

Research Article

Brasilia International Airport and the Evolution of Civil Aviation in Brazil

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Abstract: In 2019, the Brasília–Presidente Juscelino Kubitschek International Airport (BSB) completed 62 years of existence. Built to accommodate the Brazilian capital transfer from Rio de Janeiro (1956-1961), BSB was inaugurated on May 3, 1957, by the former president Juscelino Kubitschek (1955-1960). The first civil transportation airport in Brazil, however, backs to 1936, when Rio de Janeiro was the Brazilian capital, the Santos Dumont Airport (SDU), who lost importance gradually when the capital was transferred. Key findings pointed BSB as the third busiest airport in Brazil. BSB is also the first airport in Brazil to operate with two runways simultaneously (the second runway was inaugurated only in 2005). In 2012, BSB was granted for 25 years to Consortium Inframerica, formed by the Argentinean Group Corporación América (50 percent), and the Brazilian Engineering Group Engevix (50 percent). The consortium has invested BRL 1.2 billion until 2014. In 2015, a new terminal was inaugurated as well as runway and parking extension, reaching 17.5 million people transported in 2018 — analysis of civil aviation in Brazil and worldwide, and discussion complete the present article.

Keywords: Aviation, Civil transportation, Brazilian, Airport.

INTRODUCTION

This article investigated the Brazilian air passenger transportation, regarding Brasilia International Airport (BSB), as the unit of analysis (Yin, 1988), through multiple methods approach, including a descriptive single case study, direct

observation, and archival research. This work was motivated by previous research on the subject (Dias, 2019; Dias, & Albergarias, 2019; Dias & Pessanha, 2019). Brasilia airport is currently the third busiest airport in Brazil, as illustrated in the following Figure 1:

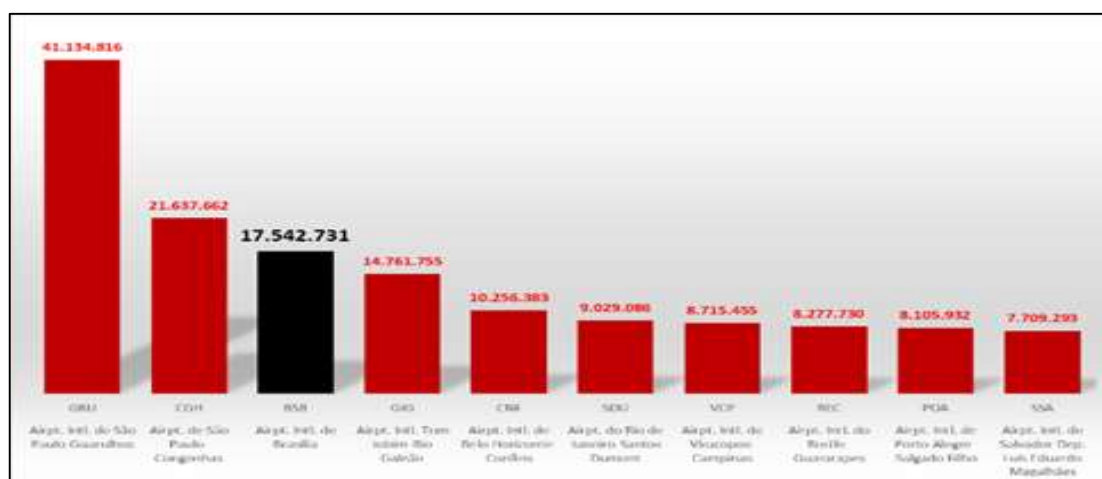


Figure 1 Ten busiest airports in Brazil. Source: Infraero, 2019.

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Initially called Vera Cruz airport, later renamed the Brasília–Presidente Juscelino Kubitschek International Airport (BSB), was founded on May 3, 1957, at Brasília, city designed to be the future capital of Brasil (inaugurated in 1961), and located at Lago

Sul, center-western Brazil, within Goiás state, at Distrito Federal DF- Federal District). This research investigated the evolution of the airport throughout the years. Figure 2 depicts BSB airport's new passenger terminal, inaugurated in 2015.



Figure 2 BSB International Airport. Source: Infraero, 2019.

#	Airport	Location	Code	Passangers per year
			(IATA/ICAO)	Total
1	Atlanta Airport International	Atlanta, Georgia, Estados Unidos	ATL/KATL	104 171 935
2	Beijing Airport International	Pequim, China	PEK/ZBAA	94 393 454
3	Dubai Airport International	Dubai, Emirados Árabes Unidos	DXB/OMDB	83 654 250
4	Airport International de Los Angeles	Los Angeles, Estados Unidos	LAX/KLAX	80 921 527
5	Airport International Haneda	Tóquio, Japão	HND/RJTT	79 699 762
6	O'Hare Airport International	Chicago, Estados Unidos	ORD/KORD	78 327 479
7	Heathrow Airport International	Hillingdon, Reino Unido	LHR/EGLL	75 715 474
8	Hong Kong Airport International	Hong Kong, China	HKG/VHHH	70 314 462
9	Pudong Airport International	Xangai, China	PVG/ZSPD	66 002 414
10	Charles de Gaulle Airport International	Ilha de França, França	CDG/LFPG	65 933 145

Figure 3: Passenger transport worldwide. Source: IATA (2019)

Observe in Figure 3, the ten busiest airports worldwide. Atlanta International Airport (ATL), is six times busiest than BSB (see Figure 1). *Airport*, according to the Merriam Webster Dictionary is defined as “a place from which aircraft operate that usually has paved runways and maintenance facilities and often serves as a terminal” (Merriam Webster, 2019).

Brasília–Presidente Juscelino Kubitschek International Airport (BSB), or hereafter just BSB - according to the International Air Transport Association (IATA, 2019), which is the trade association for the airlines, worldwide sector representative. The next section presents the methods and limitations of this article.

METHODS AND LIMITATIONS

This article is qualitative research, inductive reasoning, interpretive, cross-sectional study, comprised of multiple methods, including descriptive, single case study, in which unit of analysis is the BSB Airport in Brasília, Brazil (Yin, 1988). This research is limited to passenger transportation. Cargo transportation and other activities such as parking lot administration, and shopping center administration are not in the scope of the present research.

This study is also limited to the Brazilian civil aviation legislation and the IATA’s international standards (IATA, 2019).

Background

BSB formerly served as a base to workers that built the new Brazilian capital, Brasilia, on October 2, 1955, when the first team came to start civil works.

The civil construction lasted six months and required the clearing of an area of 1,334 million m2 of earthwork, with a runway primarily designed to 3,300 m length. However, the first version had only 324 m lengths, and 45 m wide. The passenger terminal was built of wood. BSB inauguration took place on 3 May 1957.

Currently, BSB counts with two runways: (i) 3,200 m and (ii) 3,300 m.

Figure 4 depicts the BSB airport location, as follows:

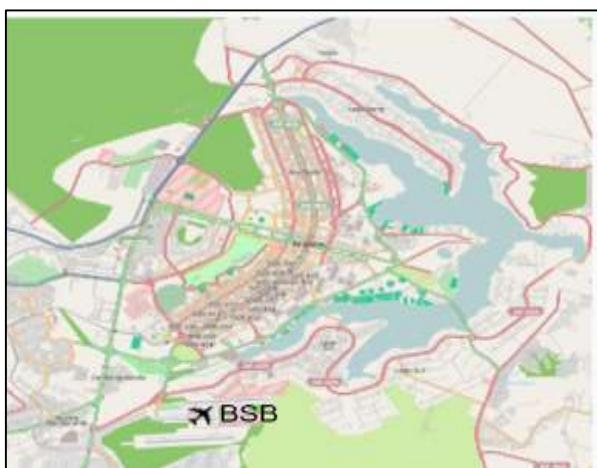


Figure 4 Brasilia Airport locations.

Source: By OpenStreetMap - <http://www.openstreetmap.org/>, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=20631561>

From 1990 to 1992, BSB airport was remodeled. In 2005, BSB gained a second runway. In 2012, BSB was auctioned by the Federal Government on February 6, 2012. The winner was the Inframercos consortium, composed of Infravix Participações SA and Corporacion America SA. The consortium operation started officially on February 29, 2013, until 2038 (25 years of concession).

On 31 August 2009, Infraero unveiled a BRL 515 million plan to prepare BSB airport to welcome 2014 FIFA World Cup (one of the 14 cities where the world cup was disputed), as well as Olympics 2016, which took place in Rio de Janeiro, Brazil (Infraero, 2019).

Civil works encompassed the following: (i) enlargement of taxiways, completed in 2013; (ii) renovation of the existing passenger terminal, delivered in April 2015; (iii) parking lot expansions, finished in April 2014.

From 2012 to 2014, the consortium Inframercos invested BRL 1.2 billion, destined to remodeling the terminal, increasing from 13 to 29 jetways and 40 to 70 airplane positions (Infraero, 2019). Figures 5 and 6 illustrate the BSB airport, as follows:



Figure 5 BSB: passenger terminals. Source: Infraero, 2019.



Figure 6 BSB: new passenger terminal. Source: Infraero, 2019.

DISCUSSION

BSB Airport was built to be a reference to the Brazilian Capital, moved from Rio de Janeiro to Brasilia, in 1961.

Santos Dumont Airport (SDU), despite the privileged location, two km away from the Center Rio currently welcomes only regional flights, and lost its national importance definitively, is currently the sixth busiest airport in Brazil, as depicted in Figure 1 (SDU, 2019).

SDU was substituted by Galeão International Airport in Rio for international flights in 1957, due to the necessity of larger runways for landings and take-offs of modern commercial aircrafts each year. The current SDU runways are 1,323 m and 1,260 m, respectively, almost 2.5 times smaller than BSB runways (SDU, 2019).

Also, civil aviation in Brazil has grown to São Paulo state, which became the wealthiest state in Brazil. Most of the passenger's volume shifted to São Paulo's airports, as a result: Guarulhos (GRU), and Congonhas (CGH) respectively, both transporting annually roughly 63 million passengers (see Figure 1), against 23 million in Rio (GIG and SDU), and 17 million in BSB.

On the other hand, BSB airport has evolved from near six million passengers transported in 2003 to approximately 17 million in 2018, almost three times the volume of passengers transported in 15 years (Infraero, 2019).

Figure 7 depicts the evolution of civil air transportation at BSB airport (2003-2018).

Observe in Figure 7 an increase in the volume of passengers transported between 2014 and 2016 due to the World Cup 2014 and Olympics 2016, both disputed in Brazil. On the other hand, BSB airport has evolved from near six million passengers transported in 2003 to approximately 17 million in 2018, almost three times the volume of passengers transported in a period of 15 years (Infraero, 2019).

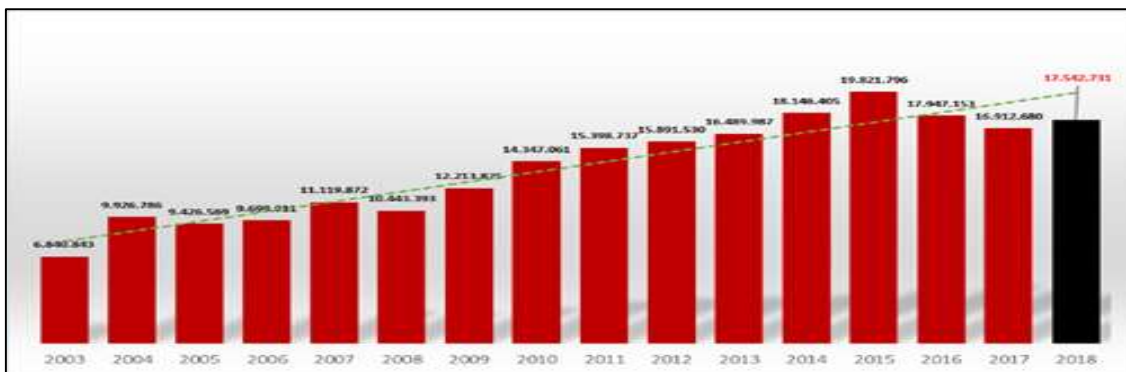


Figure 7 BSB airport (2003-2018). Source: Infraero, 2019.

Next, the city of Brasilia was planned to accommodate near 500 million inhabitants. Currently. Approximately five times more inhabitants live in Brasilia (25 million). The traffic is chaotic and BSB airport is far from downtown.

Finally, BSB airport was elect ed the best airport for civil transportation, regarding services, in 2018. The expansions are working properly and an increase in flights is expected for the next five years, in five percent.

Future studies are encouraged to assess the impact of the civil works on the BSB airport, as well as the increase of the commercial flights, along with the impact on the Brazilian civil aviation in general.

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