

VERKEHRSGEOGRAPHIE

TRANSPORT GEOGRAPHY

SIGNIFICANCE OF THE AIRPORTS-AIRLINES BINOMIALS IN THE POSITIONING OF DUBAI, DOHA AND ABU DHABI IN THE WORLD URBAN SYSTEM

Roberto DÍEZ PISONERO (Madrid)*

*Initial submission / erste Einreichung: 01/2024; revised submission / revidierte Fassung: 11/2024;
final acceptance / endgültige Annahme: 12/2024*

with 6 figures and 9 tables in the text

CONTENTS

<i>Summary</i>	207
<i>Zusammenfassung</i>	208
1 Introduction	209
2 Globalisation and Urban Competitiveness	210
3 Methodology	212
4 Dubai, Doha and Abu Dhabi in the World Urban System	214
5 Airlines-Airports Binomials in the International Positioning of Dubai, Doha and Abu Dhabi	217
5.1 Emirates, Qatar Airways and Etihad Airways: The Three Middle-East Carriers..	218
5.2 Connectivity, Expansion and Quality: The Gulf Airport Hubs	226
6 Conclusions	233
7 References	234

Summary

In the context of economic and geopolitical rivalry between the Gulf countries, Dubai, Abu Dhabi and Doha, three of the most outstanding exponents where globalisation is

* Roberto DÍEZ-PISONERO, Ph.D., Lecturer in Geography, Department of Geography, Facultad de Geografía e Historia, Complutense University of Madrid (UCM), Edificio B. C/Profesor Aranguren, s/n, Ciudad Universitaria, 28040, Madrid, Spain. – Email: robertod@ucm.es.

manifested in the region, have been focusing in recent decades on their economic diversification. This economic change is favouring their positioning in the global urban system and present themselves to the world as attractive destinations for business, investment, international trade, sports and tourism.

In this positioning, air transport acts as a fundamental agent to intensify the international projection and promote a positive image of these three destinations, through their airports-airlines binomials. These are constituted as tools for the projection of power (both hard and soft) and effective means to make strategic investments in other countries, together with their respective sovereign investment funds.

Using different international rankings and a multi-faceted methodology based on bibliographic review and the analysis and processing of statistical data from international organisations, the results reveal the growing competitiveness of these cities, thanks to the three major Gulf carriers and their respective airport hubs, which constitute powerful interconnection platforms that contribute to intensifying their global influence.

Keywords: Airport-airline binomial, Middle East (ME3) carriers, Gulf airport-hubs, rankings, world urban system.

Zusammenfassung

DIE BEDEUTUNG DER FLUGHÄFEN-FLUGLINIEN-BINOME FÜR DIE POSITIONIERUNG VON DUBAI, DOHA UND ABU DHABI IM GLOBALEN STÄDTESYSTEM

Im Kontext wirtschaftlicher und geopolitischer Rivalität zwischen den Golfstaaten richten Dubai, Abu Dhabi und Doha – drei herausragende Beispiele, in denen sich die Globalisierung in der Region manifestiert – ihren Fokus in den letzten Jahrzehnten auf ihre wirtschaftliche Diversifizierung, um ihre Positionierung im globalen Städtesystem zu stärken und sich der Welt als attraktive Ziele für Business, Investitionen, internationalen Handel, Sport und Tourismus zu präsentieren.

Bei dieser Positionierung fungiert der Luftverkehr als wesentlicher Akteur, um die internationale Ausstrahlung zu intensivieren und ein positives Bild dieser drei Ziele zu fördern, und zwar durch deren Flughafen-Airline-Binome. Diese dienen als Instrumente der Machtdemonstration (sowohl harter als auch weicher Macht) und als effektive Mittel zur strategischen Investition in anderen Ländern, zusammen mit ihren jeweiligen Staatsfonds.

Unter Verwendung verschiedener internationaler Rankings und einer multi-methodischen Methodologie, basierend auf einer bibliographischen Überprüfung sowie der Analyse und Verarbeitung statistischer Daten von internationalen Organisationen, zeigen die Ergebnisse die wachsende Wettbewerbsfähigkeit dieser Städte, dank der drei großen Golf-Fluggesellschaften und ihrer jeweiligen Flughafendrehkreuze, die als mächtige Verbindungsknotenpunkte fungieren und dazu beitragen, den globalen Einfluss der drei Städte zu intensivieren.

Schlagwörter: Flughafen-Airline-Binom, Middle East Airlines (MEA3), Flughafendrehkreuze in den Golfstaaten, Rankings, globales Städtesystem

1 Introduction

Although the link between globalisation and urbanisation processes is not new, it is from the 1970s onwards when the acceleration of the processes of globalisation of capital, work and culture, and the significant effects that this intense globalisation has on cities and urban life around the world, is evident (SOJA 2016). Today, these cities constitute spaces in which the key factors are generated to compete for the attraction of residents, tourists and investors, and have the essential elements that guarantee their progress and well-being. In this sense, the attraction of flows of all types towards these has become a priority objective in urban planning and management strategies, with the aim of not only increasing their socio-economic status and international projection but also reaching the highest positional level in a hypothetical world urban hierarchy (TAYLOR and DERUDDER 2016).

In the context of economic and geopolitical rivalry between the Gulf countries, Dubai, Abu Dhabi and Doha, three of the most outstanding exponents where globalisation is manifested in the region have been focusing in recent decades on their economic diversification beyond the exportation of hydrocarbons. The objective, among others, is to present themselves to the world as attractive destinations for business, investment, international trade, and tourism activity (ELLIS 2019). In this commitment, air transport, considered a vector of globalisation and the main mode of transporting people over long distances, acts as a fundamental sector in intensifying international projection and promoting a positive image of these three international destinations. In these three cases, urban leaders focus decisively on this sector through their airlines-airports binomials, following the tradition of other quasi-city-states in Southeast Asia. That is the case of Hong Kong and Singapore, among others, that use investments in this mode of transport to favour the attraction of globalised capital flows (ULRICHSEN 2016).

Dubai, Abu Dhabi and Doha have some of the most important airlines in the world, the three major Gulf carriers (Emirates, Etihad Airways and Qatar Airways, respectively). In addition, they have large airports, with an important *hub* function, which provides them with geographically varied and intense connectivity. This connectivity, in SASSEN's (2001) terms, becomes an essential requirement for any city that aspires to acquire the qualification of "global", by developing links (connections) beyond its immediate hinterlands. Therefore, in addition to traditional perspectives to analyse the positioning of cities in the world urban system (such as the economic, political or social dimension, among others), it is necessary to include other perspectives linked to air connectivity. In our opinion, today it is impossible to imagine a city of these characteristics without a large airport nor vice versa, since both elements interact, support and feed each other (DÍEZ-PISONERO 2016).

In this sense, we consider that aviation is a key engine for economic growth in the Gulf region for several reasons that justify its relevance: on the one hand, airlines-airports binomials, which use complementary commercial strategies to strengthen the image and reputation of these cities, by attracting more visitors and facilitating the movement of goods and people; on the other hand, the geostrategic location of this region, between Europe, Asia and Africa, which makes it a key connection point for international air routes.

For this research, the hypothesis presented is based on the following premises: (a) the cities of Dubai, Abu Dhabi and Doha constitute some of the most relevant nodes of globalisation in the Gulf region, whose recent economic diversification allows them not only to climb positions in a supposed world urban hierarchy, but also to strengthen and boost their image on the world stage; (b) in this economic diversification, air transport becomes an indispensable activity for their global positioning and competitiveness by guaranteeing the air connectivity of these destinations with the rest of the world and promoting their soft power and international influence, through their respective air binomials.

Taking these considerations into account, the objectives that will try to validate these premises are the following: (i) to analyse the international positioning of these cities in the world urban system, contrasting international rankings on different themes; (ii) to present the competitiveness strategy of these three destinations, based on the diversification of their energy economy, to strengthen their international positioning, with special attention to air activity; (iii) to evaluate the impact that Gulf airlines and their respective airport *hubs* are having on the different metrics in the international positioning of these cities; (iv) to assess the representativeness of the three airlines and airports, converted into powerful instruments of international influence, which leaders use to strengthen the reputation of these destinations on the world scenario.

To analyse the positioning of these cities in the international sphere, different free-access rankings and/or empirical exercises will be used, prepared by internationally recognised institutions and organisations. Once this positioning has been analysed, the role that air activity plays in their competitiveness will be evaluated and, to do so, the research will use a multi-faceted methodology based on bibliographic review and the analysis and processing of statistical data from air international organisations.

2 Globalisation and Urban Competitiveness

Although the link between globalisation and urbanization processes is not new, it is from the 1970s onwards when the acceleration of the processes of globalisation of capital, work and culture, and the significant effects that this intense globalisation has on cities and urban life around the world is evident (SOJA 2016). Perhaps the technological and transportation revolution, as well as the tertiarisation of the economy, are the factors of globalisation that most favour a radical metamorphosis in the contemporary development of the urban phenomenon. Thus, the process of cumulative growth that urban agglomerations had experienced since the Industrial Revolution is eclipsed not only by the processes of metropolitanisation (thanks to advances in communications), but fundamentally by a concentration of activities linked to the highly specialised tertiary sector, and which in turn is concentrated in the heart of the main global cities (SASSEN 2001).

Many of these cities find their roots in the historic development of trade hubs (WIESE and THIERSTEIN 2016). Historically, major centres of commerce emerged around natural harbours, where maritime trade routes converged to facilitate the exchange of goods, ideas and culture. These trade hubs, exemplified by cities like Hong Kong, Singapore and Dubai, among others, leveraged their strategic locations and access to the sea to become some

of the world's foremost trading cities (CONVENTZ et al. 2016). Today, as we will see later, major airport hubs have taken on a similar role, with global cities now emerging around these logistical centres to capture the economic and competitive advantages that rapid international connectivity affords. The transformation from sea ports to air hubs reflects a broader shift in global trade dynamics, where speed, connectivity, and innovation drive urban competitiveness on the world stage (TAYLOR and DERUDDER 2016).

Nowadays, these global cities emerge as the new decision centres and main catalysts for social growth and development (ZHANG and THILL 2019). Furthermore, they are the spaces in which the key factors are generated to compete for the attraction of residents, tourists, investors and researchers, and have the essential elements that guarantee their progress and well-being. Their uniqueness lies in the fact that they do not function individually, but instead interact reciprocally, forming an interconnected global mesh of strategic sites that emerge as a new geography of centrality, where material and non-material flows now constitute the greatest source of power and competitiveness (BEAVERSTOCK et al. 2002).

Thus, the attraction of flows of all types to cities has become a priority objective in urban planning and management strategies, with the objective of not only increasing their socio-economic status and international projection but also achieving the highest possible hierarchical level in a hypothetical world urban hierarchy (DÍEZ-PISONERO 2016). In this way, a narrative of rivalry between urban spaces is generated that contributes to the proliferation of rankings and empirical exercises within the framework of an archipelago economy (VELTZ 1996), to define the competitive positioning of cities based on the available goods and services, as well as the interaction between them. Thus, an important body of theory and discussion appears around the most appropriate parameters to define a global city using, in addition, different methodological approaches (DERUDDER 2006).

From an academic point of view, these rankings are important because they allow us to understand the structure of the territory and identify the cities that polarise all types of "mobilities", fundamentally those linked to the current economic phase of globalised capitalism. However, for years, they have also received certain criticism for the interested use that is sometimes made of them, for commercial, advertising or political purposes, in favour of a neoliberal discourse where the fundamental interest is that a certain city boasts, or, at least seems to have a high rank regardless of the specific conditions of the territories, contributing to a trivialisation of the concept of the city itself (GAGO GARCÍA et al. 2017).

From the thematic point of view, in these empirical works there has been an interest in analysing the competitiveness of cities from an economic perspective, which was considered until recently the "decisive optic for all attempts at academic explanation" (FRIEDMANN 1995, p. 69). This economic approach has focused mainly on the study of headquarters and flows between large multinationals, interpreted as one of the main vectors of economic globalisation (DERUDDER and TAYLOR 2018). One of the main contributions from this productive perspective is the classification offered by the "GaWC Research Group", led by the geographer Peter J. TAYLOR. This group has made a great contribution to the study of global cities by collecting systematic data, and from different dates, on advanced production services companies located in cities (DERUDDER and TAYLOR 2020).

Currently, however, competitive conditions are not based exclusively on traditional aspects such as geographical location or economic-productive representativeness. To compete today to attract residents, tourists, investors and researchers, and have the essential elements that guarantee their progress and well-being, many assets are involved in line with the so-called New Economy (SOJA 2016). This calls for new development models in which knowledge and innovation are put at the service of the city to improve its economic competitiveness, social cohesion and environmental sustainability (SCOTT 2008). Thus, academic concepts such as the so-called smart cities, knowledge-based cities or creative cities appear, where highly qualified and diversified human capital, emblematic symbolic capital, high quality of life or an active, open and tolerant cultural environment, among other "*soft factors*" (HUTTON 2016) become the distinctive elements that can differentiate cities from others through the vindication of cultural identities as a reaction to the homogenising tendencies of globalisation.

Along with these perspectives, other works focus on the analysis of transport and communication flows with different perspectives and with different indicators, in line with the mobility paradigm (GRIECO and URRY 2011). In our opinion, those that focus on air transport networks stand out especially, both due to the volume of their production and the significance of their results (DERUDDER et al. 2016). Some authors consider that air transport has turned out to be a valuable indicator, although not entirely decisive, to evaluate the centrality and organisation of urban systems, by allowing the determination of relationship intensities between pairs of cities and, therefore, establishing hierarchies (CÓRDOBA ORDÓÑEZ and GAGO GARCÍA 2012).

Considering these appreciations, this work will delve into the analysis of communications networks, especially air links, to find the international connectivity of Dubai, Abu Dhabi and Doha. It is argued that the international positioning of the three case studies cannot be understood without aerial activity, whose idiosyncrasy based on their geostrategic location and their expansion policy through the so-called airlines-airports binomials justifies this work.

3 Methodology

To analyse the positioning of the three Gulf cities in the international scenario, different free-access rankings and/or empirical exercises will be used, prepared by internationally recognised institutions and organisations. It is worth noting that the purpose of the organisation that creates the ranking, the variety of methodologies, the criteria for selecting indicators, the weights assigned to the dimensions and, what seems essential to us, the number and disparity of cities included in these lists, mean that the results must be read and interpreted with caution, within the contexts and usefulness for which they have been developed. Recognising this assessment, we consider that these lists will be very useful to offer an x-ray of the competitiveness of these cities in the world urban system.

In this research, in total, nine internationally and academically recognised indices are used that are classified into three categories for a better understanding of the results: (1) economic-productive perspective, (2) multidimensional perspective and quality of life,

and (3) miscellaneous perspective. These three categories will allow a holistic understanding of the positioning of the selected cities in the world urban hierarchy from different points of view. Furthermore, for each index, three time points are offered, depending on the availability of the source, with the aim of being able to evaluate an evolution and/or trend of that positioning. For a better understanding of the objectives and methodology used in each index, refer to the respective research. Specifically, the lists used are:

Economic-productive perspective

Top 250 – GaWC Research Group (GaWC). Prepared by the Department of Geography at Loughborough University (UK), it positions cities based on the relationships between advanced production services companies located in the cities, classifying them into four categories that go from best to worst: “alpha”, “beta”, “gamma” and “sufficiency”. For the last ranking carried out in 2020, 250 cities were classified.

Top 119 – Global Financial Centres Index (Long Finance). Published by Long Finance & Financial Centre Futures magazine and produced by Z/Yen in partnership with the China Development Institute (CDI) it constitutes the most authoritative comparison in the world on the competitiveness of the main international financial centres that seek to improve their profile and reputation. The latest publication is made up of 119 cities based on their human capital, business, finance, infrastructure and reputation.

Top 64 – Global Competitiveness Index (IMD). This report has been published by the International Institute of Management Development (IMD, Switzerland) since 1989. Unlike previous ones, it does not descend to the urban scale but instead ranks the 64 main world economies based on their ability to create long-term value, based on several categories, although it prioritises the economic dimension, especially GDP and productivity levels.

Multidimensional category

Top 100 – World Best Cities (Resonance). Its first report dates back to 2015 and it has been published annually since then. It is carried out by the international consulting firm Resonance, which classifies one hundred cities in the world through the lens of three key factors – Livability, Lovability and Prosperity – to define each city’s score.

Top 50 – The Global Cities Outlook (ATKerney). Published by the consulting firm ATKearney, it takes 156 cities around the world and ranks them based on their business activity, human capital, access to information, cultural experiences and political commitment. This classification is updated annually.

Top 195 – Quality of Life Index (Numbeo). It constitutes the largest database at a global level that orders 195 cities based on the levels of quality of life through different variables, such as climatic conditions, the health situation, transport communications, the social and political environment and the presence of violence and crime.

Miscellaneous category

Top 140 – Smart Cities Index (IMD). This report is published annually and is produced by the IMD World Competitiveness Center. It selects 140 global cities and orders them according to their innovation, technological capacity and infrastructure to be considered smart cities.

Top 100 – Euromonitor City Destinations (Euromonitor). The company Euromonitor annually publishes the 100 most important tourist destinations in the world, based on the number of international tourist arrivals. The classification focuses on urban centres and tends to exclude beach and ski destinations that can receive high volumes of visitors.

Top 100 – World airports by number of international passengers (IATA). This list is published annually by the International Air Transport Association (IATA). Unlike other rankings of national/domestic airports, it will allow us to approach the so-called interconnection airports with an important hub function, which will be essential to understand the case studies of this research.

Once the global positioning of the cities considered has been analysed, we proceed to evaluate the role that air activity plays in their competitiveness. Their representativeness derives from the policies undertaken by their respective governments in their airlines and airports, as well as from the fact that two thirds of the world's population are located within an eight-hour radius of the Gulf region, a very competitive distance for air transport. To analyse this competitiveness of aviation in this region, a multi-faceted methodology will be used based on bibliographic review and the analysis and processing of statistical data from international organisations.

4 Dubai, Doha and Abu Dhabi in the World Urban System

Dubai and Abu Dhabi, in the United Arab Emirates (UAE), and Doha, in Qatar, are three of the most outstanding cases where globalisation is manifested in the Gulf countries, a geostrategic region that is located at the intersection of Europe, Asia and Africa, and which brings together six Muslim and Arab countries, grouped since 1981 in the Cooperation Council for the Arab States of the Gulf.

Under British influence in the 1950s, the economies of these three cities depended heavily on fishing and pearl mining, with small population sizes. It was from the 1970s, now independent from the United Kingdom, when a significant economic transformation began. This, with the exploitation of their hydrocarbon reserves, such as oil and gas, attracted a young and foreign population, which have contributed to their rapid growth and development in recent decades (ALKAABI 2016).

The three cities are governed by different monarchies, personalised by different Arab Emirs, who are focusing on the diversification of their economies from the beginning of the 21st century, towards key sectors such as commerce, technology, financial services,

tourism and aviation, using knowledge and sustainability as the new emblems of the new economic and social development (ULRICHSEN 2016).

This economic diversification is documented in their different plans, such as the “Abu Dhabi Economic Plan 2030 Vision”, the “Qatar Vision 2030” and the “Dubai Industrial Strategic Plan 2030”. To implement it, sovereign funds, such as the Investment Fund of Dubai (ICD), of Abu Dhabi (ADIA) and of Qatar (QIA) play a strategic role, providing a long-term source of income and helping to mitigate the effects of oil price volatility.

This diversification is precisely what has contributed to the greater international competitiveness of the three cities in the global urban hierarchies and, consequently, to a better positioning in the world urban system, as evidenced by the evolution experienced in some of the urban rankings with the greatest international impact (Table 1).

Economic-Productive Perspective	Top 250 – GaWC			Top 119 – Global Financial Centres Index (Long Finance)			Top 64 – Global Competitive Index (IMD) (*)		
	2000	2010	2020	2015	2019	2022	2018	2019	2023
Dubai	#53	#9	#7	#16	#12	#17	#27	#25	#10
Abu Dhabi	#114	#83	#78	#28	#26	#31	#27	#25	#10
Doha	#175	#119	#64	#22	#42	#65	#30	#29	#12
Multi-Dimensional Perspective and Quality of Life	Top 100 – World Best Cities (Resonance)			Top 50 – The Global Cities Outlook (ATKerney)			Top 195 – Quality of Life Index (Numbeo)		
	2017	2019	2023	2016	2019	2022	2015	2020	2023
Dubai	#22	#9	#6	#37	#32	#11	#39	#97	#46
Abu Dhabi	–	#40	#25	–	#20	#9	#49	#70	#24
Doha	#79	#44	#36	–	–	–	#57	#88	#98
Miscellaneous Perspective	Top 140 – Smart Cities Index (IMD)			Top 100 – Euromonitor City Destinations (Euromonitor)			Top 100 – World airports by international passengers (IATA)		
	2019	2020	2023	2014	2017	2022	2014	2018	2022
Dubai	#45	#43	#17	#7	#6	#2	#1	#1	#1
Abu Dhabi	#56	#42	#13	–	#99	#24	#30	#23	#17
Doha	–	–	#59	#64	#64	#58	#20	#18	#8

(*) This ranking offers the results at the country level and not at the city level.

Source: Own elaboration. Explanation of the rankings: see Chapter 3.

Table 1: Evolution of the positioning of Dubai, Doha and Abu Dhabi in different international rankings.

Without a doubt, Dubai has been a pioneer in the region in this transformation and international recognition. Apart from the oil resources, elites have adopted other diversification strategies from the very beginning of its quasi-sovereignty, following an urban marketing strategy on a large scale similar to other “successful” entrepreneurial city-states such as Singapore (HENDERSON 2014). In this diversification, growing foreign investment has played a key role, favoured by a tax-free regulatory framework, which has boosted its economic-productive dynamism and turned it into an important business centre. This is evident from the publication of the GaWC, one of the most recognised classifications in the academic field when measuring the economic globality of cities. In 2000, the city was ranked #53 in the world and, in just two decades, it has risen to the top-10 in the world.

This economic success is also evident in the rest of the indices, such as “The Global Cities Outlook” and the “Global Financial Centres Index”, which show the city’s upward economic trend in recent decades. Due to this, Dubai has experienced one of the most impressive urban transformations in the world in a short period of time, since from being a relatively small and little-known city, it has acquired a global projection in the world urban system, consolidating itself as the global city par excellence of the Gulf (MARCHAL 2004).

After its success, the model has been imitated by other (quasi) city-states in the region, such as Abu Dhabi and Doha, which also opted for diversification into non-oil sectors. In just a few years, the appearance of both in these rankings has become widespread, experiencing sustained growth, although always in lower positions than Dubai. For this reason, there is consensus in calling them emerging global cities (TAYLOR and DERUDDER 2016).

Like Dubai, Abu Dhabi has improved its position in the GaWC ranking, but it is doing so more slowly and with less intensity. In 2000, it was ranked #114 and it has reached the Beta+ category (#78) in the most recent list. In the rest of the indices, this secondary position with respect to Dubai and a positive evolution can also be observed, except in the “Global Financial Centres Index”, in whose latest available index it declines some positions when taking the year 2022 as a reference (Covid-19 crisis). Doha has also seen rapid growth in the economic rankings considered, although its advancement has been even more recent compared to Dubai and Abu Dhabi. Its upward trend is also widespread, even surpassing Abu Dhabi in some reports, such as the GaWC. In both cases, not only have they been the centres of the oil industry of their respective countries, but also their economic diversification that has turned them into important centres of commerce and finance, with special attention to the tourism activity, sports and entertainment industry (ALKAABI 2016).

If the analysis stops at the multidimensional perspective, with special attention to the social dimension and quality of life (“World Best Cities” or “The Global Cities Outlook”), the leadership of Dubai to attract, retain and generate capital flows is evident, and, to a lesser extent, in Doha and Abu Dhabi. However, in some cases, the latter two occupy more relegated positions or even do not appear in some years, either because they were not previously selected in the preparation of these lists or, having been selected, they do not reach sufficient statuses in these hierarchies. This same reflection occurs in other indices of great

global recognition, such as “Cities of opportunities” (PWC) or “Global Power City Index” (MoriMF), which have not been used in this research because they do not present Doha or Abu Dhabi in their results.

Generally, in these multidimensional classifications where the political, social and habitability perspectives have a greater weight, more relegated positions are evident with respect to the economic-productive perspective. This decline is even more evident in the quality-of-life ranking (Numbeo), since none of the three cities is positioned among the top 20 in the world. This is influenced, among other reasons, by the political tensions present in the region, as well as the conservative habits behaviour present in society, even in Dubai, whose society is relatively liberal and cosmopolitan. Also, this quality of life has been overshadowed by environmental factors, since the extremely hot climate can be a challenge for the development of certain activities.

Despite this decline in quality-of-life ranking, these cities are experiencing an unquestionable urban competitiveness. This is undoubtedly influenced by the aforementioned diversification, which, in all three cases, is clearly focusing on knowledge and innovation as new driving forces of urban development, in line with the postulates of the New Economy 2008. Thus is evidenced by the “Smart Cities Index” (IMD), which reveals the growing reputation of these cities in talent, human capital and technology.

Tourism activity is also playing an essential role in improving the global image of these destinations. The authorities have not stopped investing in the celebration of sporting events and in the construction of high-quality tourist infrastructure, such as luxury hotels, shopping centres and theme parks, which are promoted as tourist attractions in themselves, where the global-local, the traditional-modern and the religious-secular constantly interact (HENDERSON 2014). This would explain, among other reasons, the growing evolution of international tourists (Euromonitor International).

However, to attract investment, finance, tourists, talent, foreign capital and flows of all types, in addition to the implementation of favourable regulatory frameworks, a very solid air activity is required to facilitate these movements. As shown by the ranking of the most important airports in the world by number of international passengers (IATA), the three cities occupy very prominent positions, with outstanding evolution in recent years. Dubai stands out because it has been in first position in the world since 2014, when it surpassed London-Heathrow. This, without a doubt, involves the determined commitment of the Emirati and Qatari authorities to the aviation sector, which seek to convert their respective airlines and airports into important connection centres and destinations for tourism and international business. This commitment is decisive to understand the rise of these cities in the urban hierarchies, thus justifying a more in-depth analysis of their air expansion strategy in the global air system.

5 Airlines-Airports Binomials in the International Positioning of Dubai, Doha and Abu Dhabi

British influence has been fundamental in the development of the Gulf emirates and their airlines. In the 19th century, political non-aggression agreements were established that pro-

vided legitimacy to the ruling families and allowed them to exert power and control over the new political entities. Later, in the 1930s, the British established airport infrastructure in Sharjah, allowing Imperial Airways (predecessor of British Overseas Airways Corporation) to operate flights in the Gulf and therefore initiate air activity in the region (LEBEL 2019).

Since then, aviation in the UAE and Qatar has not ceased, although it is from the end of the 20th century when it has experienced exponential growth. This is why government authorities are focusing on their airline pairings to turn their respective airlines into worldwide leaders and their respective airports as important air connection centres. These purposes are strengthening the position of the Gulf region as an important global aviation centre since, from being considered an intermediate section of the east-west routes, the region has come to occupy a central place with great global projection (AQUILINA-SPAGNOL et al. 2020). The shift of the international economic centre of gravity from the West to the East shows a scenario where the Middle East (between Europe, Africa and Asia-Pacific) has taken a greater role in the aviation world, starring in the aerial version “of the new Silk Road” (The Economist 2010).

In addition to its geostrategic location, a hinge between the largest markets in the air transport sector worldwide (Asia-Pacific and Europe), it is of special interest because two thirds of the world’s population live eight hours from the region, a very competitive distance for air transport and, therefore, for the main airlines in the region, specialised in a market niche where flights last between four and ten hours, maximising fuel efficiency and reducing costs (CONDE 2018).

Among these companies, those from these three cities stand out especially: Emirates and Etihad Airways, based in Dubai and Abu Dhabi, respectively, and Qatar Airways, in Doha. Their representativeness is so notable that, academically, they have been called the three major carriers of the Gulf (ELLIS 2019), of the Arabian Gulf (O’CONNELL 2011) or of the Middle East (FAN and LINGBLAD 2016). They are also referred to as the ME3 carriers.¹⁾

5.1 Emirates, Qatar Airways and Etihad Airways: The Three Middle East (ME3) Carriers

Founded in 1985, 1993 and 2003 by their respective states, Emirates, Qatar Airways and Etihad Airways have quickly become some of the largest and most recognised airlines in the world, serving all five continents. They constitute the most important official flag airlines of their countries and are among the most important in the world, especially Emirates and Qatar, positioned in the Top-10 worldwide based on different metrics (Table 2). These numbers show the magnitude of these airlines, which have today become powerful instruments of international influence.

¹⁾ In the region, there are other airlines of great interest that operate in the same business niche, such as Turkish Airlines (Turkiye). Others have also contributed to economic growth, tourism and trade in their respective countries, although they have less importance than the previous ones, such as Saudia (Saudi Arabia), Gulf Air (Bahrain), Kuwait Airways (Kuwait) or Oman Air (Oman), among others.

Range	a) By scheduled passenger-kilometres flown		b) By tons-kilometres of scheduled load (millions)		c) By number of countries served	
	Airline	2021	Airline	2021	Airline	2021
1	American Airlines	237,471	FedEx Express	20.66	Turkish Airlines	129
2	Delta Air Lines	195,312	Qatar Airways	16.10	Lufthansa	105
3	United Airlines	178,499	UPS Airlines	15.53	Air France	85
4	Southwest Airlines	166,631	Emirates SkyCargo	11.84	Qatar Airways	83
5	Ryanair	120,563	Korean Air Cargo	10.43	Emirates	77
6	China South Airlines	109,309	Turkish Cargo	9.22	British Airways	75
7	Emirates	93,799	Cargolux	8.58	United Airlines	73
8	Qatar Airways	91,551	Atlas Air	8.44	KLM	66
9	China East Airlines	88,677	Cathay Pacific Cargo	8.21	Delta Airlines	57
10	Turkish Airlines	86,701	China South Airlines	8.08	Aeroflot	52

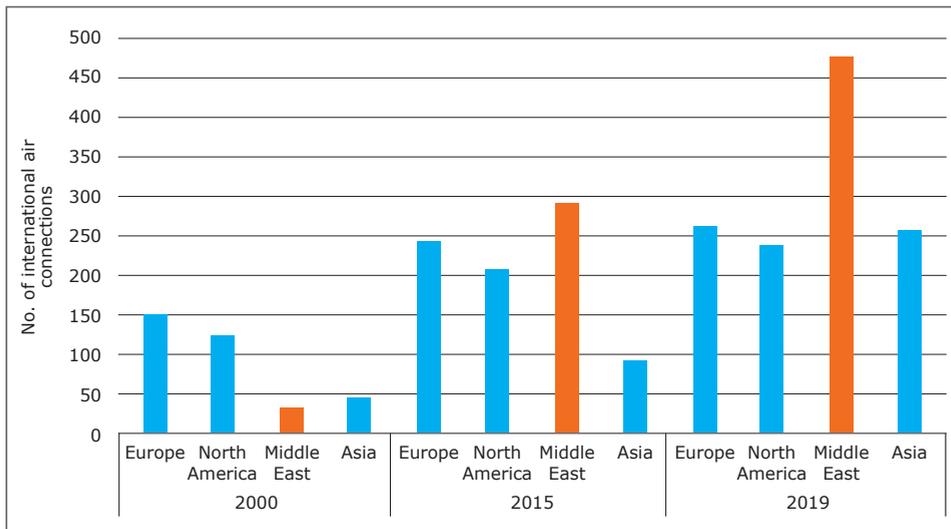
Range	d) By aircraft capacity (million scheduled seats)		e) By brand value (USD bn)		f) By economic profitability (millions USD)	
	Airline	2022	Airline	2022	Airline	2022
1	American Airlines	180	Delta Air Lines	8,922	Qatar Airways	1,514
2	United Airlines	170	American Airlines	8,488	Ryanair Holdings	1,477
3	Delta Air Lines	170	United Airlines	7,782	Int. Airlines Group (IAG)	1,350
4	China South Airlines	115	Emirates	5,104	Delta Air Lines	1,318
5	Emirates	109	Southwest Airlines	4,703	Singapore Airlines	995
6	China East Airlines	100	China South Airlines	3,229	Lufthansa Group	854
7	Air China	96	China East Airlines	2,852	United Airlines	737
8	Turkish Airlines	71	Air China	2,603	Southwest Airlines	539
9	Lufthansa	69	Air Canada	2,584	China Airlines	400
10	Qatar Airways	56	Qatar Airways	2,470	EVA Airways	400

Sources: Cirium (2021), AirCargoNews (2022), Flight-Delayed (2021), FOSTER (2023), Brand Finance (2023), Haqqi (2023). Own elaboration.

Table 2: Top 10 airlines in the world based on different airline metrics (2021 or 2022, depending on variables).

Nowadays, the ME3 carriers, despite their domestic networks are almost non-existing, lead the world market share positioning themselves as a benchmark in the sector, especially in long-haul flights (O'CONNELL and BUENO 2018). According to the most recent figures, these represent 6.5 percent of international passenger traffic worldwide and 13.6 percent of cargo movement (VILLAMIZAR 2022). This has been obtained despite the extreme economic-political rivalry between the member states of the Gulf Cooperation Council and the fierce competition between regional air players where a fourth company, Riyadh Airlines, will be added in 2025. According to the Riyadh Vision 2030 strategy, Saudi Arabia intends to imitate the Emirati and Qatari models and strengthen its aviation to change its image abroad and boost the tourism sector.

Their connectivity networks are expanding so rapidly that they are some of the fastest growing airlines in the world (AQUILINA-SPAGNOL et al. 2020). Currently, they are structurally changing international traffic flows, offering approximately twice the intercontinental air connectivity (Figure 1) and the international monthly airline capacity (Figure 2) compared to their European, North American and Asian competitors. These figures not only highlight the growth of both metrics in the last twenty years, but also the *sorpasso* experienced with respect to other world regions, thanks to their expansion strategy that is based on several actions.

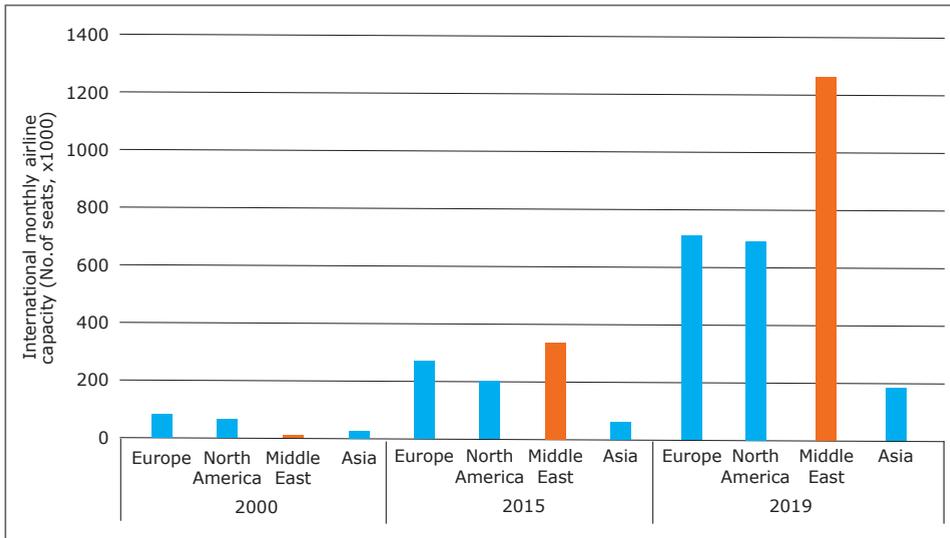


Note 1: Airlines considered: British Airways, Air France and Lufthansa Group (Europe); Delta Airlines, American Airlines and United Airlines (North America); Emirates, Qatar Airways and Etihad Airways (Middle East); Cathay Pacific, Korean Air and Singapore Airlines (Asia).

Note 2: To emphasise the international nature of this metric, international air connections belonging to the origin region have been excluded.

Source: OAG-International (2000–2019). Own elaboration, own design.

Figure 1: Evolution of the international air connections of the three main airlines in Europe, North America, the Middle East and Asia (2000–2015–2019).



Note 1: Airlines considered: British Airways, Air France and Lufthansa Group (Europe); Delta Airlines, American Airlines and United Airlines (North America); Emirates, Qatar Airways and Etihad Airways (Middle East); Cathay Pacific, Korean Air and Singapore Airlines (Asia).

Note 2: To emphasise the international nature of this metric, international seats belonging to the origin region have been excluded.

Source: OAG-International (2000–2019). Own elaboration, own design.

Figure 2: Evolution of the international monthly airline capacity (seats) of the three main airlines in Europe, North America, the Middle East and Asia (2000–2015–2019).

Firstly, the financial support by the state, across multiple strategic areas should be highlighted, with full government ownership (*flag airlines*) providing the ME3 carriers direct access to resources that many airlines lack (Table 3). Initial capital investments, sustained financial backing, government-backed debt guarantees and state-funded airport infrastructure, among other factors, have positioned these airlines as dominant players in global aviation.

Traditional airlines in Europe, the United States and Asia believe that Gulf companies are distorting competition in the aviation industry by receiving unfair state subsidies, which allow them to offer lower fares and expand rapidly in the global market (DOUGLAS 2019). However, they deny these accusations and argue that they do not receive direct state subsidies, but have obtained capital investments from their governments, like many other airlines around the world, and that their success is due to the expansion model adopted (O'CONNELL and BUENO 2018).

Secondly, the liberal market conditions in the Gulf region have been instrumental in the international growth of the ME3 carriers, allowing them to capitalise on favourable economic policies, access a diverse global workforce, and operate efficiently in competitive international markets (Table 4). All three airlines benefit from a 0 percent corporate

Factor	Emirates (UAE)	Qatar Airways (Qatar)	Etihad Airways (UAE)
State ownership	100 % owned by the Government of Dubai (Investment Corporation of Dubai)	100 % owned by the Government of Qatar (Qatar Investment Authority, QIA)	100 % owned by the Government of Abu Dhabi (Abu Dhabi Government through Mubadala Investment Company)
Initial capital investment	USD 10 billion government investment at establishment (1985)	USD 3 billion initial capital from the government (1993)	USD 2 billion initial capital from the government (2003)
Financial support since establishment	Received over USD 50 billion in various forms of state support	Estimated USD 7.4 billion in state support (2017–2022)	Estimated USD 30 billion in government funding and guarantees
COVID-19 financial aid	USD 2 billion government bailout during the pandemic (2020)	USD 2 billion government assistance during the pandemic	USD 1.6 billion financial support package during the pandemic
Debt guarantees	Government guarantees on USD 2 billion in loans	Government support includes guarantees on USD 3 billion loans	Government support includes guarantees on USD 3 billion loans
Key infrastructure investments	Up to USD 12 billion investment in Dubai International Airport (DXB) – Expansion of Terminal 3 (dedicated to Emirates)	Up to USD 17 billion investment in Hamad International Airport (state-of-the-art hub for Qatar Airways)	Up to USD 6.8 billion expansion of Abu Dhabi International Airport (Midfield Terminal) funded by the government

Sources: IATA (2023), Government of Dubai (2022), State of Qatar (2022), Etihad Airways (2022). Own elaboration.

Table 3: Empirical data of the financial support by the state in the ME3 carriers.

tax rate, subsidised fuel prices, expatriate workforce and tax-free salaries for staff. Also, it should be highlighted how open-skies policies have expanded recently allowing airlines to operate without restrictions in terms of capacity and rates on designated routes.

In addition to bilateral agreements, efforts have also been made towards a pan-regional liberalisation agreement, known as the “Open Aviation Area” (OAA), which seeks to establish a single air transport market in the Middle East. Although it is still in the initial phases, the incipient regional liberalisation has allowed not only greater capacity and air connectivity, but also the emergence of low-cost airlines, such as Air Arabia, Jazeera Airways or the Emirates subsidiary, Flydubai, which have pressured governments in the region to open their skies and allow greater competition in the market (DOUGLAS 2019).

Thirdly, the significant South Asian migrant labour population in the Gulf, particularly from countries like India, Pakistan, Bangladesh, Sri Lanka, and Nepal, is a crucial customer base for the ME3 carriers, creating sustained demand for air travel between the

Factor	Emirates (UAE)	Qatar Airways (Qatar)	Etihad Airways (UAE)
Corporate tax	0 % corporate tax	0 % corporate tax	0 % corporate tax
Fuel subsidies	Government provides subsidised fuel costs	Government provides subsidised fuel costs	Government provides subsidised fuel costs
Open-skies policies	120+ bilateral agreements enabling free flight operations	Signed open-skies agreements with 130+ countries	80+ bilateral agreements, especially in Asia and Europe
Expatriate workforce	90 % expatriates out of 60,000 employees	45,000+ employees from over 100 nationalities	Majority expatriate workforce, including management roles
Tax-Free salaries for staff	Tax-free salaries of up to USD 200,000 for pilots and staff	Tax-free salaries of up to USD 150,000 to USD 200,000 for pilots	Tax-free salaries for all expatriate staff

Sources: AUS DEM MOORE et al. (2018), IATA (2022), GCC (2023), World Bank (2023). Own elaboration.

Table 4: Empirical data of the liberal market conditions for the ME3 carriers.

Gulf and South Asia. This migrant population is met by a high frequency of flights and a high traffic volume, as Table 5 refers. Also, competitive airfares, loyalty programmes and tailored services are factors that demonstrate how this migrant labour provides a stable, captive customer base that drives the international growth of these airlines.

Additionally, the three airlines have invested heavily in the acquisition of modern and long-range fleets to offer long-haul flights, which has allowed them to increase their seating capacity and offer flights to more destinations. These aircrafts are fuel efficient, have a high passenger capacity, and are specially designed to provide comfort and convenience (AQUILINA-SPAGNOL et al. 2020). Emirates limited its fleet in the recent past to two types of wide-body aircraft, the Airbus A380 and the Boeing B777. In 2024, the airline has ordered some A350s and B787s and still ordered new B777s to replace the A380s in the next 10 to 20 years as the A380 possibly is not built anymore. Etihad and Qatar Airways operate more diverse fleets, with a mix of wide- and narrow-body aircraft (Table 6).

Likewise, the three companies have invested in marketing strategies based on “sport diplomacy”, a fundamental pillar of their development plans that materialises in using sport as a diplomatic and promotional tool with which they aim to promote their soft power, strengthen their brand and increase their global visibility (FETAIS et al. 2020). To this end, the three airlines are involved in international sports alliances and sponsorship agreements with important teams around the world, either to display their names on the respective official kits, or to transport these clubs by air (O’CONNELL 2011). Today, they constitute unmistakable icons in the most important sporting events in the world, establishing themselves as official sponsors that range from football and Formula 1 to tennis

Factor	Emirates (UAE)	Qatar Airways (Qatar)	Etihad Airways (UAE)
South Asian migrant population	Over 3.5 million Indians, 1.2 million Pakistanis, and 500,000 Bangladeshis in the UAE	700,000 Indians, 400,000 Nepalese, 350,000 Bangladeshis in Qatar	Significant number of South Asians in Abu Dhabi, around 1 million
Flight frequency to South Asia	Over 170 weekly flights to India	Over 100 flights per week to India	Serves 10 destinations in India
Air traffic volume	In 2023, Emirates carried over 4.5 million passengers between UAE and India	Over 20 % of international passenger volume from India	Approximately 40–45 % of traffic from South Asia
Economic airfares	Competitive pricing and high-capacity aircraft	Offers competitive pricing for low-income migrants	Affordable fares on key routes
Loyalty programmes	Emirates Skywards offers extra baggage allowance	Qatar Airways Privilege Club tailored for South Asians	Frequent flyer programmes with regional perks
Cultural tailoring	Multilingual crew, South Asian meal options	Catering to South Asian tastes and preferences	Regional cuisine and multilingual services

Source: GCC (2023), World Bank (2023), Emirates (2023), Qatar Airways (2023), Etihad Airways (2023). Own elaboration.

Table 5: Empirical data of the South Asian migrant labour as captive customers for the ME3 carriers.

Airline	In service	On request	Average fleet age (years)
Emirates (264 in service and 12 new requests)	144 Boeing 777; 119 Airbus A380	11 Boeing 777 1 Airbus A350	10
Qatar Airways (253 in service and 5 new requests)	29 Airbus A320; 11 Airbus A330 58 Airbus A350; 8 Airbus A380 9 Boeing 737; 2 Boeing 747 92 Boeing 777; 44 Boeing 787	2 Airbus A350 1 Boeing 777 2 Boeing 787	8.5
Etihad Airways (91 in service and 4 new requests)	14 Airbus A320; 9 Airbus A321 5 Airbus A350; 10 Airbus A380 13 Boeing 777; 40 Boeing 787	1 Boeing 777 3 Boeing 787	7.9

Source: Emirates (2023), Qatar Airways (2023), Abu Dhabi Aviation (2023), Planespotters (2023), Own elaboration.

Table 6: Operational and in-demand fleet of the three Gulf companies (2023)

and golf (FIFA, UEFA, the Premier League, the Formula 1, ATP tours including all four Grand Slams and world-class golf tournaments, among other events).

Along with the above, the investment that the three actors are making in improving the travel experience to reach the highest position in an extremely competitive industry stands out, offering an excellent air service. Far from diminishing, it has been consolidated in the two main companies, as can be seen from the results obtained in recent years from the Skytrax publication (Table 7)²⁾ Qatar Airways and Emirates are entrenched in

Rank	2012	2013	2014	2015	2016
1	Qatar Airways	Emirates	Cathay Pacific Airways	Qatar Airways	Emirates
2	Asiana Airlines	Qatar Airways	Qatar Airways	Singapore Airlines	Qatar Airways
3	Singapore Airlines	Singapore Airlines	Singapore Airlines	Cathay Pacific Airways	Singapore Airlines
4	Cathay Pacific Airways	ANA All Nippon Airways	Emirates	Turkish Airlines	Cathay Pacific Airways
5	ANA All Nippon Airways	Asiana Airlines	Turkish Airlines	Emirates	ANA All Nippon Airw.
> 5	Etihad Airways (#6) Emirates (#8)	Etihad Airways (#7)	Etihad Airways (#9)	Etihad Airways (#6)	Etihad Airways (#6)
Rank	2017	2018	2019	2021	2022
1	Qatar Airways	Singapore Airlines	Qatar Airways	Qatar Airways	Qatar Airways
2	Singapore Airlines	Qatar Airways	Singapore Airlines	Singapore Airlines	Singapore Airlines
3	ANA All Nippon Airways	ANA All Nippon Airways	ANA All Nippon Airways	ANA All Nippon Airways	Emirates
4	Emirates	Emirates	Cathay Pacific Airways	Emirates	ANA All Nippon Airways
5	Cathay Pacific Airways	EVA Air	Emirates	Japan Airlines	Qantas Airways
> 5	Etihad Airways (#8)	Etihad Airways (#15)	Etihad Airways (#29)	Etihad Airways (#21)	Etihad Airways (#12)

Source: Skytrax Airlines (2012–2022). Own elaboration.

Table 7: Evolution of the Skytrax ranking in the last 10 years (2012–2022), Top-5 airlines.

²⁾ Skytrax is a reference organisation for rating international air transport in terms of quality based on an annual survey of 41 indicators that evaluates the products and services of the different airlines and airports in the world.

the world's top-5 and, although Etihad is placed in #12 position, the strategy established in the three companies is evident, which can be considered "luxury", focused on offering an experience of high standards of quality and comfort, in on-board service and entertainment (FETAIS et al. 2020).

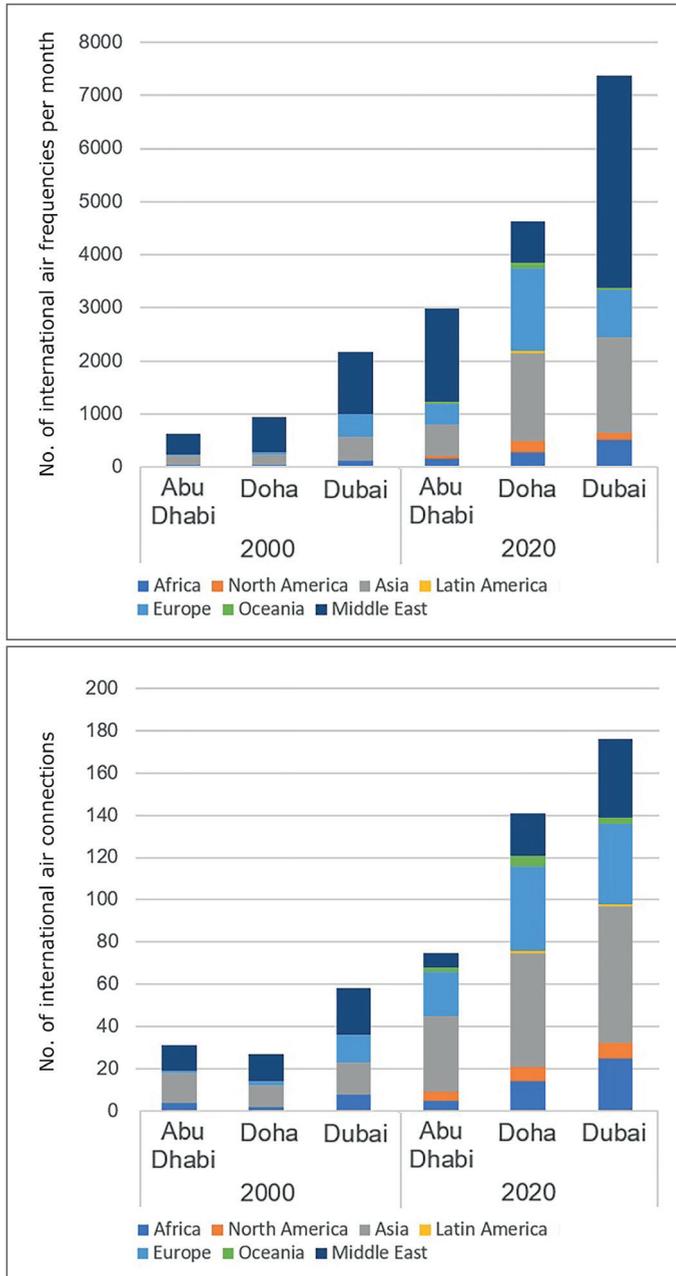
However, despite this similar expansion strategy for the three cases, some notable differences are also observed. Currently, Emirates is not a member of any airline alliance, preferring to maintain its independence and registering codeshare agreements with several airlines, which allow it to expand its coverage to many more destinations (SQUALLI 2014). Etihad adopted a growth strategy based on the acquisition of stakes in other airlines, such as Air Berlin and Alitalia, which were finally bankrupt. Now, Etihad is preparing for a new life-a renaissance based on resuming the course of investment with stronger partnerships and a renewed understanding with arch-rival Emirates (SIMMINI 2023). Qatar is the only Gulf company to join one of the major airline alliances; specifically, *Oneworld*, which allows it not only greater access to the international market, but also to build its global network with the help of other large airlines. The company has also continued to progressively increase its codeshare agreements, demonstrating its goal of pursuing broad and considerable international cooperation (HORTON 2020).

5.2 Connectivity, Expansion and Quality: The Gulf Airport Hubs

On the ground, Gulf airlines have close relationships with their respective airports. Backed by their governments, which have provided financial support and invested in their expansion, the three companies have focused on developing large strategic hubs, turning them into important international transfer points for passengers, taking advantage of their geostrategic location. Thus, Emirates has established its hub in Dubai, Qatar Airways in Doha and Etihad Airways in Abu Dhabi.

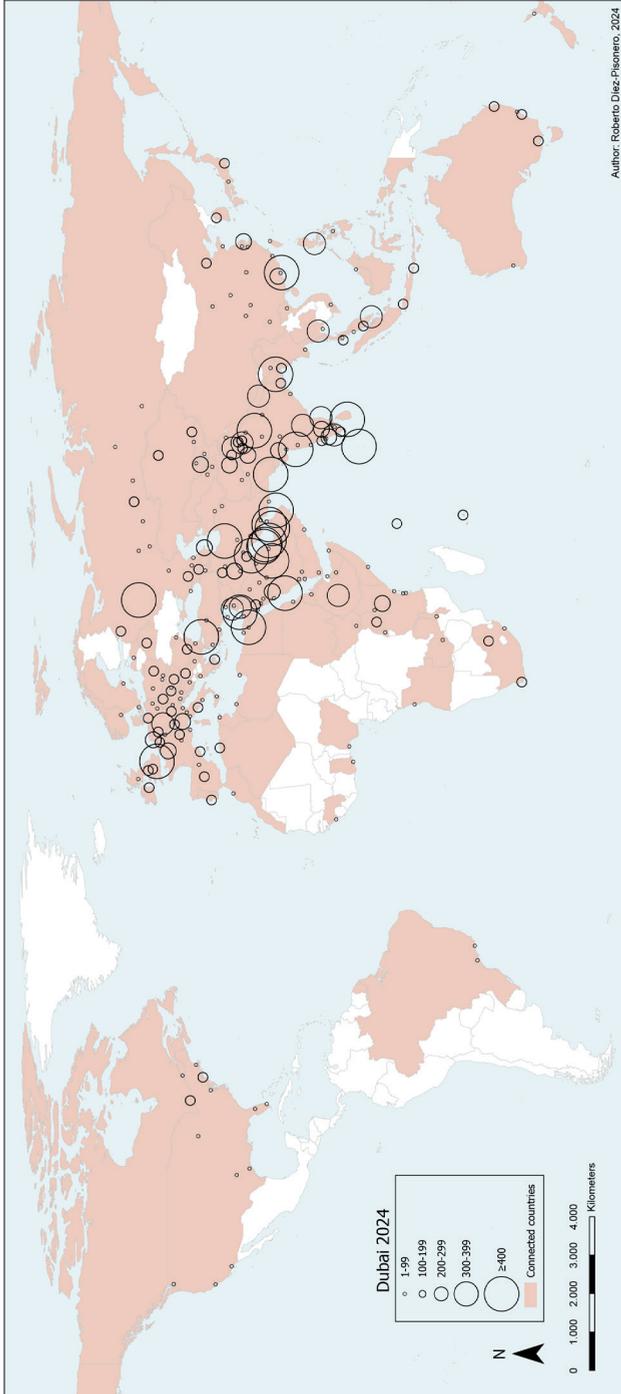
In all three cases, although at different scales, their strategies are based on the "*hub and spoke*" model, which not only allows these airports to connect with other global cities, but also collects traffic from various cities to subsequently redistribute it through their network of long-distance routes. This strategy has been fundamental to their success, challenging the leadership position of Western airlines and airports (DRESNER et al. 2015). This "*hub and spoke*" strategy, coupled with the development of aviation in the region and the growth experienced by the flag airlines themselves, has allowed the three hubs to experience a notable evolution in the main air analysis metrics, such as the international air connections and the number of international frequencies per month (Figure 3).

Both variables have not only increased in number over the last 20 years, but also in spatial diversity, with a notable presence in all major world regions, especially in Europe, Asia and North America (Figures 4–6). Precisely, these air connections and frequencies beyond their immediate hinterlands will be what ostensibly contribute to the global positioning of these cities in the world urban system, by offering geographically varied (in terms of international air links) and intense connectivity (in terms of international air frequencies), in accordance with the approaches of SASSEN (2001/1991).



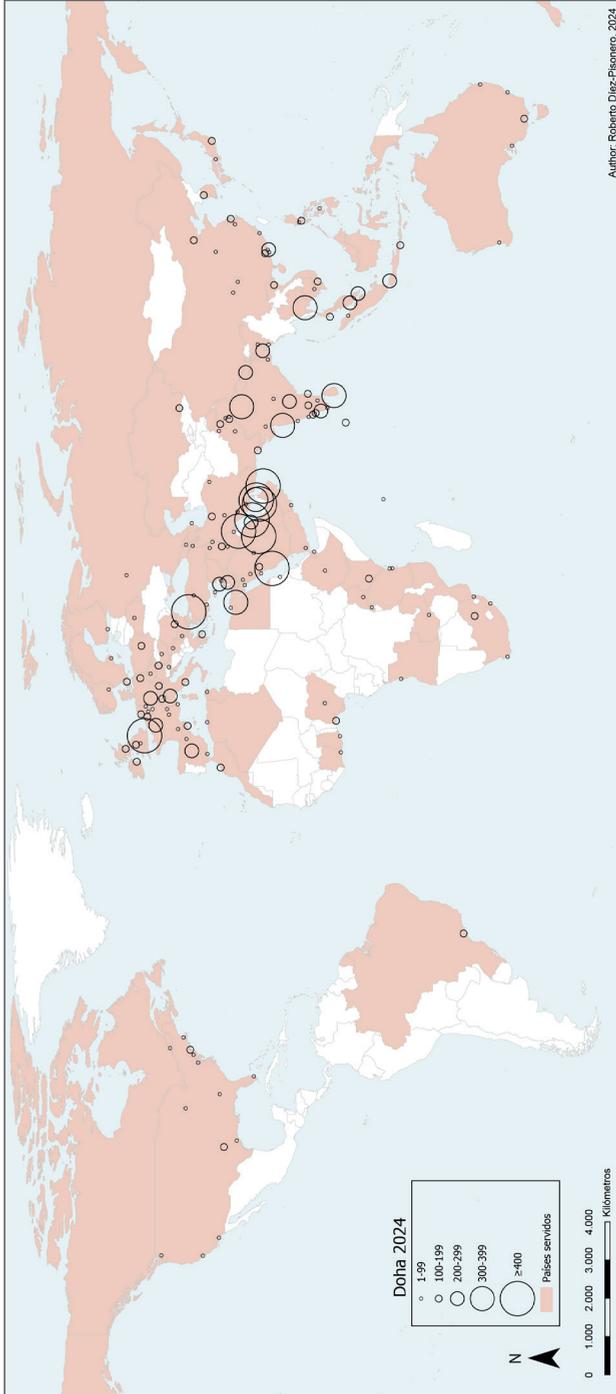
Source: OAG-International (2000–2020). Own elaboration.

Figure 3: International frequencies per month (above) and direct international air connections (below) from Abu Dhabi, Doha and Dubai (2000–2020).



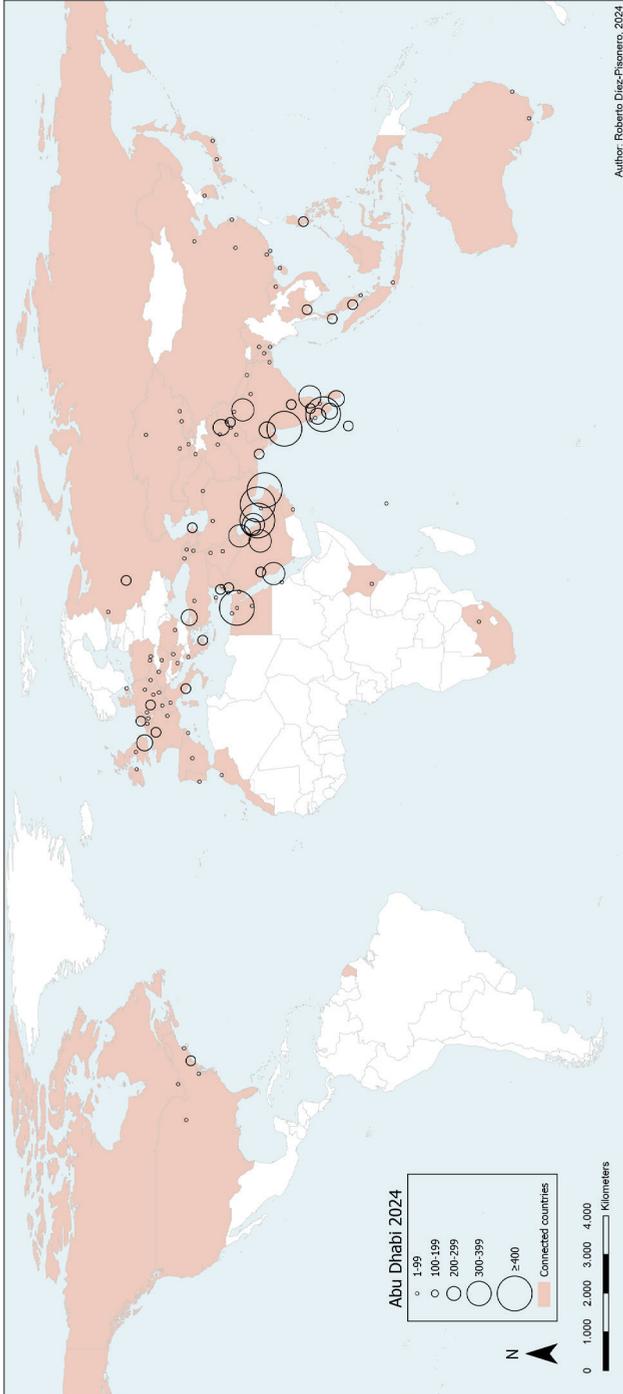
Source: OAG-International (2024, April). Own elaboration, own design

Figure 4: Monthly direct international air frequencies and connected countries from Dubai (April 2024)



Source: OAG-International (2024, April). Own elaboration, own design

Figure 5: Monthly direct international air frequencies and connected countries from Doha (April 2024)



Source: OAG-International (2024, April). Own elaboration, own design

Figure 6: Monthly direct international air frequencies and connected countries from Abu Dhabi (April 2024)

Although Dubai is the most obvious example, the truth is that the investment strategy by government leaders in their flag airline and their respective airport infrastructure is being replicated throughout the Gulf region. The need to have adequate airports that guarantee air connectivity with the rest of the world justifies the high investments that the authorities have directed in the improvement, expansion and/or new construction of these facilities. These projects are contributing to the growth of air traffic in the region and in contrast with European hubs, where time restrictions and environmental regulations limit operations and delay (or in the case of Vienna, reject) expansion plans. The three airports are expected to offer a combined capacity in the region of more than 350 million passengers by 2030 (several sources, see Table 8).

City	Project	Airlines operating base	Cost (USD billions)	Passenger capacity (mio)
Dubai (2008)	New Terminal 3 at Dubai International Airport	Emirates	4.5	70
Dubai (2027)	Dubai-Al Maktoum Airport Expansion	Emirates	10.0	160
Doha (2014)	New Hamad Airport	Qatar Airways	11.0	30
Doha (2023–2024)	Hamad Airport Expansion	Qatar Airways	0.3	70
Abu Dhabi (2009)	New Terminal 3	Etihad	6.8	20
Abu Dhabi (2023)	New Terminal A (Midfield)	Etihad	3.0	45

Source: Several sources. Own elaboration

Table 8: Recent airport development plans in Dubai, Doha and Abu Dhabi.

But we must not forget that airports, in addition to fulfilling aeronautical functions of connection and movement, also play a growing role in the constitution, consolidation and maintenance of large cities, as they are symbolic facilities, linked to the current leisure-consumption society, which are travelled by millions of users (CONVENTZ and THIERSTEIN 2016). Thus, a visitor or tourist may not see certain monuments in a town, but everyone who enters by air will use the airport, as it is the place of entry or exit from the city by air. Hence, the interest of the governments of the UAE and Qatar in offering, through these infrastructures, a modern, innovative, competitive and quality image that encourages their symbolic value and, consequently, promotes their positioning on the world map (FETAIS et al. 2020).

To achieve this, avant-garde architectural designs are made by renowned studios, in which identity features are also introduced as a way of exalting the specificity of the place. Thus, in the three airports, curved lines are introduced that aim to convey the sensation of waves and dunes that are characteristic of both countries. That is, local culture becomes an ally in *city branding* practices and the airport, therefore, becomes a place in which the local and the global constantly interact (LECONTE 2020).

To these avant-garde designs, large windows through which natural light enters, the exhibition of works of art and giant screens to show off the technological and economic power of both countries are added. Other facilities more typical of urban environments are also included, such as gourmet restaurants, hotels, swimming pools, gyms or high-end fashion brand stores. Furthermore, a tropical indoor garden has recently been inaugurated in Doha that allows local and tropical flora to be encountered without leaving the premises. That is, as a result of the development of activities linked to leisure-consumption, entertainment and commercial activities become a pretext and purpose for occupying passengers' free time. Furthermore, in line with the conclusions of DÍEZ-PISONERO (2021), it is not surprising that the three airports have participated in the lucrative shopping business to increase their non-aeronautical income, operating as large shopping centres ("air-malls"), where users are seen more as buyers than as travellers.

Rank	2014	2015	2016	2017	2018
1	Singapore Changi	Singapore Changi	Singapore Changi	Singapore Changi	Singapore Changi
2	Seoul Incheon	Seoul Incheon	Seoul Incheon	Tokyo Haneda	Seoul Incheon
3	Munich	Munich	Munich	Seoul Incheon	Tokyo Haneda
4	Hong Kong	Hong Kong	Tokyo Haneda	Munich	Hong Kong
5	Amsterdam Schiphol	Tokyo Haneda	Hong Kong	Hong Kong	Doha Hamad
> 5	Abu Dhabi (#18) Dubai (#25) Doha Hamad (#75)	Doha Hamad (#22) Abu Dhabi (#29) Dubai (#39)	Doha Hamad (#10) Dubai (#26) Abu Dhabi (#38)	Doha Hamad (#6) Dubai (#20) Abu Dhabi (#49)	Dubai (#23) Abu Dhabi (#53)

Rank	2019	2020	2021	2022	2023
1	Singapore Changi	Singapore Changi	Doha Hamad	Doha Hamad	Singapore Changi
2	Tokyo Haneda	Tokyo Haneda	Tokyo Haneda	Tokyo Haneda	Doha Hamad
3	Seoul Incheon	Doha Hamad	Singapore Changi	Singapore Changi	Tokyo Haneda
4	Doha Hamad	Seoul Incheon	Seoul Incheon	Tokyo Narita	Seoul Incheon
5	Hong Kong	Munich	Tokyo Narita	Seoul Incheon	Paris CDG
> 5	Dubai (#24) Abu Dhabi (#87)	Dubai (#25) Abu Dhabi (#73)	Dubai (#19) Abu Dhabi (#84)	Dubai (#14) Abu Dhabi (#88)	Dubai (#17) Abu Dhabi (#87)

Source: Skytrax (2014–2023). Own elaboration.

Table 9: Evolution of the Skytrax ranking in the last 10 years (2014–2023), Top-5 airports.

However, the investment made in these airports not only seeks to expand their operational capacity or diversify their income, but also to improve their quality to strengthen the image that these destinations project to the world. Currently, Abu Dhabi airport is ranked #87 and Dubai is #17 in terms of quality, according to the Skytrax publication (Table 9). But the Qatari infrastructure stands out the most, consolidating itself in the world's top-5 since 2018. The key to its distinction is that everything is designed for the comfort of passengers, where luxury, comfort and innovation constitute the main references.

However, it is worth noting that these modern facilities contrast with the existing gender separation policy at these airports, since both genders are only allowed to stay together if it is done as a family through the so-called family rooms. At the same time, all these services are only available to VIP travellers, since those in economy class must settle for with the conventional facilities of a large airport.

6 Conclusions

Dubai, Abu Dhabi and Doha constitute three of the most relevant nodes where globalisation is manifested in the Gulf countries. In recent decades, they have been betting on their economic diversification to mitigate their dependence on the export of hydrocarbons. This diversification, reflected in different plans, is contributing to the outstanding positioning of these cities in the world urban system, especially Dubai, consolidated as the global city par excellence in the region.

In all three cases, the intentions of the Emirati and Qatari governments to strengthen the image of these destinations and present them to the world as attractive centres for business, investment, international trade, sports and tourist activity are evident. In this commitment, air transport acts as a fundamental agent, not only to materialise the necessary air connectivity of any city that intends to insert itself into globalisation, but to intensify the international projection of these destinations through the so-called airline-airport binomials.

The three major Gulf carriers (ME3 carriers) are developing an increasingly prominent role on long-haul intercontinental routes. Their respective airports, despite their domestic networks being almost non-existent, are among the largest international markets in the air transport sector worldwide which allows them to strengthen themselves as important global interconnection hub centres. Hence arises our consideration that both actors are consolidated as tools for power projection (both hard and soft) and effective means to make strategic investments in other countries together with sovereign investment funds. The large investments that the authorities are making in them should not be surprising, therefore.

In this sense, it seems imperative to us to continue studying the evolution of the sector in this region, since in an increasingly interconnected and competitive world, it is necessary to determine whether the entry of new competitors, the political instability of the Gulf, global economic uncertainty or the very future of planetary aviation could influence the international positioning of these cities and their global competitiveness.

Funding and Acknowledgement

This research is supported by the Cátedra Extraordinaria “IBERIA-UCM EN TRANSPORTE AÉREO Y MOVILIDADES GLOBALES”, funded by the Spanish Iberia airline. Additionally, it is part of the research project “CITYEXPERIENCES”, funded by the Spanish Ministry of Science and Innovation. Grant/Award Number PID2021-123832OB-IOO.

The author would like to thank the editor of the journal and several reviewers for their helpful and generous comments.

7 References

- Abu Dhabi Aviation (2023): Integrated Report 2023. Abu Dhabi: Abu Dhabi Aviation PJSC. – <https://ada.ae/wp-content/uploads/2024/04/ADA-Integrated-Report-2023-En.pdf>.
- AirCargoNews (2022): Top 25 Air Cargo Carriers for 2021 Revealed. Sutton, Surrey, UK: Air Cargo News. – <https://www.aircargonews.net/airlines/top-25-air-cargo-carriers-for-2021-revealed/>.
- ALKAABI K. (2016): Geographies of Middle Eastern Air Transport. In: GOETZ A., BUDD L. (eds.): The Geographies of Air Transport. London: Routledge, pp. 231–246.
- AQUILINA-SPAGNOL C., ELLIS D., PAGLIARI R. (2020): Viewing the Middle East Big Three (MEB3) Carriers as Heterogeneous. In: Transportation Research Procedia, 51, pp. 323–332.
- AUS DEM MOORE J. P., CHANDRAN V., SCHUBERT J. (2018): The Future of Jobs in the Middle East. Dubai: World Government Summit, in Collaboration with McKinsey & Company. – <https://www.mckinsey.com/~media/mckinsey/featured%20insights/middle%20east%20and%20africa/are%20middle%20east%20workers%20ready%20for%20the%20impact%20of%20automation/the-future-of-jobs-in-the-middle-east.pdf>
- BEAVERSTOCK J., DOEL M., HUBBARD P., TAYLOR P. (2002): Attending to the World: Competition, Cooperation and Connectivity in the World City Network. In: Global Networks, 2 (2), pp. 111–132.
- Brand Finance (2023): Largest Airlines by Brand Value, US\$ Billions. London: Brand Finance. – <https://brandirectory.com/rankings/airlines/>.
- Cirium (2021): Cirium Airline Passenger Rankings for 2021. London / New York: Cirium Aviation Analytics, RELX. – <https://assets.fia.cirium.com/wp-content/uploads/2023/12/05185532/Global-Airline-Passenger-Rankings-for-2021-sept22-prmc.pdf>.
- CONDE A. (2018): La batalla por los cielos del Golfo [The Battle for the Skies over the Gulf]. In: El Orden Mundial (News Magazine), issue from April 16, 2018. Madrid. – <https://elordenmundial.com/la-batalla-por-los-cielos-del-golfo/>.
- CONVENTZ S., THIERSTEIN A. (2016): Hub-Airports as Cities of Intersections: The Redefined Role of Hub-Airports within the Knowledge Economy Context. In: CONVENTZ S., DERUDDER B., THIERSTEIN A., WITLOX F. (eds.): Hub Cities in the Knowledge Economy. Seaports, Airports, Brainports. London: Routledge, pp. 77–94.
- CONVENTZ, S., DERUDDER, B., THIERSTEIN, A., WITLOX, F. (2016): Hub Cities in the Knowledge Economy: Seaports, Airports, Brainports. London: Routledge.
- CÓRDOBA ORDÓÑEZ J., GAGO GARCÍA C. (2012): Globalización, movilidad y análisis de conectividad aérea: una herramienta para la práctica interdisciplinar [Globalisation, Mobility and Air

- Connectivity Analysis: A Tool for Interdisciplinary Practice]. In: *Revista de Antropología Social*, 21, pp. 117–146.
- DERUDDER B. (2006): On Conceptual Confusion in Empirical Analyses of a Transnational Urban Network. In: *Urban Studies*, 43 (11), pp. 2027–2046.
- DERUDDER B., VAN DE VIJVER E., WITLOX F. (2016): Knowledge Flows and Physical Connectivity in the Global Economy: An Exploration of the Related Geographies of Producer Services and Air Passenger Markets. In: CONVENTZ S., DERUDDER B., THIERSTEIN A., WITLOX F. (eds.): *Hub Cities in the Knowledge Economy. Seaports, Airports, Brainports*. London: Routledge, pp. 11–30.
- DERUDDER B., TAYLOR P. J. (2018): Central Flow Theory: Comparative Connectivities in the World-city Network. In: *Regional Studies*, 52 (8), pp. 1029–1040.
- DERUDDER B., TAYLOR P. J. (2020): Three Globalizations Shaping the Twenty-first Century: Understanding the New World Geography through its Cities. In: *Annals of the American Association of Geographers*, 110 (6), pp. 1831–1854.
- DÍEZ-PISONERO R. (2016): El aeropuerto y la ciudad en los escenarios de la globalización: una simbiosis necesaria y cambiante [The Airport and the City in Globalisation Scenarios: A Necessary and Changing Symbiosis]. Madrid: Universidad Complutense de Madrid. Doctoral thesis.
- DÍEZ-PISONERO R. (2021): High-speed Rail Stations and Airports: Symbolic Infrastructures of Mobility as “Places of Globalisation”. In: *Mitteilungen der Österreichischen Geographischen Gesellschaft (Annals of the Austrian Geographical Society)*, 163, pp. 349–370.
- DOUGLAS I. (2019): Do the Gulf Airlines Distort the Level Playing Field? In: *Journal of Air Transport Management*, 74, pp. 72–79.
- DRESNER M., EROGLU C., HOFER C., MENDEZ F., TAN K. (2015): The Impact of Gulf Carrier Competition on U.S. Airlines. In: *Transportation Research Part A: Policy and Practice*, 79 (issue C), pp. 31–41.
- ELLIS D. (2019): The Strategic Context of the Three Major Gulf Carriers. In: *Transportation Research Procedia*, 43, pp. 188–198.
- Emirates (2023): Emirates Group Announces 2022–23 Results. Dubai: The Emirates Group. – <https://www.emirates.com/media-centre/emirates-group-announces-2022-23-results/>.
- Etihad Airways (2022). Etihad Airways Annual Report 2021. Abu Dhabi: Etihad Airways Headquarters.
- Etihad Airways (2023): Etihad Airways Annual Report 2022–2023. E Abu Dhabi: Etihad Airways Headquarters.
- FAN T., LINGBLAD M. (2016): Thinking through the Meteoric Rise of Middle East Carriers from Singapore Airlines’ Vantage Point. In: *Journal of Air Transport Management*, 54, pp. 111–122.
- FETAIS A., AL-KWIFI O., AHMED, Z., TRAN D. (2020): Qatar Airways: Building a Global Brand. In: *Journal of Economic and Administrative Sciences*, 37 (3), pp. 319–336.
- Flight-Delayed (2019): Which Airlines Fly to the Largest Number of Countries? Amsterdam: Flight-Delayed.com, Yource B.V. – <https://www.flight-delayed.com/blog/2019/01/16/which-airlines-fly-to-the-largest-number-of-countries>.
- FOSTER J. (2023): Top 10: The World’s Largest Airlines by Seats in their Fleet. London: Simple Flying, Valnet Publishing Group. – <https://simpleflying.com/largest-airlines-by-seats-list/#qatar-airways>.
- FRIEDMANN J. (1995): Where We Stand: A Decade of World City Research. In: KNOX P. L., TAYLOR P. J. (eds): *World Cities in a World-System*. Cambridge, UK: Cambridge University Press, pp. 21–47.
- GAGO GARCÍA C., CÓRDOBA ORDÓÑEZ J., DÍEZ-PISONERO R. (2017): Los listados de ciudades globales. Desde la práctica investigadora a su utilización como argumento en la planificación urbana

- neoliberal [Global City Lists. From Research Practice to their Use as an Argument in Neoliberal Urban Planning]. In: *Revista Internacional de Sociología*, 75 (1), Article No. e054-e054.
- GCC – Gulf Cooperation Council (2023): GCC Reports. Labour Market Statistics. Muscat, Oman: GCC Statistical Center.
- Government of Dubai (2022): Dubai Government Annual Financial Report. Dubai: Dubai Department of Finance.
- GRIECO M., URRY J. (eds.) (2011): *Mobilities: New Perspectives on Transport and Society*. Abingdon: Ashgate Publishing (Paperback edition 2016).
- HAQQI T. (2023): Top 20 Most Profitable Airlines in the World. New York: Yahoo Finance. – <https://finance.yahoo.com/news/top-20-most-profitable-airlines-141424802>.
- HENDERSON J. (2014): Global Gulf Cities and Tourism: A Review of Abu Dhabi, Doha and Dubai. In: *Tourism Recreation Research*, 39 (1), pp. 107–114.
- HORTON W. (2020): Qatar Airways Has the Resilient Strategy Emirates Needs for Covid-19. Article from July 2, 2020. Jersey City: Forbes Inc. – <https://www.forbes.com/sites/willhorton/2020/07/02/qatar-airways-has-the-resilient-strategy-emirates-needs-for-covid-19/>.
- HUTTON T. A. (2016): *Cities and the Cultural Economy* (Series: Routledge Critical Introductions to Urbanism and the City). London: Routledge.
- IATA – International Air Transport Association (2023): *World Air Transport Statistics*. Montreal: IATA Publications.
- LEBEL J. (2019): Emirates Airline, Etihad Airways and Qatar Airways: Global Airline Companies Promoting the International Position and Reputation of Dubai, Abu Dhabi and Qatar. Paris: Institut français des relations internationales (Ifri) (Series: Études de l’Ifri). – <https://www.ifri.org/en/studies/emirates-airline-etihad-airways-and-qatar-airways-global-airline-companies-promoting>.
- LECONTE U. (2020): The Representation of Star Architecture between Local and Global Identities. In: ALAILY-MATTAR N., PONZINI D., THIERSTEIN A. (eds.): *About Star Architecture: Reflecting on Cities in Europe*. Cham: Springer Nature, pp. 35–44.
- MARCHAL R. (2004): Dubai: Global City and Transnational Hub. In: AL-RASHEED M. (ed.): *Transnational Connections and the Arab Gulf*. London: Routledge, pp. 107–124.
- O’CONNELL J. (2011): The Rise of the Arabian Gulf Carriers: An Insight into the Business Model of Emirates Airline. In: *Journal of Air Transport Management*, 17 (6), pp. 339–346.
- O’CONNELL J., BUENO O. (2018): A Study into the Hub Performance Emirates, Etihad Airways and Qatar Airways and their Competitive Position against the Major European Hubbing Airlines. In: *Journal of Air Transport Management*, 69, pp. 257–268.
- OAG-International (2000, 2015, 2019, 2020, 2024): *World Flights Database* (all flights, to/from all airports worldwide). Manchester: Comber International Guides – OAG.
- Planespotters (2023): *Fleet details and history*. Berlin: Thomas Noack. – <https://www.planespotters.net/>.
- Qatar Airways (2023): *Qatar Airways Group – Annual Report and Consolidated Financial Statement 2022–2023*. Doha: Qatar Airways Group. – <https://www.qatarairways.com/press-releases/en-WW/228541-qatar-airways-group-annual-report-and-consolidated-financial-statement-2022-2023>.
- SASSEN S. (2001): *The Global City: New York, London, Tokyo*. Princeton: Princeton University Press (updated edition, first edition 1991).
- SCOTT A. J. (2008): The Cultural Economy: Geography and the Creative Field. In: MARTIN R. (ed.): *Economy. Critical Essays in Human Geography*. London: Routledge, pp. 339–349.
- SIMMINI G. (2023): Etihad’s Parable: From airberlin-Alitalia Disasters to Renaissance. Savona: The Flight Club, IVG.com. – <https://www.theflightclub.it/en/2023/12/etihad-relaunch-alitalia-bankruptcy/>.

- Skytrax (2014–2023): The World's Best Airports. World Airport Awards. London: Skytrax. – <https://www.worldairportawards.com/es/>.
- SOJA E. W. (2016): Regional Urbanization and the End of the Metropolis Era. In: ORIOL NEL-LO O., MELE R. (eds.): *Cities in the 21st Century*. London: Routledge, pp. 71–89.
- SQUALLI J. (2014): Airline Passenger Traffic Openness and the Performance of Emirates Airline. In: *The Quarterly Review of Economics and Finance*, 54 (1), pp. 138–145.
- State of Qatar (2022): Qatar Government Financial Statistics. Doha: Qatar Ministry of Finance.
- Statista (2023): Aviation Industry in the Gulf Cooperation Council – Statistics & Facts. Hamburg: Statista GmbH. – <https://www.statista.com/topics/2836/statistics-and-facts-about-the-gcc-aviation-industry/#editorsPicks>.
- TAYLOR P., DERUDDER B. (2016): *World City Network. A Global Urban Analysis* (2nd edition, 1st edition 2004). London: Routledge.
- The Economist (2010): Rulers of the New Silk Road. In: *The Economist*, issue from June 3, 2010. London: The Economist Newspaper Ltd., pp. 1–7. – <https://www.economist.com/briefing/2010/06/03/rulers-of-the-new-silk-road>.
- ULRICHSEN K. C. (2016): Global Aviation and the Gulf. The Gulf States. In: ULRICHSEN K. C. (ed.): *The Gulf States in International Political Economy*. London: Palgrave Macmillan, pp. 151–165 (International Political Economy Series).
- VELTZ P. (1996): Mondialisation villes et Territoires. L'Économica d'archipel. [Globalisation of Cities and Territories. Archipelago Economy]. Paris: Presses universitaires de France.
- VILLAMIZAR H. (2022): 78th IATA Annual General Meeting to Be Held in Doha. – In: *Airways. Global Review of Commercial Flights*. Dallas/Fort Worth. – <https://www.airwaysmag.com/legacy-posts/78th-iata-annual-general-meeting>.
- WIESE A., THIERSTEIN A. (2016): European Port Cities: Embodiments of Interaction – Knowledge and Freight Flow as Catalysts of Spatial Development. In: CONVENTZ S., DERUDDER B., THIERSTEIN A., WITLOX F. (eds.): *Hub Cities in the Knowledge Economy. Seaports, Airports, Brainports*. London: Routledge, pp. 95–120.
- World Bank (2023): *Migration and Remittances Factbook 2023*. Washington, D.C.: World Bank. – <https://www.worldbank.org/en/publication/wdr2023>.
- ZHANG W., THILL J. C. (2019): Mesoscale Structures in World City Networks. In: *Annals of the American Association of Geographers*, 109 (3), pp. 887–908.