JTAE

E- ISSN: 2676-4253

Journal of Technology in Aerospace Engineering

Vol. 9, Special Issue, pp. 23-31, 2026

https://doi.org/10.22034/jtae.2026.1430

Journal Homepage: https://www.jtae.ari.ac.ir

Original Research Paper

The Impact of International Economic Policies on the Imposition of Airport Charges in the Aviation Industry: A Qualitative-Analytical Perspective

Masoud Karimi[1], Shahram Zarneshan[2], and Hamid Kazemi[*3]

1. Department of International Commercial Law, Allameh Tabataba'i University, Tehran, Iran
2. Department of Public and International Law, Faculty of Law and Political Science, Allameh Tabataba'i University, Tehran, Iran
3. Department of Air and Space Law, Aerospace Research Institute, Tehran, Iran

ARTICLE INFO

Article History:

Received 6 October 2025
Revised 12 November 2025
Accepted 11 November 2025
Available Online 2 December 2025

Keywords:

Airport charges
Deregulation
Privatization
Market power
Airport competition

ABSTRACT

Economic policies governing the aviation industry exert a significant impact on the determination of airport charges and, consequently, on the operational costs of airlines and the final ticket price. This study, using a descriptive-analytical approach, examines the effect of liberalization and privatization policies on airport charges rates and their implications for passenger costs. The findings of this research indicate that within the framework of deregulation policies, airports tend to increase charges to maximize revenue. However, while intense airport-to-airport competition in some regions may lead to a short-term reduction in airport charges, this rivalry could eventually result in market concentration in the long run, favoring large corporations and reducing service diversity .Airport privatization has, in some cases, led to improved efficiency and increased investment; however, its implementation in the absence of effective supervision can lead to higher airport charges and a decline in service quality. Furthermore, low-cost carriers (LCCs), given their high sensitivity to airport charges, play a crucial role in regulating these charges and fostering competition among airports. The results of this study emphasize the necessity of formulating effective regulatory policies for setting airport charges. Such policies should both support healthy competition and prevent unreasonable increases in travel costs, thereby striking an appropriate balance between the economic interests of airports and the public welfare of passengers.

* Corresponding Author's E-mail: masoudkarimi274@gmail.com

How to Cite this Article:
M. Karimi, Sh. Zarneshan, and H. Kazemi, "The Impact of International Economic Policies on the Imposition of Airport Charges in the Aviation Industry: A Qualitative-Analytical Perspective," *Journal of Technology in Aerospace Engineering*, Vol. 9, Special Issue, pp. 23-31, 2026, https://doi.org/10.22034/jtae.2026.1430.

1 INTRODUCTION

With the expansion of commercial interactions and both domestic and international connectivity, the demand for air transportation has grown, and the aviation economy is experiencing significant global growth, leading to increased profitability in the air transport industry. This industry encompasses various sectors, including airports and airlines, which are considered its most critical components. Airports play an essential role in the aviation system, acting as primary hubs for the movement of passengers and cargo. Indeed, as facilities for passengers to board and disembark and for goods to be loaded and unloaded, an airport plays a vital role in the flow of air transport. This process, by facilitating the movement of passengers and cargo owners and offering a variety of services, creates new job opportunities and increases revenue for the airport, its surrounding region, and nearby cities.

Airports require financing to cover their establishment and operational costs. Alongside government or local authority budget allocations, one of the primary revenue streams in the aviation industry, particularly in the airport sector, is the collection of airport charges from passengers and airlines in exchange for the services they receive. These charges help airports cover their expenses. Airport charges are amounts collected for the management and development of airports, which are paid by airport users for the specific services provided.[1]

These airport charges include fees for landing, passenger handling, aircraft parking, terminal rental, and other infrastructural services, which help fund and maintain these infrastructures. The implementation of airport charges can offer significant benefits, such as providing a stable revenue source for infrastructure development, creating jobs and economic growth in the areas surrounding airports, and encouraging the use of environmentally friendly technologies. These charges can also help improve service quality and reduce environmental impacts. However, airport charges can also lead to increased costs, reduced travel demand, and limited competitiveness among airports and airlines. Ultimately, the unfair or excessive imposition of charges can reduce airline profits and slow the growth of the aviation industry.

Increasing or decreasing airport charges to cover basic costs or generate profit is a critical issue in air transport that has a direct impact on the financial and commercial activities of the aviation industry. On one hand, airlines require the use of airport infrastructure to provide their services and must pay charges, such as landing and handling fees, in accordance with the laws of each country. On the other hand, airports need sufficient funding to develop infrastructure and improve services, enabling them to provide the necessary capacity to accommodate various types of aircraft. The traditional view in setting airport charges, which was based on basic costs and aimed at recovering the expenses of air transport services and facilities, has undergone significant changes in recent years.

With economic shifts and international policies such as aviation liberalization and deregulation, airports have transformed from mere providers of public infrastructure to complex commercial service providers. These changes have significantly impacted the economic development of airports due to increased competition among them, a greater focus on commercial aspects, and the importance of airports as key drivers of economic and social growth. In fact, the implementation of principles and rules of aviation economic policies, such as liberalization and deregulation, has pushed airlines and aviation entities to pursue market power. Identifying airports with significant market power is essential for regulating airport charges and maintaining fair competition in the aviation industry. Larger airports with greater market power are able to set their charges higher than their basic costs, as there is less competition at these airports. This can lead to increased airport profits and, consequently, higher ticket prices and reduced consumer access to air transport services.[2]

Since revenues from airport charges are often limited to covering current expenses and are not sufficient to provide for optimal infrastructure development, the entry of the private sector into airport management has brought about a change in how these charges are determined. In this context, the imposition of charges based on market power has been proposed as a solution, but this approach also comes with its challenges. The fundamental question is whether this method could impede the development of passenger and cargo air transport. This concern arises because increased airport charges based on market power lead to higher operational costs for airlines, which ultimately result in higher ticket prices and a transfer of these costs to passengers.[3]

On the other hand, the question arises whether airport charges should be collected solely to cover basic airport costs, or if this financial source can be utilized as a tool for profitability and infrastructure development. Adopting a flexible approach to determining airport charges can, in this regard, provide a stable financial source for airports while also improving service quality and developing aviation infrastructure without creating a serious obstacle to the growth and expansion of air transport.

In recent years, numerous studies have examined the role of airport charges within the framework of aviation economic policies. For example, Mathisen et al. (2017), by analyzing the interactions between airlines and airports, have shown that market structure and the characteristics of supply and demand have a direct and significant impact on the determination of airport charges. This study emphasizes the importance of a precise understanding of the airport market structure for optimal regulation of charges.

The study by Andrey N. Zubenko and Andrey A. Kurdin (2023) concludes that airport market power is one of the principal factors influencing the structure of airport charges. In their analysis, the authors demonstrate that this market power stems from the industry's structural characteristics, including its natural monopoly nature (resulting from high fixed costs) and network effects, which increase airline dependency on hub airports. Zubenko and Kurdin note that although deregulation and privatization policies were implemented to enhance efficiency, the transfer of ownership without sufficient oversight has amplified the risk of abuse of a dominant position to impose monopolistic airport charges. The key conclusion of this research is that the necessity of regulating airport charges remains justified, given structural risks such as the risk of expropriation of consumer investment (airlines). Their analyses indicate that this power is moderated by inter-airport competition and the high bargaining power of Low-Cost Carriers (LCCs); therefore, the authors emphasize the necessity of effective regulation to establish a balance between the economic benefits of private management and the prevention of unfair charge increases.

Furthermore, Markiewicz (2020) reviewed the rules and regulations related to airport charges in the European Union and stated that charges can be utilized as a tool to maintain or enhance the competitive position of airports. However, excessive flexibility in setting charges may lead to discrimination against smaller airlines, which highlights the necessity of formulating fair and equitable policies in this area.

Similarly, Kuzmina-Merlino (2019), focusing on airport charge policies at Riga International Airport, has shown that these charges can be employed as a strategic tool to gain a competitive advantage in the aviation market, especially in conditions of intensifying competition among airports.

Hans-Martin Niemeier and Peter Forsyth (2025) have demonstrated that airports, as critical nodes in the aviation industry, play a significant role in greenhouse gas emissions and other environmental impacts. Their economic policies, particularly the structure of airport charges and pricing mechanisms, can directly and indirectly influence airline behavior, flight volumes, and emission levels. Research indicates that insufficient or inefficient pricing prevents the proper internalization of external costs, such as noise and local pollutants, resulting in flight volumes exceeding the socially optimal level and consequently higher emissions. At high-demand airports, slot allocation and congestion charges can reduce delays and emissions; however, in the absence of full internalization, these measures do not achieve optimal carbon outcomes. Partial policies, including incentives for low-emission aircraft, the use of sustainable aviation fuels (SAF), promotion of public transport and electric vehicles, and restrictions on airport expansion, can mitigate emissions, but their effectiveness depends on airline responses and passenger substitution effects. Overall, the optimal design of airport charges, incorporating the true environmental costs of carbon, noise, and local pollutants, can simultaneously reduce emissions, enhance economic efficiency, and guide investment toward optimal capacity.

Studies such as Di Me (2022) have also addressed the role of private law instruments in regulating airport charges, proposing more flexible and efficient solutions compared to traditional regulations, which can be utilized within the framework of deregulation and privatization.

The economic analyses of Bijan Vasigh and Brian Pearce (2024) in their book Air Transport Economics examine airport privatization as a dual-faceted approach. The authors evaluate privatization

as beneficial due to its capacity for capital provision, optimizing operational efficiency, and risk transfer, which encourages airports to utilize more efficient pricing mechanisms (such as demand-based pricing) within the structure of airport charges. However, the primary risk stems from the abuse of monopolistic market power; the profit motive of the private sector, in the absence of adequate regulatory oversight, can lead to the imposition of high monopolistic airport charges, resulting in harm to airlines and conflict with the public interest. Therefore, Vasigh and Pearce emphasize the necessity of precise and targeted regulation to establish a crucial balance between the efficiency of private management and safeguarding the public interest in the structure of airport charges.

The objective of this research is to analyze the impact of economic policies implemented in the aviation industry specifically deregulation, privatization, enhanced competition, and the formation of market power on how airport charges are determined and applied. Within this framework, the study attempts to examine and explain the relationship between the market structure of airports and the prevailing economic policies, with a focus on the consequences of these policies on the level of airport charges.

The scope of the present research encompasses the aviation industry. It adopts a holistic approach to the interaction among key players, including airports, airlines, regulatory bodies, and policymakers. The main focus is on examining the relationships between airports' market power and the economic policies governing the industry, with the aim of providing a comprehensive picture of the impact of these policies on the airport charge system.

2 THE IMPACT OF DEREGULATION ON AIRPORT CHARGES

Aviation deregulation refers to the reduction of government intervention in market entry and the determination of air transport rates. This policy, by removing restrictions, fosters competition, lowers travel costs, and facilitates the entry of new companies. The primary goal is to streamline airline operations and simplify regulatory processes for greater dynamism in the industry at the national level [4].

After World War II, the aviation industry was primarily shaped by strict government regulations and agreements such as the Chicago Convention (1944). This regulatory framework limited market entry, route determination, and pricing, while emphasizing national sovereignty over airspace. However, in the second half of the 20th century, the United States spearheaded deregulation by reducing government controls and increasing competition in the aviation industry. Subsequently, this policy became a model for other countries, driving reforms in the international aviation system.

In 1938, the passage of the Civil Aeronautics Act in the United States led to the establishment of the Civil Aeronautics Board (CAB). This organization had complete oversight of the domestic aviation industry and was responsible for setting fares, schedules, and flight routes. The 'point-to-point' system, designed by the CAB, limited competition and was considered an impediment to growth and innovation in the industry [5]. The CAB also controlled ticket prices, which directly impacted the competitiveness of airlines. In the 1960s, the introduction of jets into the aviation industry led to an increase in flight speeds and passenger numbers, but these developments were accompanied by the CAB's strict regulations. The CAB prevented new airlines from being licensed or from expanding their routes, thus pushing the industry toward a geographical monopoly. In the 1970s, high inflation, reduced productivity, and increased costs caused a severe crisis in the industry, and previous efforts to solve these problems had failed [6].

In the 1970s, with the intensification of economic problems and the inefficiency of the regulatory system, the United States decided to reform the aviation industry's structure. In 1977, Alfred Kahn, the chairman of the CAB, presented a plan to Congress to reduce government restrictions. This proposal ultimately led to the passage of the Airline Deregulation Act on October 28, 1978, which was signed into law by President Jimmy Carter [7]. This Act aimed to reduce government controls and increase competition by completely eliminating market entry and pricing restrictions by 1981. Following these changes, the CAB's regulatory duties were divided between the Department of Transportation (DOT) and the Department of Justice (DOJ), and responsibility for flight safety oversight was transferred to the Federal Aviation Administration (FAA) [8].

Aviation deregulation had significant effects on increasing competition, reducing costs, and

improving service quality. With the removal of market entry restrictions, low-cost carriers (LCCs) were able to reduce ticket prices by eliminating unnecessary services and utilizing secondary airports. This made air travel more affordable for a wider group of people, and traditional airlines had to adjust their prices and offer more diverse services to preserve their market share [9].

Another important development following deregulation was the increased flexibility for airlines in setting ticket prices, which provided more options for passengers. Furthermore, the aviation industry gradually moved away from the traditional 'point-to-point' model, which had high operational costs, toward the 'hub-and-spoke' model. In this model, flights are routed through main centers (hubs) to various destinations, which reduced the number of sparsely-booked flights, increased efficiency, and lowered airlines' operational costs. Consequently, passengers were able to travel to more destinations at a lower cost [10].

Despite the advantages of aviation deregulation, these changes also brought about negative consequences. One of the most significant challenges was the increase in airline bankruptcies. The industry's high dependence on global economic conditions and unforeseen events like the September 11 attacks, the 2008 financial crisis, and the COVID-19 pandemic caused severe fluctuations in demand and costs, which led many airlines to face serious financial difficulties. Intense competition and rising operational costs also made traditional airlines more vulnerable to LCCs and consequently forced them into widespread mergers. Although these mergers helped reduce costs and benefit from economies of scale, they reduced the number of competitors in the market and increased the power of large corporations, raising concerns about higher prices and reduced service diversity for consumers [11].

Increased competition also compelled airlines to reduce operational costs, one result of which was a reduction in the workforce and increased use of contract personnel. This, especially during economic crises, led to higher turnover rates and reduced job security in the aviation industry. Some studies have shown that following liberalization, market fluctuations and numerous bankruptcies became a prominent feature of the industry, imposing significant pressure on employees.[9] Additionally, in the United States, bankruptcy laws allowed some airlines to restructure their costs, but this restructuring often involved wage reductions and changes in labor contracts. Consequently, many employees were ref9 forced to accept more stringent conditions, which negatively impacted their quality of life and job stability [11].

In summary, while deregulation increased competition and contributed to economic growth, it also led to negative consequences such as job instability, reduced financial security for employees, and increased market concentration in the hands of a few large companies. One of the consequences of deregulation was a decline in service quality and passenger dissatisfaction due to an increase in flight delays. Research indicates that the growing pressure on airlines to reduce costs and compete more has shifted their focus from service improvement to maximizing flights and lowering operational costs. This change has resulted in airport congestion, reduced opportunities for aircraft maintenance, and consequently, an increase in flight delays.

Prior to the start of the deregulation process, the aviation industry was under strict government supervision, and price competition was significantly limited. In these conditions, airport services were considered public utilities, and airlines were less sensitive to changes in airport charges. Due to a lack of incentive for efficiency improvements, airports passed on the costs of inefficient management to airlines, and these airlines, in turn, passed these costs on to passengers through higher ticket prices [12].

Before deregulation, governments sought to prevent the abuse of monopolistic positions by airports and ensure fairness in air service pricing through strict controls on airport charges. They used tools such as price caps and rate-of-return regulation to control costs. This approach was designed to prevent excessive cost increases for airlines and passengers. During this period, pricing was primarily based on operational costs and infrastructure investments, and factors like demand and competition were overlooked in this process [13]. Furthermore, rate changes were under strict supervision and were only permitted within specific frameworks.

The determination of airport charges before deregulation was regulated based on a non-profit approach, with the sole aim of covering operational costs and infrastructure investments, not generating profit. Within this framework, governments-controlled charge rates through

close supervision to prevent unreasonable cost increases for airlines and passengers. Airports were obligated to cover their costs from the charges collected, and any change in rates required justifications and arguments to be presented to regulatory bodies [13].

Although this process prevented the imposition of additional costs on passengers, it sometimes led to a lack of financial resources and delays in airport infrastructure development. Furthermore, strict pricing controls curtailed the competitive environment and reduced the incentive for innovation and efficiency improvements. This meant that airports focused more on providing basic services, and the possibility of enhancing service quality and optimizing costs faced significant challenges.[13]

With the start of the deregulation process and the reduction of government restrictions in the aviation industry, many airports were transferred to the private sector and began a process of commercialization. This change in ownership structure placed airports under greater competitive pressure and forced them to increase their efficiency and reduce costs. For example, in the United Kingdom in 1986, the management of airports under the British Airports Authority (BAA) was transformed into a private company, which led to improved operational and service efficiency [14].

In the new competitive environment, airports were required to set their airport charges in a way that was both attractive to airlines and sufficient to cover their own costs. This led to a significant reduction in airport charges, especially in areas where several airports were in competition. However, one of the major challenges of privatization was the potential for airports to abuse their market power in areas where competition was weak or monopolistic. In these areas, airports were able to increase their airport charges, which resulted in additional profits and a reduction in service efficiency [15]. Therefore, the need for more precise regulation of airport charges and continuous supervision of airport activities was felt to prevent potential abuses and maintain healthy competition in the industry [15].

3 THE IMPACT OF AIRPORT PRIVATIZATION ON AIRPORT CHARGES

Airport privatization is a fundamental approach in aviation industry management, aimed at increasing efficiency, reducing costs, and improving service quality. This process involves the full or partial transfer of management duties or ownership from the public to the private sector and can be carried out through methods such as public-private partnerships or the outright transfer of ownership.

Airport privatization began in the late 1980s, with the first successful example occurring in the UK in 1987 when the Conservative government fully transferred the shares of the British Airports Authority (BAA) to the private sector. The BAA owned major airports such as Heathrow, Gatwick, and Stansted in London. This policy, implemented as part of Margaret Thatcher's government's economic programs, paved the way for improved management and increased operational efficiency at airports [16].

In the 1990s, the trend of airport privatization expanded to other countries. Germany, Italy, and Australia were among the nations that joined this path by transferring the management or shares of their airports to private investors. In the early 21st century, crises such as the September 11 attacks and the 2008 economic recession slowed the airport privatization process [17]. However, in the mid-2000s, some countries resumed this policy, but investors acted with greater caution and focused on lower-risk projects. With the global economic crisis in 2009, this trend stalled once more, and many privatization projects were left incomplete or postponed [18].

Airport privatization has expanded in recent years due to two key factors. First, the continuous increase in air traffic and the necessity of significant investment in airport infrastructure have put considerable pressure on government financial resources. Second, the success of some airports operating as self-sufficient businesses has shown that these facilities can be managed independently without relying on government support [18].

The entry of the private sector, with its access to wider financial resources, allows for faster airport development. In addition to financing, privatization leads to optimized management, reduced operational costs, and increased competition among airports, ultimately resulting in enhanced service quality and a better passenger experience. By transferring responsibility and risk from the government to the private sector, airport privatization creates an environment for improved management and increased efficiency. This change reduces the influence of political considerations on key decisions like investment and pricing, thereby accelerating the decision-making process [17]. Furthermore, in countries where public trust in the government is low, privatization can reduce the likelihood of corruption by increasing transparency [19].

The greater flexibility of the private sector also allows it to adapt more quickly to market changes and perform more efficiently. Moreover, the introduction of new technologies and managerial innovations is another positive outcome of privatization that can improve the quality of airport services. On the other hand, privatization also provides an opportunity to attract foreign investment and transfer knowledge and technology to developing countries. International companies, by leveraging their knowledge and experience, can play a significant role in developing airport infrastructure, especially in developing economies, and can elevate industry standards [19].

Although airport privatization can lead to improved efficiency and increased investment, it also brings concerns. One of the most significant issues is its impact on airport charges. Privatization may lead to a private monopoly, which could result in an increase in airport charges. This rise in charges can create a substantial financial burden for passengers and airlines and may even affect the competitiveness of the aviation industry. Private airports, due to profit motives, often adopt different pricing policies compared to state-owned airports. They use dynamic and congestion pricing models, which may create higher costs for airlines and passengers during peak hours. In contrast, state-owned airports often set lower charges with the goal of preserving public welfare. However, privatization can lead to improved service quality, as private airports are motivated to offer better services to attract customers and compete with other airports. But in regions with weak competition, the lack of proper supervision and regulation may lead to an unreasonable increase in costs and a reduction in infrastructure investment. Therefore, effective regulation is essential to prevent potential abuses and to balance the effects of privatization on airport charges.

Although airport privatization offers numerous benefits, including increased efficiency and attracting investment, it requires careful supervision to prevent potential abuses. Without proper regulation, private companies may exploit their monopolistic position to increase airport charges and reduce service quality. Effective supervision can be achieved through price regulation, quality control of services, and ensuring continuous investment in airport infrastructure. In regions with limited competition, a lack of supervision may lead to reduced incentives for performance improvement and increased costs for passengers and airlines. Therefore, combining privatization with effective regulatory frameworks is an essential solution to protect public interests and prevent problems such as unreasonable increases in charges and a decline in service quality. In this context, regulatory bodies play a key role in controlling the behavior of airport operators. Regulating airport charges and supervising service quality prevents the abuse of a monopolistic position and a reduction in public welfare.

Supervision of airport charges is carried out through two main approaches: ex-ante regulation, where regulatory bodies actively impose limitations on pricing, and ex-post regulation, which is based on antitrust laws and takes action in cases of complaints and violations. Globally, ex-ante regulation is more common; as of 2015, only 8% of airports operated without regulatory supervision [20]. The importance of these regulatory policies stems from the fact that airports, due to their potential market power, can have a direct impact on the costs of the aviation industry. Insufficient supervision may lead to unfair increases in charges, reduced competition, and increased passenger costs. Therefore, the formulation of effective regulatory policies, in addition to guaranteeing a fair competitive environment, will lead to an increase in public welfare and a reduction in unnecessary costs for consumers.

4 THE IMPACT OF MARKET POWER ON AIRPORT CHARGES

According to Paragraph 10 of the European Commission's Guidelines on the application of

Article 82 of the EC Treaty (2009/C 45/02), a dominant position is defined as a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained in the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers, and ultimately of the consumers. This position stems from the extent of the firm's influence and dominance in the market and is subject to competitive constraints. If these constraints are weak or insufficient, the firm will enjoy significant market power, consequently undermining effective competition and acting independently. Airports, due to their high fixed costs and economies of scale, are naturally considered to operate within a monopolistic industry.

An increase in the number of passengers allows fixed costs to be distributed among more people, thereby reducing the average cost. This trend continues until a point of saturation is reached, leading to a decrease in overall costs. This phenomenon, known as economies of density, lowers operational costs at busy airports and makes them more competitive. However, this trend continues only until full capacity is reached. After that, the need for infrastructure expansion and more complex management of flight operations leads to an increase in operational costs and, consequently, a rise in average costs. This allows large airports, which benefit most from economies of scale, to gain a dominant position in the market, while smaller airports are forced to seek financial support or increase airport charges to continue operating.

The airport industry faces high barriers to entry due to significant investments in infrastructure such as runways and terminals. This infrastructure is non-transferable in nature, making it difficult to use for other activities, so the entry of new competitors into this market requires very high costs. Since existing airports usually have surplus capacity, new competitors face greater challenges, as they must compete against airports that have already covered their fixed costs [21]. On the other hand, airports can only cover their costs if they achieve a certain level of passenger and cargo traffic. Increasing operational capacity allows them to benefit from economies of scale, reducing service costs [21]. This not only strengthens the market position of large airports but also impacts airport charges; airports with surplus capacity can charge lower airport charges, making it more difficult for new entrants to compete. In contrast, if an airport faces capacity constraints, the opportunity for competitors to enter the market increases.

Another factor in airport market power is economies of scope, which allows airports to share their infrastructure and equipment to provide various services, leading to cost reduction and increased efficiency. Simultaneous use of facilities such as cargo handling equipment, service vehicles, and multi-purpose terminals reduces the need for new investments and optimizes existing resources [22]. This feature increases airports' profit margins and strengthens their market position. On the other hand, reduced operational costs allow airports greater flexibility in setting airport charges and controlling contract terms. As a result, this competitive advantage makes it difficult for competitors to enter and increases the market power of large airports.

Network effects also play a fundamental role in increasing the market power of airports and directly influence the level of airport charges. As the number of passengers and flights at an airport increases, the value of its services for both airlines and passengers rises. This allows the airport to control the terms and costs of using its infrastructure. Concentrating flights at a central airport reduces airlines' operational costs and makes shifting to alternative airports costly and difficult. This dependency forces airlines to accept higher airport charges because changing airports involves additional costs for staff training, flight schedule changes, and new coordination. [21] On the other hand, for passengers, access to more flight routes and reduced waiting times is an advantage that encourages them to choose busy airports. This reduces competition among airports and gives large airports more power to increase charges and dictate their contract terms. As a result, network effects allow airports to gain greater control over airport charge rates and increase their revenues by reducing competition.

5 THE IMPACT OF COMPETITION ON AIRPORT CHARGES

The market structure of airports and the level of competition among them play a decisive role in determining the amount of airport charges. On the one hand, investment in airport infrastructure, including the development and maintenance of runways and taxiways, gives airports with more

extensive facilities a competitive advantage. This enables them to set their charges based on demand and the level of services provided. Additionally, non-aeronautical revenues, such as commercial services, parking, retail, and restaurants, can influence airports' pricing policies. Airports with higher ancillary revenues may charge lower aeronautical charges to become more attractive to airlines and benefit from increased demand. Conversely, airports that rely more heavily on aeronautical revenues typically impose higher charges on airlines.

From a geographical market perspective, the level of competition among airports in a region is the main determinant of airport charges. In areas where several airports with similar capabilities exist, competition can lead to a reduction in aeronautical charges. However, in regions where a single airport dominates, that airport's market power increases, giving it greater ability to set its charges. This directly affects the operational costs of airlines and may ultimately be reflected in ticket prices and passenger travel expenses.

One of the key factors in airport competition and its impact on charges is the presence of low-cost carriers (LCCs). LCCs, with their high sensitivity to operational costs, have greater bargaining power in negotiations with airports and can easily move their operations to alternative airports if charges increase [23]. This pushes airports to offer more competitive airport charges and reduce costs. Furthermore, in areas with several nearby airports, competition to attract passengers and airlines intensifies, making secondary airports with lower costs a more attractive option.

Competition between hub airports to attract transit passengers also has a significant impact on the structure of airport charges. Large global airports, particularly in the Middle East and Europe, have invested heavily in infrastructure and service improvements to increase their share of the air transport market. In this competition, factors such as geographical location, terminal capacity, and flight scheduling play a vital role. Middle Eastern hubs like Dubai, Doha, and Istanbul have attracted a significant share of transit passengers by offering modern facilities and optimal management of connecting flights, strengthening their position against European competitor [24]. However, this competition among airports has a direct effect on the determination of airport charges, as airports are forced to offer more competitive charges to maintain their appeal and encourage airlines to use them. At the same time, regulatory policies can prevent the imposition of unfair costs and create a balance between free competition and the financial stability of airports.

6 CONCLUSIONS

The findings of this research indicate that aviation economic policies, especially deregulation and privatization, have direct impacts on the structure of airport charges and the costs of the air transport industry. Deregulation, by reducing government intervention, has fostered competition among airports and, in some cases, led to a decrease in operational costs. However, in the absence of proper regulatory frameworks, some airports have used their monopolistic position to increase airport charges, which has placed greater financial pressure on airlines and, ultimately, on passengers.

Airport privatization, despite leading to increased efficiency and attracting investment in some countries, has also created challenges in controlling airport charges. Especially in situations where there is insufficient regulatory oversight, this process can lead to an unreasonable increase in charges and a reduction in competitiveness. The results of this study emphasize the necessity of formulating and implementing effective regulatory policies in the area of airport charge pricing. Striking a balance between the operational independence of airports and government oversight can prevent unnecessary increases in travel costs while ensuring healthy competition and economic stability in the aviation industry.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

REFERENCES

[1] R. Abeyratne, *Convention on International Civil Aviation: A Commentary*. Cham, Switzerland: Springer, 2014, https://doi.org/10.1007/978-3-319-00068-8.

[2] T. Reynaert, N. von Hinten Reed, and B. Veronese, "The future airline-airport relationship and the question of market power," *Journal of Airport Management*, vol. 13, no. 4, pp. 322–334, 2019, https://doi.org/10.69554/ZXLR7120.

[3] D. Mei, "Airport charges regulation: A private law approach," Ph.D. dissertation, Faculty of Law, McGill University, Montreal, Canada, 2022.

[4] X. Jiao, *Deregulation of the Airline Industry*, Major paper, University of Ottawa, Ottawa, Canada, 2014, https://ruor.uottawa.ca/items/347a2870-568c-4577-945e-e155d2dd79b1.

[5] B. Humphreys, *The Regulation of Air Transport: From Protection to Liberalisation, and Back Again*, 1st ed., Abingdon, Oxon; New York, NY: Routledge, 2023, p. 46. https://doi.org/10.4324/9780429448973.

[6] R. H. K. Vietor, "Contrived Competition: Regulation and Deregulation in America," *Business History Review*, vol. 64, no. 1, pp. 41, Spring 1990. https://doi.org/10.2307/3115845.

[7] A. R. Goetz and T. M. Vowles, "The good, the bad, and the ugly: 30 years of US airline deregulation," *Journal of Transport Geography*, vol. 17, no. 4, 2009, Art. no. 253, https://doi.org/10.1016/j.jtrangeo.2009.02.012.

[8] E. E. Bailey, "Air transportation deregulation," in *Better Living Through Economics*, R. M. Solow, Ed. Cambridge, MA: Harvard University Press, 2010, https://doi.org/10.4159/9780674054622-009.

[9] N. L. Rose, "After airline deregulation and Alfred E. Kahn," *American Economic Review*, vol. 102, no. 3, 2012, Art. no. 379, https://doi.org/10.1257/aer.102.3.376.

[10] M. Smyth and B. Pearce, "Airline Network Benefits: Measuring the Additional Benefits Generated by Airline Networks for Economic Development," *IATA Economics Briefing* No. 03, 2006, Art. no. 20.

[11] B. Vasigh and B. Pearce, *Air Transport Economics: From Theory to Applications*, 4th ed., Abingdon, UK: Routledge, Taylor & Francis Group, 2024, https://doi.org/10.4324/9781003388135.

[12] P. Forsyth, C. Guiomard, and H. M. Niemeier, *Airport Economics*, Abingdon, Oxon: Routledge, 2023, https://doi.org/10.4324/9781003156901.

[13] Airports Council International (ACI) World, *Modernizing Global Policy Frameworks on Airport Charges: Ensuring the Efficient Use of Infrastructure for the Benefit of the Travelling Public*, Montreal, Quebec: Airports Council International, 2021, pp. 13–25.

[14] Aviation Learnings Team, "History of Airport Privatization: United Kingdom as Pioneer of Airport Privatization," 2022. [Online]. Available: https://aviationlearnings.com/history-of-airport-privatization-united-kingdom-as-pioneer-of-airport-privatization, [Accessed: Mar. 18, 2025].

[15] G. P. Oliveira, "Abuse of dominance in the airport sector," *Journal of Transport Literature*, vol. 7, no. 1, pp. 11–40, 2013, https://doi.org/10.1590/S2238-10312013000100002.

[16] R. Poole and C. Edwards, "Privatizing US airports," *Tax and Budget Bulletin*, no. 76, 2016, Art. no. 3, 2016.

[17] A. Graham, "Airport privatisation: A successful journey," *Journal of Air Transport Management*, vol. 89, pp. 1–4, 2020, https://doi.org/10.1016/j.jairtraman.2020.101930.

[18] A. Graham and P. Morrell, *Airport Finance and Investment in the Global Economy*. London and New York: Routledge, 2017, pp. 143–146. https://doi.org/10.4324/9781315566498.

[19] A. Graham, "The objectives and outcomes of airport privatisation," *Research in Transportation Business & Management*, vol. 1, no. 1, pp. 6–9, 2011, https://doi.org/10.1016/j.rtbm.2011.05.004.

[20] A. Graham, *Managing Airports: An International Perspective*, Routledge, 2023, https://doi.org/10.4324/9781003269359.

[21] B. Hancioglu, "The market power of airports, regulatory issues and competition between airports," *German Airport Performance*, pp. 6–7, 2008.

[22] M. Lechmann and H. M. Niemeier, "Economies of scale and scope of airports – A critical survey," *Journal of Air Transport Studies*, vol. 4, no. 2, 2013, Art. no. 7, https://doi.org/10.38008/jats.v4i2.77.

[23] C. E. Schlumberger and N. Weisskopf, *Ready for Takeoff? The Potential for Low-Cost Carriers in Developing Countries*, Washington, DC: World Bank, 2014, https://hdl.handle.net/10986/20191.

[24] A. Seredyński, T. Grosche, and F. Rothlauf, "Impact of timetable synchronization on hub connectivity of European carriers," *Journal of Air Transport Studies*, vol. 7, no. 1, pp. 80–82, 2016, https://doi.org/10.38008/jats.v7i1.53.