

# The Lessons from Sanctions on Iran and Their Impacts on the Development of Civil Aviation Understanding and Iranian Airlines

Olcay Ölçen<sup>1</sup> 

<sup>1</sup>\*Aviation Consulting Group, ACG. Global Associate Türkiye, (olcay.olcen@gmail.com)

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Corresponding Author: Olcay Ölçen

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## Abstract

After the Islamic Revolution, Iran lived through many hard times not only because of its economic and financial resources such as oil and petroleum but also because of its historical, social, supremacy and leadership of some other Islamic countries and communities. Essentially, it has tried to defend its position for many years without sacrificing its Idiosyncratic Islamic governance structure within the world context or other Islamic countries, for these reasons, it has witnessed a lot of economic and financial sanctions or bans. Although Iran has a lot of highly qualified academicians and a workforce in the science of aviation, its civil aviation management structure and related activities, such as airline management, are very far from the average of the world depending on these financial and economic sanctions and bans by international orders. This situation is subjected to this research as a gap. This paper will analyse the civil aviation and air carrier industry of Iran under the impacts of these economic and financial bans and sanctions regarding four dimensions: Maintenance, Training and licensing, corporal development, and relationships with manufacturers. Essentially, at the beginning of the new age, in terms of international politics and conflicts in every continent of the world, new sanctions and bans are on the trouble agenda of world civil aviation agencies and institutions because of their highly political structure, and these bans and sanctions carry generally economic and financial identities, although they have international policy claims. There are a lot of possibilities on the desks of the civil aviation authorities for the burdens of these sanctions and bans and their sustainability impacts on civil aviation. Moving from the situation of Iran, the correct courses and necessary economic and financial policies will be suggested in this new world context and understanding

## 1. Introduction

Economic sanctions have become the most relevant instrument of foreign policy designed to respond to a wrongful act of policy of a state, such as aggression, support of terrorism, involvement in internal wars and the violation of human rights. Sanctions are primarily imposed to change the behaviour of the wrongdoer state. However, they have been widely used as an instrument to induce regime change or even as a complement to war (Razavi and Zeynodini, 2020). And, the purposes and means of a sanctioning act can change from the focus point of the power to another. According to Karacasulu and Karakir (2014), the European Union's main objectives in applying sanctions are: i) To safeguard the common values, fundamental interests, independence and integrity of the Union in conformity with the principles of the United Nations Charter; ii) to strengthen the security of the Union in all ways; iii) to promote international peace and strengthen international security; iv) to promote international cooperation. On the other side, the sanctions and bans of the United States are under strict investigation by different authorities depending on the 1955 Treaty of Amity which removes any impediments to the free exportation to Iran of medicines and medical devices, foodstuffs and agricultural

commodities, and spare parts, equipment, and associated services necessary for the safety of civil aviation (Akhtar, 2019)

Since the Islamic Revolution of 1987, Iran has been affected by economic sanctions imposed by Western countries, especially the United States Since 2006 and with the development of the Iranian nuclear conflict, the United Nations has frequently imposed economic and financial sanctions against Iran (Shirazi et al, 2016). Essentially, the region suffers from these kinds of events such as the Syrian civil war, increased sectarian strife in Iraq, Afghanistan, Lebanon, and Libya, escalating violence in Israel and Palestinian territories, and rising security threats in Egypt, Turkey and Pakistan (Bell et al, 2016). For this cause, the existence of civil aviation and the utilization of airspace in the region always have some sustainability dilemmas with ambiguities regarding international politics. For example, according to Bucala and Hawrey (2016), the supportive attitude of Iran toward Syria (the Assad Regime) in the Syrian civil war including the activities of cargo and passenger transportation subjected to sanctions and bans from Europe and the United States. The results are devastating for Iran Civil Aviation and Iran Airlines.

**Table 1. Sanctions on Iran**

Sectors	Sanctions by the US (1995 -)	Sanctions by the European Union (2007 -)	Sanctions by the United Nations (2006- 2016)
Missile/arms industry	Restricted	Restricted	Removed
Islamic Revolutionary Guard Corps	Restricted	Restricted	Removed
Nuclear industry	Restricted	Restricted	Removed
Energy/petroleum industry	Restricted	Restricted	Removed
Banking	Restricted	Restricted	Removed
Central Bank of Iran	Restricted	Restricted	Removed
Shipping industry	Restricted	Restricted	Removed
International trade	Restricted	Restricted	Removed
Insurance	Restricted	Restricted	Removed
Foreign firms dealing with Iran	Restricted	Restricted	Removed

Iran is beyond being a Middle Eastern and developing country in world conjuncture. It has witnessed a lot of in-border and off-border negativities during the last 75 years politically and economically. Although it has redundant oil and natural gas resources, effective and efficient utilization of these resources is problematic not only by country but also by world economics. If it is coded the sanction and ban crisis in the context of Iran correctly, it seems that there is not only one state’s sanctions or bans, but there is a global sanction against Iran under the leadership of several big countries such as the European Union and the United States (Rahimi et al, 2014) and the attitude of the United Nations toward Iran becomes always negative in this equation or processes (Suzuki, 2019). Besides these, the lesson of Iran is such a clear example that the cost of protecting a regime is to remain distant from reaching the world economic community. If a list is formed of the critical sanctions in Iran, they can be counted in Table 1. Although there is a sharp decreasing trend in sanctions and bans at the United Nations level, the country and region felt the destructive impacts of the United States and European Union’s sanctions in 2016 (Jay, 2015). At the same time, If it is realized a comparison of the power of the sanctions, Torbat (2005) clearly explains that financial sanctions have a more powerful impact than trade sanctions.

Iran's civil aviation industry is also a sorrowful victim of these sanctions with other industries such as defence, oil and shipping industries (Amir, 2018). This paper aims to analyze the impacts of the sanctions on critical and vital pillars of civil aviation and airline management: Maintenance, training and licensing, corporal development, and relationships with manufacturers as a method. The importance of these four variables is examined in detail in the related titles of the literature and findings section. At the same time, the work will complete a sustainability gap and examine the development an airline and civil aviation understanding under the hard and harsh conditions of the sanctioned economy and financial context. In this way, the research offers some policies for the international civil aviation and airline order in the world where there are living conflicts and wars.

**2. Method Development**

The development of civil aviation shows similar characteristics in different countries. As it is understood from the work of Taneja (1994), civil aviation has three pillars which can be called the technological, political and economic dimensions of civil aviation. Safety, which is an important variable in the middle of this triangle, is nourished and flourished by their development and interaction of them. For example, the Paris Conference of 1919 was an important step

in the political dimension toward internationalism that should be aimed to protect by authorities (Sucharitul, 1994) on the other side, the creation of the “Airbus Idea” in the middle of the 1970s meant a great leap for European Aviation Comprehension which competed with the United States regarding three dimensions. At the same time, these two events are safety, economic, political and technological challenges for international civil aviation. Therefore, these three dimensions have complementary impacts on each other as it can be observed in the Iranian Case.

The focus point of the governance structure of civil aviation business segments has become also another important argument throughout history. Engineering, marketing, financial, and branding understandings of the civil aviation system, their positions and conformities with the aviation system are other important arguments since the beginning of civil aviation activities (Clark, 2017). Safety is another element that should be argued well. Ben-Saed and Pilbeam (2022) argue that embargos and sanctions have dramatic impacts on the development of safety climate regarding safety training, lack of safety resources, and poor safety communication. On the other side, maintenance activities have great importance for safety and countries should develop maintenance activities (Zimmermann and Mendonca, 2021). These acts should be compulsory matters (Fidanoğlu, 2017) of the elaboration of the Iranian Civil Aviation Case.

Civil aviation has an idiosyncratic legal basis under the roof of the International Civil Aviation Organization (ICAO) supplying other legal and law institutions that take their roots from bilateral and multilateral agreements and conventions and state codes such as the Turkish Civil Aviation Code of No.2920 nationally and internationally under the emphasize of a complete state freedom (Rhyne, 1946: 459). The administrative impacts of the ICAO draw a framework for countries and states for their national safety comprehension. The decisions of the ICAO are locally binding and final in front of the international legal courts (Dempsey, 1987). Nevertheless, the political positioning of ICAO has been restricted by unpeaceful considerations and states, although it develops security enhancement programs against the violence against civil aviation (Sochor, 1988). Moreover, international civil aviation activities and their governance structure show differences in the dimension of regions and states under the impact of technological and communicational infrastructures, this situation causes fragmentation, disorder and lesser integration (Sanggiiovanni, 2022).

The civil aviation sanctions show their dramatic impacts on the development of airline activities in almost every dimension. Davidson (1993) counts these negative impacts as contracts and contract-depended relationships, long-term

planning and future orientation, and the defects in internationalism. Katzman (2015) adds that the trade of aviation fuels, maintenance, education and training of civil aviators, and international and industrial development are in trouble agenda of the Iranian regime because of the sanctions and bans.

In light of the arguments above, contemporary civil aviation activities are grouped by four different and important points in this work. Firstly, it concentrates on the development of maintenance activities that are responsible for the great majority of civil aviation accidents and incidents. These activities are framed and formed with dense international, national and regional or continental contractual activities, certifications and licences depending on, for example, Annex 1 (Personal Licencing) and Annex 8 (Airworthiness) of ICAO. In the absence of these activities, the situation of Iran or any sanctioned state is in question. Secondly, training and licensing are another important aim of these bans. Unless a country is a member of the international licence and train programs and creates a uniform structure complying with international civil aviation order, its civil aviation suffers deeply from all of the negativities in the industry. Thirdly, the research welcomes a corporate approach to civil aviation, especially airlines which have a business entity. While other international airlines give the last shape to their business-making styles in the light of industrial partnerships and alliances, the state of Iranian Air Carriers has a great ambiguity. And the future is a paradox for them because of the impediments of the international order. For this reason, the corporal structure of Iranian Air Carriers is in elaborate trouble and this process should be examined. Fourthly and lastly, it develops a solid framework for the Iranian civil aviation industry regarding the most effective and efficient economic duopoly of the world between Boeing and Airbus. This duopoly gives a last shape to all of the airline activities with suppliers. Iran's situation should be evaluated in this regard, although it has other aircraft manufacturers' vehicles.

### 3. Literature Review and Findings

#### The sanctions on civil aviation in Iran

Every state tries to have nuclear power depending on its effective and efficient utilization as an energy resource for civil purposes and depending on its frustrating force for military purposes. For these reasons, states manage a nuclear policy. Nevertheless, Iran's situation is a little bit different because it elaborates an aggressive nuclear policy against international order claiming to protect a civil regime and its independence regarding energy production (Intaek and Jang, 2013). But, the distance between nuclear energy and a nuclear weapon is so short in the science of physics. The second important cause of the Iranian sanctions is the violation of human rights which are delineated as the main feature of oppressive regimes by international order. The third cause can be considered as Iran's support to Hezbollah, Hamas and Palestine Islamic Jihad (Katzman, 2001). On the other side, the sanctioning states and international order argue the current situation under the name of Iranian terrorism. Iran sustains its existence in a complex Middle Eastern region regarding political, economic, and social frameworks. Therefore, finding an optimal and comprehensive solution is not easy for the states and Iranian elite politicians in world politics (Draca et al., 2019). In this context, a rational state should consider that there are critical industries such as civil aviation, maritime,

energy, finance, and technological infrastructure but, it should know that if it makes aggressive moves, the response of international order shows its impacts on these industries of the country. Iran sustains its existence in this situation. The relationship between Iranian civil aviation and sanctions can be examined in Table 2 (IRAM).

**Table 2.** The sanctions on civil aviation in Iran

Claims	Sanctions
Transportation of weapons and military personnel with civil airlines in conflicting times in the Middle East.	Various international and regional airport restrictions. Political, economic and financial sanctions against Iranian Civil Aviation.
Unfair and illegal nuclear weapon programme	Restrictions on Aircraft Cargo in Iran Air, flag carrier and state-owned air carrier of Iran, in UN Security Council Resolutions 1803 (2008) and 1929 (2010).
Political and safety reasons	Restrictions on European Union (EU) airports in cargo transportation in July 2010. Restrictions on Iranian airlines US Executive Orders 13382.
Aims to isolate financial proliferators of weapons of mass destruction and their supporters	Restrictions on Iranian airlines US Executive Orders 13224.
As a response to the 9/11 attacks to curb terrorist financing and activities. Supporting support to the Islamic Revolutionary Guard Corps's (IRGC)	Restrictions on Iranian airlines such as Mahan Air, Caspian Air, Meraj Air and Pouya Air regarding spare parts.
*To comply with the Joint Comprehensive Plan of Action (JCPOA)	*Iran was permitted to purchase only finished commercial aircraft. Iran Air was taken off the US sanctions.
USA's exit from JCPOA	Iran Air and some people were blacklisted.
Depending on the hardships in the US export-control lists. Illegal utilization of sanction-evasion channels and Iran-bound cargo.	Mahan Air was blacklisted regarding spare parts. Dubai free zones (Blue Sky Aviation Co and Avia Trust) were sanctioned regarding aircraft parts and equipment.
The measures of the Office of Foreign Assets Control (OFAC)	Ukrainian Bukovyna Airlines is sanctioned due to relationships with Mahan Air.
The measures of the Office of Foreign Assets Control (OFAC)	Ukrainian-Mediterranean Airlines (Um Air) and its director and owner were also blacklisted due to relationships with Mahan Air.
The measures of the Office of Foreign Assets Control (OFAC)	Kyrgyz Trans Avia (KTA) was also blacklisted due to relationships with Mahan Air.
The measures of the Office of Foreign Assets Control (OFAC)	Pouya Air was blacklisted from the complex services.

\*It is a well-intended, dialogue-depended and creative process for Iran and world order. So, positivity is felt in the international policies of Iran and other parties. In this process, Boeing and Airbus also decided to sell aircraft to Iran.

## Maintenance

The aviation activities need a systematic approach in which the main items can be counted as availability, maintainability, safety, durability and reliability of these items (Zio et al., 2019) because maintenance-dependent accidents and incidents are fatal (Wild, 2023). Maintenance is not only a cost of airline companies, but it is also a subject of large and important titles according to international and continental legislation and monitoring (Herrera, 2009) bodies such as the International Civil Aviation Organization (ICAO), European Union Aviation Safety Agency (EASA) and Federal Aviation Administration (FAA) regarding contracts, licencing, BOT (Build, Operate and Transfer), OEM (Original Equipment Manufacturer) and outsourcing because of its importance in incident-accident prevention nature (Bogdanov et al., 2011). Therefore, civil aviation maintenance activities are in the hands of states and governments (Liangrokpart and Sittiwatethanasiri, 2023) under the name of airworthiness. Reporting, standardization, licenses and certifications are of great importance in airworthiness actions and need extra efforts in the international, national and regional context (Latorella and Prabhu, 2000). In the case of Iran's civil aviation, all of these matters are problematic because they depend not only on international sanctions but also on the depletion of Research and Development activities which are the main veins in the development of civil aviation in the international arena under these economic and financial sanctions (Miremadi and Baharloo, 2020). Besides these, Dadpay (2019) underlines the importance of maintenance in safety and security one more time and proves the negativity of the economic and financial sanctions regarding maintenance services and spare parts in some incidents and accidents examples. Besides, it is an unforgettable reality that an accident or an incident at regional and state levels is an international problem for civil aviators who are observing civil aviation accidents and incidents closely. According to the reasoning of Jalali (2011: 87), technical and technological sanctions against Iran can cause a collapse in international safety and security understanding of civil aviation for this reason, international civil aviation authorities and states should find a way to dialogue. By the way, the importance and position of international civil authorities in the Iran case are explained economically, and politically by (Carney and Farashahi, 2005). According to them, transnational policies and understandings are so important to develop a global understanding of civil aviation.

## Training and Licencing

Training and Licencing are important parts of civil aviation. If it is concentrated on corporal education and licencing matters and institutions in the world civil aviation order, it can be understood that the reality of civil aviation develops a dependence on international licencing and reporting (Avers et al., 2012). Even, the civil aviation language is designed and controlled by a proficiency program developed by ICAO (Kraniscka, 2016). Besides, Shi (2024) argues that civil aviation activities are an important part of Urban Air Mobility (UAM), so civil aviation is subjected to continual development regarding certifications. Ateş and Kafalı (2020) maintain that civil aviation human resources suffer from the necessary qualifications. With restrictions on reaching the maintenance and manufacturer resources, Iran's capabilities and abilities are restricted regarding licencing, therefore training. Pilots, cabin crew, maintenance technicians and

engineers, and airport and ramp services, air traffic services can not gain an international identity with the lack of international certificates, licences and training which should be given and controlled by international manufacturers and industrial suppliers qualitatively (Galisanskis, 2004) and quantitatively. The civil aviation activities of the states are managed and controlled with these certificates and licences (Brushnikin et al., 2020; Bennett, 1984). Besides these, Gov and Paksoy (2021) emphasize the importance of licences, certificates and education and training which grant them. This reasoning is confirmed also in the works of Todd and Thomas (2013: 1) regarding pilotage education and training underlying the importance of competence, regulatory minimums and syllabus. For Mendonca et al. (2019) and MoghimiEsfandabadi et al. (2023), one of the main causes of high-profile accidents is the education and training system which includes decision-making, poor leadership and ineffective communication. According to the findings of Gauci et al. (2021: 1), education and training are visionary and future tools in the hands of the civil aviation authorities. Also, civil aviation has education and training mechanisms that nourish a great job opportunity for younger generations (Watkins et al, 2016: 2) and managerial job demand with high degrees (Newcomer et al., 2014: 23). Besides this information, the licences and licences dependent training activities are the main targets of sanctions and bans against Iran (Rennack, 2016). Airports and commercial aircraft operators should ensure some licences and certifications (Yadav and Nikraz, 2014). When considering this situation in the Iranian civil aviation context, the sanctions and bans hit not only the current state of civil aviation but also its future since the first sanctions made by both the public and private institutions.

## Corporal Development

Corporal development of airlines is the third important pillar of this research. When it concentrated on the development of airlines, especially after the Airline Deregulation Act of 1978, it can be observed micro, macro and international-level corporal structures. For example, marketing and promotion-based managers began to overcome engineering-oriented managers. On the other side, budget planning, cost-effectiveness, dynamic pricing, and hybrid airlines have been the most important and contemporary managerial and theoretical subjects and activities. The development of alliances, code-sharing activities and slot programs gain new forms at the micro level considerations. Technology-based programs such as NEXTGEN (Strohmeier, 2014; Fleming et al, 2013) in the United States, activities of EUROCONTROL (MacInally, 2010; Pedroche, 2024) in European countries, development of new vision in the African and Asia continents, and regionalism such as Asia Pacific are examples which became macro and international subjects of civil aviation. So, under the impacts of internationalization and professionalism, the industry of civil aviation redefines its identity and existence year by year. Ethical and deontological philosophical movements regarding fairness, accountability, social responsibility and transparency transformed into important corporal subjects of the airlines near the safety, security, and elimination of environmental pollutants and noise. The definition of new human capital and intangible assets are the key issues in this context (Lopez, 2007; Warn 2005). Mustilli and Izzo (2009) also underline these factors as they define the global civil aviation industry. For Fardnia et al. (2022: 1), there is a negative correlation between the quality of

the governance practices and safety mistakes, errors and faults in aviation. According to Sangiovanni (2021), international civil aviation overcomes obstacles such as duplication, inconsistency and conflicts through cooperation and common sense. In the case of Iran, i) there are a lot of huge barriers and obstacles between international civil aviation understanding and corporal mechanisms and Iran, ii) As it can be seen in Table 2, every airline development and step toward internationalisation was oppressed by a sanction.

**Relationships with aircraft manufacturers**

The last explanation or pillar is about the relationship between aircraft manufacturers and Iran. There are two aircraft manufacturers in the world, Boeing of the United States and Airbus of the European Union. They are not only the projections of historical competition between two continents on both sides of the Atlantic Ocean but also are technological and innovative giants of the aviation industry. Without their contributions, it is impossible to draw a future framework in every segment of civil aviation regarding engine and component production, airport and air traffic development, and economic, social and environmental sustainability. Their effectiveness and efficiency in international civil aviation politics, rules and regulations are a known reality depending on the power of the US and European countries. Iran’s aggressive or positive attitudes against its dissidents inside and outside of the country are general subjects of bans and sanctions by these two giants. Wolber (2017) takes attention to this situation in the nuclear agreement process emphasizing the importance of Airbus and Boeing’s financial gains regarding the USA and EU. It is so important and open reality that these two giants and their suppliers are so important for developing countries such as Turkiye desiring to build solid aviation partnerships and aeronautical governance structures with the US and European countries. So, sanctions toward accessing to resources of Boeing-Airbus duopoly is another problem for Iran Civil Aviation and Iran Airlines. And findings of Adesnik and Ghasseminejad (2018) affirm the relationship between Boeing and Airbus and the sanctions by emphasizing the priorities of these companies in their region and state policies. The countries, which understand the importance of aircraft manufacturing and maintenance, develop strategies and investments in parallel with this duopoly such as Brazil (Junqueira et al., 2018) and Oman (Rawahi et al., 2020).

Under the strict, strong, harsh and comprehensive sanctions and bans and their impacts that can be counted as four pillars -and there can be more- Iran Civil Aviation and Iran Airlines try to survive. The next section of the analysis will focus on the fleets, their technology and the network structures and airports, and then it will realize a comprehensive financial analysis of airlines in Iran. The total Airline fleet of Iran can be summarized in the following Table 3(Planetspotter, 2023). Although it is observed the existence of other air manufacturers such as ATR (Aerei da Trasporto Regionale or Avions de Transport Régional), the density of Boeing and Airbus aircraft is overwhelming regarding Iran’s civil aviation fleet like the other parts of the world.

**Table 3.** Some details on Airline Fleets of Iran

Airlines	Boeing	Airbus	ATR	Other	Average year*
Iran Air	28	58	13	27	18.0 years
Iran Airtour Airlines	2	16		18	36.0 years
Iran Aseman Airlines	4	7	9	23	30.0 years
Iran Naft Airlines	1			10	
Mahan Air	5	62		31	27.0 years

As stated in the table, the Iran Civil Aviation force does not suffer only from the negativies regarding aircraft models, but also their needs of maintenance (Average age). But, depending on the sanctions on spare parts and maintenance-related Research and Development, most aircraft stay on the ground. This reality has been corrected by also media and social media. The cost of an unflaying aircraft to the airlines is more expensive than maintenance costs. One of the main aims of the Iran Civil Aviation Organization is to lessen the average age of civil aircraft (Tehran Times, 2024). Besides these, there are 319 airports in Iran. Their development strategies and internationalization processes are very important for regions and state(Pishdar et al.,2019; Oflat and Pishdar, 2017).

As it concentrates on developing civil aviation, the civil aviation industry is nourished by two main resources. One of them is the tourism industry and the other is the export and import power of the countries. Especially the balance between export and import goods economically, their diversity gains importance regarding work balance, variability of work and experience.

Shirazi et al. (2016: 11) state that the sanctions imposed against Iran have had a significant and negative effect on the amount of exports in Iran and all the countries considered in all the given years. As well, the intensity and the extent of this effectiveness over time compared to 2012 have increased which could be due to the exacerbation of the economic sanctions over time, as well as the joining of more countries to the sanctions. According to the results, the sanctions imposed each year have decreased about 33 per cent of Iran’s exports annually and have imposed a loss of 104 billion dollars on Iran’s trade. Given the reduction of 1 million barrels in Iranian exports, these results were not unexpected. It is a historical lecture and course that the sanctions have long-term and future-oriented results regarding international trade (Askari et al., 2001)

International efforts to isolate Iran and force it to stop its nuclear agenda and schedule have a lot of negative impacts on the country’s economy: all of the industries have been paralyzed, the nutritive materials prices and fuel prices are skyrocketing, and the local currency is collapsing. But by causing a plunge of the rial, the sanctions have had an unintended and, for Iran, very welcome consequence: a jump in tourism (Butler, 1993). According to some sources, three million tourists visited the country by the end of 2011, contributing more than \$2 billion to the local economy. Also according to the UN World Tourism Organization, from 2004 to 2010 international tourism in Iran grew four times faster



than the global average, which posted an annual gain of 3.2% (Mirani, 2013) with some negativities, for example, psychological impacts such as fear, economical investments, absences of necessary transportation and technological infrastructure and sophisticated financial services, mobility and visa restrictions, gender disempowerment and less purchasing power (Seyfi et al., 2022).

In this context, the cargo and passenger numbers show volatility structures which gain importance depending on sanctions as in Graph 1 (World Bank database, 2024) and Graph 2 (World Bank database, 2024).

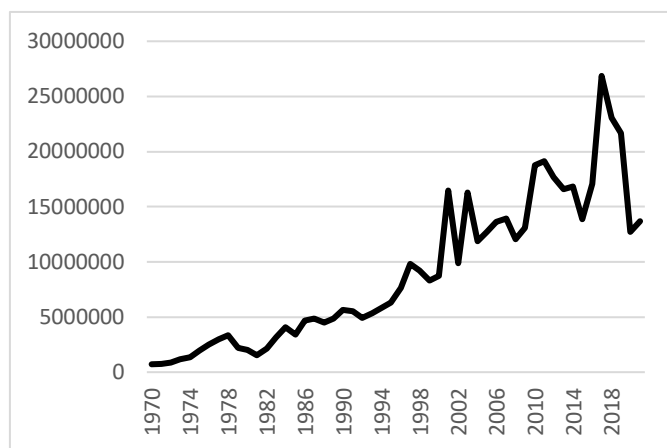


Figure 1. Iran Air Republic Passenger Numbers.

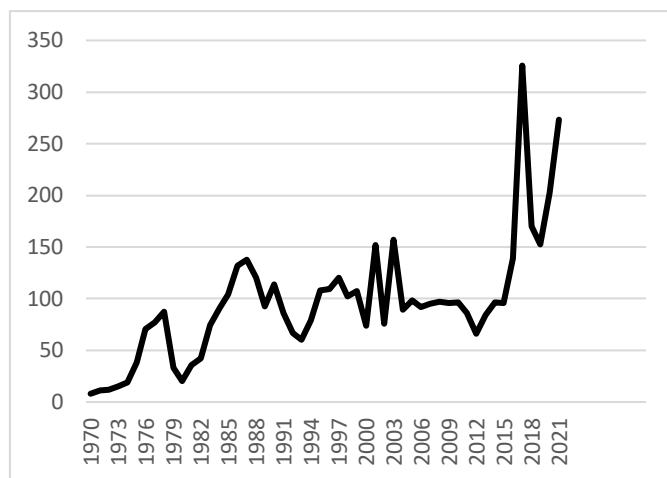


Figure 2. Iran Air Republic Cargo Numbers.

#### 4. Conclusions

With the words of Carney and Farashahi (2005: 1) emphasizing the globalities of sanctions and bans, the case of Iranian civil aviation depicts a more volatile scenario of frictionless and uncontested institutionalization of civil aviation, followed by gradual erosion of isomorphism with international norms. In this regard, the pathways to globalization are not straightforward. However, they also emphasize that adherence to transnational norms is of material concern to the economic prospects of developing countries. On the other hand, As Iran's nuclear programme edges closer to weapons capability, the nations concerned about this prospect have centred on sanctions as their favoured policy tool. Critics find this foolhardy because they see no obvious signs that sanctions are working, other than to impose hardships on

ordinary Iranians (Esfandiary and Fitzpatrick, 2011:1). From the findings of this research, more clear words, it can be easily concluded that the civil aviation industry of a country has a great dependence on internationalization. Technical and operational variables such as safety, security, environmental consciousness and noise management are formed in a continual international regulation process. Therefore, to yield profit from the activities, the technical and operational base is a necessity.

Secondly, the financial and economic impacts of the sanctions on airlines and civil aviation can be examined in short, middle and long periods. In a short time, the sanctions hit the financial and economic fiscal and financial table balance of Iran regarding airlines and the civil aviation industry. The competitive force of the airline companies and other segments of civil aviation is measured by indicators such as EBITDA (Earnings Before Interests, Taxes, Depreciation and Amortization), ROI (Return on Investments), ROA (Return on Assets) and ROE (Return on Equity) without effective, efficient and internationalized management practices, utilization and calculation of assets, debts, revenues, costs and inventories ( Liu et al, 2023; Renold et al, 2023; Tsikriktsis, 2007) it is open that Iranian Air Carriers lost their financial and economic competitive force on an international scale under the impacts of the sanctioned economy in a short time. On the other side, the loss of qualified human force hitches in marketing policies, and devastation in corporate governance structure were the main results in the middle term. Moreover, Iran's civil aviation and Air Carriers lost the main triggering forces that belong to the civil aviation world such as airline reputation (Cocis et al, 2021; Jehn and Scott, 2015) in the eyes of the passenger and cargo consumers with a collapse in safety and security policies, routing and network strategies and research and development power in technical fields. Iran suffers also from the nullities of these activities which can be counted as the maintenance of aircraft, training, certification and licencing of human forces in the long term. At the same time, branding policies (Wong and Musa, 2011; Lin and Ryan, 2016) lost their impact after incidents and accidents which formed under the impacts of the large sanctions on spare parts and maintenance and the absence of new aircraft systems.

Another important detail that should be considered here is the size of Iran's Economy and the importance of the place of SMEs in this equation and the civil aviation supply chain, it is interesting to say that Cheratian et al. (2022) find that reducing research and development (R&D) expenditures, marketing costs fixed/overhead costs and investing in information technology (IT) are positively related to small and medium-sized firms' persistence. Conversely, managerial decisions to reduce production and cut or freeze staff pay have negative and significant impacts on a firm's ability to persist during sanctions. Moreover, micro-firms are more resilient than their small and medium counterparts and they confirmed that the age of the firm has a significant and positive impact on firm persistence. Finally, the results show that having a business plan, access to finance and technology, owner education, export orientation, business networking and consulting services are the key drivers of withstanding pressure from sanctions. Regarding stock markets, within increasing the sanctions case, if the institutional quality has been also enhanced; an increase in the number of sanctions causes a long-term improvement in the bullish market. Also, in the bearish market, an increase in the sanctions and the depreciation of the rial, along with increasing institutional quality, leads to long-term growth in the stock market (Roudari

et al., 2023). Considering these arguments, the financial structure of Iran was dramatically affected by sanctions disregarding financial markets and company size. For these reasons, sanctions have also direct impacts on the financial development of Iran where civil aviation and airlines can be directly affected.

The causes of the sanctions and bans are subjects of international politics. On the other side, Iran's existence in the civil aviation and airlines world is so important not only for the country but also for a region, continent and world civil aviation activities such as airspace utilization, airline partnership and alliances, route and network arrangements and activities. The well-intended efforts toward normalization and dialogue in the Iran-World relationships and also world conjuncture gave their fruits every time, like the Joint Comprehensive Plan of Action (JCPOA) of 2016 which aimed to alleviate the economic and political burdens of Iran in return for constructive policies of Iran (Ranjbar, 2020). As observed, in the findings of Donoghue et al. (2014), one of the first aims of the JCPOA was to realize an arrangement in the transactions of Iran regarding civil aviation due to increasing impacts of internationalism in the activities of civil aviation. So, policymakers in the international arena can focus on and develop soft communication skills to develop a total solution in Iran's case. Otherwise, the region is subjected to conflicts and even wars and will continue to suffer from these negativities regarding civil aviation, airlines and air space utilization financially and economically, because of aggressiveness in sanctions and bans. The Iranian case should be an instance of the Russian-Ukrainian conflict (Prakasa et al., 2022; Akbarlı et al., 2022), the tensions between the African States and the situation of Southeastern Asian Countries such as North Korea, China and Taiwan to international civil aviation order.

### Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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