THE WORLD AIRPORT AWARDS AS A QUALITY DISTINCTIVE AND MARKETING TOOL FOR AIRPORTS

Lázaro Florido-Benítez

Lecturer, Department of Economics and Business, Málaga University, Spain

Orchid Id: https://orcid.org/0000-0003-3360-6423
E-mail: lfb@uma.es

DOI: https://doi.org/10.56801/jaoam.v1i2.4

Abstract.

This study aims to analyze the World Airport Awards as a quality distinctive and marketing tool by airports. It is a benchmarking study, and it uses secondary data from Skytrax, World Airport Awards, Airports Council International, International Air Transport Association, airport official websites and apps, App Store, and Google Play, to support research results. The method includes airport website benchmarking, communication, and marketing strategies by airports with the aim of analyzing the degree of utilization of the prize awarded by Skytrax. The study’s findings indicate that when an airport wins the Skytrax’s prize or it is positioned very good in the Skytrax’s ranking, this airport cites the achievement on its official app and website, with the aim of advertising and promoting the quality services and brand image worldwide. Furthermore, this study demonstrates that there is a high correlation between airport ranking and digital channels usage like airport’s website.

Keywords: Airport, Quality, Marketing, Benchmarking, Brand image and Management.
1. **Introduction**

During the pandemic airports became authentic graveyards of airplanes. Unfortunately, most airlines are being affected by a temporary lack of liquidity and transparency hindering the efficient allocation of necessary public and private investments, to ensure fair, free, and equitable access to airlines by government aid schemes. From a business and operational standpoint, it is necessary to increase accounting transparency on aviation activity and regulatory processes by public and private organizations, because this transparency could have positive consequences for shareholders. Indeed, according to Jordão (2009) [1] claims that investors will know better how the airport management is using the financial resources and how is managing all risks related to their operations. Departing from the above literature indicate that these actions are well suited for measuring the efficiency of airport investments based on resource input measures and performance output measures, these processes do not address the effectiveness issue with respect to the overall quality level of airport passenger services [2]. For instance, Wang et al. (2022) [3] found that an airport with high service quality can promote its operation, and it will help to improve its position in the classification of Skytrax airport service quality awards. One of the main gaps identified by researchers and practitioners was that to measure airport’s performance through operational approaches is not sufficient. For this reason, it is important to measure the level of passenger satisfaction at airports, with the aim of providing valuable information to airport operators. As stated by Volo and D’Acunto (2021) [4] the power of digital service ecosystems lies in technological innovation, and forward-looking leaders.

Airport operations are dramatically changing the industry towards modern technology adaptation, such as airport applications into passenger terminal process, applications and demand for airborne drone operations, including urban air mobility, are growing rapidly in regional and metropolitan areas [5-8]. Airports play an active role in the promotion and delivery of tourism products and services in their host cities. Furthermore, airports are the gateway where tourists enjoy and fulfill their dreams in the desired tourist destination, but the COVID-19 pandemic is accelerating the change of the rules of the game at air transport and tourism around the world [9, 10].

According to a study carried out by Straker and Wrigley (2018) [11] suggested that airport’s technology usage does influence the overall service ranking, highlighting airports which are using digital channels as a communication tool are higher ranked compared to those that currently do not utilize them to their full extent. For instance, Hamal et al. (2021) [12] propose that these operational strategies are heavily focused on enhancing consumers’ travel experience at airports and airlines. These operational and technological strategies implemented by airports are highly valued by passenger surveys in the Skytrax World Airport Awards, these are the most prestigious quality in the air transport, and they are known as ‘The Olympics of the aviation industry’. Skytrax is a consultancy firm based in London, United Kingdom.

The Skytrax World Airport Awards are voted by customers in the largest, annual global airport customer satisfaction survey. The awards are based on 13,25 million airport survey questionnaires completed by 106 different nationalities of airline customers during the survey period. Skytrax is a specialized advisor in research and quality to the air transport industry. It advises airports and airlines around the world on quality improvements and quality leadership [13, 14]. As stated by Rhoades et al. (2000), and Trischler and Lohmann (2018) [15, 16] airport operators need to tackle and respond
the needs of stakeholders and passengers at airports, thus is, they must clearly adapt to the new challenges of aviation. Air transport faces the challenge of improving the processes of information communication and transmission, customer experiences and relationships, based on real-time information exchange [17]. This study serves to emphasize the importance of airports at cities, because they provide air connectivity at destinations and improving the regional economy [18]. Although, the tourist development within a destination and airport provides a context where goals and economic interests overlap by (Destination Marketing Organizations, airport, airlines, and stakeholders), and sometimes is very hard to advance a common set of interests [19].

Moreover, the previous studies did not investigate the impact of adopted strategies on the service quality and marketing by airports. To fill this gap, the main challenge of this study is to analyze the World Airport Awards as a quality distinctive and marketing tool for airports. Skytrax awards are often cited by the winner airports for publicity and marketing, the management of social media activities by airports is an emerging issue, and existing empirical literature on the measurement of brand perception in the airport industry is lacking [20, 21]. As stated by Graham (2019) [22] competition in the airport industry assumes three different levels: competition among groups of airports, competition among airports and competition inside airports. With increasing competition between airports, perceived quality and consumer satisfaction have become a key focus of management and the most important tool to maintain a competitive advantage, measuring Airport Service Quality (ASQ) is vital to airport management nowadays [23, 24].

2. Literature Review

2.1 Airport Service Quality as a Distinctive to Empower the Brand Image of Airport

The first and last perception of quality in a tourist destination takes place at the airport [25]. Airport service quality perceived by passengers at airports, has gained increasing interest among scholars and practitioners owing to its close link to customer satisfaction, airport efficiency, non-aeronautical revenue. Nevertheless, airport service quality surveys are now widely used by both airport operators and regulatory authorities [16, 23, 26-31]. Airport operators’ managers understand the importance of passenger’s perceptions of airport service quality [26, 32, 33]. For passengers, aircraft cleanliness is non-negotiable and serves as a fundamental component of service quality. Passenger perceptions of airline cleanliness correlate with their impression of overall airline service quality and satisfaction [12, 34]. For instance, in 2021 Tokyo’s Haneda airport has been awarded the global 5-Star airport quality rating for the sixth consecutive year in the World’s Cleanest Airport category [35]. This award truly demonstrates the commitment of the airport operator and operational equipment of maintaining hygiene and cleanliness of the infrastructure, and which has become a global benchmark in this category.

The specific situation on tourism and aviation sectors requires new challenges and future opportunities [36]. In 2021, the Skytrax awards has been different due to the pandemic, with major airports falling rank and an entirely new awards category (i.e., COVID-19 Airport Excellence Awards) dedicated to the incredible efforts made by the aviation industry introduced (see Figure 1). Skytrax assessment is very important, because this is an independent institution recommended by the global air transportation industry [37]. As regards the evaluation of airport service quality, literature review includes both qualitative and quantitative data, to ensure consistency of this study. Following Jiang et al. (2015) [38] showed that there were significant differences of service quality between passengers’ expectations and perceptions.
Moreover, Bulut and Aydogan (2020) [39] revealed that the decision-makers should improve the passenger service quality. It helps decision-makers where to focus as a strategic priority.

Airports face several challenges when serving passengers, for instance, the involvement of multiple staff and service providers, and fragmented passenger segments that have diverse expectations regarding service quality [40]. Airport operators need to be aware of the importance that certain demographic and situational characteristics play in the decision-making process of purchasing products and services offered on their web page or app [41-43]. Nevertheless, Florido-Benítez (2021b; 2021d) [9, 44] detected an interoperability deficit between public and private organizations. Among the many decisions involved in internationalization of companies, one of the first ones to take is the choice of location of an airport. Airports must be multimodal and multifunctional, to attract new business models and customers. Marketing yourself as a tourist or cargo airport is a big mistake, because you are closing a multitude of commercial and non-commercial opportunities and income [45].

Previous studies on airport service quality have showed a link between quality of services and passenger’s satisfaction as well as brand image. More recent research on airport service quality has also brought in big data and public reviews, such as those from Google Review or Twitter to tackle quality services at air transport and tourism industries [20, 46-51]. Moreover, an adequate level of service quality makes the airport more attractive and can contribute to the development of the surrounding territorial context [52]. Some awards can be powerful tools to promote accessibility in the built environment, such as the Access City Award, the Accessible Airport Awards, the UIA Friendly, and Inclusive Spaces Award [53].

Figure 1: Skytrax World Airport Awards by categories in 2021. Source: Own elaboration from World Airport Awards (2021a).
2.2 Airport Marketing in the Digital Age

Marketing has become a core activity at many airports, and one that is vital for success of airport operators [54, 55]. The two main customers of airports are airlines and passengers. Marketing techniques used for these two types of customers vary depending on the needs of each client [25]. Nevertheless, as stated by Florido-Benítez (2021d; 2021e) [44, 45] airports are adapting to new business models and new collaborations, especially in the commercial activities (e.g., e-commerce, start-ups, transport and logistic activities and new technologies). In this same line, Alabsi and Gill (2021) [56] claim that there is an increasing interest in the use of various digital technologies for interacting with passengers at airports, because advances in the Internet of Things (IoT) and aviation sector have resulted in the emergence of smart airports (Koroniotis et al., 2020) [57]. The airport industry is characterized by the usage of a large amount of technology, so innovation is a necessary component for improving day-to-day commercial activities. Following Coca-Stefaniak (2019) [58] suggests that smart innovation initiatives will help tourism cities and air transport to develop new digital marketing strategies.

The digital marketing literature and research streams are in a stage of developed maturity, and this is only the beginning of mobile phone data still have great potential to further advance international business [59, 60]. As stated by Buhalis and Volcheck (2021) [61] the integration of technology in business strategy increases the complexity of marketing communications and urges the need for advanced marketing performance analytics. Destination marketers should construct an appealing image by improving the tourism infrastructures and the quality of the services and products that a destination offers [62]. Passengers evaluate the experience within the airport with the promotion of the destination they received in their country of origin. For this reason, the efficiency of managing tourism promotion is the key to the growth of arrival of tourists and encouraging the actual and potential tourists to travel a destination through the spreading of information, especially, when the COVID-19 pandemic has had a catastrophic impact on the tourism and air sector worldwide [63]. In this regard, Florido-Benítez (2022c) [64] indicates that new variants of the coronavirus, Brexit, and the conflict between Ukraine and Russia have once again set off alarm bells, as international tourism is the basis of all tourist destination. Tourist destinations and airports should extend their efforts to discover the needs and follow necessary promotional strategies to raise interest among the potential tourists. It is imperative for the decision makers to understand how tourists acquire information for tourism related to products and services [65]. Tourist communication is an important factor to have a positive image about the tourist destination and the decision-making process of tourists. Digital and mobile marketing, infrastructure, branding, quality, accessibility, and information factors about a specific destination which are mostly demanded by tourists are considered as an important mean of promotion for the tourism and aviation industries. According to Wang et al. (2020) [66] revealed that appreciation leads to intention to visit the promoted destination when the branded promotion is offered. Moreover, the rise of online channels requires airport operators to change sales strategies, reinforcing emotional promotion to stimulate impulse buyers' willingness-to-buy [43].

2.3 Airport Branding as a Marketing Tool

This research project highlights the importance of developing airport marketing strategies at airport international context, and this helps to satisfy the needs of the different passenger's segments, thanks to the information provided by airport websites and apps about the products and services showed. For instance, in mobile marketing campaigns,
everything is measured and monitored, from the media, optimization of the corporate website and the application, emails, SMS, MMS channels to the final evaluation of the customer of the product received. Mobile apps have been developed to solve the everyday problems of users. This implies a stronger interaction between the brand and the consumer [59, 67, 68]. Airport operators have placed greater emphasis on airport marketing and branding [69]. The destination image influences in the trip quality, trip value, and tourist satisfaction [70]. The image is a differentiating element with respect to your main competitors [71]. According to Hosany et al. (2006) [72] revealed that destination image and destination personality are related concepts.

Airports and companies that coexist in their microenvironment are being transformed into e-commerce driven companies that are willing to use mobile devices as their new direct sales channel or commercial information adders to favor and improving the sale of products to users [59]. Following Florido-Benítez (2016b) [73] indicates that large airports are taking advantage of the consolidation of smartphones to create airport applications’ brands and communication strategies (see Figure 2). As stated by Bennet and Rundel-Thiele (2005) [74] ‘brand managers may need to update their understanding of the nature and role of brand loyalty’. Mobile marketing contributes to improve higher levels of satisfaction among airport clients. However, for mobile marketing infrastructure to achieve long-term success, it must provide benefits to airports and airlines through the mobile applications [75]. For instance, in 2016 a research project was conducted by International University of Bad Honnef, Florido-Benítez and Düsseldorf airport, with the aim of improving the app of this airport in communication, management, screen interface and loyalty program terms. Nowadays, the Düsseldorf airport app has become an indispensable tool for passengers and this airport was awarded as the second-best regional airport in Europe and fifth best regional in the world in 2021. Leiper (1979) [76] indicates that the willingness to travel and seek new experiences is based on profit generation orientated towards the wants and needs of tourists [77].

Figure 2. Airport brand apps.
Available online at: https://play.google.com/store/apps (accessed on 6 October 2022).

3. Data Collection and Airport Website Benchmarking

3.1 Data Collection
This study collects data from the Skytrax World Airport Awards website, which each year awards the best airport in the world, where air travellers voice their opinions about their airport experience after the screening process and verification [1, 7, 11, 14, 50, 78-82]. As stated by Lubbe et al. (2011) [83] claim that the main measure of assessment of airport operations is the opinion of passengers. This study employed web crawling technique to collect the review dataset from Skytrax. The reviews were collected from the World Best Airport ranked 1st-100th, larger airports compete internationally, as they perceive themselves to be intercontinental air transport hubs [50, 69]. On the contrary, Lee and
Yu (2018) [20] indicate that Skytrax focuses more on ranking airports and presenting World Airports Awards, but the growth in the number of airport’s reviews has been slow and there is substantially lesser chance for casual visitors than aviation professionals to leave reviews in Skytrax, potentially leading to a strong self-selection bias. In addition, the temporal scope correspondent to this study has been from 2012 to 2021, this temporary scope has a particular evolutionary purpose for airports, especially the implementation of new technologies and IoT. “The service quality and passenger experience at airports can be enhanced by applying big data analytics and IoT” [84, 85]. The survey operated from 2012 to 2021, covering 700 airports worldwide and evaluating traveller experiences across different airport service and product key performance indicators, from check-in, arrivals, transfers, shopping, security and immigration through to departure at the gate (see Table 1). According to Airports Council International ‘ACI’ (2021) [86] claims that these indicators help compose an updated, accurate list of both amenities and services provided at each airport. Skytrax divides airport service quality evaluations into six dimensions: website design, ground transport, security and immigration service, passenger arrivals, departure and transit, terminal comfort and terminal facilities, and shopping, food and beverage. For this reason, the airport’s priority should be promoting its service quality [87, 88].

The data for this study is secondary data drawn from Skytrax, and passengers can rate their airline, seats, lounges, and airport experiences for a variety of attributes and share their reviews as text comments via the Skytrax mechanism. The reasons for using this data source in the analysis are: first, Skytrax requires passengers to verify themselves prior to leaving a review. And second, Skytrax compiles highly representative data from a global network of airports [89].

The survey also contained a specific COVID-19 section [11, 90]. From this survey, the top one hundred airports, this study focused on world’s top 25 airports, listed in Table 2). The format of airport audit that Skytrax conducts at airports worldwide is identical in approach for every type of airport covered whether major, regional, or domestic, but the key to the debate should be what would be best for airports and its users. Sometimes many decisions are made for reasons that do not relate to quality service [15, 87]. Connectivity and information sharing under the mediation effect of top management commitment are positively related to big data and predictive analytics acceptance [91, 92]. Following Gunasekaran et al. (2017a) [91] suggest the need for decision support system to understand break-even analysis of new design procedures and verify in terms of quality and cost effectiveness. For researchers, the method presented here can be used to facilitate more studies to investigate the relationships between the service quality and other aspects like airport’s marketing. Moreover, this the proposed model did not examine the impact of quality on other performance indicators, for instance, financial performance, and market share [14]. The top 25 airports vary significantly according to the perspective they have been analysed. An airport that performs very well according to stakeholder expectations might not perform satisfactorily by sustainability reporting investigation on empirical findings [79].
Table 1. Airport indicators to assess by customer’s surveys in the Skytrax World Airport Awards

Source. Own elaboration based on data from World Airport Awards (2021b).

* These are some topics and methodological indicators used in monitoring and evaluation of airports by Skytrax.

<table>
<thead>
<tr>
<th>General Topics</th>
<th>General Topics</th>
<th>COVID-19 Topics</th>
<th>Survey’s Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting to and from the Airport, Ease of Access</td>
<td>TV and Entertainment facilities</td>
<td>COVID-19 Information signage</td>
<td>Survey screening: All entries screened to identify each IP/user information, with duplicate or ineligible entries deleted.</td>
</tr>
<tr>
<td>Public transport options, efficiency and prices</td>
<td>Quiet areas, Bay norms, Hotel facility, rest areas</td>
<td>Face mask usage enforced</td>
<td>Survey costs: The costs of operating the survey are paid entirely by Skytrax.</td>
</tr>
<tr>
<td>Taxi availability and prices</td>
<td>Children’s play area and facilities provided</td>
<td>Visibility and availability of hand sanitizer</td>
<td>Survey languages: Customer surveys were provided in English, Spanish, and Chinese.</td>
</tr>
<tr>
<td>Availability of luggage trolleys (airside &amp; landside)</td>
<td>Airport’s app</td>
<td>Social distancing markings/ signage</td>
<td>Airports covered: Over 500 airports are featured in the survey results.</td>
</tr>
<tr>
<td>Terminal comfort, ambience and design</td>
<td>Airport’s website</td>
<td>Enforcement of social distancing</td>
<td>Survey payment: No payment or reward of any type is made to survey respondents, with all submissions on a voluntary basis.</td>
</tr>
<tr>
<td>Terminal cleanliness, floors, seating and public areas</td>
<td>Information received through physical and digital</td>
<td>Seating / F&amp;B social distancing</td>
<td>Membership subscription: No membership subscription, registration or any charge for an airport to be included in the survey.</td>
</tr>
<tr>
<td>Seating facilities throughout terminals</td>
<td>User’s experience at airports</td>
<td>Hygiene procedures at security</td>
<td>Trade association: The customer survey is not connected to any type of trade association.</td>
</tr>
<tr>
<td>Immigration - queuing times / system</td>
<td>Client’s level of satisfaction</td>
<td>Social distancing at security / immigration</td>
<td>Survey dates: The survey was conducted from August 2020 until July 2021</td>
</tr>
<tr>
<td>Immigration - staff attitude</td>
<td>Ubiquity’s information</td>
<td>Terminal cleanliness</td>
<td>Respondent nationalities: Over 100 customer nationalities participated in the survey.</td>
</tr>
<tr>
<td>Waiting times at Security screening</td>
<td>Choice of Shopping – tax free and other outlets</td>
<td>Washroom cleanliness</td>
<td>Survey hosting: The online survey was hosted at <a href="http://www.worldairportsurvey.com">www.worldairportsurvey.com</a></td>
</tr>
<tr>
<td>Crowding in lounge area</td>
<td>Prices charged in retail outlets</td>
<td>Digital COVID Certificate (DCC)</td>
<td>Award logo usage: Award winning airports are able to use the Award logo at no charge.</td>
</tr>
<tr>
<td>Seating in lounge area (quality and availability)</td>
<td>Choice of bars, cafés and restaurants</td>
<td></td>
<td>Awards event: The awards event has no charge for airports to attend.</td>
</tr>
<tr>
<td>Courtesy and Attitude of Security staff</td>
<td>Prices charged in bars, cafés and restaurants</td>
<td></td>
<td>Member airports: The customer survey is not restricted to member airports. Any airport in the world can be nominated in the survey.</td>
</tr>
<tr>
<td>Quality of security search process</td>
<td>WiFi service</td>
<td></td>
<td>Third parties: No third party survey involvement or sponsorship of the Survey process.</td>
</tr>
<tr>
<td>Check-In facilities, queuing systems and seating</td>
<td>Power charging facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wayfinding and Terminal signage</td>
<td>Telephone and fax locations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarity of Boarding Calls and Airport PAs</td>
<td>Bureau de change facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight Info Screens - clarity / quality of information</td>
<td>ATM facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendliness of Airport Staff</td>
<td>Smoking policy / Smoking lounges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language skills for Airport Staff</td>
<td>Standards of disabled user access and facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of Transit through Airport</td>
<td>Baggage Delivery times</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location of Airline Lounges</td>
<td>Priority Baggage Delivery efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washroom and Shower facilities in terminal</td>
<td>Lost luggage services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleanliness of Washroom facilities</td>
<td>Perception of security and safety standards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. World’s top 25 airports from 2012 to 2021.

Source. Own elaboration based on data from World Airport Awards (2021b)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seoul Incheon</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
</tr>
<tr>
<td>2</td>
<td>Singapore Changi</td>
<td>Seoul Incheon</td>
<td>Seoul Incheon</td>
<td>Seoul Incheon</td>
<td>Seoul Incheon</td>
<td>Tokyo Haneda</td>
<td>Seoul Incheon</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
</tr>
<tr>
<td>3</td>
<td>Hong Kong</td>
<td>Amsterdam Schiphol</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
</tr>
<tr>
<td>4</td>
<td>Amsterdam Schiphol</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
</tr>
<tr>
<td>5</td>
<td>Beijing Capital</td>
<td>Beijing Capital</td>
<td>Amsterdam Schiphol</td>
<td>Tokyo Haneda</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>6</td>
<td>Munich</td>
<td>Munich</td>
<td>Tokyo Haneda</td>
<td>Zurich</td>
<td>Zurich</td>
<td>Zurich</td>
<td>Zurich</td>
<td>Zurich</td>
<td>Zurich</td>
<td>Munich</td>
</tr>
<tr>
<td>7</td>
<td>Zurich</td>
<td>Zurich</td>
<td>Beijing Capital</td>
<td>Centur Naga</td>
<td>Centur Naga</td>
<td>Centur Naga</td>
<td>Centur Naga</td>
<td>Centur Naga</td>
<td>Centur Naga</td>
<td>Munich</td>
</tr>
<tr>
<td>9</td>
<td>Vancouver</td>
<td>Vancouver</td>
<td>Amsterdam Schiphol</td>
<td>Kansai</td>
<td>Kansai</td>
<td>Kansai</td>
<td>Kansai</td>
<td>Kansai</td>
<td>Kansai</td>
<td>Kansai</td>
</tr>
<tr>
<td>10</td>
<td>Kansai</td>
<td>London Heathrow</td>
<td>London Heathrow</td>
<td>Beijing Capital</td>
<td>Doha Hamad</td>
<td>Frankfurt</td>
<td>Frankfurt</td>
<td>Frankfurt</td>
<td>Frankfurt</td>
<td>Frankfurt</td>
</tr>
<tr>
<td>11</td>
<td>London Heathrow</td>
<td>Frankfurt</td>
<td>Auckland</td>
<td>Vancouver</td>
<td>Tokyo Nara</td>
<td>Amsterdam Schiphol</td>
<td>Tokyo Nara</td>
<td>Kansai</td>
<td>Kansai</td>
<td>Kansai</td>
</tr>
<tr>
<td>12</td>
<td>Amsterdam Schiphol</td>
<td>Kansai</td>
<td>Centur Naga</td>
<td>Centur Naga</td>
<td>Frankfurt</td>
<td>Amsterdam Schiphol</td>
<td>Frankfurt</td>
<td>Portland</td>
<td>Portland</td>
<td>Portland</td>
</tr>
<tr>
<td>13</td>
<td>Kansai</td>
<td>Kuala Lumpur</td>
<td>Frankfurt</td>
<td>Frankurt</td>
<td>Frankurt</td>
<td>Frankurt</td>
<td>Frankurt</td>
<td>Frankurt</td>
<td>Frankurt</td>
<td>Frankurt</td>
</tr>
<tr>
<td>14</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
</tr>
<tr>
<td>15</td>
<td>Shanghai Pudong</td>
<td>Shanghai Pudong</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
</tr>
<tr>
<td>16</td>
<td>Hong Kong</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
<td>Amsterdam Schiphol</td>
</tr>
<tr>
<td>17</td>
<td>Frankfurt</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
<td>Munich</td>
</tr>
<tr>
<td>18</td>
<td>Krakow</td>
<td>Melbourne</td>
<td>Melbourne</td>
<td>Melbourne</td>
<td>Melbourne</td>
<td>Melbourne</td>
<td>Melbourne</td>
<td>Melbourne</td>
<td>Melbourne</td>
<td>Melbourne</td>
</tr>
<tr>
<td>20</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
<td>Barcelona</td>
</tr>
<tr>
<td>22</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
<td>Istanbul</td>
</tr>
<tr>
<td>23</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
<td>Athens</td>
</tr>
<tr>
<td>24</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
<td>Tokyo Haneda</td>
</tr>
<tr>
<td>25</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
<td>Singapore Changi</td>
</tr>
</tbody>
</table>
Furthermore, this study introduced airport website benchmarking, with the aim of analyzing the degree of utilization of the prize awarded by Skytrax (The World’s Top Ten Airports from 2012 to 2021, see Figure 3), and communication and marketing strategies. This second stage collected information on each airport and the digital communications that they were showing in their website. The data collection for each airport began with a search of the airport’s website, and from there, information and promotional content about awards obtained by Skytrax were analyzed in order to gain an overview of existing digital channels. According to Merkert et al. (2012) [93] claim that benchmarking of airports has gained considerable interest in both the academic literature and within the practitioner community.

This approach has long been used by researchers interested in examining communication such as advertisements and media stories, to explore and gain a clearer understanding of digital channels and their usage [11, 94-97]. On the contrary, Benchmarking airports is currently popular both in the academic literature and in practice but has proved rather problematic due to the heterogeneity inherent in any reasonably sized dataset [98]. Although there are a wide range of airport benchmarking studies for large airports and in particular hubs, much less has been investigated at the local and regional level [99].

This analysis will help airport operators to manage promotion communications through airport apps and websites, to ensure airports have adequate resources to enhance capacity and meet the needs of their partners and companies, empower the airport brand image, and identifying best practices for the benefit of passengers. This study shows also as airport operators manage the prize awarded in their digital channels (website and apps), because online communications and promotion strategies are important information sources of passenger experience towards services provided at airports. Previous research claimed that ‘travelers consider the re-views of past tourists in deciding on their trips’ [100].

4. Results of Research

4.1 The World’s Top Ten Airports from 2012 to 2021

The perspective analyzed in this research project indicates that the best airports scored in the same category according to the World Airport Awards should be carefully analyzed before being considered by their features and qualities, their role in relation to the territory or tourist destination, budgets, management, direct or indirect government aid provided to airports and airlines, among many others. As stated by Jordão (2009) [1] some airports might not perform in a satisfactory way in employees, suppliers, local communities, and Destination Marketing Organization terms. Following indicate that Skytrax’s airport rankings and World Airport Awards are used for promotional purposes and competitive advantage by most of the world’s airports [101].

The rating of the World’s Top 100 airports from 2012 to 2021 were voted by air travelers around the world by Skytrax’s survey. The Table 2 shows only the World’s top 25 airports from 2012 to 2021, and within the Top Ten airport of Table 2 from this period, this study has selected and classified the World’s Top 10 airports in the last ten years. The method used to classify the best airports was apply a quantitative rating system (10 points for the first position until 1 point for the tenth position), according to this study, results showed that the best airport in the world was Singapore Changi airport with 97 points from 2012 to 2021, and its IATA code is (SIN); followed by Seoul Incheon airport (ICN) with 85 points; Tokyo Haneda airport (HND) 72 points; Hong Kong airport (HKG) 62 points; Munich airport (MUC)
61 points; Doha Hamad airport (DOH) 37 points; Zurich airport (ZRH) 32 points; Centrair Nagoya airport (NGO) 30 points; Amsterdam Schiphol airport (AMS) 25 points, and tenth place London Heathrow airport (LHR) with 20 points (see Figure 3). Each of these airports offer unique passenger experiences and provide consistent quality, basic services that satisfy customer priorities as well as their needs and expectations [102].

Competition between airports and airport operators are being fierce, especially in these difficult moments of pandemic, because ‘this crisis is longer and deeper than anyone could have expected, and international passenger traffic remained 86.6% down on pre-crisis levels over the first two months of 2021’, this situation is forcing the transformation of airports in shipping centers, in order to increase non-aeronautical revenue [103]. Many airports have transformed their terminals in shopping malls offering a great variety of commercial activities such as Singapore Changi airport, Korea Incheon International airport, Doha Hamad airport, London Heathrow airport, amongst many others. Following suggest that larger airports that provide the infrastructure for airport cities, including shopping malls, hotels, and other commercial activities, may have relatively greater opportunities to collect revenues than their smaller counterparts [98].

![Figure 3. World's top 10 airports by the Skytrax World Airport Awards (2012-2021).](source)

*Top ten airports have been scored during the period from 2012 to 2021 (Table 2. Top one with 10 points until top ten with 1 point).*

Airport operators pay more attention to offering passengers and airport visitors plenty of benefits related to entertainment. Changi Airport is a living example of good management, where the airport operator continually pays close attention to creating enjoyable experiences to the passengers [104]. Bock (2015) [105] claims that Singapore’s Changi airport has achieved a degree of prominence and singularity amongst international audiences to the point that it is frequently invoked and emulated as a ‘model’. Singapore Changi airport has won over 250 awards. Its customers and stakeholders recognized to airport operator its efforts to improve the conditions of all passengers and companies [102]. These good passenger experiences directly influence satisfaction surveys conducted by airport operators and public and
private organizations. Following showed that perceived service quality is the consumer’s judgement about a firm’s overall excellence or superiority [106, 107].

4.2 Recent Airport Website Benchmarking Results

Benchmarking should start being more widely practiced by airports and airlines worldwide to obtain better standards [108, 109]. To provide airport services characterized by high levels of quality make the travel more pleasant for the passengers, with the final objective to attract more users [52, 86]. In this study, we suggest that Benchmarking is used like a management tool by airports to determine strengths and weaknesses, and as method in future research in this area of knowledge [110-112]. Benchmarking within the airport industry can be divided into two types of evaluation: First, self-Benchmark: an airport compares its performance with itself over time; and second, external-Benchmark: an airport compares its performance with other airports either at a single point of time or during a period [113]. For improved managerial benchmarking, disaggregated data regarding non-aeronautical activities would help to identify successful strategies on the commercial side [98]. Following suggest that developing a single indicator that captures the state of infrastructure is difficult because it must consider a certain number of indicators like quality services and how users value the services provided [114].

The Figure 4 shows airport website Benchmarking of the World’s Top Ten airports by the Skytrax from 2012 to 2021. This study examined and compared websites of airports, and every one of them promoted the prizes in their websites and apps. In this section, we reflect on the relationship between the results and the literature review in order to offer insight into how World Airport Awards are currently being promoted online and provide some ways in which airports in these countries can improve their online presence.

Results show that airport websites perform well in providing content that highlights the World Airport Awards: World’s Best airport, World’s Cleanest airports, World’s Best Domestic airports, among others. Airport operators use a variety of marketing strategies to establish their credibility among foreign companies and customers, including profiling their international certifications and links to accreditation bodies. In these ten airports’ websites, they are promoting the quality of their services and positioning the airport brand image around the world. According to Wu (2018) [97] revealed that the promotion of tourism has been interrelated with the branding of destinations, because the tourism website is regarded as the most important communication tool for destination marketing in the information age. As stated by Law et al. (2010) [112] a benchmarking approach combines user perceptions with website performance to help owners identify the strengths and weaknesses of their own websites. Online reviews have been used as secondary data in many areas of marketing applications, ranging from pricing to brand management [66, 115, 116]. Passengers share their service experiences on online platforms such as Trip Advisor and Skytrax. These platforms, it is always possible to access online reviews that are independent of time and place and have a high spread rate and contributes to the growth of electronic word of mouth [117, 118]. The best airlines in the world highly recognize Skytrax’s quality awards. When an airline is awarded a ‘Skytrax star-ranking’ or advances to a higher ranking, they immediately announce this news by publishing press releases and posting it on their websites’ most visible spots. Both overall star rankings and detailed quality assessment results are publicly available on the Skytrax website [119-121]. Numerous airports are investing in digital solutions such as mobile applications, website, and wayfinding maps to improve customer experience issues. This study
provides a benchmarking tool for airports, by building upon existing research into the usage, purpose and content of digital channels [11].

Figure 4. Communication and promotion of the World Airport Awards by airport’s website.
Tokyo Haneda airport website


Hong Kong airport website

Munich airport website

Press: A success at the "World Airport Awards"

Munich Airport once again voted "Best Airport in Europe"

August 19, 2021

In times of the pandemic, Munich Airport remains at the top of the European rankings. At the annual "World Airport Awards" of the London-based aviation research institute Skytrax, the Bavarian hub airport once again awarded the title of "Best Airport in Europe" on the basis of a passenger survey. In the global ranking, Munich was voted an outstanding score once more.

Munich Airport "Best Airport in Europe" for the 14th time

Jan Lumenta, CEO of Munich Airport, is delighted that passengers around the world continue to express their confidence in the airport even in times of the pandemic. "This unprecedented appreciation encourages us to manage the current difficult situation and at the same time a great motivation to strive to ensure that our airport can soon again be a top player among hubs in terms of passenger services as well."

In Munich’s view, Doha Hamad Airport in Qatar has also been placed in the world's top ten. The World Airport Awards were the result of a global survey of passengers from more than 180 countries conducted between August 2020 and July 2021. For Munich Airport, the accolade continues a remarkable series: the airport has been recognized as "Best Airport in Europe" for the 14th time in the last 15 years.


Doha Hamad airport website

Source. https://dohahamadairport.com
Zurich Airport website


Centrair Nagoya airport website

Amsterdam Schiphol airport website

AMS: an award-winning airport

We could tell you about our accomplishments but prefer to let our customers sing our praises. For 36 years, Amsterdam Airport Schiphol has won almost 200 European and global airport awards from both airline and passenger organizations. A few recent examples:

Best airport awards
- Best Airport in Western Europe - Skytrax World Airport Awards 2020
- Favourite International Airport Award - Condé Nast Traveler (USA)
- Highly Recommended (category > 50 million passengers) - Skytrax World Traveler Awards 2014, 2016, 2017, 2018, 2019
- Airline Choice Award for the best international airport (2012 and 2016) - Business Traveller
- Best Airport in Europe 2012, 2013 and 2019 (Business Traveller)
- Conde Nast Traveler Award 2012, 2013 and 2014


London Heathrow website

Awards

2019

2018

2017

2016

Following claim that there is a high correlation relationship between the rank of an airport and the usage of digital channel typologies [96]. According to Lee and Yu (2018), and Brida et al. (2019) [20, 122] claim that user-generated online contents can be used as an alternative data source for assessing airport service quality. These findings support results from previous studies, where most tourism website evaluation research focuses on measuring website information and process, value added, relationship, trust and design, and usability aspects, fierce competition and continuous information and communications technology development have prompted organizations to adopt web-based digital marketing strategies to improve their competitive advantages [123-125].

In the aviation and tourism sectors, claim that the features of a website that help create user preference towards a travel destination have special relevance for travel-related businesses [126]. To survive and prosper during a new period of crises and beyond, airports and airlines operators must re-examine their current strategies. And assess what new strategies they should be implementing [127, 128]. According to Bezerra et al. (2021) [129] showed that passengers were interested on airport service quality. Airports can learn from the best practices of the top-ranking airports, including measures that airports can directly control, and use the results obtained to improve future performance [109]. If airport management takes a strategic and holistic approach to customer service and airport branding, customer satisfaction with the airport experience can be significantly improved. Singapore Changi Airport is renowned for its successful strategic airport brand [102].

The Figure 5 presents the adoption of procedures at the planning and programming to increase the high-quality level of passenger. On the contrary, the low-quality level of passenger is related to the absence of procedures or factors by airport operators to achieve the objective pursued or prize. Assigned measure (Airport awarded) were evaluated according to literature review and findings of this study, whilst reflective measures (Airport not awarded) were evaluated according to previous studies and results of this research. The first airport awarded node shows the specification of the prize utility and consequences for airports and quality level of passengers. We cannot forget that this quality distinctive benefits the offered services value proposition at airports. Moreover, ‘the service discipline’s research endeavours tend to explore exchange offerings, and value creation between parties that typically have a universal appeal and generalization’ [130]. Airport’s service award increases the level of customers’ service level and as a result for the airport to meet the customers’ expectation level of service more efforts should be made [131]. On the contrary, the second airport not awarded node shows airports which had not obtained the prizes or those who are not really interested in obtaining these types of quality distinctives.

Once the main purposes of the research have been achieved, the detailed analysis has enabled us to provide some hints of how to get a web which guarantees the promotion of airport brand image, thanks to the international awards of Skytrax. Furthermore, this study demonstrates that there is a high correlation between airport ranking and digital channels usage such as airport’s website and apps. According to Hung (2017) [132] revealed that the information value of websites helps customers establish a complete travel and hospitality plan; and it represents the completeness, relevance, and timeliness of website information. Law and Hsu (2005) and Wong et al. (2020) [133, 134] claim that official websites of organizations are perceived as the best place to find facilities, content, and information of companies.
Nowadays, Destination Marketing Organizations (DMOs), airports and airlines are the drivers of connectivity and promotion of the destination in which they operate [135]. Airports as an essential tool in the strategic and marketing plans of tourist destinations [136].

Strategic alliances between airlines and airports are necessary in these times of pandemic and the progressive opening of the markets, in order to ‘increases passenger confidence in flying in the recovery from the COVID-19 pandemic’ [137]. According to Albers et al. (2005) [138] suggest that in the face of increasing competition, alliances between airports and airlines offer convenient instruments for developing a long-term competitive advantage. Another highlight was the innovation at airports because innovation has a significant positive effect on airport marketing performance, irrespective of the strategic focus of the airport, the successful development of organizational readiness can be used to speed up the rate of innovation needed for digital change at airports [9, 139-141]. Innovative airports allow their people to work creatively and solve problems through dialogue rather than conflict. Successful airports are open to new ideas and technologies. They are always on the lookout for approaches that can be borrowed from other airports or even other industries [142]. Indeed, it is interesting to see to what extent reach of this awards by airports do results increased quality level of passengers, a competitive advantage and empowerment of airport brand image at global level. ‘While there are images perceived by tourists before the visit, the experience itself is the essential image source’ [143]. For this reason, to participate in these awards requires a great efforts and dedication on airport operators to enhance the quality of their runways, terminals, and activities.

Airports must attract passengers and airlines by strategically acting on marketing and route development and trying to differentiate their offer [144]. Airport operators need to segment passenger’s flow based on business priorities, to anticipate your customer’s needs, as well as monitoring and measuring airport service quality dimensions. According to [43] claims that Covid-19 brought about a massive change in airport operations. It is recommended that airport operators can maintain the quality of services carried out in a comprehensive manner in providing the information.
needed by passengers at the airport. The tendency of airport website and apps is to transform users into prosumers, and these prosumers can develop their own products, services or even plan their journey inside of airport [145].

5. Conclusions and Implications

Based on the results of the research and discussion above, a study entitled The World Airport Awards a quality distinctive and marketing tool for airports, conclusions can be drawn including:

When an airport wins the Skytrax’s prize or it is positioned very good in the Skytrax’s ranking, this airport cites the achievement on his official’s app and website, with the aim of advertising and promoting the quality services and brand image worldwide. This study examined the official websites of World’s Top 25 airports from 2012 to 2021 (see Table 2), and all of them have advertised the Skytrax’s award in their website and apps. Skytrax’s quality distinctive is a competitive advantage by airport against his main competitors. Airports in a competitive world will have to serve better their customers. ‘Airport’s competition is an increasing feature of the industry’, this is one of the main reasons why airports increasingly make use of their websites or mobile apps to sell commercial services directly to customers [146-149]. Airport service quality awards are extensively cited by the winning airports for promotional purpose [20].

Our results also show a differentiated degree of online presence depending on the type of airport. Websites of international airports have higher interactivity, offer more information, and are better adapted to conduct transactions and provide internet security than the websites of regional and tourist airport, especially in airport apps, where these have outsourced these services. Moreover, results support the view that digital marketing strategies need to highly provide content-rich website designs (i.e., new personalized products and services or technological innovation and management in the interest of sustainability, efficiency and productivity of airport operations and air traffic management) relative to their competitors’ websites. Chutiphongdech and Vongsaroj (2022) [150] found that airport's product and services should be customized depending on business environments and location contexts.

Marketing strategies used by airport operators have been a great support to promote Skytrax’ prizes, especially the diffusion of information and communication technologies through digital channels. To date, this study has shown Skytrax’ prizes contribution such as quality distinctive, marketing tool, a competitive advantage of airports that have implemented them in terms of internationalization, brand image, good management, ability to continue being competitive and permanently contact with clients and provide an important source of information to them. This study revealed that airport’s websites present high levels of communication in all aspects related to brand image and promotion of good management by operators, meaning information about prizes, safety, COVID-19 protocols, and cleanliness, among other categories. For instance, AENA group advertises on his official's website (see Figure A1) as Madrid-Barajas, Barcelona El Prat, and Alicante airports have received COVID-19 Airport Excellence Awards from Skytrax, or Tokyo Haneda airport which was awarded once again, and for the sixth successive time as the World's Cleanest airport in the world, and maintain the quality of service in terms of cleanliness and coolness of the airport terminal to create a clean and cool atmosphere in the airport area, besides this airport was the best airport in Asia and the best domestic airport for ninth successive time according to Skytrax’ awards (see Figure 4) [151].
Finally, this study may be useful for comparing website marketing performance among competing airports. Given the high importance aviation management researchers and airport operators assign to digital marketing strategies. The new airport digital marketing strategies are improving information exchange and communication in the evolution passenger connectivity, thanks to airport's websites and apps.

5.1. Theoretical Implications

In this study, we have analysed previous studies that use diverse methodological approaches to airport and tourism websites evaluation through digital marketing strategies. Findings of this study can help practitioners and researchers to understand the new strategies in the digital era. For airport operators, results of research are a great opportunity to tackle and identify the strengths and weaknesses of their websites and their relative position in the international market. Following suggest that for academic researchers, this study offers insights on tourism and aviation websites evaluation and methods of evaluation in these sectors [112]. With the increase in airport alternatives and airport service variation, passengers’ perception of the airport experience has changed [152]. This paper can help researchers and other experts improve the application of this model in different situations (case studies) and assist the airport operators in reconsidering and reconstructing the new digital marketing strategies, especially in the promotion of airport brand image.

5.2. Practical Implications

The results of this study may serve as a reference for the aviation and tourism practitioners to comprehensively understand website evaluation, constantly improve their websites and enhance suppliers’ communication with passengers, along with the rapid development of information and communications technology and the wide adoption of social media and mobile apps at present [124]. In general, airport operators have a great opportunity to make good use of official website, apps, and social media in the promotion their quality distinctive and the achievement of the international awards like Skytrax, with the aim of enhancing to enhance the airport brand image (i.e., recognition of brand image). The deployment of digital technologies by companies to secure business continuity requires strategic rethinking of their business processes. It will be important for scholars to understand the implications digital technologies deployment on work, organizing, and performance [153]. The aviation industry is undergoing a progressive digital transformation to address organizational challenges associated with transforming their business [154].

5.3 Limitations and Future Research

A major limitation of the present study is that Skytrax has not provided important data to help to this study, such as annual awards of other categories in the last ten years. Moreover, other limitations of this study are that only used Skytrax database, future research could add other international awards and so they could compare customer satisfaction levels with different awards and airports. It is recommended to include others digital channels, with the purpose of obtaining a better global vision of airport marketing strategies. Barakat et al. (2021) [24] claim that Skytrax’s official website is based mainly in English language, revealed that there were also many comments about this site on other social networks and forums that discussed the employees of Skytrax [118]. In total, 80% of comments discussed that writing the review is simple, but not since the wait for it to be officially published on the network. According to Ip et al. (2011) [155] suggest that the research gaps explored herein also provide them with fruitful avenues for further research on airport's website evaluation, as well as insights into how they can improve methodological approaches to such evaluation.
by incorporating the theories and models of other disciplines into their future research endeavors. Furthermore, future studies may apply the proposed model to analyze the performances of different official airport websites, as well as develop indicators benchmark for mobile websites that can help airport operators assess the performance of their mobile websites and apps.

References

65. Tourism promotion in the EU and destination image. AALEP, 2016.
90. World Airport Awards. 2021b.


125. Florido-Benítez, L. and E.L. Castillero, Análisis de la cadena de valor de la empresa Avanza Mobility ADO. Revista Transporte y Territorio, 2022(26).


Figure A1. Three airports of AENA group received the COVID-19 Airport Excellence Awards from Skytrax.