

# CRITICAL APPRAISAL AND ANALYSIS OF THE BAHRAINI AVIATION LAW

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## ABSTRACT

*Purpose: The purpose of the present paper is to add academic insights on the laws surrounding aviation industry in Bahrain and its due comparison with the internationally implemented standards. The author intends on providing the readers with a comprehensive understanding of the current position of the aviation law in Bahrain.*

*Methodology: The paper focuses on a doctrinal approach by providing a critique and explanation to the legal implications and ramifications of the Bahraini civil aviation law. The Author has primarily referenced the statute for the Bahraini law and other published academic works for the international conventions.*

*Findings: The Current law in Bahrain comprehensively deals with the aspects of licensing, safety standards, penalties and various other crucial and important factors that are factored in the sector of aviation. There is no present study pertaining to the analysis of the aviation law in Bahrain. When compared to other jurisdictions in the GCC or otherwise, the law in Bahrain does not lack any crucial point of consideration and adequately meets the well-established and widely followed practices and principles.*

*Importance of Study: The study intends on providing the readers an insight into the civil aviation legislation in Bahrain. The paper intends on adding to the academic database pertaining to the study of the various Bahraini Legislations.*

*Originality: The paper intends to contribute to the research related to the existing conditions of the laws relating to civil aviation while duly focusing on the present scenario in Bahrain. There is no study that is readily available regarding the position in Bahrain specifically despite of a plethora of material that discusses the provisions of international civil and commercial aviation on a general level. The Paper has also tried in drawing close relationships between the domestic legislation and the various regulations, mandates, conventions and requirements governing the same.*

*Ethical Statement: The author hereby affirms that all the information provided in this paper is affirmative to the present legal position and in no way whatsoever seeks to claim or provide the reader with any false or misleading information. The author has also relied on prior sources from well reputed books and journals which have been duly cited as and where necessary. The author's opinion where so ever added has been arrived at only after reading and duly understanding the current legal position.*

*Data Availability Statement: The data used for understanding the jurisprudence in the present paper has been relied upon interpretation of the Civil Aviation Law which has been studied in detail from official websites of the Government of Bahrain as well as the official websites related to the ICAO.*

**Keywords:** Civil Aviation, Bahrain, Liability, Chicago Convention, Montreal Convention.

## INTRODUCTION

The forthwith study presents a critical analysis and appraisal of the aviation Law in the Kingdom of Bahrain. The approach taken in the paper is purely doctrinal and intends on adding to the scholarly material pertaining to the study of the legal provision. The aviation Law in Bahrain is governed by means of the Civil Aviation Law (Law, 2013), (Aviation Law) that is overlooked and regulated by the Ministry of Transportation and the Department of Civil Aviation Affairs, and the law comprehensively covers all aspects pertaining to civil aviation such as the foundational principle of territorial sovereignty of the State and its powers to govern the airspace, the general rules of Aviation, Licensing, governs Aerodromes, lays down the standards of Air Worthiness, Registration, Environmental aspects as well as governs the operations and running of the flights by laying down standards to be followed.

The paper is divided into 4 Parts. In the first Part, the author shall intend on providing a general explanation, overview and introduction to the governing principles arising out of the various International Conventions. The second part shall analyse the Aviation Law and provide with a comparative analysis of the same with the general principles of aviation law. The third part shall proceed with the analysis of the measures that can be taken by Bahrain and the future of the civil aviation industry in Bahrain and the potential benefits. The conclusion shall be dealt in the final part of the paper.

### General Principles and Conventions Pertaining to Aviation Law

**Chicago Convention 1944:** With the ending of numerous wars, culminating with the World War II, there was a significant progression towards the establishment and codification of international conventions that would begin to govern harmonious relations between States. One such crucial sector that needed some form of governance and oversight was that of aviation (civil and State). Hence, in order to lay down sound principles of civil aviation, the Chicago Convention on International Civil Aviation (Chicago, 1944) was signed between over 50 nations in 1944, bringing an era of ensuring a safe onset of international air transportation. The Chicago Convention received wide acceptance which paved the way for the establishment of a governing body, the International Civil Aviation Organization (ICAO), which began as an inter-governmental agency, but soon was affiliated with the United National (UN).

The rationale of the Chicago Convention was to provide for the “*arrangements for the immediate establishment of provisional world air routes and services*”. The Chicago Convention was enacted with the view of modernizing the position of law and cooperation between nations pertaining to air travel and airspace, and replaced the 1919 Paris Convention (Nations, 1992) in its entirety, but has nevertheless adopted certain intrinsic principles of international law. These include (a) principle of territorial sovereignty over each nation’s airspace, (b) the nationality accredited to an aircraft, (c) freedom of flight over the high seas and (d) the limitations imposed on flight of “*state*” aircrafts (Cooper, 1965a).

Because there are no provisions in the Convention that allow for reservations, the rules are necessary. Article 82 emphasizes the Convention’s obligatory aspect, in which contracting States agree to renounce any inconsistencies in their duties and understandings and not to engage into any such agreements.

## Sovereignty

Territorial Sovereignty is the national sovereignty that permits a country to obtain the unilateral and absolute authority to grant permission or limit anything entering their territory, as well as the ability to govern any actions that occur there. National Airspace refers to the three dimensions of a sovereign country's territory, which include the airspace above the land, as well as the territorial sea and internal waterways. While Freedom of the Sea is a notion that allows all countries to navigate on the open sea's surface and fly over the open sea (Cooper, 1965). It allows nations to regulate marketing access and safeguard their internal markets and airlines in international airspace markets, both within and beyond their borders.

The principle of Sovereignty exercised over airspace can be observed under Article 1 of the Chicago Convention that states that the States shall recognize that “*every State shall have and exercise the complete and exclusive sovereignty over the airspace above its territory*”. This would include that the State shall have an absolute and unilateral right to permit or deny the entry of any other aircraft into or over the area recognized as its territory and the same would be exercised in controlling the movement within such territory (Dempsey, 2008). The scope of territory would extend to the land areas as well as the waters (based on the limits prescribed under United Nations Convention on Law of Seas – UNCLOS). The convention applies to civil aircraft specifically, because civil aircraft can only fly over the territory of other nations, whereas, state aircrafts on the other hand, are not permitted to do so unless they have a specific arrangement. Article 5 provides for the right to innocent passage for certain non-scheduled flights and Article 6 deals with scheduled flights which are limited to receiving the approval or authorization of the State in whose territory the aircraft intends on travelling through.

## Nationality of Aircraft

The 1919 Paris Convention settled many key issues, including the need for aircraft to have a nationality, the nationality of the state in which they were registered, and the fact that no aircraft could be legitimately registered in more than one state. The idea that every aircraft, at least those that fly beyond its home country, must have a nationality is crucial in aviation law because it allows a variety of rights and responsibilities to be grafted directly onto the aircraft or channelled through the aircraft to a variety of people (Cheng & Austin, 1973) Furthermore, it assures that there will be no aircraft for which no state is responsible at the international level.

Chapter 3 of the convention deals with the aspects pertaining to ‘*Nationality of Aircrafts*’. Article 17 states that the nationality of the aircraft shall be ascertained to the State of registration and Article 18 prohibits multiple simultaneous registrations of aircrafts. This is based on the practice and surmises that any ship or aircraft that flies with the flag of any sovereign State shall be deemed to have been associated with the nationality of the State under whose flag its flying and is registered. This also ensures that the aircraft or ship enjoys certain rights and privileges pertaining to undisturbed and free passage. It is to be observed that the convention applies solely to civil aircrafts and meanwhile the other aspects of international law would apply to both, civil and state aircrafts.

“*Every aircraft participating in international air navigation should bear its proper nationality and registration marks,*” according to Article 20 of the convention, which applies to all signatory nations. Article 31 states that “*any aircraft engaged in international navigation*

*should be given or rendered valid by the State in which it is registered with a certificate of airworthiness.*" Aircraft registration for nationality and public-law reasons is distinct from aircraft registration for private-law purposes.

### **Freedom of Flight over High Seas**

One of the pillars of international transport law is the idea that the oceans are a highway available to all states and subject to none's sovereignty. Long before the Chicago Conference, it was argued that aircraft flying over the high seas should have the same level of freedom as boats on the surface. Nowadays, cabotage is pledged in economic agreements between nations, and it refers to maritime trade between two or more harbours in a state (great cabotage), not to trade with a country's colonial regions. Cabotage refers to the sailing and trading along the coasting trade, often known as petit commerce (cabotage). Cabotage has been recognized in airspace law by Article 7 of the Chicago Convention, based on the analogy of maritime law. This article establishes that each contracting country has the authority to deny authorization for aircraft passengers, mail, or cargo to be transported from one location to another for a fee or on a rental basis.

Article 12 of the Chicago Convention, which dealt with "*laws of the air*," ultimately recognized this doctrine. This necessitates that each contracting state retain its own air rules as consistent as feasible with those set from time to time in the Convention. "*Over the high seas, the rules in force shall be those established under this Convention*," it continues (Cooper, 1965b) Since then, the "*Geneva 1958 Convention on the High Seas*" has explicitly reaffirmed the legal position of useable space on the high seas. One of the aspects of the freedom of the seas is the "*freedom to fly over the high seas*."

### **Limitations on Flight of State Aircrafts**

The Chicago Convention separates civil and military aircraft, manned or remotely piloted (or pilotless) aircraft, and scheduled and non-scheduled services. Article 3bis underlines the concept of customary international law that "*any State shall refrain from using weapons against civil aircraft in flight*," while it does allow it to compel civil aircraft flying above its territory without authorization to land at a designated airport. "*However, in the event of interception, the lives of passengers and the aircraft's safety must not be jeopardized*".

By its title and key clauses, the convention sets legislative regulations for civil aviation. Article 3(b) says that aircraft used in military, customs, and police duty "*must be designated State aircraft*," but it doesn't indicate that any other aircraft used by a state would be. Aircraft positions have traditionally been compared to those of ships. Historically, international maritime law has allowed a sovereign state to rigorously restrict the conditions under which foreign warships are allowed to visit its ports. Article 3(c) simply stated that state aircraft may not utilise another state's airspace or surface territory without the latter's express permission.

Pilotless aircraft may not fly over the territory of a contracting State the territory of a contractual State "*without specific authorization and in conformity with the requirements of such authorization*," according to Article 8 in compliance with such authorization's conditions. These flights must be safe. Such flights must be "*managed*" in order to avoid posing a threat to regular aircraft. Controlled in such a way as to avoid posing a threat to civil aircraft.

## Rome Convention 1952

With the improvement of aviation technology, the need for stringent liability laws also increased. With this in mind, the Rome Convention on Damage caused by foreign aircrafts to third parties on the Surface came into being in the year. However, this piece of legislation is imperfect in several aspects which consequentially have led to far less ratifications by the international community as compared to other international aviation laws such as the Montreal Convention or the Chicago Convention (Cooper, 1965; Clinton, 2019). Yet, the Convention plays a key role in placing liability in the area of surface damage caused by aircrafts on foreign territory.

The present form of the Convention has evolved thoroughly dating all the way back to the Warsaw Convention and the 1933 Rome Convention where certain amount of liability was attempted to be placed for surface damage. However, both these attempts resulted in failure with the damage caused by World War II and the lack of international accountability in those times. These failures, however, did not deter 30 nations from converging in Rome to formulate the Rome Convention of 1952, with common views of securing some protection for third parties in light of damage caused by foreign carriers (Grigorieff & De Bournonville, 2019; Whalen, 2000).

Despite its many limitations, the Rome Convention has given a basic platform to impose liability for surface damage and has been successful on various grounds. The first and foremost being that Article 20 (1) of the Convention which provided for a "*Single Forum*" as its jurisdiction. This single forum concept states that the Actions against any surface damage by operators shall be brought before the Courts of Contracting State. It also additionally provides for an agreement and arbitration. The rationale behind such a provision, especially Paragraph 1 of Article, is worth mentioning, as national laws can decide the competent national court to decide the case which can make adhering to the requirements of the Convention simpler and much more holistic (Toepper, 1954). The single forum decision completely mitigates any misuse through means of Forum shopping. Secondly, the Convention can also be commended on its approach to limitation of liability and the requisites of aviation insurance. The liability so imposed is one of strict liability and secondly, the liability so imposed on the operator is on "*per aircraft, per incident basis*". Aviation insurance is a niche concept even in the modern times and hence, the Convention was far ahead of times in providing for these nuances. Although it is not particularly defined, aviation insurance under the Convention covers all kinds of hull insurance, third party liability, war risk insurance and many more.

But as above mentioned, the Rome Convention of 1952 has not achieved absolute success due to its many flaws that were not accounted for during its drafting. The Convention does not account for damage caused due to unavoidable events or force majeure, any aerodynamical sources of damages or even Acts of God and third-party faults (Rinck, 1961; Brown, 1961) Thus, this aspect needs to be thoroughly revised so as to prevent extensive amount of loss to the Operator alone.

Secondly, the Convention has a unique provision to grant compensation for any kind of "*unusual noise*", but there is no clarity per se on what classifies as unusual noise and usual noise. Noise caused by a sonic boom perhaps could be unusual and noise caused due to take off and landing could be usual noise. With the rapid advancement of technology, noise must not be a criterion to grant compensation unless it is harmful and intentional. The Rome Convention should be amended accordingly.

Lastly, the amount of compensation as provided under the Convention is an aspect that needs to be corrected in the modern times. The maximum compensation provided for each person was limited to 500,000 gold francs as opposed to 200,000 francs in the 1933 Convention. Rather than providing a quantum of compensation, the Convention can look for alternate methods of calculating compensation such that there is balancing of interests of both the victim as well as the operator.

The Rome Convention has been taken up by the international community in the present day in a hope to modernize it. A proposal has been put forth to deliberate by ICAO such that liability can be imposed on aircraft operators for the consequences of any activity of terrorists that caused damage (Caplan, 2007). Yet still, this liability may seem a little too farfetched and can be revisited for its extreme broad scope.

### **Montreal Convention 1999**

With the large volume of air travel, issues such as damage to goods, delays, accidents and similar situations of the like are inevitable either due to mechanical errors or human errors which can result out of sheer unintentional acts. In order to provide a beneficial remedy arising out of such acts and to mitigate the risks, the international community, since 1929 (Beaumont, 1953) made constant efforts and implemented various conventions to ensure a better and stronger regulation of matters pertaining to civil aviation. The Warsaw Convention comprehensively dealt with aspects of obligations imposed on the carrier with respect to the luggage and goods ferried (Law, 2013) as well as liability for acts resulting in the death or injury of passengers. The Warsaw Convention was seen as a revolutionary modern law which revolutionized the aviation sector and was notable for its unification of claims that arose from international aviation. Since then, with the technological advancements exposing the sector to newer risks, the international community such as the ICAO has overseen the requirements of developing and updating the conventions in order to strengthen the safety and concerns in the sky.

One such notable piece of laws is the Convention for the Unification of Central Rules for International Carriage (Montreal Convention), better known as the 1999 Montreal Convention on International Carriage was adopted and entered in 2003. The rationale behind the implementation of the same was to replace the previous conventions that dealt with governing and imposing liabilities by means of the 1929 Warsaw Convention. But the Warsaw Convention had a short run due to certain developing ramifications, such as the 1955 Hague Protocol that strengthened the limits of liability that the Warsaw Convention intended to provide as only a small percentage of the travellers were aware about the liability aspect as well as there a small portion of the travellers who knew about aviation insurance. With the adoption of the Hague Protocol, the liability was significantly increased, which ensured that airlines and air carriers maintained stronger standards to meet the developing needs and interests. Post this, there were other notable changes observed that were implemented majorly by the United States of America (USA) due to their rapidly developing aviation market. A few notable changes were observed in 1965, USA proposed that Article 20 of the Warsaw Convention be amended to introduce the aspect of absolute liability to carrier liability and the same saw action in 1971 during the Guatemala City Protocol where there were steps taken to resolve disputes between USA and the Warsaw Nations. A few changes were made in the Warsaw Protocol after the discussions and negotiations. These changes put the 1999 Montreal Convention into motion as subsequent to the

Guatemala City Protocol of 1975; the Montreal Additional Protocols (No. 1 to 4) were drafted (Tompkins, 2009).

The Montreal Convention 1999 came into effect to strengthen the shortcomings of the Warsaw Convention and was adopted to protect “*the interests of consumers in the international carriage by air*” and to provide for an “*equitable compensation based on the principle of restitution*”. Not only has the Montreal Convention improved the liability and duty of care on the behest of the air carriers, but it has also provided for aspects that would easily synchronize with the onset of the digital era and the adoption of practices that are easier to follow.

Chapter II “*Documentation and Duties*,” which differs from earlier agreements, allows delivery of transport documentation and cargo records. In addition, standards have been adjusted for individual or group carriage documents. Article 3(1) abolished the requirements for carriage by stating carriage documents should contain “(a) *an indication of the places where they are to leave and to where they are to arrive (b), provided that the places of departure and of their destination are within the territory of the individual State Party and that at least one of those places of stop is within the territory of another State.*”

A new two-level carrier responsibility scheme was established to recognize “*the poor constraints of the Warsaw system on compensation for death or harm to passengers for nearly 50 years.*” Under Article 21(1), a carrier is obliged, in the event of death or damage, to assume absolute liability. The corresponding Act (21(1)) specifies that “*The carrier may not exclude or reduce its liability for damage originating pursuant to Article 17, paragraph 1, not exceeding the 100,000 Specific Drawing Rights for each passenger.*” The second level lays down the burden of proof in Article 21(2) of the carrier. The carrier must demonstrate that, in accordance with Article 17(1), the carrier is not accountable for any damage “(a) *the carriers, servants or agents of the carrier, or other wrongful deed or omission did not because the damage [or] (b) the damage was caused principally by the negligence or other misdeed or omission of a third party.*”

The Montreal Convention enabled passengers to travel on an international flight whenever an accident happened. It made it easier for passengers to see that during foreign flights they were affected by an accident. It did so by laying down so-called stringent responsibilities. That means the passenger must not prove what the airline or the pilot has done wrong. It is assumed that the passenger is clearly not responsible for flight mishaps. The air carrier is therefore immediately held responsible for international flight mishaps (Teneva, 2019).

The Montreal Convention in 1999 is far from flawless, but the airlines and their users will face their shortcomings - perhaps for decades to come. The Convention would reduce the number of cases - the lawsuit would target “*accident*” and body injury, the amount of second level damages and also the question of delay. It is uncertain. The Convention would reduce the number of litigations. In general, however, airlines have a stronger and more trustworthy law than the archaic Warsaw Convention (Matignon, 2019).

### **The Bahraini Civil Aviation Law 2013**

The Civil Aviation Law of Bahrain (Law, 2013) governing legislation over civil aviation in Bahrain and to an extent the state aircrafts. The Civil Aviation Law to a major extent has incorporated the principles as enumerated and laid down in the Chicago Convention 1944, the

Rome Convention 1952 and the Montreal Convention 1992, and the same can also be observed with the explicit recognition of such conventions, as provided for in Article 4. This part of the paper shall shed light on the overall provisions of the domestic law pertaining to civil aviation and shall draw comparisons with the internationally followed standards, practices, and principles. The two primary bodies that have been recognized to oversee and regulate the various aspects of civil aviation under the law are the Ministry of Transport as well as the Civil Aviation Affairs. While the Ministry shall be overseeing all the affairs pertaining to civil aviation, the Civil Aviation Affairs shall bear the other technical responsibilities. The Law has duly recognized the underlying and rather intrinsic principle of accreditation of Nationality over the civil airlines as well as has emphasized on the recognition of the Sovereignty, under Article 2.

Chapter III of the Law deals with the aspects of General Rules of Aviation that are to be followed and observed, which includes the governance and regulation pertaining to licenses/permits, mandatory registration, (in order to vest the aspects of Nationality, a crucial principle of international aviation law) which is based on the principles and mandates of the Chicago Convention and other on-board responsibilities and practices based on global standards. Part II of the Law deals with the provisions pertaining to the regulations in operating, setting up of, managing Airports, Aerodromes, Airfields and the powers and functions of the Civil Aviation Affairs in such matters. The Law also duly recognizes the significant requirement of recognizing and providing areal easementary rights which would ensure the safety and proper functioning of the aeronautical systems. The Law also lays the foundation in the establishment of the National Civil Aviation Programme (which is governed and regulated from time to time by the Civil Aviation Affairs).

Part III of the Law discusses the provisions and standards for ensuring a due and acceptable level of air worthiness before any certificate can be given to an aircraft or even the airline operator. There is a recognition that the standards of airworthiness shall arise from the provisions as applicable and enumerated on the Annexes to the Chicago Convention such as the maintenance of log-books, display of certificate granted, the weight and balance of the aircraft, the possession of mandatory records and documents, on board presence of working emergency equipment and the likes. Part IV deals with the aspects of the Registration and Nationality of the Aircraft, which emanates from the principles underlined in Article 20 and Article 31 of the Chicago Convention. The Law also touches upon the basic adoption of Environmental Protection Regulations in accordance with Annex 16 of the Chicago Convention. Part VI of the Law covers the various rules of the air and the Air Traffic Control and Part VII deals with the on boarding of various aeronautical services that are related to the air transportation (domestic or international) in Bahrain. The later part of the Law deals with the situations arising from accidents, sanctions for suspected and ascertainable criminal acts resulting in damages, search and rescue operations.

A notable feature of the Law can be seen under Part X, which provides for the responsibilities and interest relating to the operations of aircrafts. This deals with the adoption of the Montreal Convention 1992 (primarily along with other conventions and treaties if any) and the contractual liability of aircraft operators, where the burden is on the carrier to ensure the protection of the best interest of the shippers and receivers of cargo but bears no responsibility for the actions of on board passengers that may have the potential impact of jeopardizing the flight and the co-passengers. For the purpose of any subsequent damages or injuries caused due to the operation of the aircraft, be it either personal or even to the environment, the compensation shall be provided for by the aircraft's operator, either in the capacity of being the owner or even



as a lessee of the aircraft. This compensation is a civil compensation and the limitation on the liability for the same is to be determined based on the Rome Convention 1952. The Part also provides for the interference of the Court in the adjudication of disputes arising out from the compensation claims that have resulted due to the damage caused by the aircraft (or even multiple aircrafts). A crucial necessity for any business, insurance, has also been covered under the Law and can be observed under Article 119 which vests a responsibility on the operator (and/or its representatives) to provide for insurance coverage for any foreseeable and unforeseeable (if within the limits of contractual liability and civil law remedy) event resulting in damage to passengers, animals, mail, goods as well for its employees (pilots, flight crew, ground staff, and others involved in working on or with the aircraft).

There are always concerns pertaining to the in-flight risks that passengers may face due to acts of others, such as hijacking, violence, hostage crisis etc. To provide for an extent of redressed and remedy to such unwarranted situations, Part XI of the Law discusses provides for the grounds of liability and imposition of sanction for activities that may amount to commission of offences that poses a threat to the life and safety of civil aviation (Law, 2013). This includes any verbal or physical act, that may pose a threat to lives or safety, damages caused to the aircraft, interference and obstruction of the duty of the flight crew and the pilot, orderly behaviour (drunkenness, smoking, being abusive), and other such acts that may put the lives of the people in danger and harm the service of air transportation. There are also duties mentioned that are to be performed by the pilot in command and the crew in ensuring the safety of the passengers and preventing the wrongful acts committed in the aircraft. Such instances of wrongdoings are to be tried by the courts in Bahrain and would be tried as a criminal offence that has been committed, and the court is also equipped with the power to request for the extradition of such an offender for the purposes of trial (Law, 2013).

These provisions have been supplemented with Part XIII of the Law. Notably, the officers of the Civil Aviation Affairs have been vested with the powers of being officers for pursuing judicial prosecution against those who breach the provisions of the Law. The penalties can be summarized as under:

1. Suspension, revocation or termination of permits, licenses, certificates.
2. Prohibit the flight of aircrafts in or out of the territory and even force the grounding of aircrafts after issuance of warnings.
3. Power to charge the offender for the entirety of the expense incurred due to his actions.
4. Imprisonment of a term not less than two years but not exceeding three years. This can be supplemented with fines that can be imposed (together with the imprisonment or even separately) which shall not be less than BHD 3,000 against those persons who are in breach of the observance of the necessary requirements and protocols for ensuring the safety of the aircraft and observance of aviation standards (Law, 2013).
5. For actions against the commission of offences committed on the premises of any place associated with civil aviation as well as unlawful seizure or capture of aircrafts, the wrongdoer can be imprisoned up to a period of maximum 10 years or life imprisonment if the actions would have resulted in the death of person(s) (Law, 2013).
6. The Ministry or even the Civil Aviation Affairs is empowered with the power to confiscate aircrafts by means of court orders (Law, 2013).

### **International Conventions Ratified By Bahrain**

1. Convention on International Civil Aviation Chicago, 7/12/44.
2. International Air Services Transit Agreement Chicago, 7/12/44.

3. International Air Transport Agreement Chicago, 7/12/44.
4. Protocol on the Authentic Trilingual Text of the Convention on International Civil Aviation Buenos Aires, 24/9/68.
5. Convention on the International Recognition of Rights in Aircraft Geneva, 19/6/48.
6. Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface Rome, 7/10/52.
7. Convention for the Unification of Certain Rules relating to International Carriage by Air Warsaw, 12/10/29.
8. Protocol to Amend the Warsaw Convention of 1929 The Hague, 28/9/55.
9. Convention, Supplementary to the Warsaw Convention, for the Unification of Certain Rules relating to International Carriage by Air Performed by a Person Other than the Contracting Carrier Guadalajara, 18/9/61.
10. Convention for the Unification of Certain Rules for International Carriage by Air Montreal, 28 May 1999.
11. Convention on Offences and Certain Other Acts Committed on Board Aircraft Tokyo, 14/9/63.
12. Protocol to Amend the Convention on Offences and Certain Other Acts Committed on Board Aircraft Montréal, 4/4/14.
13. Convention for the Suppression of Unlawful Seizure of Aircraft the Hague, 16/12/70.
14. Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation Montreal, 23/9/71.
15. Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, done at Montreal on 23/9/71 Montreal, 24/2/88.
16. Convention on the Marking of Plastic Explosives for the Purpose of Detection Montreal, 1/3/91.
17. Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation Beijing, 10/9/10.
18. Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft Beijing, 10/9/10.
19. Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Aircraft Equipment Cape Town, 16/11/01.
20. Convention on the Privileges and Immunities of the Specialized Agencies, 21/11/47 – application to ICAO (Annex III), 21/6/48.

## The Future of Bahraini Aviation Sector

With Bahrain becoming a notable leader in the Gulf, there has been a significant development of the industry's leading to economic strengths of the small yet significant nation in the GCC. Bahrain, in the last decade has been actively progressing in the direction of attracting investments and is in the race of being an investor friendly Gulf nation along with forerunners such as Saudi Arabia and the United Arab Emirates. With the induction of high-tech industries into the global market, the aviation market in the Gulf especially in smaller nations such as Bahrain, has received significant attention in the past few years.

For several decades, the GCC countries' aerospace sector has been gradually and swiftly growing. It is not only because of the increased growth of the transport sector, both global and regional, but also because of the region's vital position in the network of global transport flows (Shkvarya, 2019). The Gulf countries are keeping up with the times by investing in airport infrastructural development, such as the airport modernization programme, in the formation of elements of the aerospace sector, and in the construction and significant improvement of related infrastructure. As a result, Bahrain, as an island nation and a tourist destination, requires air transport desperately, with over 2 million visitors drawn by outstanding antiquities, oriental culture, and luxury leisure, as well as the annual Formula One race. Bahrain is a major international airline hub.

Gulf Air, the national airline of Bahrain has over the years been observed as a potential competitor to the other Middle Eastern airlines such as Etihad and Emirates. Gulf Air, as the

Kingdom of Bahrain's national carrier, is one of the important assets of the country's infrastructure, stimulating the growth and development of the country's economy. With the predicted growth in the aviation sector and the rapidly growing influx of people either entering or passing through the Bahrain Airport and Bahrain slowly developing to become a tourist hotspot, the Bahraini Government has begun taking measures in digitizing the airport services. This is done in collaboration with SAP (Bahrain News Agency, 2021).

Furthermore, there is a need felt in Bahrain to realize the importance and benefit of adopting Blockchain into its aviation industry. The realization of adopting blockchain in aviation in the Gulf can be seen to have taken shape in discussions at the ICAO-UAE Blockchain Summit and Exhibition which was held in 2019, where there was need mutually observed that the blockchain and distributed ledger adoption would benefit the civil aviation operations and customer experience (Tochen, 2019) The adoption of Blockchain technology in the Bahraini Aviation industry would benefit the sector due to the rapid growth in the volumes of air traffic. The benefit of blockchain is that it would primarily assist in the reduction of losses, forgery, reduces pressure on human capital and also ensures better operational management and stronger safety standards.

With the experimental usage of the distributed ledger technology, which is a significant component of the blockchain model in the shipping industry (with respect to the technology being used in the bills of lading), the authorities are to also dwell and realize the benefits that blockchain would provide for. With UAE being the forerunner in the major technological advancements and adoptions, Bahrain can seek some foundational assistance and upon proper implementation, it would supplement UAE and make the Gulf aviation industry much stronger. A few benefits and practices in which blockchain technology can be adopted are (Caro & Martens, 2020):

1. Identity Verification-The usage of blockchain technology can improve the efficiency with which passengers' identities are verified. Passenger information, including as biometric data, needed documents, and tickets, can be stored on the blockchain network. Passengers may simply enter the airport using a verification number, eliminating the burden of waiting in large lines for document verification.
2. Tracking Cargo and Baggage-As these goods change custody from the moment of deposit, blockchain provides for the reliable and immutable tracking of their location and status. As a result, blockchain can help to improve transparency and visibility, allowing authorities and passengers to readily track their luggage at all times across the value chain.
3. Booking of tickets -- Ticket overbooking has been a concern for airlines in the past, but it could be alleviated with the use of blockchain. The usage of smart contracts would enable the automated application of a smart ticketing system that passengers might use to purchase tickets. This system would eliminate the need for human ticket issuance, increasing efficiency and accuracy.
4. Maintenance of aircraft records -- Aircrafts may change ownership up to five or six times over their lives, making information tracking and tracing a time-consuming and labor-intensive procedure. As a result, an immutable record that lists the aircraft's maintenance history in a digital context might be extremely valuable to the stakeholders involved.
5. Improve Customer experience -- The majority of airlines are concentrating their blockchain efforts in this area. When members of an airline's loyalty programme fly on a partner airline, reconciling the miles or points flown and appropriately applying those credits to the customer's account can be complicated, error-prone, and time-consuming. Smart contracts can help airlines streamline and automate their processes, reducing the chance of error and increasing customer satisfaction (Bouffault et al., 2019).

With the opening of the Bahrain International Airport during the pandemic, Bahrain has set a global example of excellence and standard along with a new-age airport. The BIA features a

slew of new technologies aimed at ensuring quick and effective passenger handling and giving passengers more control over their journeys. SITA's biometrically enabled Smart Path kiosks and Flex cloud-based passenger processing solution are among these technologies, as are Vision-22 Box's e-gates, which use facial, iris, and fingerprint identification to validate passengers' identities (Bates, 2021; Kusumaningrum, 2020; Radhi, 1996; Civil Aviation Act, 2012)

Internationalization standard is a way of meeting the specific needs of globalization and a new aviation order that is more complex. Interaction and cooperation between states increased after the Second World War. This is in line with scientific, technological and international trade developments, including the flight service. In addition, international agreements or treaties have become national sources (domestic) legislation for nearly world states. As a result, international rules will be added to national state law. States are legally and politically bound by the decree of the international organization to which they belong.

The boundary between international law and national law is undistinguished in the context of recent international law. The international organization's legal rule and decision-making process must fully be based on democratic procedures for all Member States. There is no excuse for the final wording, for negotiation, and for drafting a rule or resolution either when it comes to the decision.

Bahrain is a part of the Arab Organization for Civil Aviation since 1995 (vide Legislative Decree 12 of 1995) is also governed by the regulations implemented by the GCC. The primary rationale of having such a common set of regulations to be followed by parties of the Arab Organization as well as the GCC is to ensure peace and security in the sector of airways as well as help in the promotion of economic and social development between the nations.

## CONCLUSION

Bahrain's laws are in absolute coherence with the internally established practices and standards. Recently, the Legislature of Bahrain is proposing for an implementation of stronger liabilities and punishments for actions arising from civil aviation violations which would include death penalties in case of fatalities. This is due to the realization of amending the 2013 Civil Aviation statute of Bahrain that is imperative and a reassessment of the security and safety standards. A notable amendment proposed is for the punishment for causing destruction of aircrafts or aircraft facilities is between 3,000 to 100,000 BD or the perpetrator would be jailed for the commission of severe security violations and death penalty in case of actions that result in fatalities. The other aspect that the proposed amendment would deal with is the power of the Civil Aviation Affairs (CAA) would be given with powers to terminate contracts and impose bans on the flight of certain aircrafts.

When compared to the UK civil aviation law, the laws are similarly placed with respect to the licensing, redressed mechanisms, penalties, security provisions, membership of providers, criminal and civil sanctions and other provisions of the like, with the degree of penalty being slightly different. One notable aspect of the civil aviation laws between both the nations is that in UK, the civil aviation law has provided for the incorporation and insertion of Competition concerns in the aviation industry which is not prevalent under the Bahraini Law. This is done to ensure that the airport operation services fall under the standards of the Competition Act of UK and furthermore there is a burden on the CAA of UK to assist the Competition Commission and disclose necessary information about any violations pertaining to the competition law. This

ensures that the customer interests are not prejudiced due to the misuse of position of the airline service providers in the UK market. Bahrain can also see the feasibility of incorporating the similar aspect in case the Bahraini government intends on having Bahrain as a major airline industry hub in the Gulf, supplementing UAE. By doing this, Bahrain can begin attracting investors in the airline industry, for Bahrain to get a stronger economic position in the Gulf. Primarily the aspect of competition is dealt under various bilateral treaties between the nations.

Hence it can be said that there is tremendous potential that Bahrain has in its aviation sector in the upcoming years with the measures and advancements it is taking to ensure that Bahrain grows as an investment hub in the Gulf as well as become the face of the new generation of aviation industry. It is pertinent to note that despite being a small nation, its legal and regulatory system are well structured and enforced to ensure that Bahrain is in the race towards and modern world and market.

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