

EVOLUTION OF INTERNATIONAL PASSENGER TRAFFIC BETWEEN BRAZIL AND EUROPE

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ABSTRACT

The process of ongoing globalization and the reduction of trade barriers between countries have substantially transformed the structure of Air Transport in Brazil, resulting in greater competition and participation of international companies in the market. This process has had great impact on the structure of supply of services for Brazilian international air transport. European Union has significant importance in the current economic conjuncture. This article shows the evolution of the scenario of International Air Transport in Brazil and discusses the future prospects of the European participation in that market. We use statistical inference and graphical analysis to assess the market, considering the political and economic scenario since 1999. Data were collected from the Flight Schedule (HOTRAN), a document published by the National Civil Aviation Agency (ANAC) which provides information about flight schedules in Brazil, and from Airports Council International (ACI). This paper considers only direct flights linking the Brazilian airports to other airports in European. The results show the situation of Brazilian airlines on the region stage, showing the evolution of their participation in the axis Brazil- European.

Key-words – airlines, air transport, evolution, Brazil-Europe market, scenario.

INTRODUCTION

Brazil's air transportation sector has experienced transformations reflecting social and economic changes nationally and internationally. Airline strategies and regulatory changes have transformed the sector's competition profile, drastically reducing the share held by Brazilian airlines in the international long-haul market.

After a period of severe crisis in the sector, the international passenger market in Brazil has recovered over recent years, with an increase in the number of routes and flight frequency offered to passengers. However the market is still not what it was in the early 90s, when Varig was still competing in the long-haul flight market.

Air transportation between Brazil and Europe has intensified, both because of Brazil's increasing importance on the world scene and because of foreign airlines' interest in the Brazilian market. However the air transportation crisis Brazil experienced in the early 2000s brought about a disparity in market share between European airlines and the only Brazilian company operating routes to Europe. This disparity is a matter of concern from both an economic and social perspective, as it makes Brazil heavily dependent on the strategies of foreign airlines.

TAM, the only Brazilian airline with a share in the Brazil-Europe market, competes for passengers with other large European companies such as Air France – KLM, Lufthansa and British – Iberia.

In 2008, TAM offered a total of 54 billion seat kilometers, while Air France – KLM offered 261 billion, Lufthansa 160 billion and British – Iberia 215 billion (IATA, 2009). Each of these competitors offered more than all of the Brazilian companies combined. Though the Brazilian market is still small in the context of European companies, the recent world economic crisis that hit the airline industry after the crisis of 2001 has led companies to seek all available opportunities to make profits. Strong economic performance and opportunities for gains have placed BRIC countries (Brazil, Russia, India and China) in the spotlight of international companies.

This requires national companies to develop sound planning and strategy or face the risk of extinction from the market. The withdrawal of GOL – VARIG from the international long-haul flight market is a strong reminder of this possibility.

In light of the above, and considering the importance of understanding the evolution of flight availability in the airline industry, this paper provides an analytical review of the Brazil-Europe air transportation market, focusing on the participation of Brazilian companies in competition for the market.

The questions underpinning this paper are “How has Brazil-Europe flight availability evolved over time? Why did it experience the changes observed from 1999 to 2009? What is the current situation of Brazilian airlines on the international scene?”

AIR TRANSPORTATION WORLDWIDE

According to Brian Graham (1998), the history of Air Transportation dates back to World War II, but it was only in the 60s that this mode of transportation became widespread worldwide. International air transportation is subject to the regulation policies of each country, which have experienced profound changes since the 1970s, in parallel with the transformations in the historical and economic context of globalization, especially since the advent of neoliberalism. The number of passengers and the flow of aircraft have grown almost constantly, except when circumstantially affected by financial crises and moments of global insecurity (ex: wars and terrorist attacks).

In the mid-1990s, the industry experienced unprecedented growth and since then new policies of deregulation, liberalization, privatization and openness to competition in the air transportation industry have been introduced in most countries. In addition, demand has been augmented by factors such as the larger number of passengers from emerging countries, expansion of international tourism, and growing internationalization of manufacturing businesses, requiring greater mobility of executives.

Bilateral agreements on passenger traffic are an important factor to consider in examining global air transportation. Their principles date back to the Chicago Convention of 1944, when the first five Freedoms of the Air were introduced. These Freedoms must be agreed upon between interested countries and range from transportation of passengers between two countries by a company from either of these countries to domestic flights operated by foreign companies (cabotage).

Bilateral agreements are made on the basis of equality or equivalence between signatory states. This means everything allowed in one country also applies to the other. This enables companies from both countries to grow and provides passengers with a broader pool of services to choose from. However, a bilateral agreement is valueless if one of the countries has a competitive disadvantage, with airlines unable to compete with foreign companies. A situation such as this can make things worse for companies already in distress; the strategies of foreign companies can drive domestic companies out of business, especially when a significant imbalance in flight and pricing capacity exists between them.

More than the possibility of meeting demand, bilateral agreements can represent a geopolitical issue beyond civil aviation, since the parties to these agreements are states and not private entities. Freedoms of the Air must be established considering the advantages for each country and the power relationships that will ensue, both in the air transportation industry and in economic relations, social relations, and in the sphere of national security.

AIR TRANSPORTATION IN BRAZIL

Air transportation developed in Brazil following a globalization trend. The growing need for a fast mode of transportation for international travel or even for traveling within Brazil, given its continental dimensions, makes air transportation a public utility essential to Brazil's development.

The development of regular civil aviation in Brazil was influenced both by external factors, such as financial crises and fluctuation in oil prices, and by internal factors, including changes in regulation policies and the corporate conduct of airlines.

An analysis of the history of companies operating in the Brazilian market and of the regulation exercised by the federal government will show that a radical transformation in the framework of Brazilian air transportation that lasted for three decades occurred in the 90s. In the 90s, flight traffic began to concentrate into national and regional trunk lines with higher traffic density and fewer companies.

The airline crisis emerged early in this first decade of 2000. Collapsing companies and survival strategies were dominant from 2001 to 2002. From 2002 to 2003, companies struggled to adapt to the new market structure. From 2003 to 2005, companies with prospects for survival began to recover, some with the aid of the federal government. Since 2005, the strategy has been one of innovation and of focusing on sustainability and profitability. According to Wensveen & Leick (2009), this has prompted mergers and acquisitions involving large airline companies such as Air France – KLM or British Airlines and Ibéria.

The recent events in Europe may generate a new crisis, moving companies backwards to a new survival strategy.

BRAZILIAN AIRLINE COMPANIES

Regular air transportation of passengers has existed in Brazil since the end of the 1920s, when the country's first regular airline, Varig, was created. Other companies later emerged, with domestic and regional routes, which contributed to the growth of the market over time. At the end of the 20th century, there were four large companies in the market: Varig, Vasp, Transbrasil and TAM (Gandra, 2007). Currently only the latter is still in the market.

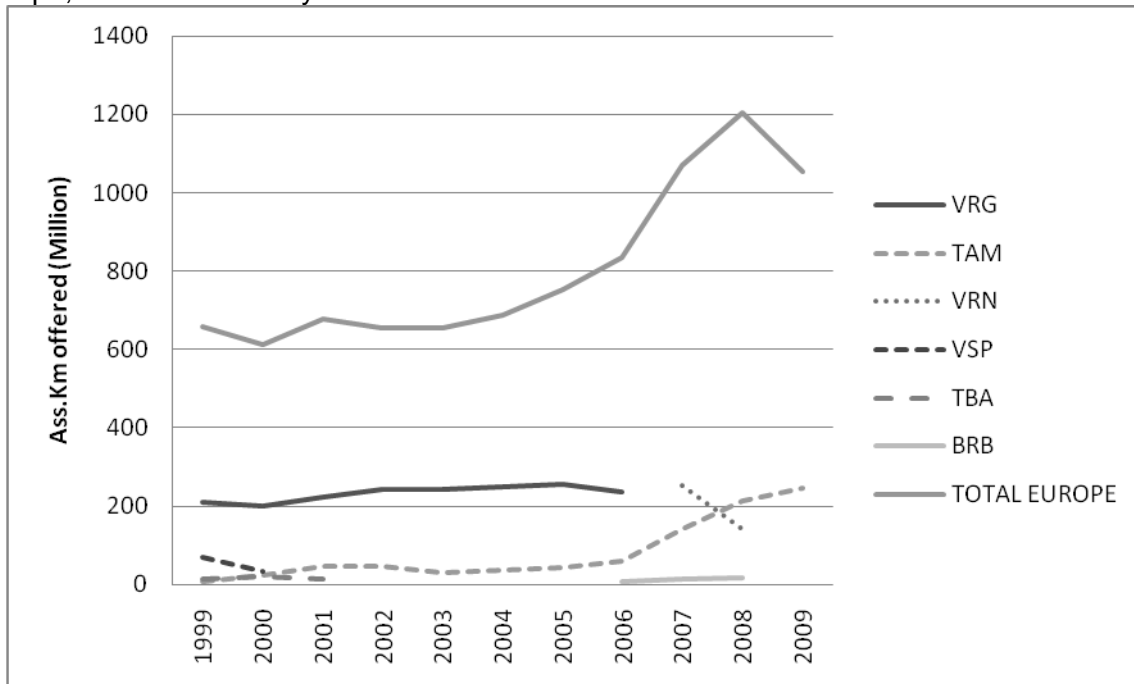
The former managers of companies that went bankrupt from 1980 to 1990 blamed their failure on the price freezes, which resulted in expenses exceeding revenue (op. cit.). That was obviously not the only factor contributing to the deterioration of these companies, whose managers were unable to adapt to new market rules.

Brazil's position on the world scene became increasingly fragile as each of these companies exited the market. Varig had been one of the largest companies in ticket sales and the only Brazilian company with a share in the Brazil-Europe market. It was important to Brazil's domestic and, especially, international air transportation.

Varig's exit from the Brazilian market resulted in a drastic drop in international flights operated by Brazilian companies, as the surviving companies were still unprepared to fill the gaps Varig had left. One way to demonstrate Varig's relevance to the Brazilian international flight market is by comparing its share with that of other companies. Graph 1 illustrates the

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situation of Brazilian companies in relation to international flights connected directly to Europe, in terms of weekly seat kilometers offered:



Graph 1 – Weekly Brazil-Europe seat kilometers offered by Brazilian companies Weekly average based on January and July.
 Source: ANAC

Graph 1 shows Brazilian companies had a 46% share in this market in 1999, but only 23% in 2009, when Brazil was represented only by TAM. Despite the growth in total available seat kilometers in Brazil-Europe flights, the Brazilian companies remaining in the market failed to absorb the flights left by exiting companies and were unable to match market growth, with only one Brazilian company – TAM – remaining in the market.

In the early 2000s, European companies increased their flight offerings aggressively to fill the gap left by the exiting Brazilian companies and the air transportation landscape changed significantly, with companies competing over continually increasing demand in an environment with liberalized pricing and flexibilization of bilateral agreements. The increase in demand is related to growth in Gross Domestic Product per capita despite the global economic crisis and amid the air transportation crisis. It is also related to greater availability of credit, including from airlines themselves. In this second half of the 2000s first decade, companies seeking to innovate have developed alliance strategies and more aggressive promotions. This concentration of flight availability in large companies and the aggressive, short-term pricing and promotion strategies are regarded as predatory in the field of strategy (Looy ET AL., 1998).

To compete with its rivals, TAM has invested in differentiating its image based on service quality, aircraft comfort, sophisticated in-flight service and an efficient loyalty program. The difference in size between TAM and its competitions in the Brazil-Europe market makes difficult for the company to compete on a price basis.

Regular air transportation in Brazil is currently concentrated in the two largest companies in the market, TAM and GOL, which jointly account for over 80% (BITA, 2010) of the seat

kilometers offered in domestic flights and nearly all international flights operated by Brazilian companies. This situation poses a certain amount of risk to Brazil, since the deterioration of one these companies (or worse, both) would render Brazil entirely dependent on foreign companies to operate their overseas flight routes.

METHODOLOGY

Literature on the subject of the Brazil-Europe air transportation market is sparse, despite its unquestionable importance to Brazil. No articles on the subject were found in any periodical scientific publications.

The data for our analysis was taken from HOTRANs – documents published by the National Civil Aviation Agency (ANAC) containing information on clearances for flights in Brazilian airspace. These documents each contain one week's worth of data. Only the HOTRANs for the months with peak passenger traffic in Brazil - January and July – were analyzed. The information presented here is weekly information for each year. In some cases, the data for the months of January and July were very similar and enabled calculation of the average between these two months for each year of the subject period.

Prior treatment of the data was necessary to obtain relevant information such as seat kilometers offered by the companies in question. In this treatment, only direct connections between Brazilian and foreign airports were considered. Using a distance matrix for the airports present on the HOTRANs, the kilometer distances were calculated by the geographic information system TransCAD®.

The documents published by ANAC show only flight clearances. The information analyzed is therefore related to flight availability only.

BRAZIL - EUROPE AIR TRANSPORTATION

The current global political and economic environment is favorable to a strong air link between the European Union and Brazil. This is demonstrated by the growth seen in air transportation between Europe and Brazil. The economic rise of BRIC countries and the world crisis have resulted in greater attention being given by the European Community to developing countries, which has increased business streams between Europe and these countries.

Graph 2 shows the international flight seat kilometers offered between Brazil and other countries by region. Europe experienced significant growth during the subject period. Up until 2001, North America and Europe each had a similar share of international flights to and from Brazil. After 2001, the North America and Europe curves diverge, with Europe showing considerable growth and North America declining and only returning to the same level as in the beginning of the decade in 2009, though still well below Europe.

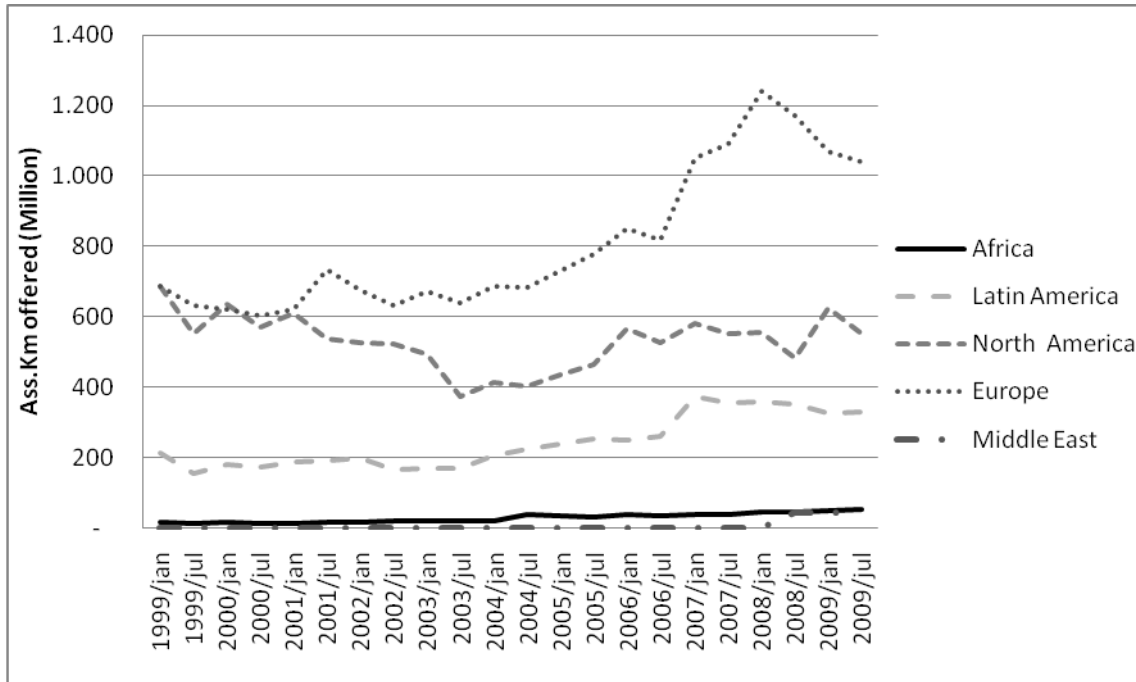
This situation can be attributed to the fact that European airline companies were less affected than North American companies by the air transportation crisis. In addition to this, the consolidation of the European Union in the 90s and the strengthening of political/economic relations with the European Community to the detriment of other regions generated an increase in business flows.

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Latin America's share remained stable until 2004, then grew until 2007, and has since remained stable.

North America's loss of market share from 2002 is notable. This can be attributed to the terrorist attacks of September 11, 2001. One of the reasons explaining Europe's decline in 2008 is that the crisis affected this region more than other countries.

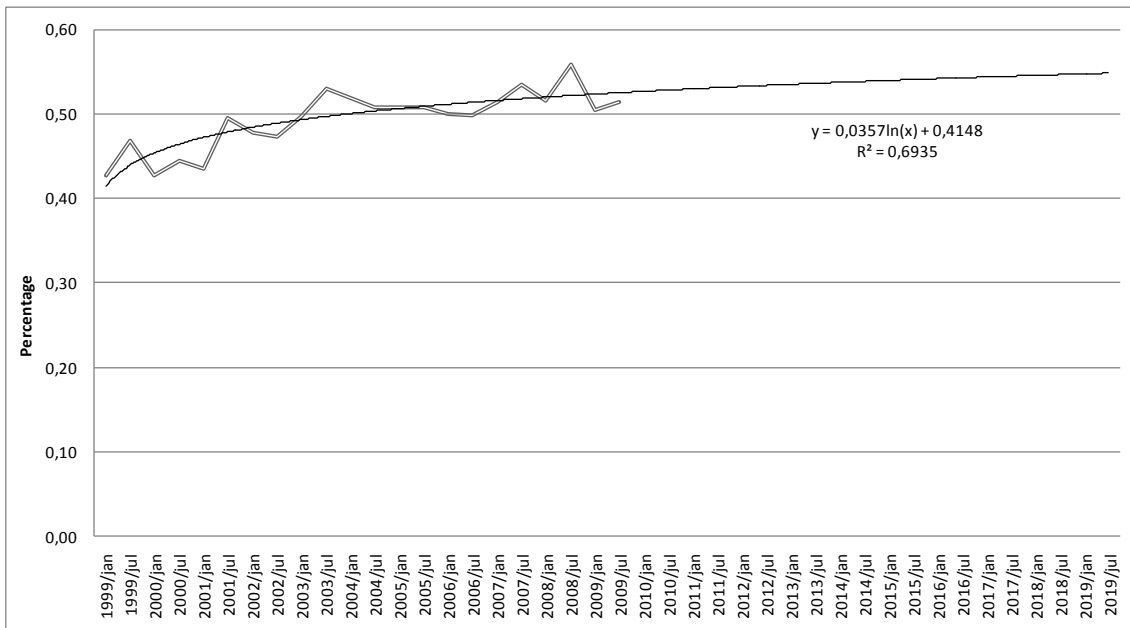
Africa and the Middle East have a very small share of this market and are served by foreign companies only.



Graph 2 – Weekly international flight seat kilometers by region.
 Source: ANAC

Graph 3 shows Brazil-Europe flight market share in terms of seat kilometers and the expected trend until 2019. Note that Europe has approximately 50% of this market and the trend for the next few years indicates Europe's share will grow slightly to 55%, demonstrating the importance of this segment to Brazil.

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Graph 3 – Market share in terms of weekly seat kilometers offered to/from Europe in Brazil's international market
 Source: ANAC

Varig's collapse, combined with the economic policies in favor of Brazil-Europe relations and the liberalization of air transportation, originated a new environment throughout the decade of 2000. Foreign companies dominated the Brazil/Europe market, as Brazilian companies were unable to compete in the market as they had before. Graph 4 shows a continual increase in seat kilometers offered by European companies, while the seat kilometers offered by Brazilian companies remained constant until 2006, initiated a recovery in 2007, which was frustrated in 2008. In 2009, with only one company competing for international long-haul flights, Brazil became a minor player with the liberalization of the sector.



Graph 4 – Weekly seat kilometers to/from Europe offered by Brazilian and foreign companies.
 Source: ANAC

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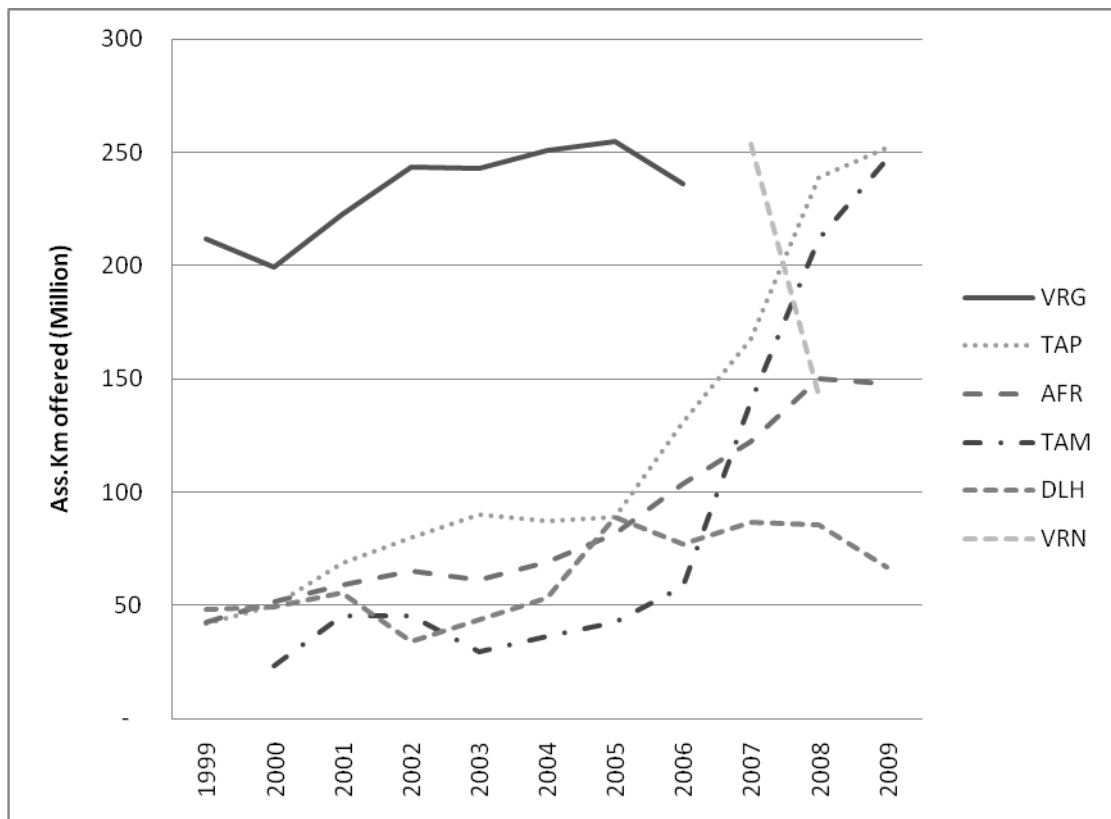
Graph 5 demonstrates Varig's strong presence in the international market to Europe. With Varig's exit in 2006, foreign companies sought to take over Varig's share of flights to Europe, most notably Transportes Aéreos Portugueses (TAP), followed by Air France (ARF) and, to a lesser degree, Lufthansa (DLH).

In 2006, Gol Linhas Aéreas bought the Varig (VRG) brand and its flights to Europe. During the two following years, Gol/Varig (VRN) operated under the code VRN. In 2008, however, GOL initiated a gradual exit from the long-haul market because it was considered incompatible with the company's strategy. This further decreased the share held by Brazilian companies in this market. An increase in the market share of foreign airline companies can be seen in this period, owing to the new strategic policies and a favorable environment. It can be inferred that Varig's share was absorbed by foreign companies and by TAM, which had a small market share in 2004.

The company with the largest share of the Brazil-Europe market in terms of seat kilometers is also the only Brazilian company competing in the market. TAM lost its only Brazilian competitor and began competing with larger companies. A huge difference in revenue separates European companies from TAM, which generates unbalanced competition and allows foreign companies to offer tickets at a marginal cost and achieve economy of scale, while TAM is forced to offer flights at operating cost. Despite the challenge and the inability to absorb a large portion of the flights left by Varig, TAM has managed to establish itself at a reasonable level, especially after the exit of its only Brazilian competitor.

The increase in market share held by foreign companies can be attributed to a change in the corporate strategy of Transportes Aéreos Portugueses (TAP), which invested in a larger number of flights offered, with daily flights to eight cities in Brazil. From Portugal, travelers can connect to most major cities of the European Union via TAP. TAP is currently the market leader on this route, along with TAM. This situation is unfavorable to Brazilian companies, especially if companies from other countries adopt a strategy similar to TAP's.

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Graph 5 - Evolution of weekly seat kilometers offered by major companies in the Brazil-Europe market. Weekly average calculated based on January and July
 Source: ANAC

Table 1 shows that when Varig operated flights between Brazil and Europe, it maintained its flight offerings and leading position, with little variation in the number of flights offered. Though maintaining its leading position, Varig lost market share because of growing demand. During this period, TAP increased 20% in terms of average annual geometric growth rate, more than the average of 5% for the market in question. Air France grew 13%, followed by Lufthansa at 3%. The main companies focusing on the European market are TAP and Air France.

Also according to the average annual geometric growth rate calculations for the period in question, TAM has grown 30% since its creation. This growth is explained by its small market share when it began operating. The company has been able to grow in this market thanks to its strategy. VRN declined 44% during its presence in the Brazil-Europe market. This poor performance led to the company's withdrawal from this market.

Flight availability data shows that the market grew about 60% over a period of 10 years; however the market share held by Brazilian companies declined significantly. Though TAM has been growing in the market, it is difficult to tell whether it will be able to maintain its position.

Table 1 – Weekly seat kilometers offered by major companies and the total for the Brazil-Europe market. Source: ANAC - Weekly average calculated based on January and July.

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Year\Airline	VRG	TAP	AFR	TAM	DLH	VRN	TOTAL EUROPE
1999	211.478.451	42.125.718	42.493.047		48.040.483		659.386.804
2000	199.273.482	49.797.794	51.749.323	23.277.335	49.323.189		613.608.414
2001	222.344.554	68.612.363	58.691.531	45.057.088	55.361.730		678.717.776
2002	243.656.078	79.737.755	65.220.583	45.057.088	33.880.471		655.688.870
2003	243.122.504	89.769.246	61.336.325	29.625.700	43.687.976		656.430.984
2004	250.895.789	87.336.431	69.104.842	35.974.064	53.495.480		685.912.759
2005	254.755.033	88.646.128	81.735.803	42.322.428	88.987.674		753.413.595
2006	235.930.033	130.901.942	103.575.207	58.550.611	77.156.943		835.668.697
2007		167.466.421	122.291.125	139.910.566	86.749.361	253.727.076	1.071.090.301
2008		238.949.311	150.166.818	211.956.984	85.738.940	142.602.638	1.204.856.046
2009		252.228.759	147.665.092	246.846.750	67.046.994		1.053.632.060

CONCLUSIONS

From the recent history of the Brazil-Europe air transportation market, one can conclude that Brazil's current share of the market is relatively small. The collapse of Varig, whose international flight routes and frequencies were never fully absorbed by Brazilian companies, demonstrates the risk Brazil will face in the future. With TAM as the only Brazilian company operating flights in this market, any reduction or discontinuation of flight routes could result in Brazil losing its share of the market entirely.

If TAM discontinued its flight routes from Brazil to Europe, Brazil would become dependent on the strategies of foreign companies and subject to regulations and other factors affecting their countries of origin, such as economic and political crises. As a result, Brazil would lose independence and regress in history.