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Benchmarking airports and airlines to enhance Ireland’s tourism

Lázaro Florido-Benítez^a and J. Andres Coca-Stefaniak^{b,*}

^a University of Malaga, Department of Business Organisation and Marketing, 29016 Málaga, Spain.

^b University of Greenwich, School of Business, Operations and Strategy, Park Row, London SE10 9LS, United Kingdom.

Abstract

Purpose – *This study analyses the role of airports and airlines in the tourism sector of Ireland between 2015 and 2024, including the impact of the COVID-19 pandemic.*

Design/methodology/approach – *Secondary data from public and private sector sources was compiled in order to analyse Ireland’s tourism sector. In addition to this, a benchmarking method (comparative matrix) was developed to outline data from five airports in Ireland as well as data gathered from key airports in the southern Spanish region of Andalusia. Data was collected from sources such as the Central Statistics Office, Failte Ireland, Tourism Ireland, the Irish Tourism Industry Confederation (ITIC), the Institute of Statistics and Cartography of Andalusia (IECA), and the main National Spanish Airports body—Aeropuertos Españoles and Navegación Aérea (AENA). The inclusion of data from Spanish airports in this study is primarily for benchmarking purposes, as the study focuses mainly on Ireland as a tourism destination.*

* Corresponding author. Email addresses: lfb@uma.es (L. Florido-Benítez), a.coca-stefaniak@gre.ac.uk (J.A. Coca-Stefaniak).

Findings – *The findings of this study reveal the importance of a unified approach to tourism promotion by airports and commercial airlines. It also reveals the close links between tourism and air transport trends in Ireland. For instance, Ryanair alone was responsible for the movement of over one billion passengers in 2015-2024 with an exponential rate of pre-pandemic growth. This study posits that further research is required to establish the feasibility of implementing a virtual interlining system supported by Artificial Intelligence (AI) merging data from airports, airlines, and destination management organisations (DMOs) with a view to streamlining strategic approaches and service delivery through innovative personalised visitor packages. It is also posited that Tourism Ireland (the country's leading tourism destination management organisation) should develop integrated marketing strategies in conjunction with airports and airline operators focused on urban and cultural tourism as a differentiating element from other island destinations.*

Originality/value – *This study contributes to an under-researched field of knowledge – the historical relationship between air transport and tourism demand. It does so by exploring the key role that air transport and airports play in the context of delivering socio-economic benefits to the tourism ecosystem.*

Keywords – *Ireland; tourism sector; airports; airlines; tourism promotion; foreign tourists; artificial intelligence; virtual interlining*

Paper Type – *Case study*

1. Introduction

Hospitality and tourism are key sectors in Ireland's economy, accounting for 20.9% of the country's gross domestic product (GDP) in 2024 (Tourism Ireland, 2025). Ireland relies heavily on visitors from the United Kingdom (UK) as the country's main source of inbound tourism and second in terms of visitor spending (Tourism Ireland, 2024). However, since the Brexit referendum, fluctuations in the value of the British pound with respect to the euro have affected the cost of travel to Ireland for many British visitors, even if the full effects of this economic schism are yet to be determined in socio-economic terms (Jimenez, 2024).

Regardless, airline travel plays a key role in Ireland's tourism (Conefrey and Hanrahan, 2024; Lohmann and Peres-de Oliveira, 2024; Mazzola *et al.*, 2022), with 95% of tourists arriving on commercial flights (Hynes *et al.*, 2024). Tourism Ireland reported an air seat capacity of 88% in 2019, in spite of that year's global economic uncertainties, soon followed by the global COVID-19 pandemic (Tourism Ireland, 2024). All in all, the competitiveness of Ireland's tourism industry relies heavily on air accessibility, with one airline playing a key role in this respect – Ryanair (Efthymiou and Christidis, 2023; Conaghan *et al.*, 2015).

Research has shown that air accessibility enhances the attractiveness of destinations (Graham, 2023), their economic development (Florido-Benítez, 2021, 2023), and their sustainability-based competitiveness (Marchesani *et al.*, 2023). However, there remains a gap in our understanding with respect to the impact of air transport on tourism development in island destinations (Agius *et al.*, 2021; Mazzola *et al.*, 2022; Rishan *et al.*, 2025).

Crucially, accessibility to the physical environment, information, and social activities are considered vital factors in the context of accessible cities (Morrison and Buhalis, 2024).

Similarly, efficient travel links (including air travel) have been shown to improve the effectiveness of local tourism ecosystems in urban settings (Olena *et al.*, 2025). Research by Florido-Benítez *et al.* (2025) has posited that tourist destinations can benefit from a more joined-up level of strategic marketing by airports and tourist attractions to enhance tourism and visitor experiences. Similarly, the enhancement of mobility linking flights and ground transport to and from destinations is crucial for addressing the transport challenges faced by island destinations (Björkman and Malhado, 2025).

The aim of this study is to explore the key role that air transport and airports play in the context of delivering socio-economic benefits to the tourism ecosystem, using Ireland as the geographical framework between 2015 and 2024. This effectively allows for meaningful comparisons pre- and post- the COVID-19 pandemic, with tourism promotion campaigns playing a key role in the post-pandemic recovery process.

To address the main objective of this study, a comparative matrix focused on key airports in Ireland and Andalusia (Spain) has been developed. This matrix outlines some of the strengths and weaknesses of airports in Ireland as well as their role in attracting international visitors. This benchmarking analysis allows for supply and demand issues to be compared more effectively in order to identify and prioritise improvements to commercial and marketing factors within the influence of airport operators (Cai *et al.*, 2025). This is especially important given that airports have a direct impact on the competitiveness, accessibility, and connectivity of tourism destinations (Sánchez-Rivero *et al.*, 2024).

Furthermore, this research posits that the use of technologies (e.g., artificial intelligence (AI), the metaverse, digital twins (DTs), machine learning (ML), the internet of things (IoT), chatbots, and robots) can help to deliver new business opportunities and enhance existing marketing strategies for the benefit of visitor experiences. Similarly, these technologies can have a positive impact on improvements to the efficiency of supply chains for products, services, and information, especially as regards tourism destinations, airports, and airline operators (Florido-Benítez, 2024; Blázquez-Resino *et al.*, 2024).

2. Literature review

2.1 Tourism promotion campaigns

Tourism Ireland, the leading country-wide destination management organisation (DMO) in Ireland launched in 2022 a tourism promotion campaign in Great Britain called ‘Shameless Plug’ in an effort to reverse the negative effects of the COVID-19 pandemic (Tourism Ireland, 2024). The target of this campaign, which used online TV streaming, social media, and digital newspapers, was to attract 8 million tourists (Florido-Benítez, 2022). This was implemented against a pre-pandemic backdrop, where Ireland had received 11.3 million overseas visitors in 2019, with a spend of 5.9 billion (Tourism Ireland, 2024). Digitalisation has notably influenced the travel and tourism sectors, especially for consumers that now have access to a much wider offer to plan and personalise their holidays (Soto-Acosta, 2020).

Beyond the UK, and with a more global audience in mind, Tourism Ireland launched a campaign called ‘Fill your heart with Ireland.’ This campaign used multiple digital channels to stimulate tourism demand from its main tourism markets beyond the UK, including the US,

Germany, France, Spain, Italy, Belgium, The Netherlands, Switzerland, and Nordic countries (Tourism Ireland, 2025). Subsequent research (Hynes *et al.*, 2024) has shown that visitor numbers to Ireland from North America rose exponentially as a result of this campaign and other online promotion strategies implemented. This echoes similar findings elsewhere, where the integration of digital marketing techniques to enhance the efficacy of destination promotion campaigns has delivered positive results (Deb *et al.*, 2024).

Research has shown that tourism promotion budgets and campaigns during the COVID-19 pandemic helped to improve hotel occupancy rates, overnight hotel stays, and international passenger arrivals in the Spanish region of Andalucía, with Málaga, Seville, Jerez, Granada-Jaén, and Almería as the region's top five airports (Florido-Benítez, 2025).

On that basis, these five locations have been included in this benchmarking study for comparison with Ireland's top airports and tourism destinations. This study builds on the findings of earlier research by Karagkouni and Dimitriou (2022), where a comparative benchmarking of European airports was developed to assess their environmental performance in relation to their strategic goals. Parallel to this, research by Junior *et al.* (2021) using benchmarking and data envelopment analysis (DEA) revealed that the most efficient airports in the world were Heathrow (LHR), Hartsfield-Jackson Atlanta (ATL), Beijing (PEK) and Dubai (DXB).

Air transport and DMO's promotion campaigns sometimes are binding factors to promote a tourist destination and attract international tourists. For example, Northern Ireland's DMO has made use of the HBO series *Game of Thrones* and its filming locations to promote Northern Ireland as an urban and culture tourism destination. Subsequent evaluations of this campaign have shown that it was effective in increasing the number of overseas visitors (Çelik-Rappas and Baschiera, 2020; Department of Transport, Tourism, and Sport, 2019). This echoes earlier research noting that promotion campaigns from different digital channels and platforms can have a significant effect on the destination perceptions of potential visitors (Uner *et al.*, 2023).

Parallel to this, research by Florido-Benítez (2023) has posited that destination promotion campaigns tend to be more effective when delivered jointly with other key stakeholders in a tourism destination. For instance, the *Game of Thrones* filming locations and the Titanic Museum in Belfast are arguably tourist attractions that draw thousands of tourists from around the world. In 2016, the Titanic Belfast Museum collected the award of the World's Leading Tourist Attraction (World Travel Awards, 2017). Soon afterwards, Tourism Ireland started capitalising on this accolade and promoting the museum as an iconic tourist attraction (Paraskevaidis and Weidenfeld, 2019). This approach is supported by research showing that co-branding strategies can be beneficial to promoting sustainable tourism, attracting new investment, and opening new visitor markets (Morrison and Coca-Stefaniak, 2024).

2.2 Airports and their influence on tourism

According to the United Nations World Tourism Organisation (UNWTO), 2024 has marked a key milestone in the recovery of international tourism from the COVID-19 pandemic, with 1.4 billion international tourist arrivals recorded globally (UNWTO, 2025). Studies have shown that visitors tend to prefer arriving at the nearest airport to their intended destination, especially when they intend on visiting a city or an attraction nearby (Florido-Benítez, 2023; Goswami *et al.*, 2024).

A well-connected airport tends to deliver competitiveness to a destination, especially in terms of global accessibility (WTTC, 2021). In Malaga (Spain), research by Eugenio-Martín (2016) found that when Málaga airport launched a new terminal with a second runway in 2010 and 2012, respectively, the number of international tourist arrivals increased considerably, especially through the services of low-cost carriers (LLCs). Similarly, the number of airline operations rose by 18%, with passenger numbers increasing by 6%.

Internationally, the impact of airports on tourism development has started to attract the attention of tourism scholars (Table 1). Much of this research has tended to analyse this topic in the context of island destinations, including how crises (e.g., global public pandemics, socio-economic crises, wars, natural disasters) impact these supply chains and tourism demand. However, not all regional and hub airports face the same conditions and characteristics.

In this respect, Bubalo (2012) analysed 149 European airports over an eight-year period (2002-2010), supported by a benchmarking method to assess their profitability. The study found that airports with more than 1 million passengers have a greater ability to operate above a break-even level. Although in 2009 nearly 90% of European airports relied on state subsidies to avoid a financial deficit, this raises major financial sustainability challenges for the future (Bubalo, 2012; Starkie, 2016).

Authors/Year publication	Location	Title
Gillmor (1996)	Ireland	Evolving air-charter tourism patterns: change in outbound traffic from the Republic of Ireland
Barret (1997)	Ireland and UK	The implications of the Ireland-UK airline deregulation for an EU internal market
Barret (2006)	Ireland	Commercialising a national airline—the Aer Lingus case study
McLay and Reynolds-Feighan (2006)	Ireland	Competition between airport terminals: The issues facing Dublin Airport
Reynolds-Feighan and McLay (2006)	Ireland, UK, Europe, and North America	Accessibility and attractiveness of European airports: A simple small community perspective
Graham and Dennis (2007)	Ireland and UK	Airport traffic and financial performance: a UK and Ireland case study
Wright (2009)	Ireland and US	Destination Ireland: an ancestral and emotional connection for the American tourist
Luis (2004)	The Canary Islands	The role of inter-island air transport in the Canary Islands
Ward (2014)	Ireland	Segmenting the senior tourism market in Ireland based on travel motivations
Conaghan <i>et al.</i> (2015)	Ireland	The sustainable management of a tourism destination in Ireland: a focus on County Clare
Mazzola <i>et al.</i> (2019)	Isles: Cyprus, Voreio Aigaio, Notio Aigaio, Kriti, Inonia Nisia, Balearic, Canary, Corse, Sicily, Sardinia, Malta, Azores, and Madeira	The role of tourism in island economic growth and resilience: A panel analysis for the European Mediterranean countries (2000–2015)
Pagliari and Graham (2019)	UK	An exploratory analysis of the effects of ownership change on airport competition
Burnett and Johnston (2020)	Ireland	Brexit anticipated economic shock on Ireland’s planning for hospitality and tourism: resilience, volatility, and exposure
Fu <i>et al.</i> (2020)	New Zealand	Do airport activities affect regional economies? Regional analysis of New Zealand’s airport system
O’Connor (2021)	Ireland	Using active learning strategies on travel and tourism higher education programmes in Ireland
Castanho <i>et al.</i> (2021)	The Azores Archipelago	Assessing Transportation Patterns in the Azores Archipelago
Cifuentes-Faura (2021)	Spain	Study of the efficiency of Spanish airlines: A non-parametric data envelopment analysis
Agius <i>et al.</i> (2021).	Mediterranean islands	So close yet so far: Island connectivity and ecotourism development in central Mediterranean islands

Panzer-Krause (2022)	Ireland and Germany	Rural Tourism in and after the COVID-19 Era: "Revenge Travel" or Chance for a Degrowth-Oriented Restart? Cases from Ireland and Germany
Law <i>et al.</i> (2022)	Cambodia, Laos, Myanmar, and Vietnam	Dynamic relationship between air transport, economic growth and inbound tourism in Cambodia, Laos, Myanmar, and Vietnam
Florido-Benítez and Dogra (2022)	Spain, and Balearic and Canary Islands	Study of relationship between Spanish airports and destination marketing: insights for destination management organisations
Mazzola <i>et al.</i> (2022)	Isles: Cyprus, Corsica, Canaries, Crete, Balearic Islands, North-eastern Aegean Islands, Ionian Islands, South Aegean Islands, Azores, Madeira, and Malta	Air transport and tourism flows to islands: A panel analysis for southern European countries
Guiomard (2023)	Ireland	Practical Difficulties in Airport Benchmarking: The Case of Dublin Airport
Warnock-Smith <i>et al.</i> (2023)	Europe	Measuring disparities in air transport access across Europe: An inequality, vulnerability, and dependence approach
Marchesani <i>et al.</i> (2023)	Italy	Cities (r)evolution in the smart era: smart mobility practices as a driving force for tourism flow and the moderating role of airports in cities
Nguyen (2023)	Asia	The causality between air transport and economic growth: Empirical evidence from regions in Asia
Ji <i>et al.</i> (2023)	UK and Ireland	Managing tourist congestion: Insights from Chinese package tours to the UK and Ireland
Hiney <i>et al.</i> (2023)	Ireland	Impact of Covid-19 on Irish airport stakeholder relationships
Kuok <i>et al.</i> (2023)	Australia	Interaction effects of air services on tourism demand
Nakayama (2024)	Japan	Understanding destination marketing processes through film tourism: local and global networks
Wong (2024)	Singapore	Tourism Development of Singapore: Artificiality Versus Profitability
Chang <i>et al.</i> (2024)	Taiwan	Enhancing smart tourism and smart city development: evidence from Taoyuan smart aviation city in Taiwan
Florido-Benítez (2024)	Global	Airport marketing strategies: aviation and tourism perspectives
Goswami <i>et al.</i> (2024)	Australia	Australian Tourist Flow: A Gravity Model Approach
Budd <i>et al.</i> (2024)	UK	Factors affecting the cessation of commercial air services at English regional airports
Rishan <i>et al.</i> (2025)	Maldives	Evaluating air transport barriers to tourism development in island states – A case study of an air service subsidy scheme in the Maldives

Table 1. Key studies on the impact of airports on tourism development.

The load factor of an airport's terminal, measures the maximum number of passengers a terminal can process and accommodate within an hour, tends to be a key indicator of efficiency in handling passenger flows (Lemer, 1992). This parameter is also influenced by passenger behaviour, security, staffing, facilities, and the terminal's layout. However, for an airline, the load factor refers to how that airline utilises its available passenger capacity, dividing the number of passengers by the total number of seats available on a flight (Devriendt *et al.*, 2009). Alternatively, this may also be computed in terms of the ratio of revenue passenger miles travelled to available seat miles (Shu, 2025). A higher load factor suggests better utilisation of resources, efficiency, and potentially higher profitability for airlines (Zou *et al.*, 2025).

This study has adopted the tourism system as its theoretical framework. This framework was first proposed by Leiper (1990) and then developed further by Morrison *et al.* (2018). This theoretical approach allows for changes over time to be incorporated into the analysis, including strategic alliances, dynamic packaging, new technologies, advances in transportation, customer trends, and destination management strategies. Technologically, for instance, air travel, tourism service providers, and urban destinations are now facing major challenges and opportunities with regard to the use of AI to improve visitor experiences and

personalised suggestions (Dwivedi *et al.*, 2024). AI, the metaverse, and digital twins (DTs) are examples of digital technologies that assist companies in meeting the demands of new customers and improving their offerings to personalise customer experiences (Soto-Acosta, 2023; Al Halbusi *et al.*, 2025).

Island destinations tend to face specific challenges in tourism, including more limited resources and air connectivity with sources of outbound tourism (Castanho *et al.*, 2021). Similarly, their geographical conditions mean that air accessibility plays a much more prevalent role than for mainland destinations, which generally benefit from a much wider portfolio of transport options. Most islands tend to provide direct flights to capital cities and key airport hubs.

However, this level of air connectivity can be drastically different in the case of regional airports. For instance, a tourist who wants to visit Malta or Madeira travelling from Sydney or Singapore will normally need to book two or more flights with different airlines to reach their final destination. However, tourists intending to travel to these two island destinations from London, Madrid, Rome, or Paris will normally benefit from direct flights. Thus, efficient air transport does not rely merely on air accessibility but also on the availability and frequency of flights throughout a whole calendar year (Kuok *et al.*, 2023).

In 1940, airlines agreed to increase the breadth of their networks through codeshare and interline agreements rather than by directly running new routes. As a result of forging partnerships with other carriers, these agreements allowed airlines to offer a greater range of destinations, thus increasing passenger options to visit tourist locations across the world and improving airport and airline operators' operational flexibility.

The first VI model and codeshare agreement was introduced by Kiwi.com in 2012. Its AI algorithms were able to develop smooth itineraries by combining distinct routes involving more than 200 ground transportation providers and more than 800 carriers (Kiwi.com, 2021). More recently, the Singapore Airlines Group has developed a virtual travel assistant in the form of a chatbot named Pelago. This chatbot is able to help customers in the process of booking flight tickets and hotels, creating personalised itineraries, suggesting mobility options, and even helping users with the process of submitting customer complaints.

Building on operational and commercial synergies, a high proportion of airlines have developed the concept of “virtual interlining” (VI). According to the Official Airline Guide (OAG) company, this concept refers to implementing digital and innovative tools to stitch together separate flights through online platforms to enhance passengers’ experiences (OAG, 2024). In the travel industry, VI is a rapidly expanding product. Research has shown that VI interlined flights allow travellers to connect more easily between multiple airports with more affordable itinerary prices (Meire and Derudder, 2021). Current examples of this approach include Spirit Airlines and Kiwi.com, Southwest, WizzAir, and Ryanair – all of which operate without any codeshare agreements. These synergies are exploited by Expedia, Google Flights, Skyscanner, and Wonderplan to sell personalised trips and tourist packages across the globe. In 2022, Tripninja created SmartFlights, an API solution for flight searches using VI, which offers OTAs the best options at affordable prices (see <https://youtu.be/bsFk2V1Pbpg?feature=shared>). This practice builds on recent research by Gogh *et al.* (2025), which posited that by merging data between organisations, GenAI can generate tailored suggestions that enhance sustainable tourism experiences.

Another example of this is Marseille Provence airport, which has implemented a Smart Pass program that improves the overall traveller experience by speeding self-connecting travellers through security and offering discounts across the airport. Similarly, Tripstack - a travel and technology company - in partnership with Thailand's low-cost carrier NokAir has expanded the airline's website booking functionalities using VI, resulting in tangible benefits for passengers, airlines, and airports. In 2024, Eurostar and SkyTeam signed a commercial deal to provide seamless train and air travel alternatives throughout Europe, improving passenger convenience and sustainability with a single ticketing platform. TripStack claims that virtually interlined itineraries might eventually account for 15% of all reservations (Chesnut, 2021).

In Ireland, the aviation industry contributed 4.1 billion euros to the country's GDP in 2017, supporting 42,000 direct jobs (Hiney *et al.*, 2020). The deregulation of air transport between Britain and Ireland in 1986 led to a rise in the use of secondary and regional airports as well as LCCs, increasing the overall number of passenger arrivals at airports (Budd *et al.*, 2024).

The analysis in this study will focus on the main five airports in Ireland by passenger arrivals, with Dublin (DUB) airport as the only hub-and-spoke in Ireland. The country's remaining airports—Cork (ORK), Shannon (SNN), Knock (NOC), and Kerry (KIR)—are classed as regional airports (IAA, 2023). In 2013, Shannon airport was separated from the Dublin Airport Authority (DAA) to improve its service delivery to users (Glover *et al.*, 2024). Table 2 outlines some of the main characteristics of these five airports from 2015 to 2024, with Dublin dominating the bulk of air traffic (85.4%), followed by Cork (6.7%), Shannon (4.8%), Knock (2.1%), and Kerry (1%).

Rank	IATA code	Airport name	City	Airport category	Owner/ Operator	Total passenger (2015-2024)
1	DUB	Dublin	Collinstown	Hub	Dublin Airport Authority (DAA)	260,997,681
2	ORK	Cork	Cork	Regional	Government of Ireland/DAA	20,506,895
3	SNN	Shannon	Shannon	Regional	Government of Ireland/Shannon Airport Authority plc	14,612,575
4	NOC	Knock	Charlestown	Regional	Charleston County and Joint Base Charleston/Charleston County Aviation Authority	6,418,630
5	KIR	Kerry	Farranfore	Regional	Kerry Airport plc	3,084,874
Total PAX						305,620,655

Table 2. Characteristics of the top five airports in Ireland analysed in this study.

[Source: Own elaboration from data held by Central Statistics Office (2025)].

Note. Donegal (CFN) and Sligo (SXL) airports not included.

In 2023, nearly 39.2 million people used airports in Ireland—the highest number of passengers recorded since records began (Failte Ireland, 2024). This is in spite of the fact that regional airports in Ireland reduced their charges during the COVID-19 pandemic to increase their competitiveness against Dublin. However, research has predicted that it may take two to three years for global passenger demand to return to pre-COVID-19 levels (Gudmundsson *et al.*, 2021).

Consequently, the management of operations by airports and airlines has faced new challenges to establish connections to new destinations. Some of these challenges have

included expanding existing infrastructure to improve service levels for airlines, cities, passengers, and investors (Gillen *et al.*, 2016). For instance, airports in Hong Kong (HKG), Málaga Costa del Sol (AGP), and Heathrow built new runways and expanded airport terminals to increase capacity and connectivity, as well as attracting new airline operators and international investors. Airports depend for their survival on air traffic movement. Therefore, flight operations management is crucial to their profitability and competitiveness.

Similarly, the range of activities that take place in the context of airport operations is aligned with over 85% of the United Nations' sustainable development goals (Khanna and Swami, 2025). In turn, the competitiveness of tourism destinations is closely linked to the effectiveness and efficiency of these operations (Özsoy and Örkücü, 2021). However, flight delays remain a major operations management challenge, with efficient airport slot allocation and traffic flow management reducing this risk substantially (Wang and Ni, 2025).

Similarly, adverse weather, cybersecurity, and runway maintenance can also have a major impact on airport operations and airline profitability (Herekoğlu and Kabak, 2024). In this respect, recent research (see Amiri and Kusakci, 2024) has shown that AI can enhance airport operations management to deal with these challenges more effectively, especially through process optimisation and a more efficient allocation of resources.

2.3 Airline connectivity to destinations

Air accessibility and connectivity with other destinations have contributed to an increase in the number of visitors to key European island destinations, including Ibiza, Mallorca, and the Canary Islands (Florida-Benítez and Dogra, 2022). This has often been achieved largely through work with LCCs, such as Ryanair, Vueling, and EasyJet airlines (Gundelfinger, 2024), and with the support of regional airports, which are able to offer lower airport fares (Halpern and Graham, 2021).

However, when discussing air accessibility, it is important to distinguish between an LCC offering lower fares and operating from a regional airports and a legacy carrier airline (e.g., British Airways, American Airlines, and Emirates), which tends to operate on established interstate routes (hub-and-spoke airport), providing full-service carriers (FSC) (Gualini *et al.*, 2024).

This article focuses on four Irish airlines and deliberately excludes commercial airlines from other countries, such as EasyJet, Iberia, Transavia, Eurowings, and Volotea, amongst others. In Ireland, Ryanair is the first operator in terms of aircraft numbers (563) and connections to destinations (222), as shown in Table 3. Ryanair's main aircraft is the Boeing 737-800. This plane type is suited to the distances, passenger numbers, and flight frequencies of domestic operations (Bardell and Yue, 2018). Beyond Ireland, Ryanair has grown over the last eleven years to become Europe's top operator in 2023 by daily flights (2,813) and passenger numbers (182 million) (EUROCONTROL, 2024; CAPA, 2024).

Aer Lingus ranks as the second airline in Ireland, with 54 aircraft and connections to 93 destinations. Aer Lingus also operates in Europe as a hybrid carrier (LCC and FSC) to diversify its business model (Magdalena and Bouzaima, 2021). The Airbus A320Neo is the most used aeroplane by this operator because this aircraft is 15% more fuel efficient than today's comparable models (Lufthansa Group, 2023; Airbus, 2023). This allows the company to pass

savings on to its customers. This is important, as research by Mazzola *et al.* (2022) has shown that flight connections and types of aircraft used bear a strong correlation with visitor arrivals in island destinations.

Rank	IATA code	Airline name	Hub airport	Headquarters	Fleet size	Destinations	Main type of aircraft
1	FR	Ryanair	Dublin	Dublin	563	222	Boeing 737-800
2	EI	Aer Lingus	Dublin	Dublin	54	93	Airbus A320Neo
3	WX	CityJet	Dublin	Dublin	28	10	Bombardier CRJ-900
4	EA	Emerald Airlines	Dublin	Dublin	17	21	ATR 72-600

Table 3. Characteristics of the top four Irish-owned commercial airlines in Ireland.

[Source: Own elaboration from Central Statistics Office (2024a)].

Note. Aer Arann Islands is not included. Stobart Air ceased operations on 12 June 2021.

Aircraft models are an important factor, especially in the context of the type of airlines analysed in this study, which operate short- and medium-haul domestic and regional flights. Whilst a short-haul flight will have a maximum duration of 3 hrs (e.g., Dublin-Madrid flight), a medium-haul one will last three to six hours (e.g., Dublin-Istanbul). On the other hand, a long-haul flight tends to last six to twelve hours (e.g., Dublin-New York), with an ultra-long-haul flight spanning in excess of twelve hours (e.g., Dublin-Sydney). In this study, the vast majority of the flights considered are at the short and medium-haul end of the spectrum, given that the majority of them serve outbound tourism from the UK and continental Europe. On the contrary, when visitors to Ireland travel from North America or Australia, the prevailing option for transport tends to be a long-haul or ultra-long-haul flight.

The third place in this analysis corresponds to CityJet, with 28 aircraft and 10 destinations. Its main model of aircraft is the Bombardier CRJ-900. These regional jets are the most efficient in CityJet’s fleet (Bombardier, 2017). Since the beginning of 2023, CityJet has operated wet lease services on behalf of Brussels, Lufthansa, and Scandinavian airlines. In turn, the fourth airline considered in this study is Emerald Airlines, with 17 aircraft and 21 destinations. Emerald is a regional franchise operator for Aer Lingus. The ATR72-600 forms the backbone of Emerald Airlines' growing fleet—a turboprop aircraft that combines environmental and economic performance while emitting up to 40% less CO₂ on regional flights (Aer Lingus, 2023). These four airlines have their operational bases and headquarters in Dublin.

3. Methodology

This study was conducted with Ireland and the southern Spanish region of Andalusia as its geographical framework. More specifically, the study has analysed the top five airports and tourism cities in each case (see Figure 1) as they bear a number of comparable characteristics. The distinctiveness of Ireland’s case relative to other island destinations is that this destination enjoys a geographical location that is convenient for visitors from North America as well as European countries, whilst boasting a very distinctive heritage offer coupled with rural, urban and nature-based attractions that attract one million visitors every year (Burholt *et al.*, 2013).



Figure 1. Top 5 airports in Ireland by number of passenger arrivals. [Source: Own elaboration]

The main purpose of this study is to deliver a better understanding of the role of airports in the development of Ireland’s tourism sector between 2015 and 2024. This period was selected as the time frame for analysis in view of the complex socio-economic events affecting this country and much of the rest of the world, including a global economic crisis, Brexit, and the COVID-19 pandemic (O’Connor, 2021). A multi-pronged approach was adopted to data collection. First, an in-depth assessment was carried out of relevant published research (see Table 1), followed by the gathering of data related to the promotion of tourism in Ireland, including airports and airlines (see Tables 2 and 3).

In addition to this, a comparative analysis (Table 4) of Irish and Andalusian airports has been developed in an attempt to benchmark their capacity and potential to support the tourism sector in both destinations. The development of a comparison matrix of airports helps to highlight the importance of their services and attributes (Tsai *et al.*, 2011). A number of parameters were selected for analysis as part of this study, including the number of runways and terminals, the number of airlines serving each airport, the number of destinations served by each airport, the number of boarding gates, each airport’s load factor, car park capacity, the distance to the nearest city centre, and whether each airport offers an intermodal accessibility

mode (Florido-Benítez, 2024; Henke *et al.*, 2022; Lee *et al.*, 2021; Hrushka *et al.*, 2021; Bufalo, 2012).

In addition to this, airport connections by number of passenger arrivals were compiled using data for 2024 and compared (Table 5). This data is important for DMOs and airport operators, as an airport's geographical location and its capacity to serve different destinations impact the movement of passengers (Gao, 2021).

Secondly, in order to explore the effect of airports on tourism in Ireland, quantitative and qualitative data was collected to elicit visitors' motivations to travel to Ireland. This included their country of origin, as well as passenger numbers and tourist arrivals at airports and urban destinations in Ireland, including specific data for Ryanair and Aer Lingus, hotel occupancy rates at key destinations, and tourism promotion.

This analysis builds on earlier studies, which have shown that to assess the impact of air transport on tourism, researchers should identify and measure indicators such as travel motivations (Gupta *et al.*, 2023), where visitors have travelled from (Zhan *et al.*, 2020), the number of passenger arrivals (Florido-Benítez, 2023), the number of tourist arrivals (Fernández *et al.*, 2020), hotel occupancy rates (Buhalis *et al.*, 2024), and tourism promotion (Florido-Benítez, 2022). This combined analysis has been shown by some studies to deliver a more holistic understanding of a country's inbound tourism (Ji *et al.*, 2024).

In line with this, Figure 2 illustrates the main motivations for travel to Ireland as well as the country's main inbound tourist markets by volume of visits in 2024. In turn, Figure 3 outlines passenger numbers transported by the country's two most important airlines, both of which are integrated in the marketing strategies of key tourism destinations in Ireland—Ryanair and Aer Lingus. Furthermore, Figure 4 offers a more granular level of the data by providing passenger numbers and tourist arrivals in Ireland's top five airports along with the hotel occupancy rates in the country's main urban destinations.

Thirdly, this study selected the top 32 cities in Ireland by visitor numbers over the 2015-2024 period. This was done in order to elicit how flight accessibility and airport location influence the number of foreign visitors (Table 6).

All the data used in this analysis was compiled from sources available in the public domain, including the Central Statistics Office (2024a, 2024b, 2025), Department of Transport, Tourism, and Sport (2019), Failte Ireland (2023, 2024, 2025), IAA (2022, 2023), ITIC (2018, 2023, 2025a), Tourism Ireland (2024, 2025), the Institute of Statistics and Cartography of Andalusia (IECA, 2025), *Aeropuertos Españoles and Navegación Aérea* (AENA, 2025), UNWTO (2025), World Travel Awards (2017), the International Air Transport Association (IATA, 2024, 2025), and WTTC (2021). These sources were selected because they provided the most relevant data in each case. This data was then used for the indicators selected in this study.

Finally, this study used data from Andalusia's main airports (AENA, 2025) and hotel occupancy rates (IECA, 2025) to deliver a suitable comparison with Ireland's top five airports as well as hotel occupancy rates in their nearest cities as part of the benchmarking process (Kincai *et al.*, 2023).

Andalusia was selected as a region for comparison in this study given its parallels with Ireland in terms of tourism demand. These similarities include their shared source tourism markets for visitors – the United Kingdom, France, and Germany. In addition to this, the ratio of flight hours from these source markets to both destinations is very similar – 2 to 5 hours. Also, both destinations rely heavily on the services of low-cost airlines, including Ryanair and EasyJet.

Figures 5 and 6 present data comparing airports number of operations, passengers, tourist arrivals, and hotel occupancy rate indicators to highlight the importance of airport operations management and air accessibility for tourist destinations and accommodations. The comparative analysis of the results suggests that a benchmarking approach can help detect weaknesses and strengths in airport operations management to make better future decisions in operational, commercial, and tourism terms (Guiomard, 2023; Cai *et al.*, 2025). It also allows airport operators and DMOs to elicit marketing strategies to improve their competitiveness with respect to rival destinations (Sánc-Rivero *et al.*, 2024).

4. Results and discussion

4.1 Effectiveness of Tourism Ireland's promotion campaigns

The period analysed in this study (2015-2024) has shown that tourism marketing strategies and promotion campaigns by Tourism Ireland have relied largely on digital channels, with a focus on repositioning the country's brand image and attracting visitors with higher levels of disposable income, whilst benefitting local communities and promoting culture (Carvalho *et al.*, 2024).

According to Tourism Ireland (2024), the return on tourism marketing investment in 2019 was €42 for every €1 spent on advertising. The same return on investment was achieved in 2016 (Department of Transport, Tourism, and Sport, 2019), with a record 11.3 million visitor arrivals. However, in the absence of data beyond 2020, it is difficult to establish whether this 42:1 ratio is applicable to the post-COVID years.

In Ireland, North American tourists represent the second most important market segment (18.8%) after the UK with 35.7% (see Panel B in Figure 2). This is influenced by good flight connections between Dublin and New York (Aer Lingus, Delta Airlines, or United Airlines) with an estimated flight time of 7 hours and 45 minutes. In fact, the relationship between the US and the British Isles in terms of tourism has remained strong over a sustained period of time with a steady flow of trans-Atlantic air traffic (Halpern and Mwesiumo, 2021). Market segmentation has also played a key role in this process from a destination marketing perspective (Bratić *et al.*, 2024).

In addition to the UK and North America, Ireland also received a significant proportion of its visitors from continental Europe (Hotel Management Network, 2024). France and Germany accounted for 7.7% of visitors to Ireland, respectively, followed by the rest of Europe (6.6%) - Belgium/the Netherlands/Luxembourg (4.7%); Spain and Portugal (4.5%); Italy (4.1%); Canada (3.2%); Australia/New Zealand (2.2%); and Denmark/Norway/Sweden/Finland (1.7%). In the case of the southern Spanish region of Andalusia, its main foreign tourism markets are the UK, Germany, France, The Netherlands, and Belgium (IECA, 2025). Tourism

in Ireland and Andalusia relies heavily, in both cases, on visitors from the UK, Germany and France.

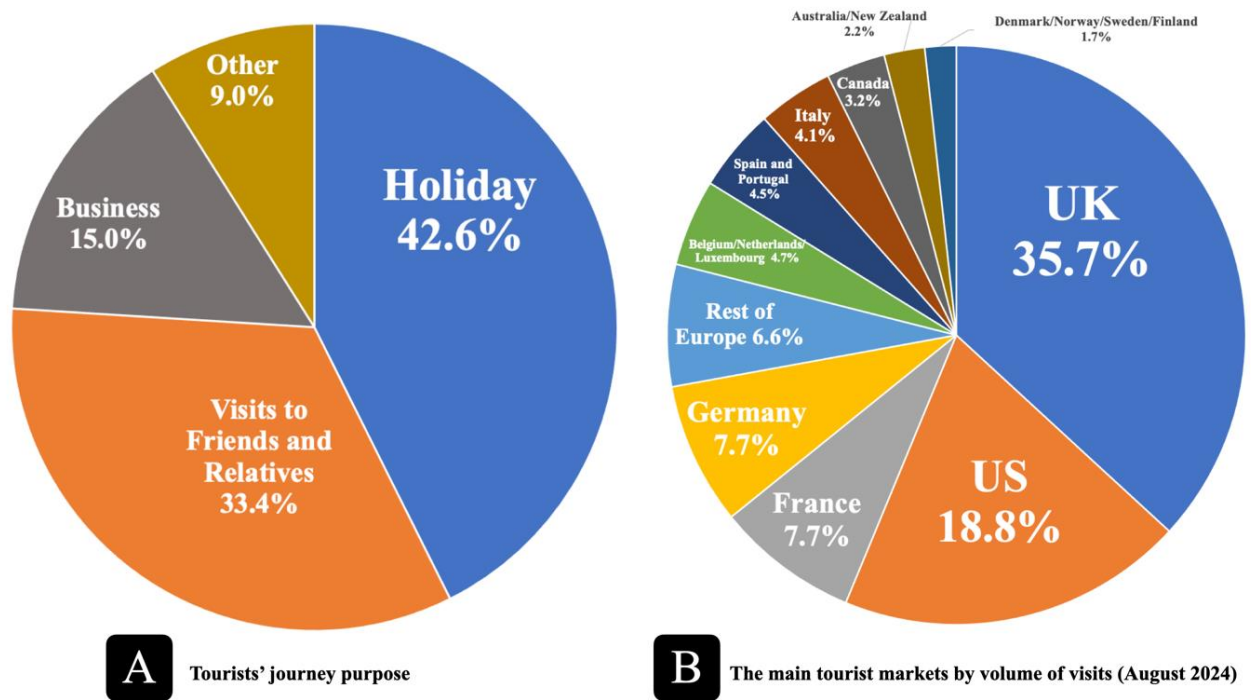


Figure 2. Visitors’ travel purpose and main tourism markets by volume of visits in 2024. [Source: Own elaboration from Tourism Ireland (2025) and ITIC (2025)]. Note: Data on main tourism markets for 2024 not available from Tourism Ireland.

Destination promotion using digital channels is likely to remain key for Ireland, with airports in other parts of the world playing an increasingly active role in this regard. For instance, Singapore Changi airport promotes its services digitally with a focus on flight accessibility, connectivity, and flight frequency. These characteristics have been found to attract investment in Singapore and increase passenger arrivals (Wu and Tsui, 2020). In 2023, 90% of overseas visitors arrived in Singapore via the city’s Changi airport, with Malaysia, Germany, Australia, and the UK as the main countries of origin (Wong, 2024; Tan, 2024).

4.2 Tourism demand and its relationship with air transport and tourism in Ireland

The level of Ireland's tourism demand is significantly influenced by the interdependence of foreign tourism and transportation, as shown in Table 4.

Dublin (DUB) airport has three runways and two terminals and provides connections to 190 destinations. Its load factor is the highest of those examined at 90%. However, Dublin airport is a hub airport, whilst all other airports in Ireland are regional airports, so it offers better facilities and infrastructure. Dublin and Cork airports have an intermodal node that

considerably enhances accessibility to move to their respective city centres. Both airports are managed by DAA. This operator reported a profit after tax (before exceptions) of €236 million in 2024 from both airports - a year-on-year increase of 35% (DAA, 2025).

Dublin airport's main connection				
	Airport/IATA code	Arrivals	Departures	Total number of passengers
1	Heathrow/ LHR	849,056	844,567	1,693,623
2	Gatwick/ LGW	646,427	633,313	1,279,740
3	Schiphol/ AMS	596,646	593,097	1,189,743
4	Manchester/ MAN	483,282	488,350	971,632
5	Stansted/ STN	468,430	456,153	924,583
6	Birmingham/ BHX	402,233	406,385	808,618
7	Málaga/ AGP	386,914	387,602	774,516
8	Edinburgh/ EDI	369,843	355,493	725,336
9	Charles De Gaulle/ CDG	359,191	357,812	717,003
10	Faro/ FAO	325,020	319,863	644,883
Cork airport's main connection				
	Airport/IATA code	Arrivals	Departures	Total number of passengers
1	Heathrow/ LHR	187,590	188,199	375,789
2	Stansted/ STN	149,111	146,192	295,303
3	Schiphol/ AMS	103,276	104,720	207,996
4	Manchester/ MAN	100,909	99,111	200,020
5	Málaga/ AGP	78,200	78,010	156,210
6	Edinburgh/ EDI	73,885	74,931	148,816
7	Faro/ FAO	71,046	70,616	141,662
8	Lanzarote/ ACE	60,355	60,776	121,131
9	Gatwick/ LGW	60,610	60,216	120,826
10	Palma de Mallorca/ PMI	45,508	46,005	91,513
Shannon airport's main connection				
	Airport/IATA code	Arrivals	Departures	Total number of passengers
1	Heathrow/ LHR	130,910	127,183	258,093
2	Stansted/ STN	122,451	117,643	240,094
3	Gatwick/ LGW	59,640	59,936	119,576
4	Logan/ BOS	49,345	51,637	100,982
5	John F Kennedy/ JFK	47,067	50,128	97,195
6	Manchester/ MAN	40,913	38,590	79,503
7	Kraków John Paul II/ KRK	31,452	31,468	62,920
8	Newark/ EWR	29,679	31,238	60,917
9	Edinburgh/ EDI	31,175	27,827	59,002
10	Alicante/ ALC	28,255	28,175	56,430
Knock airport's main connection				
	Airport/IATA code	Arrivals	Departures	Total number of passengers
1	Stansted/ STN	75,502	79,635	155,137
2	Luton/ LTN	65,018	65,432	130,450
3	Liverpool/ LPL	50,038	50,886	100,924
4	Heathrow/ LHR	34,076	32,544	66,620
5	Edinburgh/ EDI	21,343	22,048	43,391
6	East Midlands/ EMA	21,543	21,778	43,321
7	Birmingham/ BHX	12,073	26,810	38,883
8	Manchester/ MAN	18,351	19,788	38,139
9	Bristol/ BRS	17,216	17,379	34,595

10	Faro/ FAO	14,941	15,153	30,094
Kerry airport's main connection	Airport/IATA code	Arrivals	Departures	Total number of passengers
1	Dublin/ DUB	51,477	58,778	110,255
2	Luton/ LTN	49,955	54,076	104,031
3	Stansted/ STN	34,059	36,173	70,232
4	Frankfurt-Hahn/ FRA	20,302	19,580	39,882
5	Alicante/ ALC	16,545	16,697	33,242

Table 4. Arrivals and departures at Ireland’s top 5 airports by number of passengers in 2023. [Source: Own elaboration based on data from Central Statistics Office (2025)].

Note: Data for 2024 not available from Central Statistics.

On the other hand, Shannon (SNN), Knock (NOC), and Kerry (KIR) airports do not have an intermodal node to facilitate passenger mobility, even though these three airports provide jointly access to 65 destinations worldwide and play an important part in Ireland’s tourism sector.

In the case of Andalusia, Málaga (AGP) airport is the only one with two runways and three terminals, with 65 airlines operating from this airport and delivering passengers to and from 156 different destinations across the globe. Both Málaga and Jerez airports offer an intermodal node, which delivers a greater range of transport alternatives to their passengers, especially in terms of direct links to the city centre in each case. On the other hand, Seville (SVQ) airport provides the second-best load factor (85%), after Granada-Jaén (GRX) with 86.5%. Seville airport also offers the largest car parking capacity with places for 2,700 vehicles. It also offers access to 75 destinations and, as Andalusia’s capital city, tends to benefit a great deal from international tourist arrivals. Parallel to this, Jerez (XRY), Granada-Jaén and Almería (LEI) are all regional airports, providing jointly connections to 36 destinations.

Studies have shown that DMOs rely heavily on their understanding of visitor motivations and expectations when developing and promoting destinations (Parreira *et al.*, 2021). Similarly, tourist behavioural intentions related to flight availability, connectivity, and airport proximity to visitor attractions are emerging as key elements shaping visitor decision-making in this respect (Florido-Benítez, 2022). Panel A in Figure 2 shows that foreign visitors chose Ireland in 2024 for holiday reasons (42.6%), followed by visits to friends and relatives (VFR) (33.4%) and business (15%). British visitors accounted for 43.6% of Ireland’s market in that year, largely as a result of geographical proximity and excellent flight connections.

This bilateral UK-Ireland relationship has played a key role in supporting the travel and tourism sector after the Brexit referendum (Murphy, 2024). Research elsewhere supports this strategic approach and points to the need for governments to invest in travel infrastructure as well as tourism in order to maintain competitiveness internationally and stimulate foreign tourism markets (Nakayama, 2024). The Irish Tourism Industry Confederation (ITIC) has reported that Ireland will receive 13.7 million tourist arrivals in 2025. However, a key supporting element of this forecast relies on the completion of plans for the development of improved terminal facilities and a new runway at Dublin airport (ITIC, 2018).

Air accessibility is key to Ireland, with 95% of visitors arriving on flights and a significant proportion of those flying with Ryanair and Aer Lingus. Figure 3 outlines the dependence of

Ireland's inbound tourism on Ryanair (93.1%). However, the advent of the COVID-19 pandemic in 2021 saw a -428.6% drop in passengers compared to pre-pandemic levels. By 2024, after the pandemic, air passenger numbers had increased 8.8% compared to 2023, with industry sources forecasting this LCC to become the largest in Europe by passenger numbers. This rate of recovery appears to have been replicated by airports in other global destinations, including New Zealand, where Christchurch airport—the country's second-largest international gateway—experienced a similar recovery in passenger numbers (Fu *et al.*, 2020).

For example, in 2021, Ryanair experienced a reduction in passenger arrivals of -348.5% in Palma de Mallorca (PMI) airport and -285.1% in Gran Canaria (LPA) airport. In spite of this, PMI saw an increase in 2024 of only 0.9% compared to the previous year, whilst LPA saw a drop in passenger arrivals of -15.5% (AENA, 2025). Unlike Ireland, the Canary and Balearic Islands are coastal leisure destinations subject to considerable levels of seasonality, with the majority of visitors arriving in the summer months.

Ryanair has had a considerable impact on tourist flows to island tourism destinations. For instance, Ryanair launched its first direct flights to Lanzarote (ACE) airport (Canary Islands, Spain) in 2009. In that year alone, it carried 94,402 passengers. By 2011, Ryanair had opened a base at this airport, with passenger numbers steadily increasing to 1.5 million by 2019. In 2024, passenger numbers carried by Ryanair to Lanzarote had reached nearly 2 million (AENA, 2025).

Nonetheless, Ryanair has recently confirmed the removal of about one million seats in Spain amid a dispute with airport operator AENA over planned increases to passenger fees by 2026. Consequently, Ryanair has announced it will close its Santiago de Compostela base in northwestern Spain with a substantial seat reduction in flights to the Canary Islands. Ryanair's request for lower passenger fees was rejected by the Spanish government, which pointed out that AENA's proposed €0.68 per passenger fee would be lower than Ryanair's average 21% increase in ticket prices for 2025. Inevitably, these commercial and political disagreements create uncertainty in local economies and the tourism sector, which tends to have a negative impact on new investments and infrastructure projects.

From an economic and policy perspective, the findings of this study suggest that more effective communication between airports, airline operators and local and regional governments can lead to improved decision-making at policy level, especially in the realm of social and economic sustainability. For instance, increases in airport tax and tourism tax in times of economic uncertainty can be counterproductive to recovery and growth. This applies especially to economic crises. In turn, a more supportive fiscal approach towards airport operators and the tourism and hospitality sector can have beneficial consequences for local economies, whilst introducing policies that monitor closely any rise in negative environmental impacts such as carbon emissions (Niemeier and Forsyth, 2025).

In this respect, encouraging travellers to use VI tools in the planning of their itineraries may improve efficiencies not only in terms of cost, but also carbon emissions. Similarly, new initiatives such as the UK's Electronic Travel Authorisation (ETA), which requires visitors to apply for permission to enter the UK could potentially benefit from operational and strategic synergies offered by VI systems, including commercial opportunities for stakeholders in the travel and tourism service supply chain

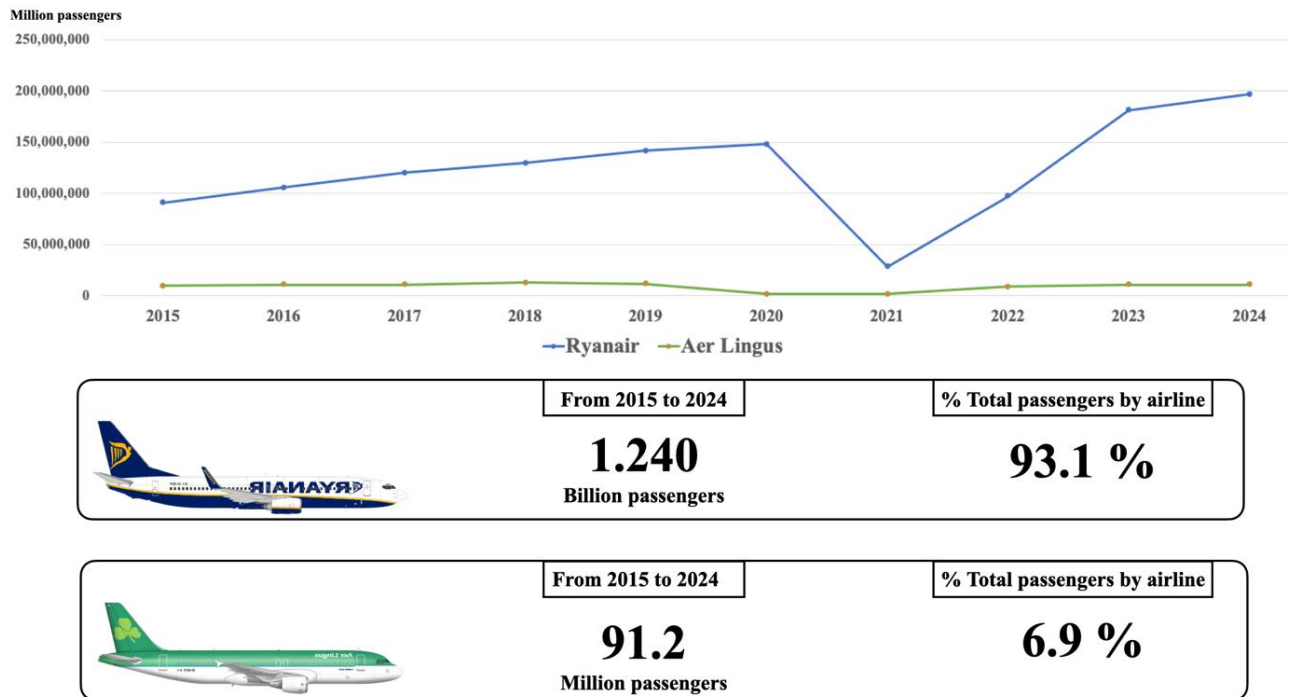


Figure 3. Number of passengers for top two Irish airlines (2015-2024).
 [Source: Own elaboration based on data from Central Statistics Office (2025)].
 Note. Data for CityJet and Emerald airlines not available for 2015-2023.

In Ireland, Aer Lingus—the country’s second largest airline—experienced a -450.8% drop in passengers during the COVID-19 pandemic, with a more modest recovery in 2024 than that of Ryanair – 2.8%. In 2001, Aer Lingus was transformed into a profitable hybrid airline as a consequence of the highly competitive LCCs. By 2013, Ryanair's CEO Michael O'Leary launched a bid to buy Aer Lingus, but the European Commission blocked the move on the grounds that the merger would have harmed consumers by creating a monopoly (EC, 2013).

Inbound tourism is key for Ireland’s hospitality sector, as in so many other destinations around the world (Panzer-Kraus, 2022). Figure 4 illustrates the growth in passenger arrivals in Ireland over the period 2015-2024 at five Irish airports. This growth was matched by hotel occupancy rates. It also shows that Brexit had little or no impact on the Irish tourism sector, possibly due to Tourism Ireland’s forward planning (Erdos, 2024). The use of branding and marketing campaigns by Tourism Ireland has improved visitors’ perceptions of the country considerably, especially after Brexit (Boughton, 2022).

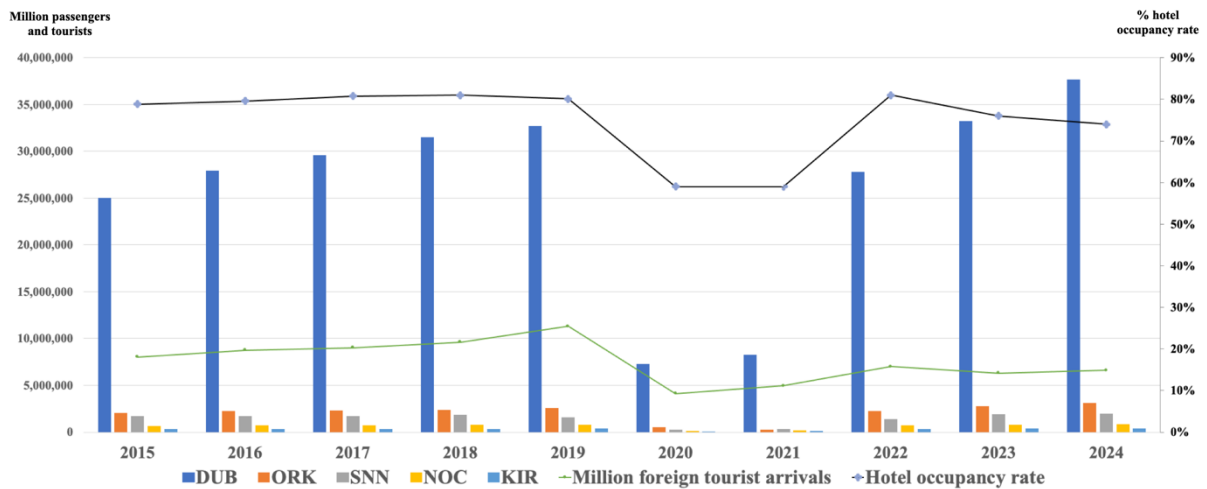


Figure 4. Number of passenger and tourist arrivals at top five airports in Ireland, with hotel occupancy rate in those destinations (2015-2024).

[Source: Own elaboration based on data from Central Statistics Office (2024a, 2024b, 2025), Tourism Ireland (2024, 2025)].

The global COVID-19 pandemic had a drastic effect on airport activity and tourism worldwide. By 2020, passenger and tourist arrivals in Ireland had decreased by 77.6% and 63.5%, respectively. During the pandemic, Ireland’s top five airports experienced very low traffic volumes, with the overall number of visitors dropping to 7.5 million. In turn, hotel occupancy rates (see Figure 4) were also subdued.

However, by 2024 passenger arrivals at Ireland’s main five airports had increased by 15.6% compared with 2019. Adopting an operations management perspective, Table 5 outlines the main connections offered by Ireland’s and Andalusia’s key airports by number of passenger arrivals in 2024.

For instance, Dublin airport offers excellent connections with key UK airports, including Heathrow, Manchester, Gatwick, Stansted, Birmingham, and Edinburgh. Other important airports include Schiphol (The Netherlands), Málaga Costa del Sol (Spain), Charles de Gaulle (France), and Faro (Portugal). In the case of Shannon airport, British airports also play an important role in in-bound tourism, though airports in the United States such as JFK, Logan and Newark delivered 6.5% of total passenger arrivals at Shannon airport.

In view of this situation, it would be advisable for Shannon Airport Authority and Tourism Ireland to develop joint marketing strategies and promotion campaigns targeting the North American outbound tourism market segment and key airlines to increase passenger arrivals in Shannon. In addition to this, it would be desirable for Tourism Ireland, OTAs, and airports in Ireland to integrate VI into their official websites to enhance air connections between the United States and Ireland, combined with more attractive flight and accommodation prices.

A good example in this respect is Changi Airport (CKG) – one of the best-connected airports in the world, where extensive online and interline connections provided by Singapore Airlines and SilkAir play an important part. Similarly, Barcelona (BCN) and Gatwick (LGW) airports have a considerable market potential for VI, which could result in new opportunities for

cooperation between airports and airlines to provide complementary routes (Cheung *et al.*, 2022).

Rank	Cities and counties	Geolocation
1	Dublin	Dublin
2	Cork	South West
3	Kerry	
4	Antrim	
5	Armagh	Northern Ireland
6	Down	
7	Fermanagh	
8	Derry/Londonderry	
9	Tyrone	
10	Galway	West
11	Mayo	
12	Roscommon	
13	Clare	Mid West
14	Limerick	
15	Tipperary	
16	Laois	Midlands & Mid East
17	Longford	
18	Louth	
19	Offaly	
20	Westmeath	
21	Kildare	
22	Meath	
23	Wicklow	
24	Carlow	South East
25	Kilkeny	
26	Waterford	
27	Wexford	
28	Cavan	Border
29	Donegal	
30	Leitrim	
31	Monaghan	
32	Sligo	

Table 5. Top 32 cities and counties in Ireland and Northern Ireland in terms of visitor numbers (2015-2024).

[Source: Own elaboration based on data from Tourism Ireland (2024, 2025)].

In general terms, demand for visitor accommodation in Ireland tends to exceed supply. By 2032, it is estimated that 11,500 additional rooms will be needed to meet the rising demand and enable the country’s tourism sector to reach its full potential. In line with this, Ireland will need to explore options and incentives with a view to attracting new hospitality operators. Although a full viability study would be required for this, one option would be for Ireland to pilot the development of a joint virtual interlining platform for airports, airlines, DMOs, and OTAs that allows travellers to combine different airports, flights, and accommodation to enhance their visitor experiences. This virtual interlining platform would map the world’s main airports, connecting flights, and hotels in Ireland, as well as the country’s main attractions.

Using this data, AI algorithms could deliver the most convenient connections for passengers. This digital platform would also analyse itineraries, personalise routes, and arrange adjustments and re-routing, if required. Data could be integrated into an airline's and OTA's booking flows and give passengers transparency into their itineraries. Succinctly, a virtual interlining platform would facilitate the expansion of new connections and routes, help to avoid connection disruptions, and deliver greater levels of flexibility in terms of accommodation. It would also benefit tour operators as they would find it easier to react to interline requests instantly thanks to a real-time offer and order management system, which also allows suppliers complete commercial control over their preferred itineraries (IATA, 2024).

As part of this analysis of Ireland's tourism, it is also important to draw comparisons with similar tourism regions. Figures 5 and 6 deliver a performance comparison of airports in Andalusia and Ireland, including data related to passenger and tourist arrivals, hotel occupancy rate, and the number of airport operations. The resulting benchmarking graphs provide insights on infrastructure performance, which show that initially, the number of passenger arrivals in Ireland was 305 million, with arrivals at Andalusian airports totalling 250 million. However, when tourist arrivals are considered, Andalusia received 281 million tourists against and Ireland's 75 million during the period analysed in this study.

In Andalusia, tourism promotion budgets and marketing campaigns helped to increase the number of passengers and tourist arrivals as well as hotel occupancy levels during the pandemic crisis (Florido-Benítez, 2025). The results show that Ireland did not recover 11.3 million tourist arrivals since 2019. In fact, between 2020 and 2024, the average number of tourist arrivals in Ireland was 5.8 million, which is arguably below the potential of a tourist destination like Ireland. Ireland may need to consider the development of enhanced tourism marketing strategies to attract new segments of the market, including younger generations of visitors and reduce its dependence on British tourists.

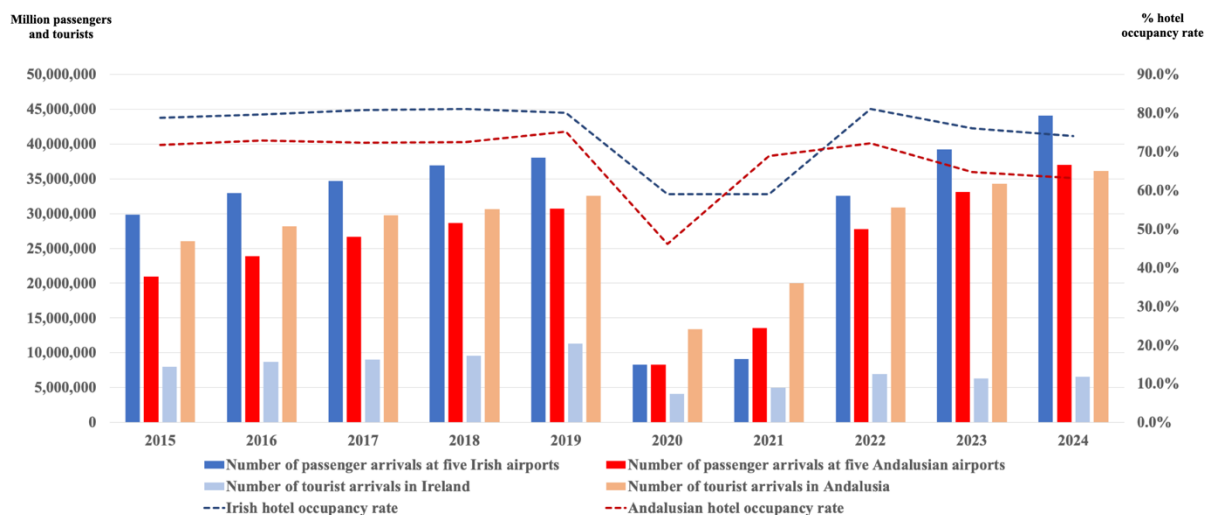


Figure 5. Number of passengers and visitor arrivals at Ireland's top five airports, with hotel occupancy rates (2015-2024).

[Source: Own elaboration based on data from Central Statistics Office (2024a, 2024b, 2025), Tourism Ireland (2024, 2025), AENA (2025), and IECA (2025)].

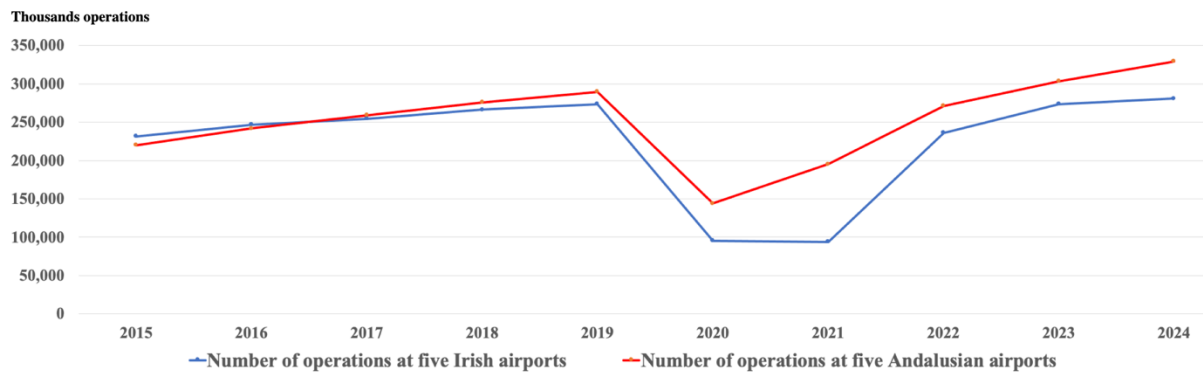


Figure 6. Number of operations at top five airports in Ireland and Andalusia (2015-2024). [Source: Own elaboration based on data from Central Statistics Office (2025) and AENA (2025)].

On the other hand, the average hotel occupancy rate was higher in Ireland (74.9%) than in Andalusia (68%) during the period analysed in this study. This may have been due in part to the higher seasonality of Andalusia as a tourism destination as well as increasing levels of competition faced by hotels in that region from the sharing economy (e.g., Airbnb) (Benítez-Aurioles, 2019, 2022). Research has shown that hotel customers place more value on amenities and staff professionalism, whereas Airbnb visitors tend to focus more on proximity to tourist attractions and staff recommendations (Sánchez-Franco and Aramendia-Muneta, 2023). Given that airports in Ireland hosted 2,253,267 flights during the period of analysis in this study compared to 2,530,751 flights in Andalusian airports, it is worth noting that airports in Ireland experienced higher levels of passenger traffic (55 million higher) than airports in Andalusia. All this in spite of lower flight volumes.

These results suggest that airports in Ireland tend to be more efficient in terms of operations management and passenger volumes. In turn, this has advantages in terms of efficiencies related to CO₂ emissions. This is an important factor for Ireland in terms of attracting new commercial airlines and investment. This is important as airports in Ireland experienced considerable financial losses in 2020. The COVID-19 pandemic led to a shortfall of €28 million for Shannon Airport Authority. and in turn, DAA – the airport operator for Dublin and Cork airports – lost €280 million (Hiney *et al.*, 2023).

One of the potential barriers to implementing AI-based virtual interlining systems may relate to data protection legislation. Under the European General Data Protection Regulation (GDPR), airlines that depend on consent to process passenger data must ensure alignment with updates to the legislation and existing guidance in each country, especially to safeguard this data against potential online access vulnerabilities. In spite of these complexities related to legal compliance, United Airlines and Delta have built on the VI approach by developing a system that offers their passengers the option of tracking their checked-in luggage using mobile applications, whilst also shortening travel times and enhancing customer satisfaction levels during the entire journey.

In 2024, Ryanair reached a partnership agreement with loveholidays.com and Kiwi.com OTAs that allows its customers to book low-cost package holidays. In turn, Kiwi customers can buy Ryanair flights/ancillaries at prices without mark-ups. It is worth noting that Kiwi.com came up with the concept of VI as early as 2012.

An analysis of the number of operations and relative passenger arrivals in Dublin, Málaga, Palma de Mallorca, and Gran Canaria airports (see Figure 7), revealed that Málaga airport was the fastest to recover to pre-pandemic levels (2019) in terms of passenger numbers, followed by Dublin (13.3%), Gran Canaria (12.9%), and Palma de Mallorca (10.7%). In terms of operations, Málaga airport, which experienced an increase of 17.1%, was also the fastest to recover to pre-pandemic levels, followed by Palma de Mallorca (10.7%), Gran Canaria (10%), and Dublin (2.9%). In 2023, Palma de Mallorca airport (5.4% and 4.7%) and Gran Canaria airport (2.5% and 5.3%) reached pre-pandemic levels with better results in terms of operations and passengers than Dublin airport, with 0.3% and 1.9%, respectively.

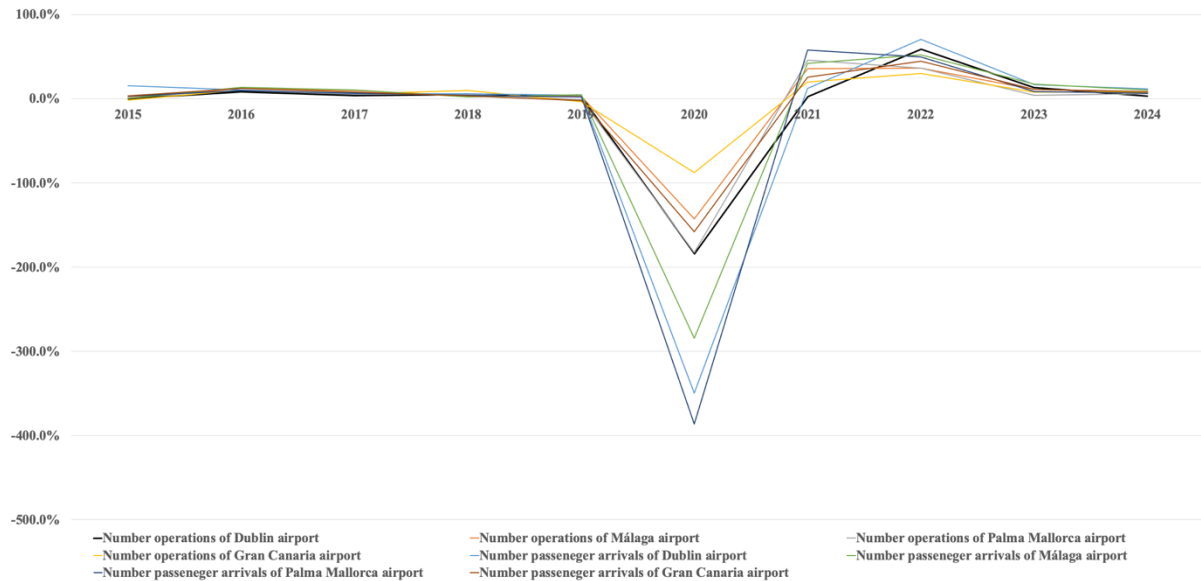


Figure 7. Number of operations and passenger arrivals by percentage (2015-2024). [Source: Own elaboration based on data from Central Statistics Office (2025) and AENA (2025)].

The attraction of individual tourism destinations is also key to the success of a country’s performance as a destination. Table 6 outlines Ireland’s most visited cities and counties in 2015-2024 (Tourism Ireland, 2024, 2025). Not surprisingly, Dublin was the most visited urban tourism destination, with Dublin airport playing a key role in this respect with 261 million passenger arrivals in that period and several nearby tourism attractions on offer, including the Guinness Storehouse, the National Gallery of Ireland, Trinity College, and St. Patrick’s Cathedral, among others. As the country’s capital city, Dublin is also a gateway to the rest of Ireland, with all its associated benefits in terms of economic development (Law et al., 2024).

Dublin’s dominance in Ireland can be interpreted as both a strength and a risk from a tourism marketing strategy perspective. Tourism Ireland focuses on Dublin as the country’s main tourism asset. However, this could also lead in due course to the same overtourism and gentrification problems (Rosello-Geli, 2025) already experienced by some of Europe’s premier urban tourism destinations, including Barcelona, Venice, Prague, London, and Amsterdam. In order to avoid this potential pitfall, Tourism Ireland may need to diversify the marketing of the

country's tourism offer to nearby regions in view of reducing the pressure of tourism demand on Dublin.

Rank	Cities and counties	Geolocation
1	Dublin	Dublin
2	Cork	South West
3	Kerry	
4	Antrim	Northern Ireland
5	Armagh	
6	Down	
7	Fermanagh	
8	Derry/Londonderry	
9	Tyrone	
10	Galway	West
11	Mayo	
12	Roscommon	
13	Clare	Mid West
14	Limerick	
15	Tipperary	
16	Laois	Midlands & Mid East
17	Longford	
18	Louth	
19	Offaly	
20	Westmeath	
21	Kildare	
22	Meath	
23	Wicklow	
24	Carlow	South East
25	Kilkeny	
26	Waterford	
27	Wexford	
28	Cavan	Border
29	Donegal	
30	Leitrim	
31	Monaghan	
32	Sligo	

Table 6. Top 32 cities and counties in Ireland and Northern Ireland in terms of visitor numbers (2015-2024).

[Source: Own elaboration based on data from Tourism Ireland (2024, 2025)].

Ireland's second tourism city by visitor numbers is Cork—the main urban tourism destination in the southwest of the country. However, the effectiveness of this city's tourism marketing strategies has been contested (Horgan and Baum, 2023). County Kerry ranks third in terms of visits, followed by Antrim County in Northern Ireland. The latter offers a number of tourist attractions, including the Titanic Belfast, the Ulster Museum, St. George's Market, Belfast City Hall, St. Anne's Cathedral, and filming locations used for the Game of Thrones series, which attract thousands of overseas visitors every year (Leonard, 2019; Tourism Northern Ireland, 2023). However, measuring the sustainability of the country's tourism development remains a challenge (Chi and Liu, 2023).

5. Conclusion

This study has discussed the key role airports and airline operators play in Ireland, with a special focus on their impact on tourism demand. Similarly, this study has shown that Ireland's reliance on air travel for in-bound tourism means that key operators such as Ryanair and Aer Lingus should play a key role in strategic decision-making related to the development and promotion of tourism in Ireland. This is particularly significant with regards to the relationship between passenger arrivals and hotel occupancy rates.

The findings of this analysis build on those of earlier research by Kuok *et al.* (2023), Mazzola *et al.* (2019, 2022), and Cifuentes-Faura (2021) to show that air accessibility improves the evolution of tourism demand and activities, especially in island destinations. In 2024, Ireland allocated 70 million euros to the development of new marketing and promotion strategies for its inbound tourism market to recover from the effects of the COVID-19 pandemic. In spite of the shortage of accommodation, which continues to affect the country's hospitality sector, this study has shown that existing hotel occupancy rates are broadly aligned with the number of inbound passengers and tourist arrivals at five of the country's main airports.

It is posited that the implementation of a virtual tool integrating data from airports, airlines, and DMOs would help to adopt a more holistic approach to the country's tourism strategy. A virtual data integration tool, supported by AI, would deliver a more seamless approach to personalised packages and visitor decision-making by merging data related to flights, accommodation, and information on nearby attractions, leading to an overall improvement in the visitor experience.

Although Dublin is the most visited urban destination in Ireland, other tourism cities and counties contribute to what remains a balanced mix of urban tourism and regional attractions (Hiney *et al.*, 2020). The analysis carried out in this study has shown that Dublin has a dominant position in terms of visitor arrivals, largely as a result of its airport's facilities (e.g., three runways, two terminals, load factor, breadth of destination connections), as well as the 46 commercial airlines that operate in this airport. This study reinforces the importance of integrating the management of airports with the management of tourism destinations not only from a logistics perspective but also in terms of tourism promotion.

This study has also shown that Ireland benefits from a wide range of tourism attractors, including urban tourism, visits connected to family and friends, cultural attractions, and business tourism. By contrast, other island destinations, including Malta, Cyprus, the Maldives, the Azores, Madeira, and the Canary and Balearic Isles, among others, draw the majority of their tourism from coastal leisure activities (Castanho *et al.*, 2021; Luis, 2004) and are highly seasonal.

One of Ireland's advantages as a tourism destination is its proximity and air accessibility to the UK and continental Europe, as well as its cultural links with countries further afield, including North America and Australia. Consequently, it would seem appropriate for the country's DMO - Tourism Ireland - to build on these attributes by designing marketing strategies that are more resilient to seasonal tourism. Urban and cultural tourism fit this criterion and tend to attract visitors with higher levels of disposable income.

Another relevant finding of this study was that airports in Ireland, especially Dublin, depend highly on UK airports for their connections and visitor numbers. Diversifying air connections with destinations in China, Dubai, the United Arab Emirates, Japan, Australia, and Latin America could help dynamise the number of passenger arrivals in Ireland and reduce its dependency on British visitors. Comparatively, only two of ten of Málaga airport's connections are with other Spanish destinations.

5.1. Theoretical implications

This article contributes to current knowledge in tourism and travel with a specific focus on the nascent field of aerotainment (Florido-Benítez *et al.*, 2025). Building on this concept, which argues that travellers' decisions are influenced by an airport's proximity to major tourism cities, research cited in this study has argued that emerging technologies, such as AI and metaverse platforms (backed by big data and cloud computing), will increasingly facilitate the creation of personalised travel packages in real time to maximise vacation time.

Similarly, smart technologies are having a growing influence on visitors' pre-stay experiences and expectations through the use of virtual tours. This is being moderated by cognitive aspects (Carrasco-García *et al.*, 2025) that are attracting growing levels of scholarly interest. In addition to this, the concept of aerotainment will continue to develop from a number of theoretical perspectives that include the experience economy theory, the theory of staged authenticity, theoretical frameworks linked to the commodification of travel and mobility, postmodern tourism and other paradigms related to mobility.

As technologies supported by AI and quantum computing become more widespread in their use in travel and tourism, the opportunities for aerotainment to build on its systems-based approach to sustainable development and co-creation processes will grow with a higher level of use of real-time data (Florido-Benítez and Coca-Stefaniak, 2025b). Passengers at key U.S. airports services by Delta Airlines now have access to biometric self-boarding services. Similarly, Dubai International Airport is planning on introducing the use of biometric gates in 2026 to expedite the administration of immigration processes.

Moreover, augmented reality (AR) navigation solutions reliant on AI and the growth in the use of virtual tour guides will also offer new opportunities for immersive visitor experiences (Jalilvand and Ghasemi, 2024). Google Lens and other AI-powered platforms already provide information about local heritage, hospitality outlets, and key visitor attractions. This can be used to support the strategic positioning of tourism destinations, engage their local communities, and promote the authenticity of nearby regions to visitors. For instance, the VoiceMap app provides customers with AI-guided audio tours, depending on their chosen location.

This research also delivers operations management recommendations aimed at making Ireland a more resilient and attractive destination, with a focus on air accessibility and connectivity. It is posited that Ireland would benefit from enhanced airport terminal facilities, diversify its inbound tourism market to reduce the country's dependence on British visitors, and build a new runway at Dublin airport (ITIC, 2025b).

This study may influence future research to develop theoretical frameworks that help understand the interoperability and commercial interaction between tourist destinations,

DMOs, airport and airline operators with a focus on emerging new technologies with a view to improving the visitor experience and residents' quality of life.

5.2. Practical implications

From a business-to-business (B2B) perspective, bilateral agreements between OTAs and airlines or airports supported by VI assistants can offer opportunities for improved levels of service to travellers. This includes faster solutions to missed connection flights. In addition to this, VI can be used as a commercial tool to offer personalised tourist packages

The resulting bilateral commercial agreements (B2B and B2C) would need to be rooted in confidential, transparent, and secure processes in view of protecting sensitive consumer data. Similarly, airport and airline operators' commercial agreements with DMOs could contribute to more sustainable economic development (Lohmann and Peres-de Oliveira, 2024; Zenelis, 2022).

In addition to improvements in transport infrastructure, airports need to start building factors such as capacity and connectivity into their brand to become more competitive. For instance, Málaga's airport recently received €1.5 billion in funding from the Spanish government to expand terminal capacity to 36 million passengers, strengthen mobility infrastructure around the airport, and redesign the baggage handling system as a strategic move towards promoting the south of Spain internationally as an alternative tourism destination to other parts of the country with higher levels of international investment.

5.3. Limitations and future studies

Although this study provides a matrix that compares airports in Ireland and Andalusia, the DEA method was not used in this analysis. Future studies could develop a DEA method to measure the efficiency, productivity, and profitability of airport operators analysed here as a basis for attracting investment and new airline operators.

Parallel to this, airports tend to be rather reluctant to provide specific information on their operations, including advertising budgets, number of employees, staff costs, commercial revenues, and CO2 emissions, amongst other factors. Partly as a result of this lack of information, it was not possible for this study to incorporate passengers' experiences and satisfaction levels into the analysis. Future research could examine what passengers think about key airports in Ireland and Andalusia using online reviews, especially from the perspective of accessibility, connectivity, social media presence, links to OTAs and their level of interaction with emerging AI platforms.

The findings of this study also posit a number of questions, which merit further scholarly enquiry. For instance, what impact does air accessibility have in some of the world's key island destinations (e.g., Cyprus, New Zealand, and Japan) on neighbouring islands? Similarly, how are airports and airline operators integrated into island DMO marketing and promotion campaigns? Understanding the complexity of interactions between key stakeholders in tourism destinations, including island destinations, requires a systems-based approach. This study has

embraced that paradigm, though an analysis of the complexity of these relationships was beyond the scope of this research.

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