THE VALUE OF AIR TRANSPORT IN COLOMBIA

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The Value of Aviation in Colombia

Connectivity & Competitiveness are the keys to maximizing the economic benefits of air transport

Key Points

- Aviation is a very important economic facilitator, contributing more than US$ 7.5 billion in GDP and generating 600,000 jobs in Colombia.
- Air connectivity supports tourism and facilitates trade, as well as connects friends and families and promotes the exchange of knowledge and ideas.
- Air connectivity in Colombia supports economic competitiveness, increased productivity, improved efficiency, and encourages innovation. In turn, the reciprocal relationship between operational and regulatory competitiveness of government entities is fundamental for the development of air connectivity.
- The aviation market in Colombia has great potential to continue growing, particularly in terms of domestic connectivity and diversifying direct international connections. As this report highlights, some priorities include:
  - Improve airport capacity, particularly at the current El Dorado Airport;
  - Provide transparency ensuring the participation of the industry in the planning and implementation of airport projects;
  - Reduce taxes and charges in order to make air travel more affordable for the consumer; and
  - Strengthen the institutional framework and eliminate onerous regulation (3 different entities for surveillance and control, outdated jet fuel regulation, among others) that does not conform to international best practices.
- Addressing these key issues is fundamental for the development of the air transport sector and its role in economic development and social cohesion in Colombia.
- The potential of aviation for Colombia is significant, both in terms of the sector and delivering benefits to the economy more broadly. Under the 'current trends' forecasts referenced in this document, air passenger demand is expected to more than double in the next 20 years.
  - However, high taxes, burdensome regulation, and inadequate infrastructure expansion will limit the opportunity for the air passenger market to grow.
- The implementation of economic and regulatory policies, which facilitate the development of air transport, could potentially quadruple the demand for air travel, fostering an economic gain of up to US $38.2 billion in GDP and approximately 1,9 million jobs supported by aviation.
- This report offers a plan to achieve Colombia's potential as a vibrant and dynamic aviation market. No actor can achieve this vision alone. IATA recognizes this need and is at your disposal to work with Colombian authorities and partner with government organizations, industry, and commerce to achieve this common goal.

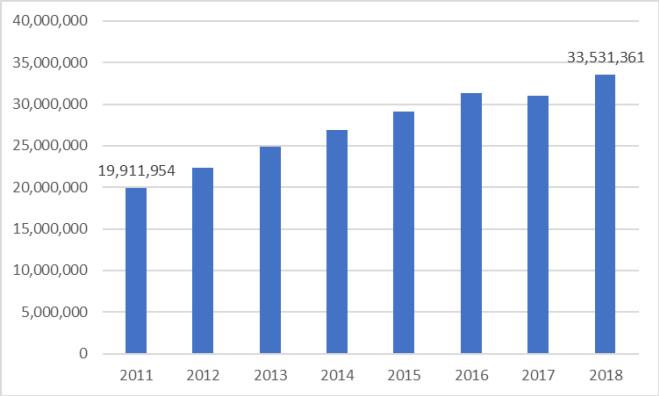
Air Transport in Colombia

The air transport market in Colombia has grown significantly over the past ten years.

The number of origin-destination passengers travelling to and from Colombia has increased at an average annual rate of 6.2% over this period.

• A total of 33.5 million passengers flew to/from Colombia in 2018, up from 19.9 million a decade ago.

Figure 1: The air transport market in Colombia

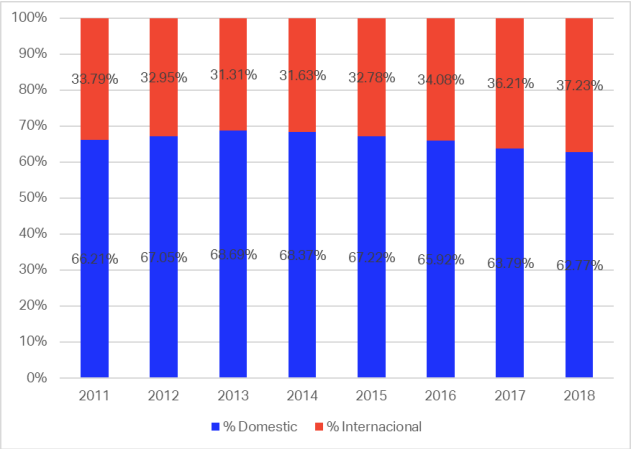


Source: IATA DDS

Colombia's air transport market is heavily skewed towards domestic passengers. Around 66% of air passengers are domestic in nature, with the remaining 34% being international.

• That said, since 2014, there has been an increase of 5,6 percentage points in the international share of total passengers.

Figure 2: International vs domestic air passenger markets

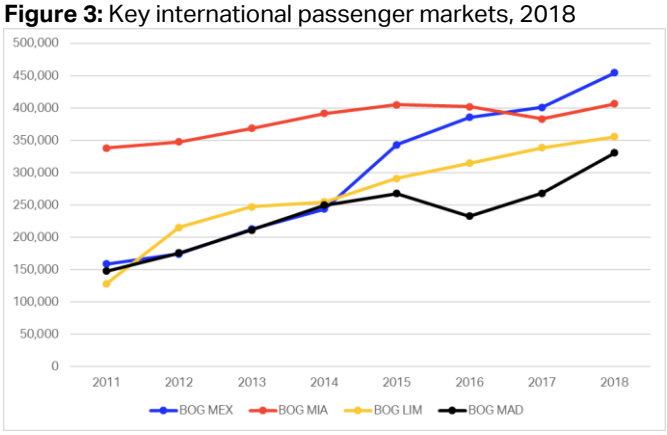


Source: IATA DDS

According to IATA's latest *World Air Transport Statistics* publication, Colombia has three domestic airport pairs in the global Top 100 ranking.

• The largest of these is Bogota – Medellin with almost 3,1 million passengers in 2018, followed by Bogota – Cartagena with 2.2 million passengers and finally Bogota – Cali with 1.8 million passengers.

Figure 3: Key international passenger markets, 2018

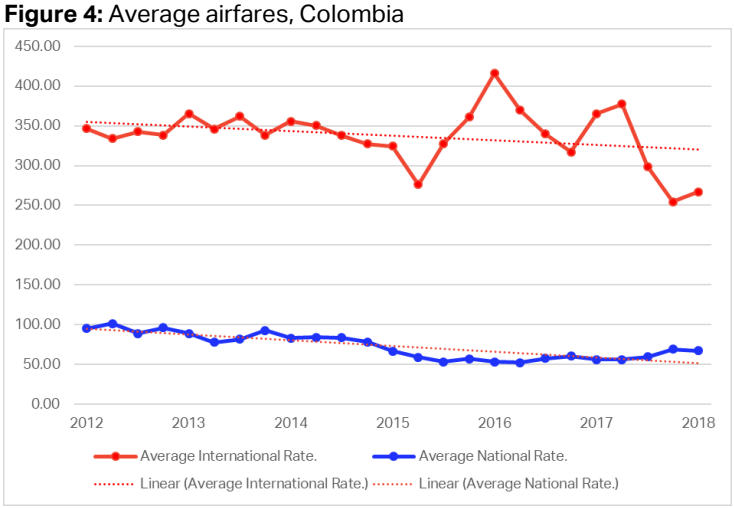


Source: IATA DDS

In terms of the main international markets within Latin America, the fastest growth in recent years has been between Bogota and Mexico City (see Figure 3).

• The route Bogota – Ciudad de Mexico moved 442.116 passengers in 2018, followed by Bogota – Lima with 371.772.

Figure 4: Average airfares, Colombia



Source: IATA DDS

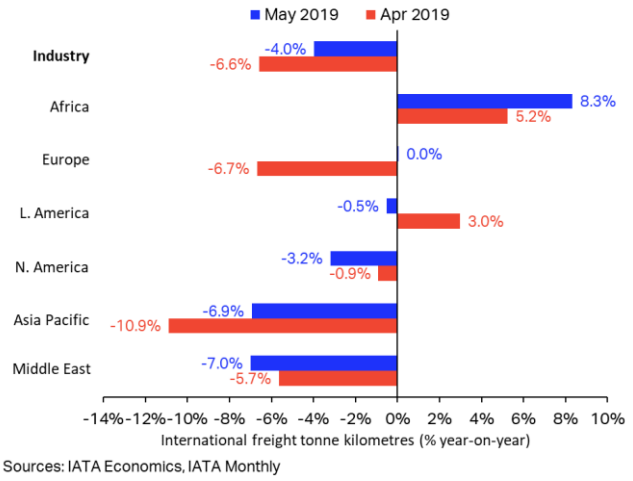
An important driver of the robust growth rates in air passenger demand over recent years noted above has been the reduction of air fares.

• Lower prices typically stimulate demand, and Colombia's air transport market has been no exception to this experience.

As shown in Figure 4, the price of international air tickets has decreased at a rate of 4,9% yearly since 2012. The story is similar for the domestic market, where airfares have fallen at an average annual rate of around 4.8% over the same period.

With airfares steadily declining as a result of a strong degree of competition between airlines, the market appears to be functioning as it should. As such, there seems to be little compelling reason for the government to intervene in terms of prices to correct any deficiencies in the air transport market.

Figure 5: Key international air freight markets, 2019



Source: IATA Economics

After three consecutive months of international freight growth, Latin America returned to negative year-on-year growth in May. International FTKs are currently 0.5% below their level of May 2018.

• This weak performance in international markets is at odds with a moderately positive growth outcome in total FTKs flown by the Latin American airlines, which are up 2.7% year-on-year, indicating that the region's domestic markets are performing more strongly than their international counterparts.

The five busiest air cargo routes for Colombia are the United States, Netherlands, Mexico, Chile and Peru. In that sense, Colombia considers the United States its primary commercial ally.

Meanwhile, trade connections are strong with Mexico and Chile, in part, for belonging to the Pacific Alliance. Peru is a special case because it is not only a member of the Pacific Alliance but part of the Andean Community of Nations as well.

Aviation as an Economic Engine

Air transport is more than just moving passengers and cargo between destinations. One of the most important benefits from air transport is the spillover impact on other sectors of the economy (e.g.: trade, investment, education, ideas, capital and technology). A key economic indicator, stimulated by good air transport connections, is foreign direct investment, creating productive assets that will generate a long-term flow of GDP.

Air transport is the *Business of Freedom* and contributes significantly to the Colombian economy, creating jobs and generating wealth:

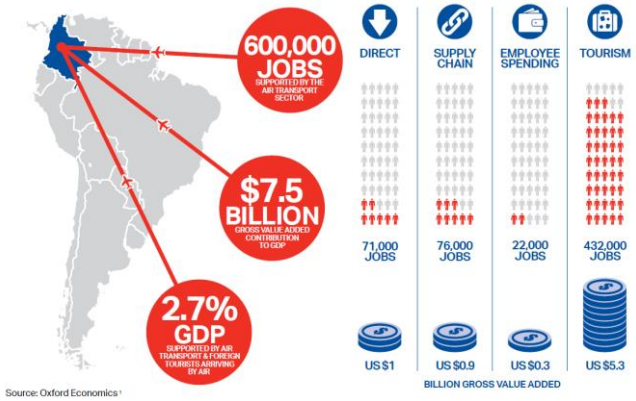
• Airlines, airport operators, airport companies (restaurants and stores) and air navigation service providers employed 71,000 people in Colombia, according to the most recent data. The industry also directly made a gross value-added contribution of US$ 2.2 billion to GDP;

• In addition, when purchasing goods and services from local suppliers, the sector supported another 76,000 jobs and US$ 900 million in GDP. Furthermore, the sector is estimated to have supported 22,000 jobs and contributed US$ 260 million in GDP by paying wages to its employees;

• Foreign tourists who arrive in Colombia by air and spend their money in the local economy, support another 432,000 jobs and contribute US$ 5.3 billion to the Colombian economy;

• In total, 2.7% of Colombia's economic activities depend on the air transport sector, including tourism, which is dependent on travel, particularly air transport.

Figure 6: Contribution of air transport to GDP and employment in Colombia

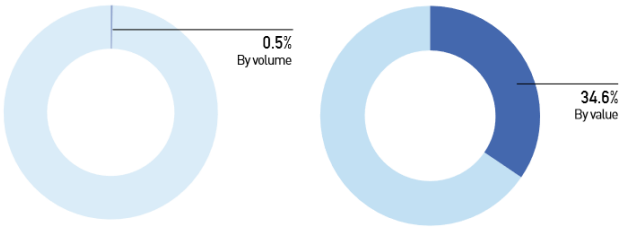


Source: Oxford Economics

In addition to tourism, air transport also allows Colombian companies to sell their goods and services around the world and helps to attract foreign investment.

• Air transport accounts for only a small proportion of world trade by volume, at around 1%. However, in value terms, aviation's share is much larger; about 35% of the world trade measured by its value is transported by air.

Figure 7: Proportion of global trade transported by Air



Source: ATAG, ABBB

• Air freight is particularly important for perishables, such as flowers, fish, fresh fruit, vegetables or pharmaceutical products. Air connectivity is also of vital importance for companies that seek to access and be integrated into global value chains.

• Similarly, air connectivity is important for cities and companies that compete to attract foreign direct investment.

For example, for multinational companies seeking to establish a regional headquarters in a Latin American city, it is essential to take into account the capacity to reach the rest of the region from a single center. Having access to the breadth and depth of a network of routes that allow short

same-day round trips as well as daily flights to more distant destinations, is ideal.

In addition, air transport can also increase productivity throughout the economy:

• By expanding the customer base - air transport allows companies to exploit economies of scale and reduce unit costs;

• By exposing domestic companies to greater foreign competition - it helps boost improvements in the efficiency of national companies to stay globally competitive.

• By improving efficiency - many industries depend on air transport to maintain their "just-in-time" production operations, providing greater flexibility within the supply chain, and reducing costs by minimizing the need to maintain stocks of available supplies;

• By acting as a stimulus for innovation - extensive air transport links facilitate the creation of professional networks and encourage collaboration between companies and researchers located in different parts of the world.

All these economic benefits would be reinforced, magnified, and strengthened to the extent that Colombia is capable of further developing as a regional hub.

• Acting as a hub allows airlines to offer a wider network with a greater frequency of services and a multiplicity of destinations.

The Importance of Air Connectivity

Air connectivity is a measure of economic potential and opportunity. The more connected a country is by air, the greater its capacity to capitalize on the economic and social benefits that air transport can offer.

Figure 8a and 8b show the network of direct connections for Colombia, both international and domestic. It is worth remembering that the direct international connections, in turn, open up further opportunities for Colombian travelers.

Figure 8a: Direct connectivity from Colombia

Source: SRS Analyser

Figure 8b: Direct connectivity within Colombia

Source: SRS Analyser

In the case of Colombia, most of the direct services are national routes, with almost 90 domestic connections.

In the international arena, there are a total of 94 direct routes. This represents a growth of more than 40% since 2012.

Of these 94 direct international routes, Colombia has 33 routes to other destinations in Central and South America, in addition to having 61 routes to other countries, mainly in North America and Europe.

With its advantageous geographical location and its potential to act as a regional center, there is scope to diversify Colombia's network of international connections, not only from Bogota but also from other large urban centers in the country, such as Medellin, Cali, Barranquilla, and Cartagena, for example.

How to measure air connectivity?

Air connectivity has many dimensions, including:

• the number of routes;

• the 'importance' of destinations;

• the frequency of services; and

• the number of seats available.

In broad terms, three types of connectivity that can be considered; namely Direct, Indirect and Hub connectivity., each of which is discussed below:

i. Direct connectivity: Reflects the direct air services available from an airport. It can be measured not only in terms of the number or economic importance of the destinations, but also in terms of frequency.

• For example, an airport with five daily flights to another airport would register a score higher than one with only four daily flights.

ii. Indirect connectivity: Measures the number of destinations to which you can fly, through connecting flights at hub airports from a private airport.

• For example, on a Cartagena - Bogota flight, the large number of connections available from Bogota expands the range of destinations available from the airport of origin.

Indirect connections can be weighted according to their quality, depending on the connection time and related deviation. In this last aspect, an itinerary from Cartagena to

New York through Bogota is considered better than an alternative itinerary through Lima or Sao Paulo.

iii. Hub connectivity: Reflects the number of connecting flights that can be provided by the airport, taking into account the minimum and maximum connection times.

• As in the case of indirect connectivity, the connections in the hub can be weighted according to their quality in terms of the deviation involved and the connection times.

Based on the above, IATA has developed a connectivity indicator to measure the degree of integration that a country has within the global air transport network.

• It is a qualitative measure of the number and economic importance of the destinations served from the main airports in a country, the frequency of service to each destination and the number of forward connections available from each destination.

In the IATA measure, connectivity increases as the number of destinations increases, the frequency of services increases and / or the number of destinations to larger hub airports increases.

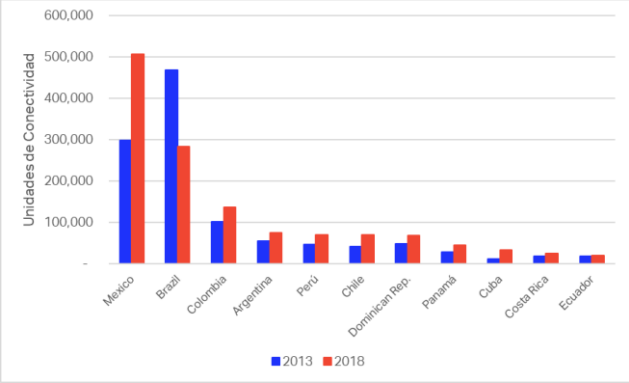
How well does Colombia perform on air connectivity?

Colombia is the third best connected country in Latin America behind Mexico, and Brazil and its air connectivity has increased by 34% in the last five years. This represents a solid growth performance, broadly in line with the world average over the same period.

• However, compared with its regional peers, Colombia's increase in connectivity is still far from the growth experienced in countries like Mexico (70%), Panama (58%) and Peru (51%).

Figure 9 shows the connectivity index in 2018 for a selection of Latin American countries, also showing how connectivity has evolved in the last five years.

Figure 9: Connectivity 2018 vs 2013, selected countries



Source: SRS Analyser

The level of connectivity depends, to some extent, on the size of a country's economy and the number and size of the companies served by its air transport sector. Naturally, larger economies are connected to more destinations and have more seats available, but quantity is not necessarily a measure of quality.

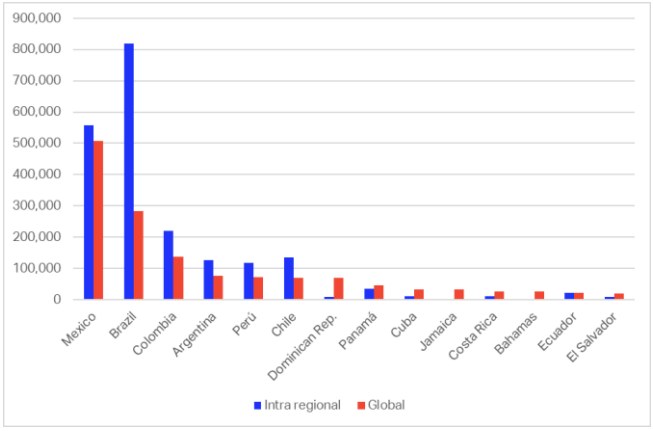
Therefore, another key measure that must be examined is the level of connectivity relative to the Gross Domestic Product (GDP) in terms of its relation to productivity and economic growth. Using this definition, Colombia surpasses Mexico and Brazil, but it is behind Panama.

Connectivity can also be measured at the intra-regional as well as the global level, as shown in Figure 10.

Colombia has a very balanced air network, perhaps due to its advantageous geographic location that stands out as a very important comparative attraction.

In this regard, it is unlike Mexico, which has higher scores in terms of global connectivity due to its proximity to the United States market, or Brazil, which has greater relative connectivity within the region.

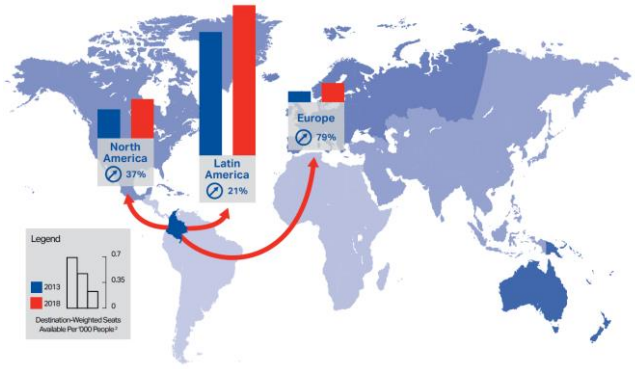
Figure 10: Global vs. intra-regional connectivity, selected countries



Source: SRS Analyser.

However, Figure 11 shows that in terms of passenger traffic, the markets that have grown the quickest have been Europe (79% per year) and North America (37%). The flow of passengers in the region has also increased by 21%, although it should be noted that this market is still in a development stage.

Figure 11: Evolution of connectivity by market: 2013- 18



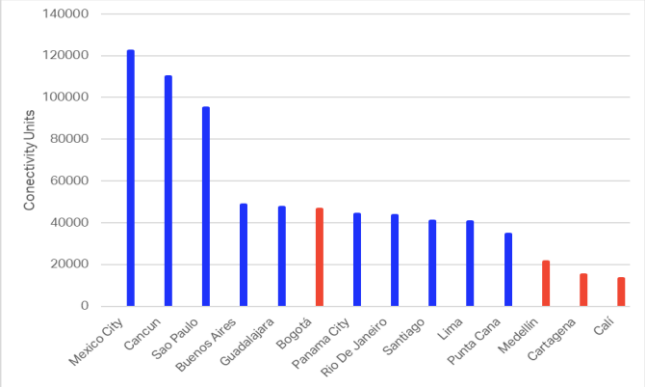
Source: SRS Analyser

Finally, connectivity can be measured at a city level to see how Colombian cities compare with other large cities in Latin America and the rest of the world in terms of their integration into the global air network.

As shown in Figure 12, Bogota is ranked number six in the best-connected cities in Latin America behind three Mexican cities, Sao Paulo and Buenos Aires.

• In addition to Bogota, Medellin, Cartagena, and Cali are all also ranked among the top 25 places on this measure of air connectivity.

Figure 12: Air connectivity, selected cities, 2018



Source: SRS Analyser

The Challenge of Competitiveness

Many of the factors that determine the connectivity of a country cannot be directly influenced by government transportation ministries or the DGAC. For example, the size and geographic location of the country or its demography.

Nevertheless, there are many elements in which governments and regulators can facilitate the development of air connectivity.

The increase in air connectivity generates greater economic and social benefits for the country. Therefore, we define the competitiveness of air transport as the set of institutions, policies and factors that determine the level of connectivity in a country.

In this context, IATA has developed a tool to study the competitiveness of the regulatory environment of air transport in a country in order to promote dialogue between the industry and the authorities.

IATA has identified five key elements that measure the ease of doing business and which; therefore, influence the level of competitiveness of the country's air transport.

These are:

• passenger facilitation;

• cargo facilitation;

• supply chain management;

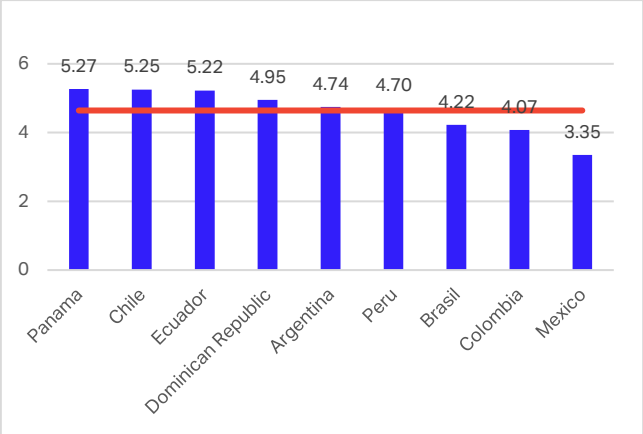
• infrastructure management; and

• regulatory environment.

Figure 13 represents aggregate results for a selection of countries in the region.

• As can be observed, Colombia ranks below the regional average and lags, at some distance, from other countries such as Chile and Panama with which it competes to be the preeminent center of aviation in the region.

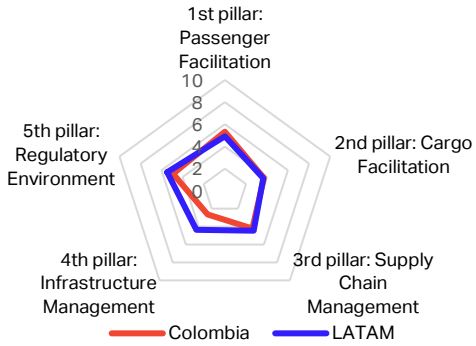
Figure 13: Competitiveness in air transport, selected countries (maximum = 10)



Source: IATA Economics 2019

Figure 14 breaks down the general ranking of Colombia into the different indicators, in addition to making a comparison with the other countries in the region.

Figure 14: Competitiveness, Colombia vs. Region



Source: IATA Economics 2019

Infrastructure management and the regulatory environment are the main pillars of disadvantage for Colombia.

On this note, to improve the competitiveness in the country and advance towards a more developed market, the government and the authorities should invest in infrastructure (including the enhancement of the existing El Dorado Airport) and aim to improve the regulatory environment with a smarter regulation approach to incentivize e air transport businesses in the country.

Figure 15: Competitiveness, Colombia vs. Region

Index Component	Colombia	LATAM
Air Transport Regulatory Competitiveness Index	**4.07**	**4.64**
1st pillar: Passenger Facilitation	5.33	4.92
2nd pillar: Cargo Facilitation	3.71	3.65
3rd pillar: Supply Chain Management	4.21	4.45
4th pillar: Infrastructure Management	2.65	4.36
5th pillar: Regulatory Environment	4.92	5.47

Source: IATA Economics 2019

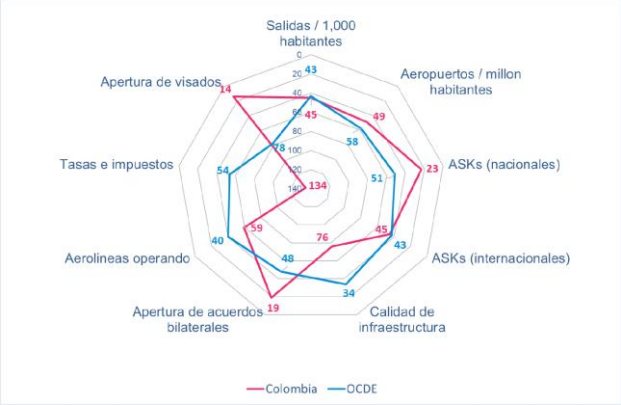
The World Economic Forum (WEF) has also developed a Global Competitiveness Index for the Travel and Tourism

sector (TTCR) that incorporates some of the factors necessary to develop air connectivity.

Figure 16 presents an overview of the various aviation elements collected in the TTCR. In this case, Member States of the OECD are referenced as a point of comparison to Colombia.

Overall, Colombia ranks 62 out of 136 countries that participate in this index. Infrastructure, tax burdens, and safety and security report the lowest scores for Colombia.

Figure 16: WEF TTCR: Colombia vs OECD



Source: World Economic Forum (WEF)

Together, the two competitiveness indices illustrate both the strengths of air transport in Colombia, and also the critical issues where there is potential for improvement.

Although Colombia equals or exceeds its neighbors in some of the indicators, the indices show that there are three issues in which the country scores low:

- infrastructure;
- cost competitiveness; and
- appropriate regulation.

These three issues, being key to achieving greater competitiveness, will be the subject of more detailed study in the sections that follow. In addition, improved regulation will be developed, reflecting the extent to which regulatory processes and practices respond to international best practices.

i. Infrastructure

To understand the importance of addressing the lack of airport capacity, IATA, in collaboration with ALTA and ACI-LAC, commissioned a study to evaluate the economic impact of capacity constraints in Latin America.

The analysis is based on two forecasts of "restricted" passenger growth scenarios. The scenarios consider the potential impact of the limitations on capacity of the terminal and the runway.

However, the results and implications of the analysis apply to any restriction on the growth of passengers, whether regulatory, tax, environmental or other measures that limit the capacity of the sector as a whole to respond to consumer demand.

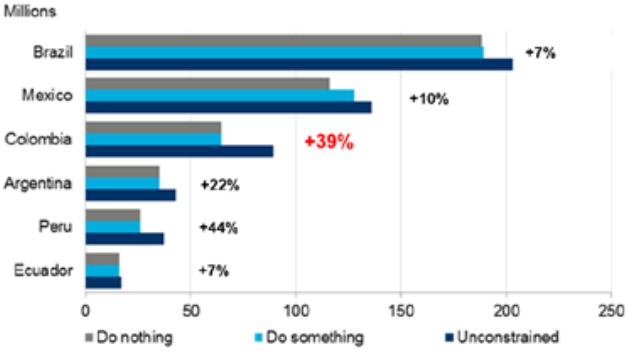
As a result, it is clear that the impact of capacity constraints in Colombia could significantly reduce the potential rate of passenger growth over the next 20 years.

If there is no increase in capacity in the coming years, all four major airports in the country will be saturated by the beginning of the next decade.

Figure 17 shows the impact on demand in the case of not addressing capacity bottlenecks. The analysis suggests that passenger demand in Colombia could be 39% higher than in the so-called "do nothing" scenario, if the infrastructure was improved in a timely manner.

In percentage terms, this differential is the second most significant among countries included in the study, only behind Peru, with the usual saturation problems that exist in Lima.

Figure 17: Growth in passenger demand - restricted and unrestricted



Source: IATA "Maximizing the Economic Benefits of Air Transport in Colombia"

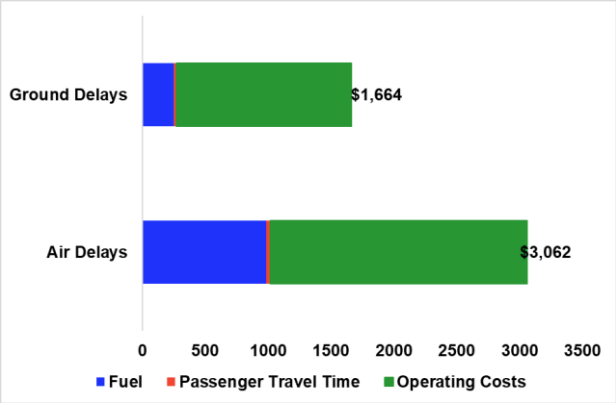
Capacity limitations are not only due to insufficient airport capacity, but also to airspace limitations. Last year, the Civil Aviation Authority of Colombia and IATA finalized the redesign of the Bogota airspace. The project aimed to improve air traffic management and the performance of arrivals and departures at El Dorado International Airport.

With the implementation of these improvements there was a reduction of delays, with substantial savings in time for the passengers and costs for the airlines.

- The annual savings is estimated at US $ 3.06 million from a reduction in air delays plus US $ 1.66 million due to reductions due to delays on land.

During the project a total of 36 new Performance Based Navigation (PBN) procedures were developed and the air navigation service provider developed a similar number of procedures to adapt to other terminal maneuvering areas (TMA).

Figure 18: Annual benefits of delayed reduction of airspace redesign (US $ 000s)



Source: IATA "Maximizing the Economic Benefits of Air Transport in Colombia"

The capacity has increased due to the improvement of the runway from 68 to 92 movements per hour, including arrival and departure procedures, which will allow airlines to offer more flights to / from Bogota.

• Delay reductions will also result in less CO2 emissions and fuel savings as illustrated in Figure 12.

Figure 19: Environmental benefits of airspace redesign (US$ '000s)

Source: IATA "Maximizing the Economic Benefits of Air Transport in Colombia"

It is important to note that this project only considered Bogota's TMA airspace, which represents just 3.4% (~55,000 km²) of all Colombian airspace (~1,600,000 km²).

However, to take advantage of all of Colombia's operational potential, it must analyze all the airspace that composes it and that also includes the other cities that not only have their own traffic, but which also feed El Dorado Airport.

Further expansion of the use of Palanquero airspace to 24 hours per day, for example, could generate additional savings of 12 to 41 nautical miles, equivalent to a daily saving of 15,000 kgs in fuel and 46,000 kgs. in CO2.

• The increased capacity will allow the sector to contribute to GDP growth, hence economic activity could rise to US$ 1.64 million per year and create additional 131,000 jobs.

Case Study (El Dorado)

IATA's long-term air passenger demand forecasts for Colombia point to a very positive growth outlook. The number of Origin-Destination (O-D) air passenger journeys to/from and within the country is expected to more than double over the next 20 years.

Under 'current trends' scenario, demand will grow to around 68.2 million passengers per year in 2037, from around 30 million currently.

• Two scenarios are also presented within the forecasts; the 'Return to globalization' (upside) scenario would result in 153.6 million passenger journeys per year in 2037, while the 'Protectionism deepens' (downside) scenario would see a more modest increase, to around 51 million passengers per year by the end of the forecast horizon.

With that estimation and given that Bogota's airport moves approximately 65% of the passenger traffic in Colombia, we are able to calculate the additional demand likely to be placed on the infrastructure.

If the growth evolves consistent with the 'current trend' scenario, Bogota could be expected to have to accommodate around 44.3 million passengers per year. In the upside scenario the airport will be required to manage almost 100 million passengers per year.

• Even under the downside scenario El Dorado Airport would have to accommodate around 33 million passengers – an increase of more than 10 million passengers per year than currently.

With this perspective, it is important that Colombia moves forward in terms of infrastructure, so that it could harvest the most out of the expanding demand. In the short/medium term several issues need to be solved with stakeholders to make Bogota's airport more efficient.

- **Increase operating hours:** the current environmental license limits the operation on the southern runway between 10pm and 6am. In addition, the northern runway has to operate only westbound (both departures and arrivals) at night, further reducing capacity considerably.
- **Improve processes:** a better coordination between stakeholders would improve the decision-making process and would increase capacity at the airport. The airport operator does not even know what the actual capacity is. A formal capacity study produced with industry accepted standards is needed.
- **Concessions:** It is important to align the concession's incentives with the country's objectives. This is relevant as they have direct implications on the country's ability to attract business/tourism and integrate commercially speaking. Extensive and transparent consultation with all stakeholders to align incentives and CAPEX plans is key for the success of the aviation sector.

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ii. Cost competitiveness

Despite the economic value associated with the growth of air connectivity, many governments in Latin America continue to see air transport as a luxury, rather than a catalyst for economic growth. As a result, aviation has been an easy target for taxation.

Unfortunately, this view is outdated. The evolution of different business models within the industry, including low cost carriers and more recenty, ultra low cost carriers has made air transport accessible to more people around the

world. This democratization of air transport has brought more airlines to the Colombian market.

• The entrance of Viva Air, Easyfly, Jetblue, and Spirit among others, has encouraged additional competition in the local market, and has contributed in large part to the reduction in average airfares noted in Figure 4.

At the same time, however, the growing privatizations of airports have contributed to an increase in airport charges in many countries. Both of these trends increase the cost of air travel and damage the industry's economic competitiveness.

In the case of Colombia, the taxes and fees included in a passenger ticket represent, on average, US$ 20 in a domestic tariff (one way) and more than US$ 100 on an international airfare.

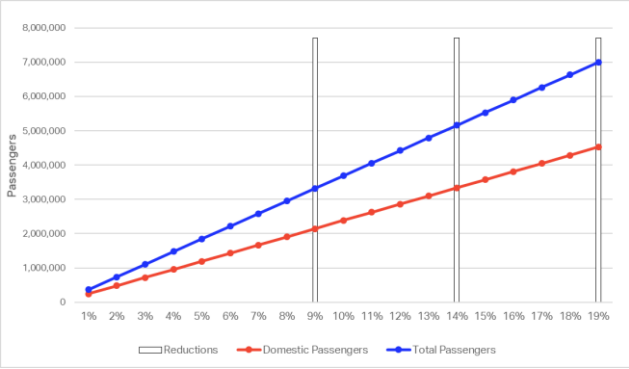
In 2018, this amount represented around 30.3% and 40.9%, respectively, of the average domestic and international airfares.

In order to understand the extent to which taxes and charges act as a burden on economic competitiveness, IATA commissioned a study from SEO Economics – a prestigious consultant firm associated with the University of Amsterdam, and with a long history of economic analysis related to the air transport industry – to assess the economic benefits of reducing the cost of travel. The study considered the impact of lower costs in terms of passenger demand, the growth of connectivity, and the economy.

• According to the study, passenger demand would be 20% higher if taxes were eliminated and charges dropped to competitive levels.

• In terms of macroeconomic impact, the increase in connectivity and associated economic activity would lead to an increase of US$ 19.4 billion in GDP and the creation of 239,000 additional jobs

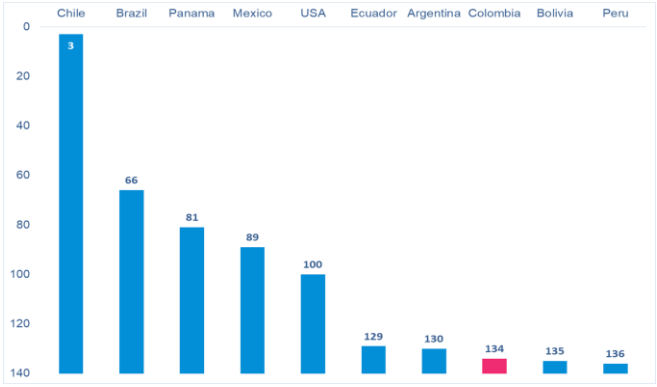
Figure 20: Increase in Demand due to the reduction in taxes



Source: DDS, IATA.

Reducing taxes can increase passenger demand, as shown in the Figure 20. Estimating different reduction scenarios (9%, 14% and 19%), it is evident that the number of passengers will increase between 2.2 million and 4.5 million on domestic flights. If the total market demand is taken into account (both domestic and international), the demand rises from 3.3 to 7 million.

Figure 21: Competitiveness of Costs - Fees and Taxes, selected countries.



Source: SEO report on "Economic Benefits of reducing aviation taxes in Latin America and the Caribbean"

Figure 21 depicts how Colombia lags behind its neighbors in the region in terms of cost competitiveness, highlighting rates as an area of focus where policy change could have a significant impact.

However, the example of the Cartagena airport in Colombia illustrates how excessive taxes and charges can act as a burden on air connectivity and economic activity that depends on air transport.

In this case, at the beginning of 2015, the Colombian government decided that at Cartagena Airport, the fees for international passengers would be reduced from US$ 92 to US$ 38.

• The measure had an immediate impact; the number of international passengers increased by 26%, and arrivals of international visitors to Cartagena increased by 38%. In turn, these additional arrivals contributed to broader economic benefits to Colombia, which had not been available previously.

iii. Successful Regulation

A fundamental component for the aviation sector to be competitive and allow it to act as a catalyst for the economy is a solid and transparent policy and regulatory framework. Many international organizations, including the OECD, have recognized the importance of sound regulatory policies.

Within aviation, IATA has promoted the need for governments to adopt better regulatory practices for both the design and the policy process. Recently, ICAO adopted the Smarter Regulation principles of IATA, which consist of incorporating clearly defined and measurable policy objectives, in the least expensive manner, into the regulatory process of a country.

It is achieved through a transparent, objective, consultative and collaborative process among the main stakeholders, including obviously the authority. Smarter regulation is based on five principles of policy design and five principles in the process.

Guiding principles of good policy design:

Sound policy should satisfy the following criteria:

- Consistency and coherence;
- Proportionality;
- Risk oriented;
- Fair and without distortions; and
- Clarity and certainty.

Guiding principles of good policy process

A sound policy process should satisfy the criteria noted below.

- Definition of a clear need;
- Impact evaluation;
- Transparency;
- Reduction of charges and periodic reviews; and
- Opportunity to respond and review.

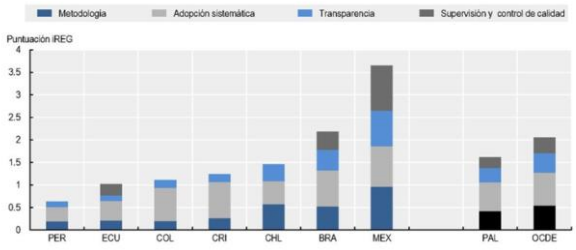
The concept of successful regulation and application are not exclusive to aviation; they can and should be included in all areas where government intervention is being considered through standards. Likewise, they can be applied in all areas of aviation, from consumer protection to security regulation.

In this regard, the OECD's Regulation Policy study assesses the extent to which Latin American countries conform to the best global practices in regulatory policy.

- The OECD concluded that although there are several initiatives that aim to improve the quality of regulation, Colombia is still in the process of rationalizing them into an explicit regulatory policy for the entire government. This certainly reflects the experience observed in the aviation sector.

Figure 22 shows how Colombia compares with the regional and global average. It demonstrates clearly, that there is significant potential for improvement.

Figure 22: OECD Study on Regulatory Policy in Latin America



Source: OECD

The OECD formulated three specific recommendations, all of which are pertinent and applicable to aviation and which conform to the principles of the IATA Smarter Regulation, which we certainly believe should be applied in Colombia, as a measure to improve competitiveness:

- Consult stakeholders systematically and at the beginning of the process and, in any case, before taking decisions;
- Introduce a system of Regulatory Impact Studies to support the formulation of policies based on empirical data and analysis.
- Conduct ex-post evaluations to ensure that the regulations meet their objectives.

The economic value of converting potential into reality

As noted above, it is expected that the demand for air travel to, from, and within Colombia will at least double in the next 20 years.

However, the true potential is much greater. If Colombia could take the set of measures proposed in this report, the number of passengers could possibly grow much more in the same period.

In this more optimistic scenario (Upside), the demand would quintuple by 2037. For this case to occur, a favorable regulatory policy and operating environment with adequate infrastructure is needed.

Figure 23: Economic Contribution with Different Scenarios.

		PASSENGERS	US $ GDP	JOBS
2017		30.3 m	$7.5 bn	600,366
2037	Current Trends	68.2 m	$17 bn	860,222
	Upside	153.6 m	$38.3 bn	1,972,622
	Downside	51 m	$12.7 bn	639,095

Source: IATA

The positive growth forecast for Colombia is underpinned by a very favourable GDP growth rate, which, in turn, is expected to deliver strong gains in household incomes, measured by GDP per capita. In this particular context, the higher incomes mean air tickets become more affordable, boosting the demand for air travel. It is estimated that by 2037, demand will be 68 million passengers per year.

On the other hand, if the Colombian government takes steps towards better regulation, macroeconomic stability and policies that benefit the sector, passenger growth could reach 153 million passengers by 2037.

This growth in demand would not only benefit the aviation sector in Colombia. Stimulating traffic and allowing national and international connectivity to reach its full potential would also provide a great boost to the Colombian economy and its competitiveness.

Figure 23 shows that the economic impact of creating a favorable operating and regulatory environment would in turn increase the total number of jobs supported by aviation to almost 2 million by 2037 and the contribution to GDP up to US$ 38.3 billion.

The way ahead: a plan to maximize the benefits of aviation in Colombia

To take full advantage of the benefits provided by aviation, Colombian authorities must promote a regulatory and operational framework that allows airlines to provide maximum social and economic benefits.

This can be achieved by doing the following:

- Recognizing that aviation is a strategically important sector that supports a broad set of economic and social development objectives of the country, and that creating the right conditions to develop air connectivity will be of vital importance to achieve the Government's goals of economic growth and social cohesion of Colombia;

- Improving airport infrastructure in the regions and, in particular, continue with the expansion process of the current El Dorado Airport in Bogota;

- Ensuring transparency and the participation of the industry in the planning and implementation of airport projects;

- Improving cost competitiveness by reducing and simplifying taxes and charges that make air travel more expensive, make traveling to Colombia less attractive and generate a significant administrative burden for airlines;

- Implementing a successful regulation policy for aviation; so that regulations are only created when there is a clearly identified need; consult with industry and other interested parties if regulation is necessary; ensure that the implementation of policies complies with international best practices.

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