operations Manual, Maintenance Manual, Security Plan, Emergency Plan and Aircraft Removal Plan	100% of the States	2022
• Analyze the traffic by airport to ensure that runway utilization during peak hours does not exceed 70% of the total installed capacity	100% of the States	2025
• Comply with the following maximum standards recommended by ICAO: o Outbound passenger service: 60 min o Inbound passenger service: 45 min o In-transit passenger service: 30 min o Import cargo service: 4 hours until its delivery	Compliance with 80% of the standard Compliance with100% of the standard	2025 2030
• Ensure that each State achieves a total	50% of the States 100% of the States	2025 2035

[27] "Control and monitoring measures that States should apply in a privatized airports environment– Airport operational efficiency" – ICAO (1999)

airport density ratio of at least 1.0 and an international airport density ratio[28] of at least 0.5		
• Implement the ICAO PBIP navigation system which sets out the implementation strategy for air navigation infrastructure in the region, in line with the GANP (see the section on air navigation for details)	100% of the States	2025
• Periodically monitor each airport's performance to confirm that it has plans to accommodate the annual growth in traffic	In 100% of the States at least one audit per year	As of 2019

Objective 5: Update airport processes to secure more seamless passenger and cargo traffic

Different types of technology have been applied in the most important airports throughout of the world to simplify and automate registration, security, customs, embarkation, disembarkation, baggage collection and other processes. All of the improvements that have been implemented promote more seamless air traffic in benefit of greater connectivity and also make it possible to reduce operating costs in the long run by eliminating the inefficiencies and overcrowding created by extra costs for airlines and passengers.

Action 5: Update airport processes in the principal airports, by State, through the adoption of new technology in keeping with good international practice successfully accomplished in other regions		
Specific activities and compliance metrics:	**Target**	**Date**
• Implementation of self-service check-in modules	70% of the States 100% of the States	2020 2030
• Implementation of a centralized baggage drop-off area for all airlines	50% of the States 70% of the States 100% of the States	2020 2025 2030
• Adoption of new security control technology that would minimize passenger waiting and security check times to reach international benchmarks (i.e.: security metal detector arches, x-ray machines, etc.)	50% of the States 100% of the States	2025 2035
• Establishment of an electronic immigration system that would expedite waiting times and arrival and departure control processes (API - Advance Passenger Information technology, homogeneous language for all States)	50% of the States 70% of the States 100% of the States	2025 2030 2035
• Modification of the customs clearance process by eliminating random checks (green or red lights) to follow international	50% of the States 100% of the States	2020 2025

[28] Total airport density measures a State's total airports divided among its population in millions of inhabitants. International airport density is similar to the former ratio, but considers only the number of international airports in its calculation.

examples where the passenger is given the choice between "something to declare" or "nothing to declare"		

Objective 6: Facilitate and simplify security controls for in-transit passengers

According to the system currently applied in the SAM Region, in-transit passengers undergo security checks at the point of origin and again at each airport in the region where they take connecting flights until they reach their destination. ICAO and the "Aviation Security and Facilitation Group" have made a recommendation on the implementation of a One-Stop Security System for in-transit passengers to contribute to more seamless traffic and the reinforcement of hubs. Bilateral agreements will need to be signed between States to put those changes into effect.

Action 6: Implementation of the OSS (One-Stop Security System for in-transit passengers) in the SAM Region		
Specific activities and compliance metrics:	**Target**	**Date**
• Signing of the necessary agreements among the States in the SAM Region	50% of the States 100% of the States	2022 2025
• Implementation of the OSS system	50% of the States 100% of the States	2025 2030

Objective 7: Reduce charges for and/or eliminate taxes on air transport

The application of taxes or charges to air transport are some of the measures that produce extra costs for consumers and air carrier operators. The imposition of taxes on international airfare tickets is considered an untechnical practice (inasmuch as most of the service is provided outside the country's territory) that makes the cost of airfares considerably more expensive. In like manner, the tax on overflights discourages air carrier operators from flying over certain territories to the detriment of a more efficient route structure. Very few of the world's countries today follow that practice, but 2 States in the SAM Region continue to do so. According to the study "Economic Benefits of Reducing Aviation Taxes in Latin America and the Caribbean" conducted by SEO Amsterdam Economics, exemption from taxes and reduction of charges on air transport in South America could boost air traffic by at least an additional 15%.

Action 7: Review of the charges applied and of their impact on the cost of air transport for consumers, formulation of a proposal and implementation of a tax reduction and/or exemption.		
Specific activities and compliance metrics:	**Target**	**Date**
• Review of the charges and taxes applicable to national and international air transport in each State and preparation of a proposal for their reduction and/or exemption	50% of the States 100% of the States	2025 2030
• Exemption from the payment of VAT on international airfare tickets	50% of the States 70% of the States 100% of the States	2025 2030 2035

• Completion of the exemption from payment of VAT on overflights in all SAM States	100% of the States	2022

Objective 8: Make improvements in the control of operating charges applied by airports to air operators

The application of airport charges to air carrier operators for take-off, landing, parking, refuelling, cargo transport, etc. raises the operating costs considerably, leading in the end to more expensive airfare tickets. Heavy charges disincentivate the operation of airlines in given airports, to the detriment of the State where they are located, making it important for government regulations to ensure an optimum level of charges for the territory.

Action 8: Review current airport charges, establish maximum levels to be applied and incorporate special systems		
Specific activities and compliance metrics:	**Target**	**Date**
• Review of existing charges by airport and of their impact on a greater flight offering and establishment of maximum rates by activity	50% of the States 100% of the States	2022 2030
• Implementation of special airport charges for airlines during hours of low flight frequency	50% of the States 100% of the States	2022 2025

Objective 9: Expand the existing direct route network to achieve more intra-regional connectivity

At present, not all of the 14 States in the region are interconnected by direct routes, with or without stops. Passengers wishing to travel from Chile to French Guiana, for example, will necessarily have to make an intermediate connection in North America or Central America, resulting in inefficiency stemming from long routes and extra connection costs.

Action 9: Review the existing routes among the 14 States of the SAM Region and evaluate the possibilities for improving that route system to achieve better interconnection		
Specific activities and compliance metrics:	**Target**	**Date**
• Interconnection of the States within the region so that it will no longer be necessary to leave the region in order to take an indirect route to another State in the SAM Region.	100% of the States	2025
• Promotion, incentivation and raising of each State's connectivity ratios with the rest of the region, in order to reach a level of at least 29% (direct non-stop connection with at least 4 States in the SAM Region)	100% of the States	2030

Objective 10: Enter new extra-regional destinations and markets of countries with a great potential for growth

As mentioned in the previous section of this module, there are still several regions and countries with few direct connections with the SAM Region. Foremost among these are several emerging markets that are global economic leaders with a rising demand, like China and India. The SAM Region needs to increase its connectivity with regions like Asia and the Pacific, the Middle East, Africa and Oceania, above all in the case of air cargo.

Action 10: Analyze the options for creating new routes between each State in the SAM Region and regions with which connections today are few or nonexistent		
Specific activities and compliance metrics:	**Target**	**Date**
• Creation of at least 3 new direct routes per State to other regions of the world	75% of the States	2025
• Having at least one direct route in each of the following regions: Asia and the Pacific, the Middle East, Africa and Oceania	50% of the States 75% of the States	2030 2035

Objective 11: Jointly attract travellers from distant countries and regions with a reduced presence in the SAM Region, like Asia and the Pacific, the Middle East and Oceania

There are some distant markets with cultures and languages that are very different from those of the region, which today must currently take indirect--and, therefore, more costly--routes for purposes of tourism in some country in the region that could be of interest to them. Those costs and language barriers could constitute an important disincentive, with the result that in many cases that investment in tourism would be worthwhile only if more than one destination could be visited.

Action 11: Agree upon and carry out a joint event ("South America within reach") to promote and attract tourism from distant regions to the SAM Region		
Specific activities and compliance metrics:	**Target**	**Date**
• Establishment of an organizing committee on which each participating State is represented and selection of the venue and date of the event.	With the participation of at least 50% of the States	2020
• Preparation of the event (estimation and distribution of costs, preparation of presentations, invitation to important persons in the industry, etc.).	End of the activity	2022
• Holding of the event	End of the activity	2023

Objective 12: Strengthen the operation of existing and potential regional and domestic hubs to ensure that each State has at least one efficient hub airport

The existence of hub airports for international and/or domestic connections increases the possibilities for a given region or State's connectivity by facilitating the operation of indirect routes and direct routes with stops. Those airports must comply with certain conditions as to geographic positioning that favour them as the best points for connection and access to other cities. This, however, is not enough to guarantee that their use as hubs will end up being beneficial; investments must also be made in adequate infrastructure and efficient in-transit processes must be implemented in order for their comparative advantage of being chosen by passengers and airlines as a centre for connection to materialize.

Action 12: Analyze the geographic positioning, potential level of passenger and cargo traffic, existing infrastructure and investment needed to select and increase the possibilities of each State's principal and secondary airports' serving as hub points.		
Specific activities and compliance metrics:	**Target**	**Date**
• Analysis of the existing traffic (passengers and cargo) in the principal airports, by State, radius of geographic influence and potential radius of additional action were they to operate as hubs	50% of the States 100% of the States	2020 2025
• Preparation of the plan for investment in infrastructure and in improving ground and air processes in order to guarantee adequate operation at peak hours in airports identified as hubs	50% of the States 100% of the States	2022 2028
• Consultation with airlines that could be interested or that already operate a connection centre in those airports in order to hear their comments and suggestions	50% of the States 100% of the States	2022 2028
• Implementation of the Master Plan	50% of the States 100% of the States	2025 2030

Objective 13: Foster an increase in the supply of flights and routes at more competitive prices, in order to bring about the inclusion of a larger percentage of each State's population

Low-cost airlines have invigorated the air connectivity market in Europe and North America by broadening route frequency and alternatives within a territory at prices that are more competitive and accessible to a larger percentage of the population. Their entry into the region is limited as yet and could heavily benefit each State's domestic and international markets on short and highly travelled routes.

Action 13: Participate in events and approach low-cost operators to promote their entry into States in the SAM Region		
Specific activities and compliance metrics:	**Target**	**Date**
• Participation by the SAM Region in "Routes"	100% of the States	2020

or a similar event in order to make presentations to low-cost airlines interested in operating in the region		
• Arrangement of one-on-one meetings with operators that show the most interest in operating in a given State, in order to hear their concerns and obtain feedback	At least 1 meeting between the State and an operator	2021
• Entry of at least one new low-cost airline with an operating license that would expand the existing route network	50% of the States	2025

Objective 14: Promote secondary airports in order to boost traffic development in cities with little connectivity

Secondary airports are of key importance in the redistribution of traffic within each State in order to decentralize the benefits of greater connectivity and make it accessible to a larger percentage of the population. The current system of low-cost airlines offers the opportunity to promote secondary airports with more competitive operating costs and thereby boost new routes and improve the connectivity of a State as a whole and not just of its capital.

Action 14: Adjust the regulatory framework and installed capacity of secondary airports to facilitate the entry of new air operators		
Specific activities and compliance metrics:	**Target**	**Deadline**
• Analysis of the current condition of the principal airports, by State (including an airline operating costs benchmark)	100% of the States	2020
• Review of the legislation regulating the entry into and operation of new air carrier operators in secondary airports, in order to foster a more favourable environment	100% of the States	2025
• Entry of a new low-cost airline with an operating license and routes in at last 1 secondary airport	50% of the States 75% of the States	2025 2035

Objective 15: Establish a favourable regulatory environment for the entry/operation of new airlines through partnerships

Airlines reach a decision to operate within a State only after making a thorough cost-benefit analysis of the expected traffic demand and operating costs. It is very common practice to establish partnerships for operating flights jointly and sharing costs (code sharing) and thereby accede to routes that would not otherwise be viable. Furthermore, airlines, above all those from distant regions, prefer to make an initial approach to a State in which they are interested through representative offices (GSAs) that would sell their airfare tickets for indirect routes to that State even though they lack an operating license and must enter into partnerships with already operating airlines. In that way, they are able to obtain samples and information about the potential level of demand to which they could accede and later decide in a second stage whether to start operating

directly non-stop or with stops, if necessary. According to IATA, strategic alliances among airlines (Star Alliance, One World and Sky Team, among others) currently cover over 80% of Atlantic and Pacific air traffic.

Action 15: Review each State's internal regulations to ensure that no obstacles exist to the formation of strategic partnerships or alliances and/or the entry of new air carrier operators without a direct presence in the market		
Specific activities and compliance metrics:	**Target**	**Dead-line**
• Revision of standards and regulations by States in order to secure greater openness and/or a reduction of existing obstacles to joint operating systems and partnerships or alliances (i.e. code sharing and commercial cooperation, among others)	100% of the States	2022
• Review and improvement of existing regulations in order to allow for the operation of offline airlines represented by GSAs (i.e.: obligation to establish branches, tax registration problems, etc.)	100% of the States	2022

Plan of Action Summary

Objective	Activities	Targets	**Date**
1) Greater openness to international air traffic (ASAs and freedoms of the air)	• Review of existing ASAs and proposal of amendments	100% of the States	2020
	• Signing of SAM Region agreements/addenda	100% of the States	2023
	• Signing of agreements/addenda with other regions	100% of the States	2030
2) Make immigration control more flexible	• Granting of visa exemptions among all States in the SAM Region	100% of the States	2020
	• Granting of visa exemptions or more flexible visa processing with the rest of the world's countries	100% of the States	2025
3) Permit foreign investment in national airlines	• Permission of SAM Region air carrier operators to invest in more than a 51% shareholding	50% of the States 75% of the States	2022 2028
	• Attainment of a greater opening to the investments of foreign operators until they gradually reach a 51% share	75% of the States	2035
4) Remove restrictions on the capacity of air and ground infrastructure of the main airports	• Confirmation that each airport in the region has received the operating plans recommended by ICAO (airport operational efficiency)	100% of the States	2022
	• Runway use during peak hours not to exceed 70% of the installed capacity	100% of the States	2025
	• Outbound passenger service: 60 min		
	Inbound passenger service: 45 min	80% of the target	2025
	In-transit passenger service: 30 min	100% of the target	2030
	Cargo service: 4 hours until its delivery		
	• Attainment of a total airport density ratio of 1.0 and	50% of the States	2025
	international airport density ratio of 0.5 for each State	100% of the States	2030
	• Implementation of ICAO's air navigation PBIP	100% of the States	2025
	• Annual monitoring of the airport growth plan and actual capacity	100% of the States	As of 2019
5) Modernization of airport processes	• Self-service check-in modules	70% of the States 100% of the States	2020 2030
	• Centralized baggage drop-off area	50% of the States 70% of the States	2020 2025

Objective	Activities	Targets	**Date**
		100% of the States	2030
	• New security control technology using international standards (security metal detector arches, x-ray machines, etc.)	70% of the States 100% of the States	2025 2030
	• Electronic immigration system (API - Advance Passenger Information)	50% of the States 70% of the States 100% of the States	2025 2030 2035
	• Implementation of the customs declaration alternatives of "something to declare" and "nothing to declare"	50% of the States 100% of the States	2020 2025
6) Simplification of transit security control	• Signing of agreements between SAM Region States	50% of the States 100% of the States	2022 2025
	• Implementation of the OSS system (One-Stop security control System)	50% of the States 100% of the States	2025 2030
7) Reduction of charges and/or exemption of taxes on air transport	• Review of consumer charges and preparation of proposals for their reduction	50% of the States 100% of the States	2025 2030
	• Exemption from payment of VAT on international airfare tickets	50% of the States 70% of the States 100% of the States	2025 2030 2035
	• Exemption from payment of VAT on overflights	100% of the States	2022
8) Control of airport charges	• Review of existing rates and establishment of maximum charges	50% of the States 100% of the States	2022 2030
	• Implementation of special airport charges during hours of low flight frequency	50% of the States 100% of the States	2022 2025
9) Expansion of the intra-regional route network	• Implementation of special airport charges during days of low flight frequency	100% of the States	2025
	• Connection of each State with at least 4 other States in the region (intra-regional connectivity ratio of 29%)	100% of the States	2030
10) Entry into new foreign destinations and markets	• Creation of at least 3 new direct routes to new destinations per State	75% of the States	2025
	• Having at least one direct route with Asia and the Pacific, the Middle East, Africa and Oceania	50% of the States 75% of the States	2030 2035

Objective	Activities	Targets	**Date**
11) Joint promotion of regional tourism for tourists from distant countries	• Establishment of an organizing committee and determination of the date and venue for the event to promote regional tourism	Participation by at least 50% of the States	2020
	• Preparation and funding of the event	End of the activity	2022
	• Holding of the event	End of the activity	2023
12) Strengthen regional and/or domestic hubs	• Analysis of the traffic and radius of influence, by airport	50% of the States 100% of the States	2020 2025
	• Preparation of investment plans to guarantee adequate operation during peak hours	50% of the States 100% of the States	2022 2028
	• Consultation with airlines interested in a connection centre	50% of the States 100% of the States	2022 2028
	• Implementation of the Master Plan	50% of the States 100% of the States	2025 2030
13) Broaden the offering of low-cost airline flights and routes	• Participation in "Routes" or a similar event in order to make presentations to low-cost airlines	100% of the States	2020
	• Arrangement for one-on-one meetings with air carrier operators that show the most interest in operating in the region	At least 1 meeting per State	2021
	• Entry of at least one new low-cost airline with an operating license that would broaden the existing route network	50% of the States	2025
14) Promote secondary airports	• Analysis of the current condition of the principal secondary airports, by State and cost benchmark	100% of the States	2020
	• Review and improvement of existing legislation for the entry and operation of new air operators	100% of the States	2025
	• Entry of a new low-cost airline with an operating license and routes in at least 1 secondary airport	50% of the States 75% of the States	2025 2035
15) Establish a favourable regulatory environment for interline partnerships and alliances	• Review and achievement of greater openness to and/or the reduction of obstacles to joint operating systems and partnerships and alliances	100% of the States	2022
	• Review and improvement of existing regulations in order to allow for the operation of offline airlines represented by GSAs	100% of the States	2022

7 Annexes

Annex A

Direct non-stop international routes from airports registered with ICAO

Argentina

Routes		
AEP	**Aeroparque (SABE)**	
ASU	Asuncion	Paraguay
CWB	Curitiba	Brazil
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
MVD	Montevideo	Uruguay
PDP	Punta del Este	Uruguay
POA	Porto Alegre	Brazil
SCL	Santiago	Chile
UIO	Quito	Ecuador
COR	**Cordoba (SACO)**	
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
LIM	Lima	Peru
PTY	Panama	Panama
SCL	Santiago	Chile
EZE	**Ezeiza (SAEZ)**	
AKL	Aukland	New Zealand
AMS	Amsterdam	Holland
ASU	Asuncion	Paraguay
ATL	Atlanta	United States
BCN	Barcelona	Spain
BOG	Bogota	Colombia
BSB	Brasilia	Brazil
CCC	Cayo Coco	Cuba
CCS	Caracas	Venezuela
CDG	CDG Paris	France
CUN	Cancun	Mexico
DFW	Dallas	United States
FCO	Rome	Italy
FLN	Florianopolis	Brazil
FOR	Fortaleza	Brazil
FRA	Frankfurt	Germany
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
IAH	Houston	United States
JFK	New York	United States
LHR	London	United Kingdom

LIM	Lima	Peru
MAD	Madrid	Spain
MEX	Mexico	Mexico
MIA	Miami	United States
MVD	Montevideo	Uruguay
NAT	Natal	Brazil
POA	Porto Alegre	Brazil
PTY	Panama	Panama
PUJ	Punta Cana	Dominican Republic
REC	Recife	Brazil
SCL	Santiago	Chile
SSA	Salvador	Brazil
VVI	Santa Cruz	Bolivia
MDZ	**Mendoza (SAME)**	
GRU	Rio de Janeiro	Brazil
SCL	Santiago	Chile
RGL	**Rio Gallegos (SAWG)**	
PUQ	Punta Arenas	Chile
ROS	**Rosario (SAAR)**	
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
SLA	**Salta (SASA)**	
VVI	Santa Cruz	Bolivia
Total routes	**54**	**21 Countries**
Airports	**7**	

Bolivia

Routes		
LPB	**La Paz (SLLP)**	
BOG	Bogota	Colombia
CUZ	Cusco	Peru
IQQ	Iquique	Chile
LIM	Lima	Peru
SCL	Santiago	Chile
VVI	**Viru Viru Santa Cruz (SLVR)**	
AEP	AEP B. Aires	Argentina
ASU	Asuncion	Paraguay
EZE	EZE B.Aires	Argentina
GRU	Sao Paulo	Brazil
IQQ	Iquique	Chile
LIM	Lima	Peru
MAD	Madrid	Spain
MIA	Miami	United States
PTY	Panama	Panama
Total routes	**14**	**10 Countries**

Airports **2**

Brazil

Routes		
BEL	**Belem (SBBE)**	
CAY	Cayenne	French Guiana
LIS	Lisbon	Portugal
MIA	Miami	United States
PBM	Paramaribo	Suriname
BSB	**Brasilia (SBBR)**	
CDG	CDG Paris	France
EZE	EZE B. Aires	Argentina
LIS	Lisbon	Portugal
MIA	Miami	United States
PTY	Panama	Panama
PUJ	Punta Cana	Dominican Republic
CNF	**Belo Horizonte (SBCF)**	
LIS	Lisbon	Portugal
MIA	Miami	United States
CWB	**Curitiba (SBCT)**	
AEP	AEP B. Aires	Argentina
FLN	**Florianopolis (SBFL)**	
EZE	EZE B. Aires	Argentina
FOR	**Fortaleza (SBFZ)**	
EZE	EZE B. Aires	Argentina
FRA	Frankfurt	Germany
LIS	Lisbon	Portugal
MIA	Miami	United States
GIG	**Rio de Janeiro (SBGL)**	
AEP	AEP B. Aires	Argentina
AMS	Amsterdam	Holland
ATL	Atlanta	United States
BOG	Bogota	Colombia
CDG	CDG Paris	France
COR	Cordoba	Argentina
DXB	Dubai	United Arab Emirates
EZE	EZE B. Aires	Argentina
FCO	Rome	Italy
FRA	Frankfurt	Germany
IAH	Houston	United States
JFK	JFK New York	United States
LAD	Luanda	Angola
LHR	London	United Kingdom

LIM	Lima	Peru
LIS	Lisbon	Portugal
MAD	Madrid	Spain
MIA	Miami	United States
MVD	Montevideo	Uruguay
OPO	Oporto	Portugal
PTY	Panama	Panama
ROS	Rosario	Argentina
SCL	Santiago	Chile
YYZ	Toronto	Canada

GRU	**GRU Sao Paulo (SBGR)**	
AEP	AEP B. Aires	Argentina
AGT	Ciudad del Este	Paraguay
AMS	Amsterdam	Holland
ASU	Asuncion	Paraguay
ATL	Atlanta	United States
AUH	Abu Dhabi	United Arab Emirates
BCN	Barcelona	Spain
BOG	Bogota	Colombia
CDG	CDG Paris	France
CMN	Casablanca	Morocco
COR	Cordoba	Argentina
DOH	Doha	Qatar
DTW	Dallas	United States
DXB	Dubai	United Arab Emirates
EWR	EWR New York	United States
EZE	EZE B. Aires	Argentina
FCO	Rome	Italy
FRA	Frankfurt	Germany
IAD	Washington	United States
IAH	Houston	United States
IST	Istanbul	Turkey
JFK	JFK New York	United States
JNB	Johannesburg	South Africa
LAD	Luanda	Angola
LAX	Los Angeles	United States
LHR	London	United Kingdom
LIM	Lima	Peru
LIS	Lisbon	Portugal
MAD	Madrid	Spain
MCO	Orlando	United States
MDZ	Mendoza	Argentina
MEX	Mexico	Mexico
MIA	Miami	United States
MUC	Munich	Germany
MVD	Montevideo	Uruguay

MXP	Milan	Italy
OPO	Oporto	Portugal
ORD	Chicago	United States
PTY	Panama	Panama
PUJ	Punta Cana	Dominican Republic
ROS	Rosario	Argentina
SCL	Santiago	Chile
VVI	Santa Cruz	Bolivia
YYZ	Toronto	Canada
ZRH	Zurich	Switzerland
IGU	**Foz de Iguazu (SBFI)**	
LIM	Lima	Peru
MAO	**Manaos (SBEG)**	
BLA	Barcelona	Venezuela
CUR	Curacao	Curacao
MIA	Miami	United States
PMV	Porlamar	Venezuela
NAT	**Natal (SBSG)**	
EZE	EZE B. Aires	Argentina
LIS	Lisbon	Portugal
MXP	Milan	Italy
POA	**Porto Alegre (SBPA)**	
AEP	AEP B. Aires	Argentina
EZE	EZE B. Aires	Argentina
LIM	Lima	Peru
LIS	Lisbon	Portugal
MVD	Montevideo	Uruguay
REC	**Recife (SBRF)**	
EZE	EZE B. Aires	Argentina
FRA	Frankfurt	Germany
LIS	Lisbon	Portugal
MIA	Miami	United States
SSA	**Salvador (SBSV)**	
EZE	EZE B. Aires	Argentina
FRA	Frankfurt	Germany
LIS	Lisbon	Portugal
MAD	Madrid	Spain
VCP	**VCP Sao Paulo (SBKP)**	
FLL	Fort Lauderdale	United States
LIS	Lisbon	Portugal
MCO	Orlando	United States
MIA	Miami	United States
Total routes	**112**	**30 countries**
Airports	**15**	

Chile

Routes		
ANF	**Antofagasta (SCFA)**	
LIM	Lima	Peru
IPC	**Easter Island (SCIP)**	
PPT	Papeete	French Polynesia
IQQ	**Iquique (SCDA)**	
LPB	La Paz	Bolivia
VVI	Santa Cruz	Bolivia
PUQ	**Punta Arenas (SCCI)**	
MPN	Mount Pleasant	Falkland Islands
RGL	Rio Gallegos	Argentina
SCL	**Santiago (SCEL)**	
AEP	AEP B.Aires	Argentina
AKL	Auckland	New Zealand
ASU	Asuncion	Paraguay
ATL	Atlanta	United States
BOG	Bogota	Colombia
CDG	CDG Paris	France
COR	Cordoba	Argentina
CUN	Cancun	Mexico
DFW	Dallas	United States
EZE	EZE B.Aires	Argentina
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
GYE	Guayaquil	Ecuador
IAH	Houston	United States
JFK	New York	United States
LAX	Los Angeles	United States
LIM	Lima	Peru
LPB	La Paz	Bolivia
MAD	Madrid	Spain
MDZ	Mendoza	Argentina
MEX	Mexico	Mexico
MIA	Miami	United States
MVD	Montevideo	Uruguay
PTY	Panama	Panama
PUJ	Punta Cana	Dominican Republic
SYD	Sydney	Australia
YYZ	Toronto	Canada
Total	**33**	**19 countries**
Airports	**5**	

Note: 2016 Alitalia operates non-stop flights from Rome to Santiago.

Colombia

Routes		
ADZ	**San Andres (SKSP)**	
PTY	Panama	Panama
SJO	San Jose	Costa Rica
AXM	**Armenia (SKAR)**	
FLL	Fort Lauderdale	United States
BAQ	**Barranquilla (SKBQ)**	
CUR	Curacao	Curacao
MIA	Miami	United States
PTY	Panama	Panama
BGA	**Bucaramanga (SKBG)**	
PTY	Panama	Panama
BOG	**Bogota (SKBO)**	
ATL	Atlanta	United States
AUA	Aruba	Aruba
BCN	Barcelona	Spain
BLB	Balboa	Panama
CCS	Caracas	Venezuela
CDG	CDG Paris	France
CUN	Cancun	Mexico
CUR	Curacao	Curacao
DFW	Dallas	United States
EWR	New Jersey	United States
EZE	EZE B.Aires	Argentina
FLL	Fort Lauderdale	United States
FOR	Fortaleza	Brazil
FRA	Frankfurt	Germany
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
GUA	Guatemala	Guatemala
GYE	Guayaquil	Ecuador
HAV	Havana	Cuba
IAD	Baltimore	United States
IAH	Houston	United States
JFK	New York	United States
LAX	Los Angeles	United States
LHR	London	United Kingdom
LIM	Lima	Peru
LPB	La Paz	Bolivia
MAD	Madrid	Spain

MCO	Orlando	United States
MEX	Mexico	Mexico
MIA	Miami	United States
PTY	Panama	Panama
PUJ	Punta Cana	Dominican Republic
SAL	San Salvador	El Salvador
SAP	San Pedro Sula	Honduras
SCL	Santiago	Chile
SDQ	Santo Domingo	Dominican Republic
SJO	San Jose	Costa Rica
SJU	San Juan	United States
UIO	Quito	Ecuador
VLN	Valencia	Venezuela
YYZ	Toronto	Canada
CLO	**Cali (SKCL)**	
ESM	Esmeralda	Ecuador
GYE	Guayaquil	Ecuador
LIM	Lima	Peru
MAD	Madrid	Spain
MIA	Miami	United States
PTY	Panama	Panama
SAL	San Salvador	El Salvador
CTG	**Cartagena (SKCG)**	
FLL	Fort Lauderdale	United States
JFK	New York	United States
MIA	Miami	United States
PTY	Panama	Panama
CUC	**Cucuta (SKCC)**	
PTY	Panama	Panama
MDE	**Medellin-Rio Negro (SKRG)**	
AUA	Aruba	Aruba
BLB	Balboa	Panama
CUR	Curacao	Curacao
FLL	Fort Lauderdale	United States
JFK	New York	United States
LIM	Lima	Peru
MAD	Madrid	Spain
MEX	Mexico	Mexico
MIA	Miami	United States
PAC	Panama City	Panama
PTY	Panama Tocumen	Panama
SAL	San Salvador	El Salvador
VLN	Valencia	Venezuela
PEI	**Pereira (SKPE)**	
PTY	Panama	Panama
Total routes	**74**	**23 countries**

Airports
10

Ecuador

Routes		
ESM	**Esmeralda (SETN)**	
CLO	Cali	Colombia
GYE	**Guayaquil (SEGU)**	
AMS	Amsterdam	Holland
BLA	Barcelona	Venezuela
BOG	Bogota	Colombia
CCS	Caracas	Venezuela
CLO	Cali	Colombia
FLL	Fort Lauderdale	United States
JFK	New York	United States
LIM	Lima	Peru
MAD	Madrid	Spain
MIA	Miami	United States
PTY	Panama	Panama
SAL	San Salvador	El Salvador
SCL	Santiago	Chile
UIO	**Quito (SEQM)**	
AEP	AEP B.Aires	Argentina
ATL	Atlanta	United States
BOG	Bogota	Colombia
FLL	Fort Lauderdale	United States
HAV	Havana	Cuba
IAH	Houston	United States
JFK	New York	United States
LIM	Lima	Peru
MAD	Madrid	Spain
MEX	Mexico	Mexico
MIA	Miami	United States
PTY	Panama	Panama
SAL	San Salvador	El Salvador
Total	**27**	**12 countries**
Airports	**3**	

Guyana

Routes	
GEO	**Georgetown (SYCJ)**

CUR	Curacao	Curacao
JFK	New York	United States
KIN	Kingston	Jamaica
MIA	Miami	United States
PBM	Paramaribo	Suriname
POS	Port of Spain	Trinidad & Tobago
PTY	Panama	Panama
PZO	Puerto Ordaz	Venezuela
YYZ	Toronto	Canada
OGL	**Ogle International (SYGO)**	
BGI	Bridgetown	Barbados
Total routes	**10**	**9 countries**
Airports	**2**	

French Guiana

Routes		
CAY	**Cayenne (SOCA)**	
BEL	Belem	Brazil
FDF	Fort de France	Martinique
ORY	Orly Paris	France
PBM	Paramaribo	Suriname
PTP	Point a Pitre	Guadeloupe
Total routes	**5**	**5 Countries**
Airports	**1**	

Note CAY/PZO ceased operating in 2016

Panama

Routes		
BLB	**Balboa (MPMG)**	
MDE	Medellin	Colombia
BOC	**B.delToro (MPBO)**	
SJO	San Jose	Costa Rica
DAV	**David (MPDA)**	
SJO	San Jose	Costa Rica
PAC	**Panama Pacifico (MPPA)**	
MDE	Medellin	Colombia
SJO	San Jose	Costa Rica
PTY	**Panama (MPTO)**	
MAR	Maracaibo	Venezuela
ADZ	San Andres	Colombia

AMS	Amsterdam	Holland
ASU	Asuncion	Paraguay
ATL	Atlanta	United States
AUA	Aruba	Aruba
BAQ	Barranquilla	Colombia
BGA	Bucaramanga	Colombia
BLA	Barcelona	Venezuela
BOG	Bogota	Colombia
BOS	Boston	United States
BSB	Brasilia	Brazil
CCS	Caracas	Venezuela
CDG	CDG Paris	France
CLO	Cali	Colombia
COR	Cordoba	Argentina
CTG	Cartagena	Colombia
CUC	Cucuta	Colombia
CUN	Cancun	Mexico
CUR	Curacao	Curacao
EWR	EWR N. York	United States
EZE	EZE B. Aires	Argentina
FLL	Fort Lauderdale	United States
FRA	Frankfurt	Germany
GDL	Guadalajara	Mexico
GEO	Georgetown	Guyana
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
GUA	Guatemala	Guatemala
GYE	Guayaquil	Ecuador
HAV	Havana	Cuba
IAD	Washington	United States
IAH	Houston	United States
IQT	Iquitos	Peru
JFK	New York	United States
KIN	Kingston	Jamaica
LAS	Las Vegas	United States
LAX	Los Angeles	United States
LIM	Lima	Peru
MAD	Madrid	Spain
MBJ	Montego Bay	Jamaica
MCO	Orlando	United States
MDE	Medellin	Colombia
MEX	Mexico	Mexico
MGA	Managua	Nicaragua
MIA	Miami	United States
MSY	New Orleans	United States
MTY	Monterrey	Mexico

MVD	Montevideo	Uruguay
NAS	Nassau	Bahamas
ORD	Chicago	United States
PAP	Port au Prince	Haiti
PBC	Puebla	Mexico
PEI	Peirano	Colombia
POS	Port of Spain	Trinidad & Tobago
PUJ	Punta Cana	Dominican Republic
SAL	San Salvador	El Salvador
SAP	San Pedro Sula	Honduras
SCL	Santiago	Chile
SDQ	Santo Domingo	Dominican Republic
SFO	San Francisco	United States
SJO	San Jose	Costa Rica
SJU	San Juan	United States
SNU	Santa Clara	Cuba
STI	Santiago	Dominican Republic
SXM	Saint Martin	Saint Martin
TGU	Tegucigalpa	Honduras
TPA	Tampa	United States
UIO	Quito	Ecuador
VLN	Valencia	Venezuela
VVI	Santa Cruz	Bolivia
YUL	Montreal	Canada
YYZ	Toronto	Canada
Total routes	**78**	**33 Countries**
Airports	**5**	

Nota 1: IQT/PTY route cancelled in 2016.

Paraguay

Routes		
AGT	**Ciudad del Este (SGES)**	
GRU	Guarulhos	Brazil
ASU	**Asuncion (SGAS)**	
AEP	AEP B. Aires	Argentina
EZE	EZE B. Aires	Argentina
GRU	Sao Paulo	Brazil
LIM	Lima	Peru
MAD	Madrid	Spain
MIA	Miami	United States
MVD	Montevideo	Uruguay
PTY	Panama	Panama
SCL	Santiago	Chile

VVI	VVI Santa Cruz	Bolivia
Total routes	**11**	**9 Countries**
Airports	**2**	

Peru

Routes		
CUZ	**Cusco (SPZO)**	
LPB	La Paz	Bolivia
IQT	**Iquitos (SPQT)**	
PTY	Panama	Panama
LIM	**Lima (SPJC)**	
AMS	Amsterdam	Holland
ANF	Antofagasta	Chile
ASU	Asuncion	Paraguay
ATL	Atlanta	United States
BOG	Bogota	Colombia
CCS	Caracas	Venezuela
CDG	CDG Paris	France
CLO	Cali	Colombia
COR	Cordoba	Argentina
CUN	Cancun	Mexico
DCA	Washington	United States
DFW	Dallas	United States
EWR	EWR New York	United States
EZE	EZE B. Aires	Argentina
FLL	Fort Lauderdale	United States
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
GYE	Guayaquil	Ecuador
HAV	Havana	Cuba
IAH	Houston	United States
IGU	Iguazu	Brazil
JFK	JFK New York	United States
LAX	Los Angeles	United States
LPB	La Paz	Bolivia
MAD	Madrid	Spain
MCO	Orlando	United States
MDE	Medellin	Colombia
MEX	Mexico	Mexico
MIA	Miami	United States
MVD	Montevideo	Uruguay
POA	Porto Alegre	Brazil
PTY	Panama	Panama

PUJ	Punta Cana	Dominican Republic
SAL	San Salvador	El Salvador
SCL	Santiago	Chile
SJO	San Jose	Costa Rica
UIO	Quito	Ecuador
VVI	Santa Cruz	Bolivia
YYZ	Toronto	Canada
Total	**41**	**20 Countries**
Airports	**3**	
Chiclayo to Panama, Panama		since 2016
Lima to Rosario, Argentina		since 2016
Lima to London, United Kingdom		since 2016

Suriname

Routes		
PBM		
AMS	Amsterdam	Holland
AUA	Aruba	Aruba
BEL	Belem	Brazil
CAY	Cayenne	French Guiana
CUR	Curacao	Curacao
GEO	Georgetown	Guyana
MIA	Miami	United States
POS	Port of Spain	Trinidad & Tobago
Total Routes	**8**	**8 Countries**
Airports	**1**	

Uruguay

Routes		
MVD	**Montevideo (SUMU)**	
AEP	AEP B.Aires	Argentina
ASU	Asuncion	Paraguay
EZE	EZE B. Aires	Argentina
GIG	Rio de Janeiro	Brazil
GRU	Sao Paulo	Brazil
LIM	Lima	Peru
MAD	Madrid	Spain
MIA	Miami	United States
POA	Porto Alegre	Brazil
PTY	Panama	Panama
SCL	Santiago	Chile

PDP	**Punta del Este (SULS)**	
AEP	AEP B.Aires	Argentina
Total routes	**12**	**8 Countries**
Airports	**2**	

Venezuela

Routes		
MAR	**Maracaibo (SVMC)**	
AUA	Aruba	Aruba
CUR	Curacao	Curacao
MIA	Miami	United States
PTY	Panama	Panama
BLA	**Barcelona (SVBC)**	
GYE	Guayaquil	Ecuador
MIA	Miami	United States
PTY	Panama	Panama
BRM	**Barquisimeto (SVBM)**	
CUR	Curacao	Curacao
CCS	**Caracas (SVMI)**	
ATL	Atlanta	United States
AUA	Aruba	Aruba
BOG	Bogota	Colombia
CDG	CDG Paris	France
CUR	Curacao	Curacao
EZE	EZE B. Aires	Argentina
FCO	Rome	Italy
FRA	Frankfurt	Germany
GYE	Guayaquil	Ecuador
HAV	Havana	Cuba
IAH	Houston	United States
JFK	JFK N York	United States
LIM	Lima	Peru
LIS	Lisbon	Portugal
MAD	Madrid	Spain
MEX	Mexico	Mexico
MIA	Miami	United States
POS	Port of Spain	Trinidad & Tobago
PTY	Panama	Panama
PUJ	Punta Cana	Dominican Republic
SDQ	Santo Domingo	Dominican Republic
LSP	**Las Piedras (SVJC)**	
AUA	Aruba	Aruba
CUR	Curacao	Curacao

PMV	**Porlamar (SBMG)**	
BOG	Bogota	Colombia
HAV	Havana	Cuba
POS	Port of Spain	Trinidad & Tobago
PZO	**Puerto Ordaz (SVPR)**	
GEO	Georgetown	Guyana
VLN	**Valencia (SVVA)**	
AUA	Aruba	Aruba
BOG	Bogota	Colombia
CUR	Curacao	Curacao
MDE	Medellin	Colombia
PTY	Panama	Panama
Total routes	**40**	**18 Countries**
Airports	**8**	

Note: Includes routes that have been temporarily suspended

Annex B

Historical data on total passengers in the SAM Region, by State

Historical information about total passengers in 2010-2015 provided by IATA for each State in the SAM Region is provided below, together with the respective annual growth figures. That traffic covers all routes with origin or destination in a given State.

It should be added here that the total passengers in the SAM Region were calculated based on the summation of each State's air traffic adjusted by the common traffic to avoid having the same group of passengers at the regional level be counted twice--in other words, passengers recorded as traffic with one State of the SAM Region as its origin and also as traffic with another State in the same region as its destination.

List of the air passenger traffic – SAM Region

	2010	2011	2012	2013	2014	2015
Argentina	16,319,509	17,436,931	18,058,511	18,737,910	19,338,394	20,770,021
Bolivia	2,836,376	3,352,284	2,954,029	3,701,704	4,440,596	4,803,394
Brasil	71,448,804	85,301,511	89,155,178	93,784,107	96,438,277	93,932,069
Chile	10,009,292	11,454,156	12,390,847	13,657,477	14,201,523	14,870,794
Colombia	18,074,070	19,868,015	22,113,532	24,879,988	26,680,339	28,839,549
Ecuador	6,508,169	7,462,168	7,735,513	8,139,512	7,457,336	7,367,168
Guyana	439,888	439,063	471,846	420,971	461,383	493,054
Guyana Francesa	409,202	401,589	405,396	382,870	370,856	386,953
Panamá	7,005,031	8,271,459	10,174,870	11,586,681	12,782,167	13,434,673
Paraguay	815,181	907,272	909,994	871,746	893,764	894,262
Perú	8,567,601	9,261,953	11,196,661	13,262,078	13,618,677	15,238,719
Surinam	381,617	405,063	449,517	508,565	473,040	457,100
Uruguay	1,653,818	1,782,312	1,849,428	1,742,513	1,814,937	1,772,847
Venezuela	8,291,745	8,990,852	10,313,336	12,455,533	11,371,479	9,687,743
Región SAM	**140,270,932**	**161,530,677**	**173,815,809**	**189,789,145**	**195,957,076**	**198,385,611**

Argentina; …Brazil; …French Guiana; Panama; ….Peru; Suriname;…SAM Region (OJO igual en el siguiente),

Annual air passenger traffic growth figures – SAM Region

	2011	2012	2013	2014	2015
Argentina	6.8%	3.6%	3.8%	3.2%	7.4%
Bolivia	18.2%	-11.9%	25.3%	20.0%	8.2%
Brasil	19.4%	4.5%	5.2%	2.8%	-2.6%
Chile	14.4%	8.2%	10.2%	4.0%	4.7%
Colombia	9.9%	11.3%	12.5%	7.2%	8.1%
Ecuador	14.7%	3.7%	5.2%	-8.4%	-1.2%
Guyana	-0.2%	7.5%	-10.8%	9.6%	6.9%
Guyana Francesa	-1.9%	0.9%	-5.6%	-3.1%	4.3%
Panamá	18.1%	23.0%	13.9%	10.3%	5.1%
Paraguay	11.3%	0.3%	-4.2%	2.5%	0.1%
Perú	8.1%	20.9%	18.4%	2.7%	11.9%
Surinam	6.1%	11.0%	13.1%	-7.0%	-3.4%
Uruguay	7.8%	3.8%	-5.8%	4.2%	-2.3%
Venezuela	8.4%	14.7%	20.8%	-8.7%	-14.8%
Región SAM	15.2%	7.6%	9.2%	3.2%	1.2%

Annex C

Airlines that operate direct flights - SAM Region

Argentina

1. LATAM Argentina
2. American Airlines
3. Air France
4. Aeroméxico
5. Aerolíneas Argentinas
6. Austral
7. Avianca
8. Sky Airline
9. British Airways
10. Copa Airlines
11. Delta Airlines
12. Emirates Airline
13. VRG Linhas Aereas
14. Iberia
15. LATAM Brasil
16. LATAM Airlines
17. Deutsche Lufthansa
18. LACSA
19. Air New Zealand
20. Boliviana de Aviación
21. Andes Líneas Aéreas
22. LATAM Paraguay
23. Qatar Airways
24. Taca Airlines
25. Turkish Airlines
26. United Airlines
27. Air Europa
28. Alas Uruguay

Bolivia

1. Aerocon
2. Aerolíneas Argentinas
3. Air Europa
4. Amaszonas

5. American Airlines
6. Avianca
7. Boliviana de Aviación
8. Copa Airlines
9. Gol Transportes Aéreos
10. LATAM Airlines
11. LATAM Paraguay
12. Línea Aérea Eco Jet
13. Peruvian Air Line
14. Sky Airline

Brazil

1. Aerolíneas Argentinas
2. Aeroméxico
3. Avianca
4. Air Canada
5. Air Europa
6. Air France
7. Alitalia
8. American Airlines
9. Austral Líneas Aéreas
10. Azul Linhas Aéreas
11. Boliviana de Aviación
12. British Airways
13. Condor Flugdienst
14. Copa Airlines
15. Delta Airlines
16. Deutsche Lufthansa
17. Emirates Airline
18. Ethiopian Airlines
19. Iberia
20. Jet Airways
21. KLM Royal Dutch
22. Korean Air Lines
23. LATAM Group
24. LATAM Brasil
25. LATAM Paraguay
26. Insel Air International
27. Oceanair
28. Passaredo Transportes Aéreos

29. Qatar Airways
30. Royal Air Maroc
31. South African Airways
32. SWISS International Air Lines
33. Taca Airlines
34. TAP Portugal
35. Turkish Airlines
36. United Airlines
37. VRG Linhas Aereas

Chile

1. American Airlines
2. Air France
3. Aeroméxico
4. Aerolíneas Argentinas
5. Avianca
6. Alitalia
7. Copa Airlines
8. Delta Airlines
9. VRG Linhas Aereas
10. Sky Airline
11. Iberia
12. LATAM Brasil
13. LATAM Group
14. Qantas Airways
15. Taca Airlines
16. United Airlines
17. Amaszonas Paraguay

Colombia

1. Aerogal
2. ABC Aerolíneas
3. Insel Air International
4. Air Panama dba Parsa
5. SATENA
6. Avior Airlines
7. American Airlines
8. Air Canada
9. Air France
10. Aeroméxico

11. Avianca
12. Jetblue Airways
13. Copa Airlines
14. Delta Airlines
15. Iberia
16. LATAM Brasil
17. KLM Royal Dutch
18. LATAM Group
19. Deutsche Lufthansa
20. LACSA
21. Spirit Airlines
22. Aero Republica
23. Taca Airlines
24. United Airlines
25. Conviasa
26. Viva Colombia
27. Republic Airline

Ecuador

1. Aerogal
2. Insel Air International
3. Avior Airlines
4. American Airlines
5. Aeroméxico
6. Avianca
7. Jetblue Airways
8. Copa Airlines
9. Delta Air Lines
10. Tame
11. Iberia
12. KLM Royal Dutch
13. LATAM Group
14. LACSA
15. Aero Republica
16. Taca Airlines
17. United Airlines
18. Viva Colombia
19. LATAM Ecuador

Guyana

1. Caribbean Airlines
2. Conviasa
3. Copa Airlines
4. Fly Jamaica Airways
5. Insel Air Aruba
6. Insel Air International
7. LIAT
8. Surinam Airways Ltd.

French Guiana

1. Air Caraibes
2. Air France
3. Azul Linhas Aereas
4. CAIRE dba Air Antilles Express
5. Corsair
6. Surinam Airways

Panama

1. Aerogal
2. Nature Air
3. Air Panama dba Parsa
4. Avior Airlines
5. American Airlines
6. Air France
7. Aeroméxico
8. Avianca
9. Copa Airlines
10. Delta Airlines
11. Aviateca
12. Iberia
13. KLM Royal Dutch
14. Deutsche Lufthansa
15. LACSA
16. Spirit Airlines
17. Aero Republica
18. Línea Aérea De Servicio Ejecutivo Regional (LASER)
19. Air Canada
20. Santa Barbara Airlines
21. Taca Airlines

22. Turkish Airlines
23. United Airlines
24. Conviasa
25. Viva Colombia
26. Republic Airline

Paraguay

1. LATAM Brasil
2. Aerolíneas Argentinas
3. Air Europa
4. Amaszonas del Paraguay
5. Amaszonas (Bolivia)
6. American Airlines
7. Avianca
8. BQB Líneas Aéreas
9. Copa Airlines
10. Gol Transportes Aereos
11. LATAM Group
12. LATAM Paraguay

Peru

1. Star Perú
2. Aerogal
3. Interjet
4. American Airlines
5. Air France
6. Aeroméxico
7. Aerolíneas Argentinas
8. Avianca
9. Jetblue Airways
10. Copa Airlines
11. Delta Airlines
12. Tame
13. Sky Airline
14. Iberia
15. LATAM Brasil
16. KLM Royal Dutch
17. LATAM Group
18. LACSA
19. Spirit Airlines

20. Peruvian Air Line
21. Air Canada
22. Taca Airlines
23. United Airlines
24. Air Europa
25. Viva Colombia
26. LC Busre

Suriname

1. Caribbean Airlines
2. Gol Transportes Aéreos
3. Insel Air Aruba
4. Insel Air International
5. KLM Royal Dutch
6. Surinam Airways

Uruguay

1. LATAM Brasil
2. Aerolíneas Argentinas
3. Air Europa
4. Air France
5. Amaszonas (Bolivia)
6. American Airlines
7. Avianca
8. BQB Líneas Aéreas
9. Copa Airlines
10. Gol Transportes Aéreos
11. Iberia
12. LATAM Group
13. SOL Líneas Aéreas

Venezuela

1. Rutas Aéreas
2. Insel Air International
3. Avior Airlines
4. American Airlines
5. Air France
6. Aruba Airlines
7. Aerolíneas Argentinas
8. Avianca

9. Caribbean Airlines
10. Copa Airlines
11. Cubana de Aviación
12. Delta Airlines
13. Enter Air Spolka
14. Tame
15. Iberia
16. LACSA
17. Aero Republica
18. Línea Aérea De Servicio Ejecutivo Regional (LASER)
19. Aserca Airlines
20. Santa Barbara Airlines
21. Taca Airlines
22. TAP Portugal
23. United Airlines
24. Air Europa
25. Conviasa
26. Aeropostal Alas de Venezuela

Source: IATA, updated in September 2016

Annex D

Detailed explanation of the calculation of passenger and cargo connectivity indices

a) Passenger connectivity index

This index was constructed considering each State's actual passenger traffic to its various direct destinations. These traffic flows, however, have not been added up directly, but have been weighted according to their importance within the global connectivity network (available seating capacity).

The index is calculated at the country level and each destination is assigned a value in accordance with its importance; the country assumed to be most connected at the global level, the United States, is given a weight of 1. In the case of the rest of the countries, the total number of seats per kilometer offered is compared with those of the United States; as a result, a country with one-half the number of seats per kilometer of those offered by the United States would bear a weight of 0.5 and so on successively.

Therefore, the formula used to calculate the passenger connectivity index of each State in the SAM Region is as follows:

$$\sum_{1}^{n} Pd_1 * Pe_1 + Pd_2 * Pe_2 + \ldots Pd_n * Pe_n$$

where Pd_n = Number of passengers flying from the State analyzed toward destination n

$$Pe_n = \frac{\text{Asientos por km ofertados de destino n}}{\text{Asientos por km ofertados de Estados Unidos}}$$

$$Pe_n = \frac{\text{Seats per km offered from destination n}}{\text{Seats per km offered from the United States}}$$

In this way, destinations with a larger degree of connectivity with the rest of the world will bear a greater weight than less connected destinations within the valuation. As a result, the connectivity index will have a higher value in the case of States that serve a larger number of destinations and the larger the number of seats per km offered by those destinations to the rest of the world.

By way of example, we will calculate French Guiana's connectivity index according to the following data furnished by IATA:

Number of passengers on direct routes from French Guiana:

Country	Number of passengers
Brazil	8,973
France	165,507
Guadaloupe	16,888
Haiti	384
Martinique	93,854
Suriname	2,779
United States	308

Seats per km offered by each country at the global level:

Country	Seats per km offered	Weight vis-à-vis the United States
Brazil	3,392,903,688	0.0843
France	4,165,105,681	0.1035
Guadaloupe	58,736,308	0.0015
Haiti	30,891,379	0.0008
Martinique	53,345,304	0.0013
Suriname	19,437,683	0.0005
United States	40,221,233,030	1.0000

Connectivity level of passengers from French Guiana (IC):

IC = 8,973 * 0.0843 + 165,507 * 0.1035 + 16,888 * 0.0015 + 384 * 0.0008 + 93,854 * 0.0013 + 2,779 * 0.0005 + 308 * 1

IC = 18

It should be explained that the result of each index is a referential value with significance only if compared with the rest of the indices obtained for each State in the SAM Region. The result does not correspond to any metric in particular, but is an indicator of relativity among States and gives an idea of the differences in level of connectivity in terms of magnitude.

b) <u>Cargo connectivity index</u>

The cargo connectivity index was prepared using the same logic as that of the passengers. In this case, however, the total tonnes of cargo transported to each destination were weighted considering its GDP as compared with the global GDP. In this way, it is attributed an economic importance in terms of the size of the economies with which the States maintain trading relations.

In this case, the following formula was applied:

$$\sum_1^n Cd_1 * Pec_1 + Cd_2 * Pec_2 + \ldots Cd_n * Pec_n$$

where Cd_n = Total tonnes transported to each destination

$$Pec_n = \frac{\text{PBI del destino n ajustado por Paridad de Poder de Adquisición}}{\text{PBI mundial ajustado por Poder de Adquisición}}$$

$$Pec_n = \frac{\text{GDP of destination n adjusted by Purchasing Power Parity}}{\text{Global GDP adjusted by Purchasing Power}}$$

In this case, the connectivity index will have a higher value for States that transport a larger quantity of tonnes to destinations with significant GDPs at the global level.

Annex E

IATA passenger projection per State

a) Number of passengers (in thousands)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Argentina	21,803	21,900	23,047	24,803	26,266	27,358	28,304	29,163	29,832	30,485	31,249	32,150	33,129	34,164	35,252	36,399	37,591	38,832	40,132	41,493
Bolivia	5,150	5,550	5,917	6,299	6,680	7,060	7,461	7,881	8,373	8,849	9,356	9,901	10,490	11,126	11,803	12,521	13,278	14,081	14,933	15,838
Brazil	89,885	88,126	90,599	95,457	101,937	108,387	114,397	119,659	123,984	127,443	130,673	133,939	137,426	141,131	144,895	149,004	153,381	157,982	162,762	167,714
Chile	16,856	17,819	18,948	20,041	20,981	21,803	22,594	23,367	24,056	24,683	25,330	26,025	26,779	27,593	28,472	29,401	30,355	31,344	32,374	33,448
Colombia	31,188	32,848	34,898	37,172	39,439	41,683	43,989	46,392	48,882	51,379	53,964	56,428	59,032	61,786	64,702	67,792	70,753	73,860	77,142	80,616
Ecuador	7,513	7,890	8,333	8,813	9,295	9,749	10,227	10,763	11,334	11,980	12,552	13,160	13,816	14,500	15,194	15,931	16,678	17,464	18,285	19,146
Guyana	552	573	605	638	667	693	715	737	760	788	814	839	866	895	925	955	989	1,025	1,064	1,103
Guy. Francesa	395	403	415	427	442	458	474	490	507	525	543	562	582	602	624	645	668	691	716	741
Panama	14,756	16,430	17,996	20,073	21,907	23,499	24,903	26,224	27,508	28,817	30,071	31,290	32,555	33,904	35,329	36,827	38,300	39,846	41,473	43,179
Paraguay	1,050	1,113	1,210	1,322	1,433	1,533	1,629	1,720	1,800	1,886	1,952	2,020	2,093	2,171	2,253	2,340	2,431	2,528	2,629	2,736
Peru	16,612	17,297	18,037	18,905	19,747	20,586	21,464	22,425	23,396	24,410	25,444	26,517	27,656	28,855	30,115	31,444	32,772	34,182	35,672	37,247
Suriname	505	580	650	713	774	828	884	940	993	1,042	1,064	1,075	1,084	1,095	1,108	1,123	1,140	1,158	1,178	1,197
Uruguay	1,972	2,157	2,379	2,614	2,842	3,036	3,214	3,360	3,496	3,609	3,745	3,921	4,120	4,254	4,357	4,488	4,642	4,811	4,992	5,181
Venezuela	8,718	8,411	8,196	8,678	9,223	9,822	10,312	10,814	11,286	11,680	12,050	12,409	12,770	13,138	13,512	13,893	14,277	14,673	15,083	15,508

Argentina; … French Guiana …Venezuela

*The figures for French Guiana were prepared in-house within the context of this study; IATA did not project them individually because French Guiana is considered to be a part of France.

b) Annual growth assumptions, by State

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Argentina	4.8%	0.4%	5.2%	7.6%	5.9%	4.2%	3.5%	3.0%	2.3%	2.2%	2.5%	2.9%	3.0%	3.1%	3.2%	3.3%	3.3%	3.3%	3.3%	3.4%
Bolivia	6.6%	7.8%	6.6%	6.5%	6.0%	5.7%	5.7%	5.6%	6.2%	5.7%	5.7%	5.8%	6.0%	6.1%	6.1%	6.1%	6.0%	6.0%	6.1%	6.1%
Brazil	-8.1%	-2.0%	2.8%	5.4%	6.8%	6.3%	5.5%	4.6%	3.6%	2.8%	2.5%	2.5%	2.6%	2.7%	2.7%	2.8%	2.9%	3.0%	3.0%	3.0%
Chile	10.7%	5.7%	6.3%	5.8%	4.7%	3.9%	3.6%	3.4%	2.9%	2.6%	2.6%	2.7%	2.9%	3.0%	3.2%	3.3%	3.2%	3.3%	3.3%	3.3%
Colombia	8.5%	5.3%	6.2%	6.5%	6.1%	5.7%	5.5%	5.5%	5.4%	5.1%	5.0%	4.6%	4.6%	4.7%	4.7%	4.8%	4.4%	4.4%	4.4%	4.5%
Ecuador	1.2%	5.0%	5.6%	5.8%	5.5%	4.9%	4.9%	5.2%	5.3%	5.7%	4.8%	4.8%	5.0%	4.9%	4.8%	4.9%	4.7%	4.7%	4.7%	4.7%
Guyana	7.5%	3.7%	5.5%	5.5%	4.5%	3.9%	3.3%	3.0%	3.2%	3.6%	3.4%	3.1%	3.2%	3.3%	3.4%	3.3%	3.5%	3.6%	3.7%	3.7%
Guy. Francesa	2.0%	2.0%	3.0%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Panama	9.8%	11.3%	9.5%	11.5%	9.1%	7.3%	6.0%	5.3%	4.9%	4.8%	4.4%	4.1%	4.0%	4.1%	4.2%	4.2%	4.0%	4.0%	4.1%	4.1%
Paraguay	9.7%	6.0%	8.7%	9.3%	8.3%	7.0%	6.2%	5.6%	4.7%	4.8%	3.5%	3.5%	3.6%	3.7%	3.8%	3.9%	3.9%	4.0%	4.0%	4.1%
Peru	8.3%	4.1%	4.3%	4.8%	4.5%	4.2%	4.3%	4.5%	4.3%	4.3%	4.2%	4.2%	4.3%	4.3%	4.4%	4.4%	4.2%	4.3%	4.4%	4.4%
Suriname	8.1%	14.8%	12.1%	9.8%	8.5%	7.0%	6.7%	6.3%	5.7%	4.9%	2.2%	1.0%	0.8%	1.0%	1.2%	1.4%	1.5%	1.6%	1.7%	1.7%
Uruguay	10.4%	9.4%	10.3%	9.9%	8.7%	6.8%	5.9%	4.6%	4.0%	3.2%	3.8%	4.7%	5.1%	3.3%	2.4%	3.0%	3.4%	3.6%	3.8%	3.8%
Venezuela	-11.5%	-3.5%	-2.6%	5.9%	6.3%	6.5%	5.0%	4.9%	4.4%	3.5%	3.2%	3.0%	2.9%	2.9%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%

…French Guiana…

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