

## Comparative analysis of domestic commercial air transport of routes, frequencies and airlines to and from the Lima International Airport from March 06 to 17, 2023

Análisis comparativo del transporte aéreo comercial doméstico de rutas, frecuencias y aerolíneas desde y hacia el Aeropuerto Internacional de Lima Perú del 06 al 17 de Marzo del 2023

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### ABSTRACT

The objective of the research is to conduct a comparative analysis of domestic commercial air transportation to and from the Jorge Chávez International Airport in Lima, focusing on routes, frequencies, and airlines during the period from March 6th to March 17th, 2023. A descriptive quantitative research methodology will be employed to define relevant variables and assess the concepts related to the study's theme. The results obtained will be presented in an analysis that will reveal the comparative relationships among airlines, destinations, and routes of passenger air transportation within the Peruvian context.

**Keywords:** air transport, airport, airlines, frequency, routes.

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## RESUMEN

El objetivo de la investigación consiste en llevar a cabo un análisis comparativo del transporte aéreo comercial doméstico desde y hacia el Aeropuerto Internacional Jorge Chávez de Lima, centrándose en las rutas, frecuencias y aerolíneas durante el período del 06 al 17 de marzo de 2023. Se empleará una metodología de investigación cuantitativa de tipo descriptivo, con el fin de definir las variables pertinentes y dimensionar los conceptos relacionados con la temática estudiada. Los resultados obtenidos serán presentados en un análisis que revelará las relaciones competitivas entre las aerolíneas, los destinos y las rutas del transporte aéreo de pasajeros en el contexto peruano.

**Palabras clave:** transporte aéreo, aerolíneas, aeropuerto, frecuencias, rutas.

## INTRODUCTION

The air commercial market is defined as the set of economic activities related to civil air transport, together with airlines, airports, travel agencies, and other services. Airlines transport passengers and cargo, operate aircraft, and are clients of airport services (Acero, Fajardo & Romero, 2017). It is also important to note that the level of influence of airlines at an airport, based on the origin-destination routes they offer, generates market leadership that results in a significant presence (Ribadeneira, Vega, Pierard, 2021).

Moreover, “an airport is an intermodal transfer facility between land transportation and air transportation” (Vreedenburgh, 1999, cited in Mendiola, Arévalo, Maratuech, Pérez & Valencia, 2011), and it has buildings, facilities, equipment, systems, services, and personnel dedicated to the arrival, departure, and movement of aircraft, passengers, and cargo (Civil Aeronautics Law of Peru, n.d., cited in Mendiola, Arévalo, Maratuech, Pérez & Valencia, 2011). Airports have become connection hubs offering a wide commercial range for passengers, airlines, and other involved service providers (Acero, Fajardo & Romero, 2017).

The Jorge Chávez International Airport (JCIA), like most Latin American economies, began its participation in the air industry in the early 1990s and concentrates the largest passenger flow in Peru’s airport network, accounting for 62.8%, according to research conducted by Cruz, Tello, and Cesar (2012), cited in Acero, Fajardo, and Romero (2017). By 2008, the share of the main foreign airlines exceeded 60% of the total domestic demand in Peru. According to IATA, cited in Avion Revenue (2025),

domestic air transport in Peru operates at 90% of its capacity, while international traffic reaches 70% compared to 2019 levels. Nevertheless, in 2024, 24 million passengers were mobilized through this airport, once again reaching pre-pandemic air traffic levels. This outcome not only demonstrates the sector's progressive recovery but also highlights its growth potential, driven by the airport's modern infrastructure, which will enhance connectivity and optimize travelers' experience.

Likewise, LATAM Airlines Peru began operations in 1999, offering flights from Lima to Cusco and Arequipa. With its significant growth and consolidation as a preferred air transport option for Peruvian travelers, together with Jorge Chávez International Airport as its main hub, the airline strengthened its market position by offering flights to 18 domestic destinations and 34 international destinations (Escudero, n.d.).

Subsequently, other important airlines began entering this market, such as Sky Airlines Peru, considered the second-largest airline in operations within Peru and the third in international traffic, which began its journey in 2019 (Ventola, 2025). Similarly, JetSmart Peru quickly positioned itself in the Peruvian market, connecting to 14 domestic destinations from the capital. As a result of Lima International Airport's expanded connectivity, Parejas (2024) points out that the launch of routes with significantly reduced fares has increased competition in the market, creating new opportunities for passengers but also new challenges for competing airlines and their pricing strategies.

In addition, the operations of other airlines began to be added to the list, such as Atsa Airlines, which offers more than 15 weekly domestic flights from Lima to four destinations (Chachapoyas, Tingo María, Huánuco, and Punta Sal) (Atsa Airlines, n.d.).

Therefore, the objective of this research is to identify the market share of domestic commercial air passenger transport by routes, frequencies, and airlines from Jorge Chávez International Airport in Lima during a one-week period from March 6 to 17, 2023, and to facilitate its comparison. Thus, this study is based on a literature review as the theoretical foundation and on the collection and analysis of data to measure market share. It is considered important for academic actors to contribute to the study of new information that benefits public knowledge related to the subject and helps improve the tourism activity of the study objects.

## **MATERIALS AND METHODS**

Through the application of numerical measurement techniques and statistical analysis, the information necessary to achieve the study's objectives was collected. The study adopted a quantitative and descriptive approach, with the purpose of characterizing the phenomenon under investigation and establishing a rigorous analysis. To delve into the most significant aspects of domestic operations, the analytical-synthetic method was used to break down and examine the information in detail, facilitating the attainment of conclusive results. In addition, a review of secondary (bibliographic) sources was employed as a theoretical foundation technique for generating quantitative

information that would facilitate the numerical understanding of the subject. The search, review, and selection of theoretical data were obtained from official sources such as airport and airline websites, following strict reliability and validity criteria.

## RESULTS

This section presents and discusses the results obtained after the collection and analysis of data corresponding to the study variables. To facilitate an effective synthesis of the data, charts and tables have been prepared using the abbreviations designated by the International Air Transport Association [IATA] to identify each city pair and airline.

**Tabla I:** *Rutas domésticas por aerolínea. Corte semanal del 06 al 17 de marzo de 2023*

RUTAS	LATAM (LA)	SKY AIRLINES (H2)	STAR PERÚ (2i)	JET SMART PERÚ (JZ)	AVIANCA (AV)	ATSA AIRLINES (4A)
LIM-AQP-LIM	125	43	10	17	2	2
LIM-AYP-LIM	43	5	0	0	0	0
LIM-CJA-LIM	58	8	8	5	0	1
LIM-CHH-LIM	3	3	0	0	0	2
LIM-CIX-LIM	62	11	9	14	0	0
LIM-CUZ-LIM	145	31	17	17	6	2
LIM-HUU-LIM	26	0	18	5	0	4
LIM-IQT-LIM	67	18	1	8	2	2
LIM-JAU-LIM	25	0	10	2	0	0
LIM-PIU-LIM	85	23	11	14	3	0
LIM-PCL-LIM	52	3	12	5	4	1
LIM-PEM-LIM	18	4	6	2	0	0
LIM-TCQ-LIM	38	8	10	6	0	0
LIM-TYL-LIM	29	9	5	6	0	1
LIM-TPP-LIM	93	19	24	12	4	0
LIM-TRU-LIM	69	17	14	7	0	0
LIM-TBP-LIM	39	11	1	3	1	1
LIM-MZA-LIM	1	3	0	0	0	2
LIM-ILQ-LIM	3	0	0	1	0	0
LIM-JUL-LIM	2	0	0	0	0	0
TOTAL	983	216	156	124	22	18

Source: Authors, 2025

Note: AQP = Arequipa, AYP = Ayacucho, CJA = Cajamarca, CHH = Chachapoyas, CIX = Chiclayo, CUZ = Cusco, HUU = Huánuco, IQT = Iquitos, JAU = Jauja, PIU = Piura, PCL = Pucallpa, PEM = Puerto Maldonado, TCQ = Tacna, TYL = Talara, TPP = Tarapoto, TRU = Trujillo, TBP = Tumbes, MZA = Mazamari, ILQ = Ilo, JUL = Juliaca.

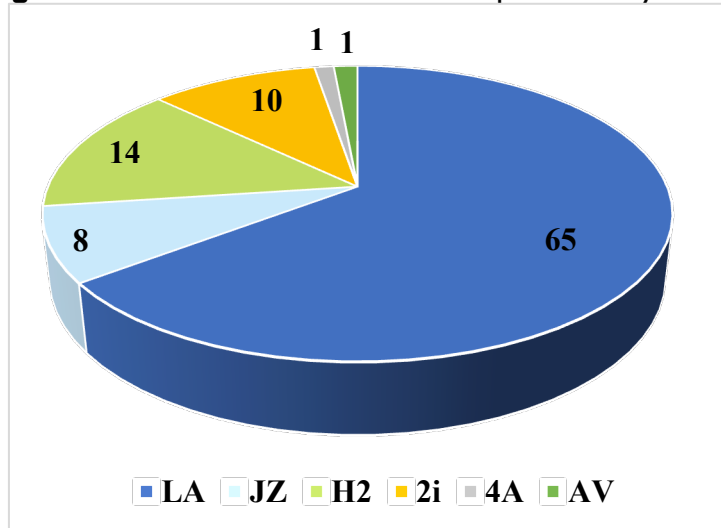
Regarding the variables of airlines and frequencies, it was found that for the weekly period from March 6 to 17, 2023, the total number of domestic flights operated by the six airlines providing this service was 1,519. LATAM, Sky Airline, Star Perú, JetSmart Perú, Avianca, and Atsa Airlines concentrate most of their domestic operations on the route to Cusco, with 218 flights.

LATAM maintains a dominant presence on most routes with 983 domestic flights, with the LIM-CUZ-LIM route having the highest frequency (145 flights). Likewise, secondary competitors such as Sky Airline and Star Perú are identified as significant competitors, with 216 and 156 domestic flights, respectively, and with a strong presence on the LIM-PIU-LIM and LIM-HUU-LIM routes, with 23 and 18 flights, respectively.

Meanwhile, JetSmart Perú and Avianca show a moderate presence in the market with 124 and 22 domestic flights, respectively, with their most notable routes being LIM-CIX-LIM and LIM-CUZ-LIM, with 14 and 6 flights, respectively. In contrast, some routes such as LIM-JUL-LIM and LIM-ILQ-LIM have very low or no frequency, which may indicate limited demand for these destinations. Finally, Atsa Airlines concentrates most of its domestic operations on the LIM-HUU-LIM route, out of its total of 18 recorded flights.

Furthermore, the following section presents the market share represented by each airline with respect to the total frequencies recorded for the weekly period from March 6 to 17, 2023.

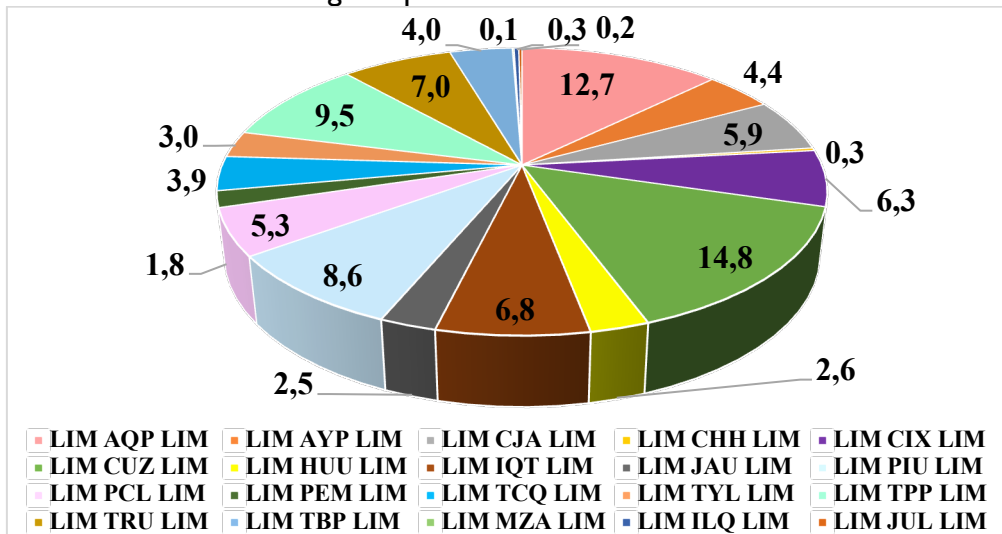
**Figure 1:** Market Share of Domestic Operations by Airline



Source: Authors, 2025

As shown in the previous figure, LATAM stands out as the leading airline in terms of market share in domestic operations, capturing 65% of the total frequencies recorded during the week of March 6 to 17, 2023. In more distant competition, Sky Airline ranks second with 14%, followed by Star Perú with 10% and JetSmart Perú with 8%.

**Figure 2:** Direct Domestic Flight Operations of LATAM Airlines



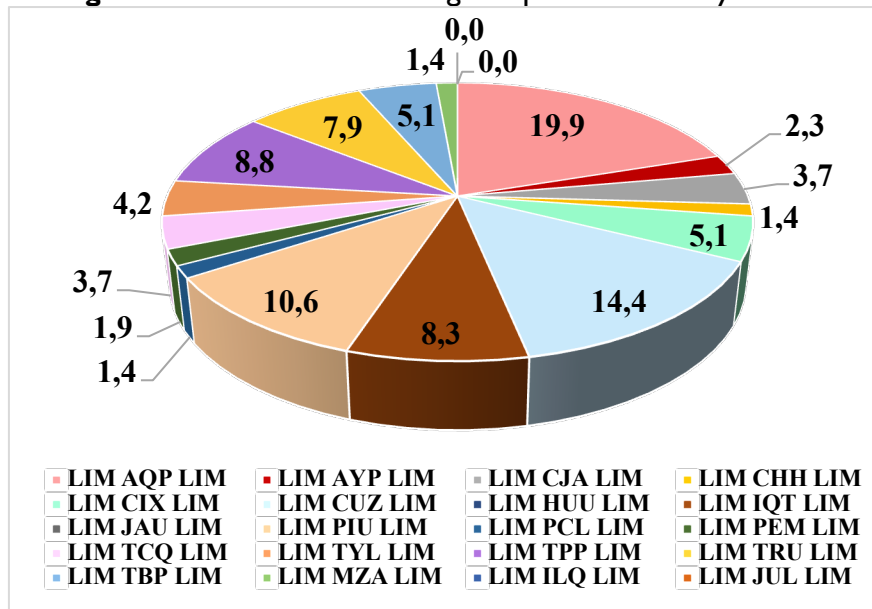
Source: Authors, 2025

In this way, it has been determined that, from the total flights operated by LATAM during the weekly period from March 6 to 17, 2023, 14.8% of domestic operations correspond to the 145 frequencies recorded in Table I for the city of Cusco as its main route, suggesting high demand or strategic importance. Furthermore, the next most operated route by this airline is LIM–AQP–LIM, with 12.7%, followed by LIM–TPP–LIM, with 9.5%.

The LIM–PIU–LIM and LIM–TRU–LIM routes also have a significant frequency, at 9.5% and 7% respectively, indicating other areas of focus for operations. On the other hand, routes such as LIM–CHH–LIM, LIM–MZA–LIM, LIM–ILQ–LIM, and LIM–JUL–LIM have a very low frequency, below 1%, which could reflect lower demand. Nevertheless, most secondary routes have a frequency between 2.5% and 12.7%, showing a relatively balanced distribution of operations among these routes.

The following figure presents data that reflect the distribution of market share among the domestic operation routes of Sky Airline.

**Figure 3: Direct Domestic Flight Operations of Sky Airline**



Source: Authors, 2025

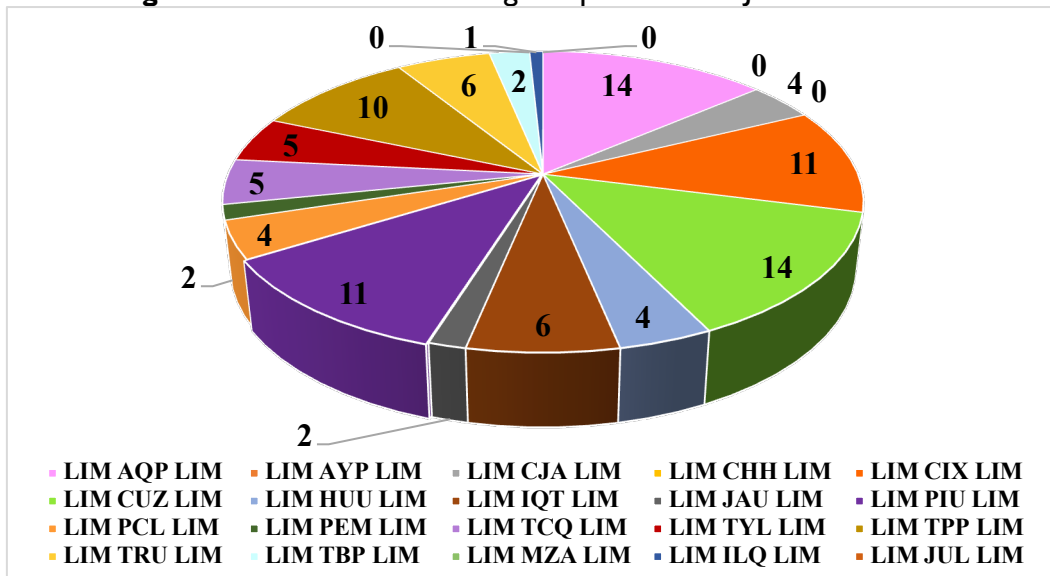
It has been determined, through the previous figure, that from the total flights operated by Sky Airline during the weekly period from March 6 to 17, 2023, 19.9% of domestic operations correspond to the 43 frequencies recorded in Table 1 to the city of Arequipa for this airline. In addition, the next highest percentage routes after the aforementioned city are LIM–CUZ–LIM with 14.4%, followed by LIM–PIU–LIM with 10.6%.

In terms of general distribution, most routes have a frequency between 1.4% and 8.8%, showing a balance of operations among secondary routes and a strong preference for the LIM–AQP–LIM route.

The following figure presents the data corresponding to the distribution of market share among the domestic operation routes of Star Perú.



**Figure 5:** Direct Domestic Flight Operations of JetSmart Airline

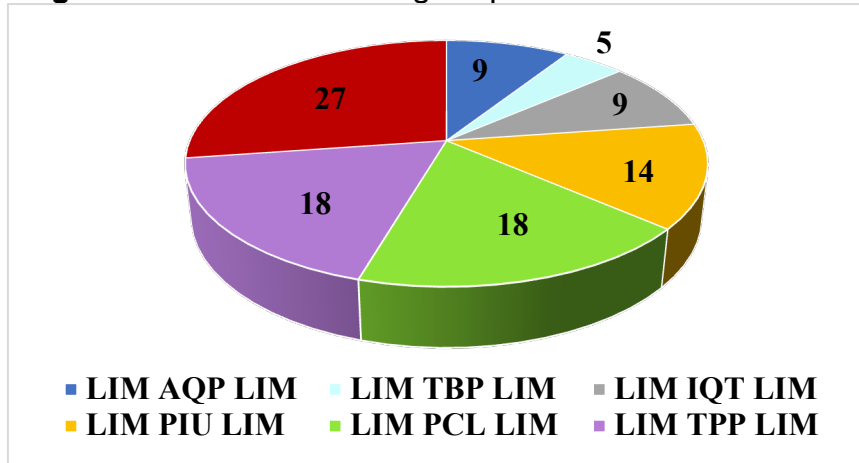


Source: Authors, 2025

It has been determined, through the previous figure, that from the total flights operated by JetSmart during the weekly period from March 6 to 17, 2023, 14% of domestic operations correspond to the 17 frequencies recorded in Table 1 to the cities of Arequipa and Cusco each. In addition, the frequencies on the LIM–PIU–LIM and LIM–CIX–LIM routes each account for 11% of domestic operations.

The LIM–TPP–LIM route also holds a notable share with 10% of operations, while the data also show that for the remaining routes, there is an offer equal to or less than 6%. The following figure presents the recorded data reflecting the distribution of market share among the domestic operation routes of Avianca Airline.

**Figure 6:** Direct Domestic Flight Operations of Avianca Airline



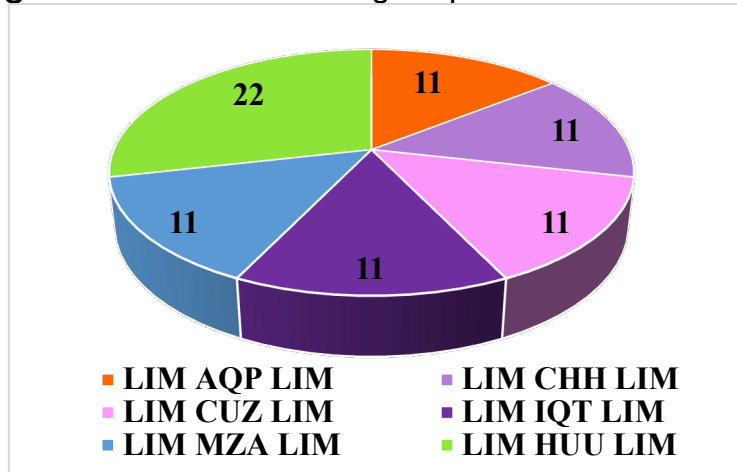
Source: Authors, 2025

Through the previous figure, it has been determined that, from the total flights operated by Avianca during the weekly period from March 6 to 17, 2023, 27% of domestic operations correspond to the 6 frequencies recorded in Table I to the city of Cusco from its total flights. This is followed by 18% for the LIM–TPP–LIM and LIM–PCL–LIM routes each, 14% for the LIM–PIU–LIM route, 9% for the LIM–AQP–LIM and LIM–IQT–LIM routes, and the remaining 5% for the LIM–TBP–LIM route.

It is important to mention that the other cities shown in Table I with zero frequency were omitted from the previous figure to optimize the schematic representation of the airline’s activity.

The following figure presents the recorded data reflecting the distribution of market share among the domestic operation routes of Atsa Airline.

**Figure 7: Direct Domestic Flight Operations of Atsa Airlines**



Source: Authors, 2025

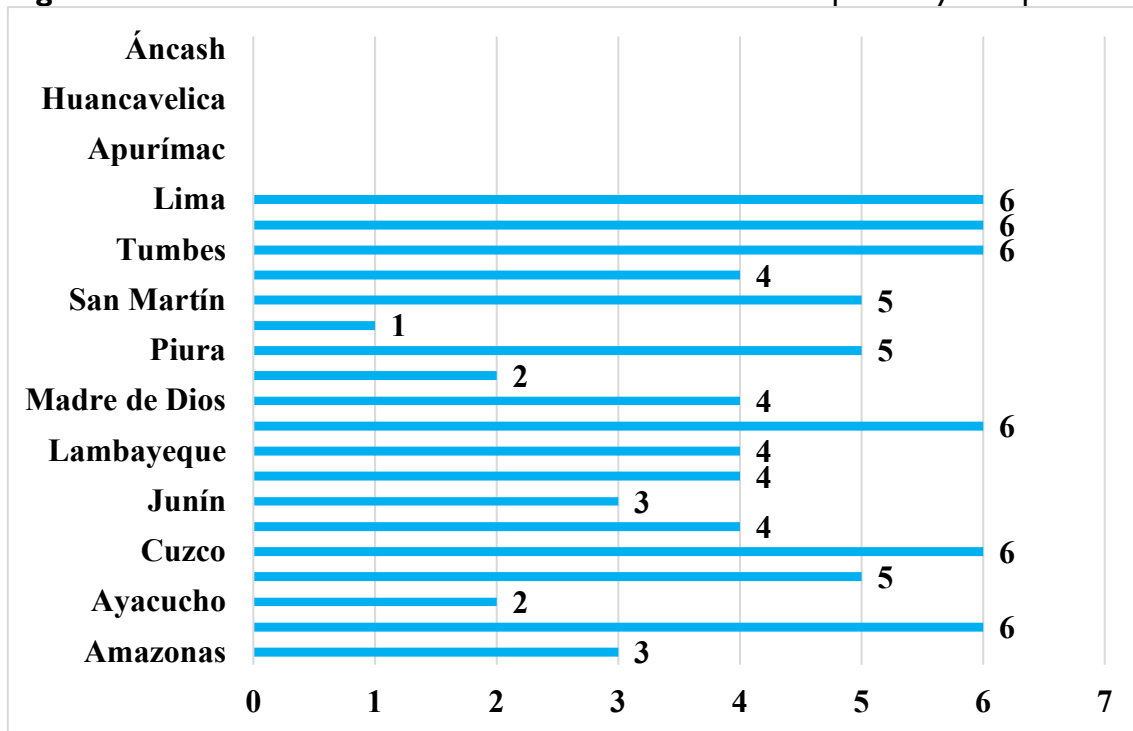
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As with the other airlines, for Atsa Airlines it has been determined, through the previous figure, that from the total flights operated during the weekly period from March 6 to 17, 2023, 22% of domestic operations correspond to the 4 frequencies recorded in Table I for the LIM–HUU–LIM route for this airline. The rest of the routes each account for 11% of operations, showing an even distribution that could indicate a balanced demand and supply among the cities served by Atsa Airlines.

It is important to mention that the other cities shown in Table I with zero frequency were omitted from the previous figure to optimize the schematic representation of the airline’s activity.

On the other hand, according to the political division map of Peru, SocialHizo (2025) points out that the country is divided into 24 departments, as shown in the following figure.

**Figure 8:** Peruvian Domestic Commercial Air Transport by Department



Source: Authors, 2025

As observed in the previous figure, the departments of Peru that currently have direct domestic flight operations to and from Lima are the cities of Arequipa, Cusco, Loreto, Piura, San Martín, Tumbes, and Ucayali, served by five or six airlines. Departments such as Ayacucho, Cajamarca, Huánuco, Lambayeque, Madre de Dios, Tacna, and La Libertad have moderate service with two to four airlines, while the rest of the departments either have no airline service or have a very limited one. This situation may be due to the lack of demand or adequate infrastructure, but it could also represent an opportunity for the future development of air services in these areas.

In this way, through the presentation of the study's results, the findings align with what was stated by Acero, Fajardo, and Romero (2017) regarding airports becoming a commercial hub for passengers and airlines. Over time, Lima International Airport has become a convergence point for the supply of flight frequencies operated by a variety of airlines and passenger demand for specific routes. At the same time, Cruz, Tello, and César (2012) point out that since 2008, the share of the main foreign airlines has exceeded 60% of the total domestic demand in Peru—a reality that continues to this day despite the launch and operation of its own flag carrier (Star Perú), which maintains a smaller domestic market share than the Chilean foreign airlines LATAM and Sky Airline.

Furthermore, the entry into service of new airlines, especially low-cost carriers, has proven to be a challenge for other traditional or similar competitor airlines. This supports Parejas' (2024) statement as accurate, since, as seen in the results obtained, the low-cost airlines JetSmart and Sky Airline have successfully and consistently penetrated this market, together accounting for 28% of the market share. This suggests a possible preference for specific domestic routes to certain destinations due to their reduced fares, creating competitiveness challenges for the remaining four airlines in question.

## CONCLUSIONS

Summarizing the results obtained from the research, it has been determined that with a 65% share, LATAM dominates the supply in the domestic market to and from Jorge Chávez International Airport in Lima during the weekly period from March 6 to 17, 2023, indicating a strong and greater service capacity compared to other airlines. Likewise, these patterns suggest that LATAM is the clear leader in the domestic flight market, while other airlines such as Sky Airline and Star Perú have strengths in specific routes to the cities of Arequipa and Tarapoto.

Similarly, the significant share of Sky Airline, with 14% of operations, makes it the second strongest competitor, which could reflect a competitive pricing strategy for specific routes where it has an advantage.

On the other hand, Star Perú remains stable with a 10% share, suggesting a regular market presence and that its low-cost strategy may give it an advantage over other airlines. However, JetSmart Perú, Avianca, and Atsa Airlines, with 8% and 2% combined between the latter two, may indicate a focus on niche markets different from the other companies or on less-frequented routes. For Atsa, this could also suggest recent or limited operations on very specific routes.

Therefore, the variability observed in the frequency of routes offered by airlines providing domestic services to and from Lima Airport may be an indicator of market demand and the distribution strategy of each airline.

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