ARTHAVAAN
Volume 3, Issue 1, December 2019

http://www.bharaticollege.com

Transaction Costs and Strategic Alliances of Air Transport. Case of Aeroméxico in Skyteam in the Face of the Boeing Crisis

Costos de transacción y las alianzas estratégicas del transporte aéreo. Caso de Aeroméxico en Skyteam frente a la crisis de Boeing

José G. Vargas-Hernández[1], María Guadalupe Hernández Martínez[2]

[1]M.B.A.; PhD., Research Professor, Department of Administration
University Center for Economic and Managerial sciences, University of Guadalajara
Periférico Norte 799 Edif. G201-7, Núcleo Universitario Los Belenes, Zapopan, Jalisco, 45100,
jvargas2006@gmail.com, jgvh0811@yahoo.com, josevargas@cucea.udg.mx
[2]Maestría en Negocios y Estudios Económicos
Centro Universitario de Ciencias Económico-Administrativas
Universidad de Guadalajara
Av. Periférico Norte N° 799. Núcleo Universitario Los Belenes, C.P.45100
Zapopan, Jalisco, México
gpehernandeznin@hotmail.com

Abstract: ***The aviation industry plays an important role in global economic development by offering efficient global connectivity, through a safe and fast service, which facilitates trade and tourism. However, it also faces high operating costs that have bankrupted many airlines throughout history. This situation led the industry to generate strategic alliances that have contributed to the permanence of airlines in the face of market threats. Such is the case of Aeroméxico, who faces the suspension of 6 aircraft of the Boeing 737 MAX 8 model, product of recent plane crashes where 2 of them crashed. The negotiation power granted by the decrease in transaction costs derived from being part of the Skyteam strategic alliance benefits Aeroméxico in the face of this adversity.***

Keywords: ***AeroMexico, aviation industry, Boeing, strategic alliance, transaction costs,*** *JEL.* ***M210, L140***

Resumen

La industria de la aviación cumple un papel importante en el desarrollo económico global, al ofrecer una conectividad mundial eficiente, a través de un servicio seguro y veloz, que facilita el comercio y el turismo. No obstante, también enfrenta altos costos operativos que han llevado a la quiebra a muchas aerolíneas a lo largo de la historia. Esta situación llevo a la industria a la generación de alianzas estratégicas que han contribuido a la permanencia de las aerolíneas frente a las amenazas del mercado. Tal es el caso de Aeroméxico, quien enfrenta la suspensión de 6 aeronaves del modelo Boeing 737 MAX 8, producto de los recientes accidentes aéreos donde 2 de ellos se estrellaron. El poder de negociación que le otorga la disminución de costos de transacción derivada de formar parte de la alianza estratégica Skyteam beneficia a Aeroméxico frente a esta adversidad.

Palabras clave: Aeroméxico, alianzas estratégicas, industria de la aviación, Boeing, costos de transacción.

1. INTRODUCTION

The aviation or air transport system, which can be defined as the transfer of people, animals or things from a point origin to a destination through airspace aircraft, has made available to man the dream of flying and crossing borders. It fulfills a fundamental role in global economic development by allowing greater connectivity, which lowers the costs of passenger transport and favors commerce at different scales due to its high speed, safety and efficiency. The Air Transport Action Group (ATAG, 2018) reported that global air transport generates 65.5 million jobs and contributes 2.7 million dollars to the world's economy. This makes the airline industry a catalyst for business and a social transformer that generates wealth. (CANAERO 2017; ATAG, 2018).

It is the youngest transport industry that has grown exponentially in the last century, which has involved high costs in research and development. Even with the fact that it is the fastest and safest transportation system, it is also the one

with low profit margins and high fixed costs; These include crew salaries, fuel and flight equipment rental payments (Grupo Aeromexico, 2017). Among these concepts, the most significant one for airlines is fuel, in which they invest between 181 and 226 billion dollars (CANAERO, 2017).

However, it is an industry that is characterized by its high level of cooperation, from the creation of associations such as IATA, which operate since 1945, to the generation of contemporary strategic alliances such as Skyteam, created in 2000. Airlines find a mechanism of cost reduction, among these those of transaction, and improve their income opportunities in coordinated trade actions. Mexico is an important part in the formation of such coalitions, having one of the leading airlines in the national and Latin American market, founding member of Skyteam, the global airline of Mexico, Aeromexico.

This document will deepen the analysis of the airline industry in Mexico and the world, concentrating attention on the case study of Aeromexico, its strategic alliances and the benefits of being part of these in the face of current challenges.

2. BACKGROUND

A. Historical background of the industry worldwide and internationally

The aviation industry has a recent history, in relation to other types of transport, given that, although great thinkers of previous centuries dreamed of flying, it was the Wright brothers who achieved the first flight in an aircraft called biplane in 1903. However, it was not until the outbreak of the First World War, that significant sums of financial capital were invested in research and development for military purposes, and that the development of the airline industry was finally encouraged. At the end of the war, the Germans founded the first commercial airline, the Deutsche Luftreederei, with a regular service on the route Berlin to Leipzig and Weimar (Bridges, 1969).

It was in the 1920s that pioneering airlines emerged in Europe and America. Among these, the following stand out:

1) KLM or Royal Aviation Company, which was founded on October 7, 1919 in the Netherlands, and currently continues to operate under the same name, forming part of the AIR FRANCE KLM group since 2004 (KLM, 2019).
2) Qantas, originally named Queensland and Northern Territory Aerial Services Limited, was founded in 1920 in Queensland, Australia (QANTAS, 2019).
3) Avianca, today Avianca Holdings S.A. I started operations in 1919 in Colombia, and today it is part of Star Alliance (AVIANCA, 2019)

Like these, other airlines appeared during the 20's, however, were companies that faced financial problems due to the low demand of the service, which led them to be subsidized by the government or nationalized, to finally disappear or be absorbed (Bridges, 1969). That was the case of Mexicana de Aviación. Later, with the Second World War, air transport was promoted with the increase in the size of the propellers. With this, it started a technical development of the aircraft that produced the growth of the industry, but also, the airline companies faced political and technical obstacles in the transformation of facilities and routes. (Bridges 1969; ICAO 2019).

This type of adverse situations led the aviation industry to organize itself. First, through the creation of the International Civil Aviation Organization, in 1944, with the signing of the Chicago Convention by 54 countries. The purpose of this document was to promote cooperation, friendship and understanding among nations (in fact, this served as a precedent for the UN), and laid the foundations of the regulations and procedures for carrying out air navigation throughout the world (ICAO, 2019). Likewise, the IATA (International Air Traffic Association) emerged the following year, in 1945, in Havana Cuba, with 57 member airlines from 31 nations.

This association was founded with the objective of being a vehicle for cooperation between airlines, promoting reliable, safe and economic air services for the benefit of consumers (IATA, 2019). By grouping the airlines, IATA has managed to simplify the procedures for the elaboration of agreements and standardization of procedures, so that even when operating complicated routes structures, a growth has been achieved in the services offered with high efficiency (Portals, 2012). Participates together with publishing companies in the publication of a series of manuals for exclusive use in air transport, such as:

1) TACT Manuals (The Air Cargo Tariff) with three volumes: one on rules, one on world reference rates and the last one on reference rates in North America.
2) OAG Manuals, which instruct on the management of itineraries for both passenger aircraft and freighters, also divided into North America and the rest of the world.
3) Special Manuals, which describe the handling of restricted materials, handling of live animals, airport operations, etc. (Portals, 2012).

The standardization of IATA came to the point of coding each airport and airline, with global usage codes between lines and official documents, which has facilitated international operations (Portals, 2012).

At the national level, passenger traffic can be divided into three historical phases:

1) Between 1920 and 1946, there were high growth rates around 60%

2) From 1947 until now, passenger traffic has maintained a growing rate, with the exception of fluctuations caused by temporary economic instability.

3) In 2006, the integration of low-cost airlines into the domestic market began, serving new segments of the market, favoring competition and connectivity (CANAERO, 2017)

With respect to the pioneering lines, the Compañía Mexicana de Aviación began operations in 1924, being the first nationally and the fourth worldwide. Originally it started with private capital and in 1957 it was nationalized. But the neoliberal policies of the decade of the 80's let it go through crisis. For both Mexicana and Aeromexico, the commercial opening and open skies policies of Carlos Salinas impact, given their conditions of low competitiveness. Both companies had a poor fleet and were not prepared to face their international competitors. Therefore, the intervention of the State was inevitable, who rescued and restored the industry. However, in the government of Vicente Fox, Mexicana de Aviación was sold to entrepreneurs without experience in the sector, which led to its imminent quiet in 2010 (Leyva, 2011).

On the other hand, Aeromexico is the trunk airline that survived this process. Founded in 1934, it operated for the first time the route between Mexico City and Acapulco. The international opening occurred in 1957 to include routes to the United States, Spain and France. By the year 2000, together with the airlines AirFrance, Delta and Korean Air, they founded the Skyteam alliance. In 2011, they begin their operations in the Mexican Stock Exchange. In 2012, the purchase agreement with Boeing of up to 90 B737-MAX aircraft was signed. As a result of the collaborative work with Delta, in 2015 they formalized a Joint Cooperation Agreement and in November of that year, Delta Air Lines owned 49% of the shares (Aeromexico Group, 2017)

B. News of the industry worldwide and internationally

Currently, air transport generates more than 10 million direct jobs, transports 62 million tons, with a value of 6 billion dollars. 1303 airlines operate with 31, 717 aircraft, 45,091 routes between 3, 759 airports and 170 service providers (ATAG, 2018).

According to CANAERO's 2016-2107 yearbook, the aviation industry contributes $ 2.7 trillion dollars to world GDP, moving more than 3.57 million passengers. The advance of the industry has produced 2,550 bilateral agreements among 170 countries; the number of connections 20 years ago has doubled, with a number greater than 18,000 connections; fuel consumption has been reduced by 80% compared to 1960, and as a consequence also the cost of the ticket has been reduced by half compared to 20 years ago.

This sector has had a growth in passenger volume between 20% and 30% annually in Latin America and the Caribbean, as a result of market liberalization and airline consolidation in the region. This involves the regulatory framework that is divided into 3 main areas: 1) market regulation, 2) economic, 3) technical (Fioravanti et al, 2016).

The first enters with the intervention of ICAO and the 9 freedoms of the air, which have been applied in the polities of open skies. Market regulation also gives rise to strategic alliances, which are a mechanism for reducing costs and increasing benefits for consumers, through the distribution of operations and economies of scale by wholesale purchases for airlines, as well as accumulation of points, transfers, greater variety of destinations and schedules for users. These alliances must ensure free competition, avoiding the formation of monopolies or entry barriers to new competitors (Fioravanti et al., 2016). The second, economic regulation is related to the rules regarding the exploitation and use of infrastructure and airport assets. The third and last, the technical regulation refers to the rules on operational safety that ICAO regulates worldwide (Fioravanti et al.2016).

The International Civil Aviation Organization is currently composed of 193 countries and industry groups with the aim of reaching a consensus on the Standards and Recommended Practices (SARPs) for international civil aviation and on policies that make it possible for the sector of civil aviation is operationally safe, efficient, protected, economically sustainable and environmentally responsible (ICAO, 2019). While IATA, today is composed of 290 airlines, which represent 82% of air traffic, with the mission of promoting the growth of the safe and sustainable air transport industry, which connects and enriches the world (IATA, 2019).

With respect to the performance of airlines worldwide, according to the statistical information of CANAERO (2019), the airlines with the highest ANNA connectivity index worldwide in 2015 were Turkish Airlines, American Airlines and United Airlines. In Latin America, due to its connectivity index, Aeromexico, Copa Airlines and Azul Airlines stand out (CANAERO, 2017).

Aviation statistics in Mexico show that by 2017 more than 2,200 flights a day take off and land, transporting 220,000 passengers a day, generating 1 million direct and indirect jobs and contributing 2.9% of the national GDP. Within the territory operate 8 airlines of national regular service and 57 of regular international service, with 360 aircraft of 8.6 years of average age. It has the airport with the largest number of

passengers and operations in Latin America, as well as 3 alliances of passenger airlines and 2 cargos (CANAERO, 2017).

The market shares of Mexican airlines, between 2017 and 2018, according to CANAERO (2019) was distributed as follows:

1) Grupo Aeroméxico with 29.13%
2) Fly with 27.50%
3) Inter jet with 21. 22%
4) VivaAerobus with 16.88%
5) Aeromar with 1.47%
6) Others or the rest with 3.79%

These data reflect the growth of the industry in number of passengers and investment in transportation equipment, which has produced an economic income of 18 billion dollars per year. While keeping in mind that in the last 18 years 11 airlines have declared bankruptcy and the effort to keep the surviving airlines has been significant (CANAERO, 2017). At the national level, the airlines have been organized through the National Air Transportation Board (CANAERO), which acts as an autonomous institution made up of 60 companies related to air transport, with the following objectives:

1) Represent, promote and defend the general interests of the national and international aviation industry, putting the public interest over the private one.

2) Promote the activities of its affiliates in Mexico and abroad.

3) Be a consultative and collaborative body of the authorities for the design, dissemination and execution of policies, programs and instruments for the development of air transport.

4) Promote, guide and provide training on the carrying out of administrative procedures before the authorities, in order to generate a culture of responsibility and observance of the legislation and regulation of the airline industry.

5) Be a source of statistical, legislative and regulatory information on the airline industry (CANAERO, 2019).

The regulatory body of aviation in Mexico is the Secretariat of Communications and Transportation, through the General Directorate of Civil Aviation, whose mission is to ensure that air transport participates in the process of sustained and sustainable growth, which contributes to social welfare, regional development and job creation, supporting the formation of a better integrated and communicated society (SCT, 2019).

Within the regulatory framework, there are several laws related to the regulation of air transport, but among these stand out the Civil Aviation Law and Airports Law. The first, according to its first article, aims to "regulate the exploitation, use or use of air space located on the national territory, regarding the provision and development of civil and State air transport services." While the second, "regulates the construction, administration, operation and operation of civil aerodromes, which are an integral part of the general means of communication."

With respect to Aeromexico, in its last annual report to the Mexican Stock Exchange of 2017, they mention being a global airline under a network model with 43 national and 49 international destinations, with 580 daily passenger flights. His leadership in the market is reflected in his financial situation, by managing an operating income of $ 3, 110 million pesos. Its workforce is composed of 15, 300 people, of which 68.6% are unionized. It is a certified member of IATA, which has 131 aircraft: 15 Boeing 787-8 and 787-9, 3 Boeing 777, 54 Boeing 737-700 and 737-800 or Boeing B737-7 and B737-8 and 59 Embraer 170 and 190 (Aeromexico Group, 2017).

As previously mentioned, Aeroméxico is a founding member of Skyteam, an alliance that today consists of 19 airlines, with access to 1150 destinations worldwide, 14,500 daily departures, 630 million annual passengers and 750 rooms (Skyteam, 2019), distributed by airline as shown in the following table:

TABLE 1: Skyteam member airlines

AIRLINE	DESTINATION	COUNTRIES	DAILY DEPARTURES	ANNUAL PASSENGERS	FLOAT
AEROFLOT	146	52	750	32.8 millones	241
AEROLÍNEAS ARGENTINAS	58	13	337	13.1 millones	84
AEROMÉXICO	92	24	600	20.7 millones	130
AIREUROPA	53	23	226	10.6 millones	54

AIRLINE	DESTINATION	COUNTRIES	DAILY DEPARTURES	ANNUAL PASSENGERS	FLOAT
AIRFRANCE	195	93	1500	97.8 m	312
ALITALIA	95	44	556	21.8 m	118
CHINA AIRLINES	156	29	114	15.1 m	88
CHINA EASTERN	257	35	2248	103.1 m	787
CZECH AIRLINES	49	26	90	2.9 m	18
DELTA	324	57	5800	180m	800
GARUDA INDONESA	90	14	600	24m	202
KENYA AIRWAYS	52	40	154	3.7m	36
KLM	164	73	357	32.7	204
KOREAN AIR	123	43	465	26.7 millones	164
MEA	32	23	69	3m	18
SAUDIA	90	37	540	31.2m	149
TAROM	40	23	55	2.4 m	25
VIETNAM AIRLINES	49	17	400	26.5 millones	89
XIAMENAIR	94	16	546	27.2 m	167

Source: Own elaboration with date from Skyteam (2019)

3. DELIMITATION OF THE PROBLEM

Despite having a privileged position as a country in the airline industry with one of the pioneer airline companies, Mexico has faced adverse situations of both public and private nature, which have resulted in the closure of several airlines in recent years. Therefore, it is relevant to study the Aeromexico case, as a leading company in Mexico and Latin America.

This company has stated in its report before the Mexican Stock Exchange of 2017, its risk factors, among which the following should be noted:

1) Volatility in fuel prices
2) Risks that insurance does not cover
3) Economic recessions
4) Delays in flights
5) Airport access and service charges
6) Lack of guarantee in access to adequate facilities
7) Delay in the development of new infrastructures
8) Terrorist attacks or outbreak of contagious diseases
9) High competitiveness of the industry
10) Restructures derived from bankruptcies or commercial competitions
11) Inadequacy of indebtedness in flight equipment
12) Increase in fixed obligations
13) Lack of adequate liquidity
14) Inability to compete against companies with higher resources or lower costs
15) Revocation of concession by the government
16) Aging of the fleet
17) High operative dependence of the International Airport of Mexico City
18) Termination of strategic alliances
19) High concentration of the Boeing fleet (55%) and Embraer (45%)
20 Delivery delays or low performance of aircraft B787 and B737-Max (Aeromexico Group, 2017).

Just in the last 8 months there have been 2 unfortunate accidents involving the Boeing 737 MAX 8 model. The first one in October 2018, the aircraft of the Lion Air company crashed in Indonesia, killing 189 people. The second in March 2019, with the airline Ethiopian Airlines collided in Ethiopia, killing 157 people of 30 different nationalities. In both cases, the airlines report that the accidents occurred shortly after takeoff and that they were recently acquired aircraft (BBC, 2019). News that impacts the world and propitious of the governments of several countries, including Mexico, USA and Canada, to suspend the commercial operation of the Boeing 737 MAX 8 model (Expansión, 2019).

For Aeromexico this implied the suspension of 6 of its aircraft, which resulted in a 3% decrease in its capacity during the first quarter of 2019 (Grupo BMV, 2019). The Secretary of SCT, Javier Jiménez Espriú, stated that the suspension could have an important economic and operational impact on said airline. (La Jornada maya, 2019) This adding the fact that the airline has an acquisition contract with Boeing for 90 aircraft of this

particular model (Grupo Aeromexico, 2017) However, being a founding member of the Skyteam alliance has produced high commercial cooperation, better negotiating position with suppliers, and strengthening of the brand, offering customers a greater number of destinations, flights, schedules and points accumulation opportunities (Group Aeromexico, 2017).

Research question

With this panorama, the following research question arises. How the reduction of transaction costs and be a member of the Skyteam alliance benefit Aeromexico against the suspension of Boeing 737 Max aircraft?

4. THEORETICAL-CONCEPTUAL BACKGROUND

The theoretical concepts relevant to this study are the transaction costs and strategic alliances. The costs of negotiation, decision, surveillance, application and information search are examples of transaction costs (Vargas-Hernández & Hernández, 2014). While strategic alliances are defined by Thompson, Gamble, Peteraf and Strickland (2012: 187) as "a formal agreement between two or more companies in which they agree to work in cooperation with a common object".

In the following section of literature review, the origins and other theoretical details of transaction costs and their implication in strategic alliances are studied.

5. REVIEW OF THEORETICAL AND EMPIRICAL LITERATURE

In Vargas-Hernández & Hernández (2014) reference was made to the first works on the theory of transaction costs, highlighting the authors Coase, Arrow and Williamson. The originator of the theory was Coase, who defined the transaction costs as those related to the negotiation and conclusion of contracts, which are originated by the lack of confidence and uncertainty (Coase, 1937). On the other hand, Arrow (1974) includes the concept of rationality to the discussion, pointing out that thanks to cooperation, the balance between personal fulfillment and the claim of social conscience is achieved, conserving the economic benefits.

He also emphasized the importance of information processing, which, given its volume and individual management limitations, requires several people to achieve better decision making and avoid diminishing returns (Arrow, 1974). Finally, Williamson contributes what he calls the three problems of transaction costs: the specification of assets, technological support and cost minimization. However, his attention was focused on the organizational behavior and governance of the firm, including concepts such as credible commitments and adaptation (Williamson, 1985).

Given the criticism of the theory of transaction costs, indicated by its incomplete formalization, Williamson (2010) explains that this is in its natural progression, which began in the 1930s, identifying the errors and omissions of neoclassical theory. Then, in the 1970s, concepts were included to reinterpret vertical integration, vertical market restrictions and the organization of the labor market, among other similar phenomena to achieve theoretical linkage. For the 1980s, government structures, credible contracting, hybrid modes and transaction sizing were included in the theory, empirical applications and tests were produced that paid for the formalization process that continues today (Williamson, 2010).

It should be noted that it is the possibility of making predictions, the variation of the topic and the application in public policies that make an economic theory meaningful. Elements that the transaction cost theory has fulfilled (Williamson, 2010). One of these applications is described by Hennart (1991) in the article "The transaction cost theory of Joint Ventures: an empirical study of Japanese subsidiaries in the United States", where the theory postulates that the comparison between the costs and benefits of property sharing or having it complete will be the key decision in the formation of joint ventures.

After the econometric study it was confirmed that also the Japanese decide to associate when they need to combine intermediate inputs of high transaction costs in the market, which can occur in three cases; 1) when they enter new industries, 2) when they enter the new market for the first time, and 3) when they want access to the resources of local companies (Hennart, 1991).

In the analysis of transaction costs in the Western Biocluster (Vargas-Hernández & Hernández, 2014), it was obtained that the members of the cluster reduce the negotiation costs through:

1) Decrease in the number of transactions, by operating as a civil association
2) Increase management productivity
3) Encourage trust among its members
4) Reduce the cost of information inquiry through the transfer of knowledge
5) Balance the demands of each member and social welfare
6) Adapt the organization and generate credible commitments (Vargas-Hernández & Hernández, 2014)
7) In this same order of ideas, the relationship between transaction costs and strategic alliances is introduced.

8) Alliances provide different types of relevant benefits to member companies: Replace horizontal mergers and acquisitions
9) Facilitate external contracting and subcontracting
10) Strengthen the competitiveness of companies by generating competitive advantage
11) Grant greater bargaining power
12) Risk decreases when sharing
13) Generate entry barriers to new competitors
14) Contribute to the opening of new markets
15) Promote the development of innovation in products and technology
16) Subtract technical weaknesses
17) Increase skills and abilities
18) Improve the efficiency of the supply chain
19) Produce economies of scale
20) Decrease in costs in general
21) Open the opportunity for joint learning
22) Help companies make better use of their resources and capabilities
23) Promote the acquisition of internal knowledge about new cultures and / or markets
24) Facilitate access to valuable skills that are only found in a certain geographic location
25) Generate synergy among its members (Thomson et al. (2012).

The profile of companies that most requires and resorts to this type of strategy are those where technological advances occur in an accelerated manner, in different areas simultaneously and whose performance affects other companies or industries (Thomson et al., 2012). with this profile, so historically has formed partnerships to reduce their costs and improve service.

6. METHODOLOGY

Given the nature of the phenomenon, in order to explain and describe it, the methodology used was qualitative. A documentary investigation of secondary data was developed, both theoretical and empirical literature, on the aviation industry in its national and international context, the strategic alliances of this and other sectors, as well as its relationship with transaction costs. Recent events and their relation to the object of study were analyzed.

7. ANALYSIS OF RESULTS

As a result of the documentary research carried out, it is concluded that, thanks to the formation of strategic alliances, transaction costs are reduced, which has a significant impact on the aviation industry, given its high costs and low levels of utility.

In the Mexican case, it is more evident in benefit, not only because of operational costs, but also because of the inconveniences and performance problems of the corporate and state government that the airline industry has faced, favoring the closure of 11 airlines in the last 18 years.

The cooperation between the airlines reduces the costs of negotiating and concluding contracts by encouraging trust between the parties. The integration of alliances facilitates external contracting, strengthens their competitiveness, provides economies of scale and greater bargaining power, remedies technical weaknesses and share risks, with the generation of synergy.

To answer the question, how would the decrease in transaction costs and be a member of the Skyteam alliance benefit Aeromexico in the face of the suspension of Boeing 737 Max aircraft? It is deduced that, for this company, belonging to Skyteam benefits him, giving him greater bargaining power over Boeing, considering that among the 19 airlines they have a fleet of 3686 aircraft and great potential demand.

Faced with this situation, Boeing will have to provide quick and effective solutions that do not continue to affect Aeromexico's operations and revenues, given that, at best, it could lose contracts and commercial relations with all Skyteam members, especially with Delta, as a majority shareholder of the Mexican airline.

8. CONCLUSIONS

The tragedy resulting from the two unfortunate air accidents in the months of October 2018 and March 2019, where two Boeing 737 MAX 8 model aircraft collapsed, have put the airline industry in the spotlight, with the suspension of this model by the governments of various parts of the world.

In Mexico, the trunk airline, Aeromexico, has suffered economic repercussions with the suspension of 6 of its aircraft of said model. But the problem is greater, given that a large percentage of its aircraft are manufactured by Boeing and today it has purchase contracts for 90 aircraft of the model in question. However, historically the aviation industry has managed to overcome high operating costs, management failures and other adverse situations thanks to the support among its members. Organizations such as ICAO and IATA, created after the Second World War, laid the foundations for

industrial organization of international cooperation par excellence.

Aeroméxico has the backing of the Skyteam alliance, made up of 19 airlines, including the American Delta, which is its current majority partner, which not only strengthens commercially in front of its customers, with a better service, but also in front of its suppliers, with greater bargaining power.

The decrease in transaction costs within the strategic alliances makes it easier for Aeromexico to hire external contractors, in this case, its negotiating position vis-à-vis Boeing, who will have to provide immediate solutions to avoid the loss of a client of high influence and dominance as it is the Mexican airline.

REFERENCES

[1] Arrow, K (1974). *The Limits of Organization*. New York, NY: W. W. Norton and Company. (review)

[2] ATAG (2018). *Aviation. Benefits Beyond Borders.* Ginegra, Suiza: Air Transport Action Group. Recuperado de https://aviationbenefits.org/

[3] AVIANCA (2019). *Sobre Nosotros.* Colombia: Avianca. Recuperado de https://www.avianca.com/mx/es/sobre-nosotros/

[4] Bridges, V (1969). *Historia de las Comunicaciones*. *Transportes Aéreos.* Recuperado de http://www.librosmaravillosos.com/transportesaereos/pdf/Historia%20del%20Transporte%20Aereo%20-%20Valery%20Bridges.pdf

[5] CANAERO (2017). *Anuario. 2016-2017*. Recuperado de http://canaero.alpha-it.mx/wp-content/uploads/2017/04/26102328/ANUARIO-CANAERO-2016-2017.pdf

[6] CANAERO (2019). *Nosotros.* CDMX, México: Cámara Nacional de Autotransportes Recuperado de http://canaero.org.mx/nosotros/

[7] CANAERO (2019). *Estadística Mundial.* CDMX, México: Cámara Nacional de Autotransportes Recuperado de http://canaero.org.mx/estadistica-mundial/

[8] Coase, R (1937). *The nature of the firm*. Económica, 4: 386-405.

[9] Expansión (2019). México suspende "hasta nuevo aviso" operaciones de aviones Boeing 737 MAX. CDMX, *Expansión* Recuperado de https://expansion.mx/empresas/2019/03/13/mexico-suspende-hasta-nuevo-aviso-operaciones-de-aviones-boeing-737-max

[10] Fioravanti, R et. al. (2016). *Temas actuales de América Latina y El Caribe. Transporte Aéreo*. abril 01,2019, de Banco Interamericano de Desarrollo Sitio web: https://publications.iadb.org/.../Transporte-Aereo-Temas-Actuales-para-America-Latin

[11] Grupo Aeroméxico (2017). *Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado.* Recuperado del sitio de internet de la Bolsa Mexicana de Valores https://www.bmv.com.mx/docs-pub/infoanua/infoanua_829324_2017_1.pdf

[12] Grupo BMV (2019). *Comentarios y análisis de administración.* CDMX, México: Bolsa Mexicana de Valores Recuperado de https://www.bmv.com.mx/docs-pub/visor/visorXbrl.html?docins=../ifrsxbrl/ifrsxbrl_911659_2019-01_1.zip#/visorXbrl

[13] Hennart, J (1991). The transaction costs theory of joint ventures: an empirical study of Japanese subsidiaries in the United States. *Management Science*. Vol. 37, 483-97. mayo 13, 2019. De EBSCO host Base de datos

[14] KLM (2019). *Company profile.* Holanda: KLM Royal Duch Airlines. Recuperado de https://www.klm.com/corporate/en/about-klm/profile/index.html

[15] IATA (2019). *The Founding of IATA.* USA: International Air Transport Association. Recuperado de https://www.iata.org/about/Pages/history.aspx

[16] IATA (2019). *IATA Members*. USA: International Air Transport Association. Recuperado de https://www.iata.org/about/members/Pages/index.aspx

[17] ICAO (2019). *Historia de la OACI y el Convenio de Chicago.* Quebec, Canadá: Organización de Aviación Civil Internacional. Recuperado de https://www.icao.int/about-icao/History/Pages/ES/default.aspx

[18] Leyva, P. (2011). *La irresponsabilidad empresarial en Compañía Mexicana de Aviación*. El Cotidiano, marzo-abril, 19-32. mayo 13, 2019, De EBSCO host Base de datos.

[19] Portales, G. (2012) *Transportación Internacional.* Ciudad de México: Trillas.

[20] QANTAS (2019). *Nuestra Empresa.* Australia: QUANTAS. Recuperado de http://www.qantas.com/travel/airlines/our-company/global/es

[21] SCT (2019). *Misión y Visión.* México: Secretaria de Comunicaciones y Transporte. Recuperado de http://www.sct.gob.mx/transporte-y-medicina-preventiva/aeronautica-civil/1-quienes-somos/11-mision-y-vision/

[22] Skyteam (2019). *Acerca de nosotros.* Holanda: SkyTeam Airline Alliance. Recuperado de https://www.skyteam.com/es-MX/about/

[23] Thomson, A.; Gamble, J.; Peteraf, M. & Strickland. A. (2012). Administración Estratégica. Teoría y casos. México: McGraw Hill.

[24] Vargas-Hernández, J & Hernández, M. (2014). Transaction Cost in a Biocluster on Wester Jalisco. International Journal of Research in IT, Vol. 4, 14-24.

[25] Williamson, O (1985). The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. New York, NY: The Free Press.

[26] Williamson, O (2010). Transaction Cost Economics: The Natural Progression. *American Economic Review*. Vol 100, pp 673–690