



**Centre for Aerospace & Defence Laws (CADL)
Directorate of Distance Education
NALSAR University of Law, Hyderabad**

**Course Material
P.G. DIPLOMA (AVIATION LAW AND
AIR TRANSPORT MANAGEMENT)**

1.1.2. International Air Law

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Introduction:

Why aviation law and air transport management course? The Indian Aviation Industry has shown tremendous growth potential in the past decade both in terms of volume as well as in quality of services rendered. With privatization of Indian Aviation Industry and introduction of government schemes like UDAN (Ude Desh ka Aam Nagrik) and NABH Nirman, the airlines have drastically expanded its domestic market and now India is seen a major player in the Aviation market. Its rapid growth within India recently and across the globe coupled with usage of the best and the most innovative technologies and increasing contribution to the economic and infrastructural development of a country makes the international civil aviation sector particularly important from both legal as well as management perspective.

Hon'ble Finance Minister, Smt. Nirmala Sitharaman on May 16, 2020 as part of "Atmanirbhar Bharat" or "Self-reliant India" announced reforms for eight sectors – coal, minerals, defence production, air space management, airports, MRO, distribution companies in UTs, space sector, and atomic energy. Further, relating to Aviation Industry, she announced to make the air travel cheaper and in an effort to make civilian flying more efficient and to ease the restrictions on utilisation of the Indian Air Space. With relating to Airport infrastructure, Finance Minister said that the additional investment by private players in the 12 airports in the first and the second rounds is expected to be around Rs 13,000 crore for making Indian Airports as World-class airports. The above announcements of the Finance Minister were part of the Rs 20 lakh crore economic stimulus package promised by Prime Minister, Shri. Narendra Modi in his address to the nation in the month of May, 2020.

Covid-19 pandemic effect on the aviation industry include loss of airport revenue, cancellation of flights, issues relating to non-operation of airports and the airlines, government notifications and the invocation of the 'Force Majeure' clause in contracts etc. have impacted a lot. Flights are almost empty and flight schedules have been dramatically reduced. The warnings from trade associations are dire. People who work for airlines don't know what's going to happen. Since the outbreak in Wuhan, China in December 2019, the Covid-19 pandemic caused by the novel coronavirus which is spreading increasingly and became a huge crisis across the globe, deeply affects not only the public health but also the business world. There is no doubt that the civil aviation sector is the most affected sector by the pandemic and hundreds of airlines have to ground thousands of airplanes due to flight bans. The organisations like ICAO, ACI, CANSO, IATA, TIACA, WFP and WHO working in a close cooperation in the development of this single source for aviation-specific guidelines with the objective of ensuring appropriate planning and action at all levels in order to mitigate the effects of a human outbreak.

Further, the scientific and technological developments in the field are so rapid that they have posed challenges to the legal fraternity. At present, the significance of Air Law and aerospace management needs no explanation due to indispensable uses of airspace for the purposes ranging from commercial to military. The increasing volume of disputes in the field of aviation has also resulted in the manifold increase in the legal practitioners working in the field of aviation at both developed and developing countries including India. India being a significant player in the field of aviation sector lacks professionalism in various manners because of the improper knowledge of the legal and managerial aspects of aviation when compared to other developed countries.

Keeping this in mind, the two years course on M.A. (Aviation Law & Air Transport Management) is a unique initiative undertaken by Centre for Aerospace and Defense Laws (from now onwards CADL) at NALSAR, Hyderabad. The course is designed to provide an in-depth understanding of Air Law and aerospace management along with some fundamental principles of public international law related to aviation. The course would be highly useful to the candidates having wide-ranging background from legal to scientific.

Through this course CADL at NALSAR aims to create an industry of aviation lawyers catering and specializing in both legal and management aspects of international aviation law. The course participants would not only have a sound and strong foundation on legal and management patterns of international civil aviation sector but also will be well-equipped to handle practical and contemporary aspects and challenges faced in the daily governance of the aviation industry.

Why this course at NALSAR? Every job seeker is aware that the job market is no more bountiful due to the economic slowdown and COVID-19 Pandemic. India is no different in terms of job market and job aspirants have to try harder than ever before. But some newer avenues are opening up notwithstanding the lack of enthusiasm in the economy. A career in Aviation laws is one such area which the latest addition to the job market is and has huge potential in the long run. Aviation Lawyer or Aerospace lawyers are the answer to the legal hassles in the ever increasing as well as complicated Aviation industry. In India, despite huge potential in the aviation sector there are only few institutions or universities which have started courses in Aviation law. Out of which there are hardly any institution running the course effectively and efficiently.

From its inception, the University is committed to ensure highest quality in imparting legal education. One of the core missions of NALSAR is to produce legal professional who are professionally competent, technically sound and socially relevant lawyers. In this regard the University through the aforementioned course introduced by CADL aims to cater to the growing needs of the aviation industry and impart knowledge and train participants in the legal as well as management aspect.

The innovative law course has been introduced keeping in mind the need of the hour. The study of this course will cater the need of **Aerospace Lawyers** which will meet the demand of trained and certified professional lawyers in ever growing aviation sector. Growth and commercialization of aviation business has created the demand for legal professionals to handle the legal complications in the industry. It enables students to obtain an understanding of the application of legal principles to aviation. It further provides an overview of the role of law in the management of aviation and explains legal concepts and principles as they apply to aviation and the conduct of pilots and operators. It examines international regulatory body conventions, regulations and audit processes.

Legal and Management aspects of International Civil Aviation are so well interconnected that the study of one aspect is incomplete without the study of the other. The unique advantage of the course is the comprehensive understanding of the aviation industry which would include its operational aspects, legal management and technical knowledge with a special focus on catering to the contemporary requirements of the growing aerospace industry.

The curriculum of the course is a tailor-made to meet the professional needs of the aviation industry which includes airport, airline, aerospace and related sectors so that the trained professionals are in a position to directly take on the core legal-cum-managerial positions in

any of these sectors. A lawyer who has been endowed with rational mind can perform the multiple roles in the form of an aviation lawyer, manager and technical support. Similarly, a manager who is endowed with analytical ability is now in a position to function at a higher level with a greater competence by acquiring the specific knowledge of the rules of the game – Aviation Law.

Nature of perspective target group learners: The course aims to meet the needs of personnel currently involved in the aviation industry, students of aviation and aviation enthusiasts who wish to upgrade their skills at tertiary level in the field of management in air transportation and application of aviation law. In addition, the program is designed to have considerable application for personnel in related technologically based service and business industries.

How Course is conducted? This Master's Programme has four semesters. Each Semester will have Onsite intense sessions by the subject experts, followed by online session where participants will work on the case studies and assignments and upload them on the dedicated web platform / submit them by email. The students can contact / communicate by email with the subject experts pertaining to various queries on the concerned subject. Relevant course material will be uploaded on the website and can be accessed through their login id.

Face to Face contact sessions will be conducted for seven days in a semester at Hyderabad by the subject experts. Suggested reference guidance would be provided at the contact sessions. Each subject shall consist of 15 teaching hours which will come to 60 teaching hours per semester for three semesters. Case study analysis will be part of the concerned subjects and will be discussed in onsite sessions. Attendance at the onsite session is not compulsory.

The conduct of the programme involves uploading of updated course material, assignments etc. on the website.

International Air Law: The aviation industry has always been a very unique industry in itself. Its rapid growth across the globe coupled with usage of the best and the most innovative technologies and increasing contribution to the economic and infrastructural development of a country makes the international aviation sector particularly important from both legal as well as management perspective. The main role of international law is to promote global peace and prosperity. Ideally, international law and its accompanying institutions act as a balm to smooth over opposing interests that nations may have. Through this module aim is to give an overview of the basic laws and principles covered under the ambit of modern international law as well as its impact on the domestic sphere within India. Transport (particularly air transport) being an integral part of the international law plays an important role in the field of aviation and hence, the laws and principles of international law act as an umbrella law for regulating the law of Aviation and aerospace management. Below is a brief overview of the contents of the module.

Module – I covers Introduction to International Law including Definition, Nature Scope, Sources, Subjects, Relations between International Law and Municipal Law.

This module provides an introductory preface to the International Law, to make the students familiar with the basic principles and concepts relating to the course in general. The module contains discussions on the overview of the existing global legal systems, an exhaustive introductory approach to the International Law, containing its definition, nature, scope and

development over the period. The discussion further includes sources and subjects of international law. It elaborates Article 38 of the Statute of the International Court of Justice (ICJ), and other sources are discussed briefly. Further it also covers the subjects of International law including States, International Organizations, Individuals and Non-State Entities. The last chapter of the module will cover on relation between International Law and Municipal Law while focusing on Indian State Practice.

Module-II Covers Introduction to International Air Law including Definition, Sources, Theories and Subjects of Air Law. This module also briefly covers the Development of Air Law before the Chicago Convention including the Paris Convention 1910, Paris Convention 1919 and other International Air Law Treaties.

This module takes into account the introduction to the international air law and aims to impart the basic information relating to the development of the international air law. The module commences with the definitions of air space and outer space and the delimitations between the two. The discussion further introduces the concept of state sovereignty in air law, with the help of various theories on the subject, followed by an exhaustive study on the nature, scope and stages of development of the international air law. The module further provides for the sources of international air law, followed by a comprehensive discussion on the development of air law in general and the role of the Paris Conventions of 1903, 1910 and 1919, and concludes with a discussion on regionalism and private international air law conferences in the development of international air law.

Module-III Covers Chicago Conference and Chicago Convention. It briefly touches the historical evolution of Chicago Convention and the outcome of the Chicago Conference including interim agreement, Two freedoms agreement, Five freedoms agreements, Standard Form of Bilateral Air Service Agreement and various annexes to the Chicago Conference.

This module encompasses a very exhaustive discussion on the Chicago Conference, 1944 and its role in the development of the International Air Law. The discussions in this module start with the events leading to the conducting of the Chicago conference, followed by the controversy regarding the freedom of the air and sovereignty in the air and the differences between the two concepts. The module then covers the outcomes of the Chicago Conference, including the interim agreement, the two-freedoms and the five-freedom agreements, technical annexes and a standard form of bilateral agreement. The recent developments, including the bilateralism philosophy involving the liberal and open skies also find a place in this module. Further, a critical analysis of the Convention on the International Civil Aviation or Chicago Convention is present, with the recent developments in respect of the conference.

Module-IV focuses on the Structure and Functioning of the International Civil Aviation Organisation (ICAO). Its role in making International Air Law including the recent Aviation Treaties.

This module deals with the role of ICAO in development of International Air Law and the Annexures appended to it. The discussion includes the membership and organs of the ICAO: the legislative administrative and judicial, followed by the functions of the ICAO and the economic and technical regulations by the ICAO. The discussion then refers to the ICAO Air safety and security regulations, along with its various Annexes, and the related recent

developments. Lastly, the module concludes with ICAO, the International Court of Justice and Dispute Settlement Mechanism.

Module-V: Application of New and Emerging Technologies in Civil Aviation Industry

This module focuses on application of New and Emerging Technologies in Civil Aviation Industry which includes information communications technology (ICT); artificial intelligence (AI), machine learning and robotics; nanotechnology; biotechnology; and quantum computing etc. The technological advances in question are driven by a digital revolution that commenced more than four decades ago. The aviation industry is not untouched from the effects of the digital wave, which has created a ripple effect across industries and organizations. With futuristic, alternate travel modes such as Hyperloop, with the growing prominence of the highly sophisticated AR/VR technology, the aviation industry is in a rather dynamic state. Although, air travel is still the preferred mode for long-distance journeys, the tables might turn on the sector if it fails to adapt and align with the latest technologies are covered in the above module.

MODULE VI: Globalization, Covidization and Its Impact on Aviation Industry

This module is divided into three parts. Part-I will focus on globalization and its impact on global economy and will also highlight its impact on Indian economy. Part-II will focus on de-regulation, globalization and liberalization of aviation industry. It will also highlight the de-regulation in the USA and its impact on US aviation industry. Further it also highlighted the aviation liberalization process in the European Union and other parts of the world including Asia Pacific Region. Part-III will focus on the Covid-19 pandemic impact on various sectors and particularly it will focus on the aviation industry. The pandemic has presented a lot of challenges for the global economy some of which have direct bearing such as disruption in supply chains, challenges in meeting contractual obligations and problems of funding while others are universal in nature like maintaining the safety and health obligations at workplaces, impact of travel restrictions, protecting sensitive information and data etc. It also briefly highlights the Covid-19 pandemic impact on Airlines, Airports, MROs, Force Majeure clause, passenger rights etc.

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MODULE – I

INTRODUCTION TO INTERNATIONAL LAW

MODULE – I: INTRODUCTION TO INTERNATIONAL LAW

DEFINITION, NATURE, SCOPE AND DEVELOPMENT OF INTERNATIONAL LAW

Why Module on International Law? In this modern age the world has greatly shrunk as a result of scientific and technological developments drastically. With the events in the recent past such as deadly wars as well mass murder if the humanity there was an immediate impact on the rest of the world. Similarly other issues such as maintenance of peace , security and sovereignty of states, environment degradation, terrorism, piracy, air and space law, law of seas , airplane hijacking, international trade and commerce and dispute related topics as well protection of human rights and international trade as well as business. These are the issues which are global in nature and cannot be solved within the territorial as well as political boundaries. These issues are global in nature and cannot be confined to and solved within territorial or political boundaries. Therefore, States maintain regular relations with other states because a modern State cannot lead an isolated life in the present context of world affairs. The more a State is civilized and perfect in its organization, the greater and more familiar shall be its intercourse with other States. This leads to that a Government of a State must not only conduct its internal affairs but also regulate its conduct towards the Governments and citizens of other States.

Just as people cannot live in a society without rules, laws and customs to regulate their actions, so even states cannot have mutual intercourse without usages and conventions to regulate their conduct. International Law impinges on state sovereignty by creating new structures for regulating relations across international boundaries. International Law and International Norms limits the state sovereignty in another way. They create principles for governing international relations that compete with the core realist principles of sovereignty and anarchy. International Law derives not from actions of any legislative branch or other central authority, but from traditions and agreements signed by states. It also differs in the difficulty of enforcement, which depends not on the power and authority of central government but on reciprocity, collective action and international norms. Without International laws and customs, it is impossible for states to maintain relations on the basis of peace, harmony and mutual co-operation. Rather, then the rule 'might is right' will prevail that would be destructive for the global peace and humanity.

International law has emerged & grown to fulfill the essential needs of men organized in separate communities & national entities bound together by common bonds of geography & civilization. The political order of the world is divided into three kinds of nations/ states according to their political, social, economic & cultural backgrounds as to: The western or the capitalist countries are known as First World Countries; The Communist or Socialist countries of East Europe, Latin America & China are known as Second World Countries; The developing or under-developed countries of Asia & Africa are coined as Third World countries. International Law is to be found in the history of ancient & medieval as well as modern times of each kind of political communities.

International law governs relations between states. It provides the basis for peace and stability and aims to protect and ensure the well-being of humankind. Globalization has not only increased the importance of international law but also the complexity of international legal issues. Transportation is one of the important fields of international law. International treaties are essential for ensuring the safety of international air and rail travel. International Air Law being a part of Contemporary International Law has many branches including the relevant

principles and rules of international law, the International Human Rights Law, International Humanitarian and Refugee Law, International Trade Law, International Intellectual Property Law, International Environmental Law, International Space Law, etc. that affect the use of air space and aeronautics.

What is International Law (IL)? International Law also called other names like Law of Nations, Public International Law, Inter-State Law and Trans-national Law, etc. It is generally viewed that International Law regulates the relations between or among states or International Law is Body of legal rules, norms, and standards that apply between sovereign states and other entities that are legally recognized as international actors. International also called Law of nations because it regulates the behavior of nation-states. The expression 'International Law' and 'Law of Nations' is synonymous and is equivalent terms. Jeremy Bentham introduced the former in 1789. Prior to that International Law was known by the name 'Law of Nations'. International law also called Public International Law because there is a private international law or Conflict of Laws. Public International law is commonly divided into the law of war and the law of peace. Hugo Grotius, "considered to be father of international law" called his great work as *De Jure Bella ac pacis* or the Law of War and Peace. Oppenheim divides his treatise into one volume on peace and the other on war.

The conventional view is that public international law is made up of two separate and distinct branches, with the law of war being necessary to regulate the rights and obligations of belligerents and neutrals when the law of peace is no longer applicable. Private International law or Conflict of laws is different which regulate the behaviors of two or more individuals of different countries. International law also called as Inter-state law, which provides a system of rules governing the conduct of inter-state relations. Judge Philip Jessup called international law as Trans-national law because it regulates the actions or events that transcend national frontiers. International law also equated other terminology like Common Law of Mankind, World Order and World Law.

Definitions

Traditional Definitions of International Law: Oppenheim: International Law is "the name for the body of customary and treaty rules which are considered legally binding by civilized states in their inter course with each other." There are three main elements present in this definition: Body of rules governing the relation between the states, States regard them binding in their relation with each other and Rules are derived from customs and Treaties. *J.L.Brierly:* International Law may be defined as "the body of rules and the principles of actions, which are binding upon civilized states in their relation with the one another. *Hackworth:* "International Law consists body of rules governing the relation between states." According to Bentham, international law is a collection of rules governing relations between states. *Queen Vs. Keyn: Lord Coleridge C.J.* defined "the law of Nations is that collection of usages which civilized states have agreed to observe in their dealings with one another"

Modern definitions of International Law: Charles G. Fenwick: International Law may be defined as "the body of general principles and scientific rules which are binding upon members of the International Community in their mutual relations." *Whiteman:* International law is "the standard of conduct at as given time for states and other entities subject there to." *J.G.Starke:* International Law may be defined as that body of law which is composed for its greater part of the principles and rules of conduct which states feel themselves bound to observe, and therefore, do commonly observe in their relations with each other, and which includes also: The rules of law relating to the functioning of international institutions or

organizations, their relations with each other, and their relations with states and individuals; and Certain rules of relating to individuals and non-states entities so far as the rights or duties of such individuals and non-state entities are the concern of the international community. *Schwarzenberger* "International Law as the body of legal rules which apply between sovereign states and such other entities as have been granted international personality." Whiteman defined International Law as-- The standard of conduct at a given time, for states and other entities subject thereto.

On the basis of above definition we may conclude that international law is a body of rules and principles which regulate the conduct and relations of the members of international community. The contention that states alone are the subject matter of international law is not only inconsistent with the changing nature of international law but has become completely obsolete and inadequate. Individualistic character of international law is being replaced by the law of social inter-dependence. International law has been remarked as a "living and expanding code". In view of some changing character and expanding scope of international law today, international institutions, some non-state entities and individuals have also become the legitimate subjects of international law. Thus, international law is constantly evolving body of norms that are commonly observed by the members of international community in their relation with one another. These norms confer rights and impose obligations upon state and to a lesser extent, upon international organizations and individuals. Moreover, International law has effects on, and effected by the international relations, political thought and communications, as well as by the awareness of women and men in every state that they are part of those addressed by the United Nations as being "we the people of the United Nations".

Nature of International Law: The status of international law is the most controversial and debated topic among the jurist all over the world. The important to be debated is whether international law is really a law or not? Or is it just a code of rules of conduct of moral force only? In order to understand the real nature of international law it is important to take into consideration how the various theorists have defined the term "*law*".

International Law is not true Law: The initial reaction of law students and laymen alike, when they are first told about international law, is usually highly skeptical. They believe that states have little respect for international law, and have no incentive to obey it in the absence of a supranational system of sanctions capable of being enforced against the law-breaker. In short, the popular belief is that international law is not really law. In fact, however, states do accept that international law is law and what is more, they usually obey it. It is true that international law is sometimes broken with impunity, but the same could be said of any legal system. The supporter of the positivists school like *Hobbes*, *Bentham* and *Pufendorf* are of the view that international law is not a true law as it is not binding on the states. Many other prominent jurists took the similar view.

The most prominent amongst them is the British jurist Austin who believed that law is the command of the sovereign attended by sanction in case of violation of the command. In other words law should be limited to the rules of conduct enacted by a determinate legislative authority and enforced by physical sanction. The definition of law as given by Austin basically has two parts: Any rule which is not enacted by sovereign or superior cannot be regarded as law; and Command must be enforced by the sovereign authority. According to him existence of both is necessary for any law to be called as "Proper Law" and other senses of law are "improper law". International law is law improperly so called because it has neither sovereign authority to enact laws nor there is adequate sanction behind it. Since the

international law governs the relation of the states inter se and there is sovereign political authority of the state inter se, there is no supreme executive government to execute these laws nor there is any judicial organization with compulsory jurisdiction, it cannot be said to be law.

Criticism: *Austin's* view has been vehemently criticized by many jurists. According to *Sir Henry Maine* and *Savigny* Austin has not taken into consideration certain important facts which are necessary as to: 1) He completely ignores the customary or unwritten laws and only treats laws enacted by the sovereign legislative authority as law. 2) Laws are not only obeyed because of the fear of sanction behind them, they are also observed because of habit of mind and practice of communities. *Oppenheim*: Another famous jurist Oppenheim defines law as a body of rules for human conduct within a community which by a common consent of the community shall be enforced by external power. Thus this definition of Oppenheim has three main parts: There must be a community; there shall be a body of rules to govern the community; and there shall be a common consent of the community that the rules be enforced by external power.

Comparison with the contemporary international law: When we look at the definition of Law as given Oppenheim and compare it with the present concept of international law, the international law satisfies all the requirements of law. There is an international community present at the international level which is the community of nations. Customs and the treaties have in them set rules which govern the conduct of the members of the international community. The international communities do accept that these set rules are binding on them and are governed by them. There have been many treaties concluded between and among the states and though there are few breaches too but it cannot refute the existence of the international law.

International Law as weak Law: International law is a law in the true sense of the term which is in turn affirmed by the state practice as well as the practices of the international judicial institutions. International law is observed by all the state and the international level because it is crucial for the peaceful relations and cooperation. Nevertheless it has to be conceded as a weak law. There are many reasons behind saying so which can be summarized as: 1) International law is not as efficient and as effective as the state legislative machinery as wide options are given to the state parties through customs and treaties. 2) Courts at the international level act with the consent of the state and don't have jurisdiction to decide the disputes of all the states. 3) Under International law the enforcement measures are not effective as courts do have real power to enforce its decisions. 4) Rules as laid down at the international level are frequently violated by the states.

International law is a weak law on the institutional side as there is no legislature, the court though present is not strong enough and has no real powers to enforce its decisions. There is an urgent need to develop formal institutions which will be responsible for law creation and enforcement. There shall be a strong enforcement mechanism and for which the state cooperation is the need of the hour. According to *Austin*, International Law is not true law but positive International morality only. *Holland* remarked that International Law is the vanishing point of jurisprudence. According to him, rules of International law cannot be kept into the category of law because they lack sanction, which is an essential element of municipal law. He further said there is no judge or arbiter to decide international disputes and that the rules of international law are followed by states by courtesy.

- ◆ **Austin Definition of Law:** Law is the command of sovereign political authority given by political superior to inferiors.

- ◆ In International Law, no political superior, no physical force and no enforcing authority. So international law is not a law. Rules of international law.
- ◆ The rules of international law are positive morality: Holland Bentham, Brown etc., is denied the legal character of international law.

International law is not law because: No agency for international legislation. International Law is a limitation imposed by sovereign state upon itself. Auto limitation is no limitation; therefore international law is not a law, No organized force, No a determinate impartial arbitrator, though we have the International Court of Justice, but has no compulsory jurisdiction. Some writers called international law as a quasi-law. Starke: International law is a weak law *In Queen vs. Keyn* case the court said International law is not an exactly law.

International Law is a Law: *Oppenheim, Brierly, Starke, H.L.A.Hart, Pollock, etc.* States obey International law far more often than most people suppose. Fear of sanctions has very little to do with this obedience. There are other factors inherent in the very nature of international law and of international society which induce states to obey international law. These factors more than compensate for the weakness of sanctions, but few people are aware of them, because they have no counterpart in international system of law.

In international law the absence of a legislature means that states very largely create law for themselves, and it is unlikely that they will create law which is not in their interests or which they will be tempted to break. Interdependence is the order of the day. In today's world states are interdependent in many ways, and international law facilitates international cooperation. For example states have a common interest in preventing pollution of the sea, but prevention of pollution requires detailed rules about such things as the discharge of oil from ships, and a treaty or some other legal instrument is the obvious way of laying down the necessary rules. Similarly, when a particular problem is constantly arising (for example, do aircraft from one state have a right to fly through the air space above another state?), it is everyone's interests to have an agreed rule to deal with all such cases, instead of leaving every individual case to be decided by a trial of strength between the particular states concerned. Even when the relevant rule of international law is imprecise, it still performs a useful function; it may not eliminate the area of disagreement between states, but at least it reduces that area, and thus makes it easier for disputes to be settled without frictions.

Sanctions of observance of International Law: A controversial question is the extent to which sanctions, including sanctions by way of external force, are available under international law, to secure observance of its rules. At one extreme there is the view that international law is a system without sanctions. However, it is not quite true that there are no forcible means of compelling a state to comply with international law. The United Nations Security Council may, pursuant to Chapter VII of the United Nations Charter of 26 June 1945, in the event of a threat to the peace, breach of the peace, or act of aggression, institute enforcement action against a particular state to maintain or restore international peace and security, and to the extent that the state concerned is in breach of international law. For example, economic sanctions proclaimed in 1966 against Rhodesia or military in the Korean War 1950 or both in 1990 against Iraq. Also, under article 94, paragraph 2 of the Charter, if any state, party to a case before the International Court of Justice, fails to perform the obligations incumbent upon it under a judgment rendered by the Court, the Security Council may upon application by the other state, party to the same case, make recommendations or decide upon measures to be taken to give effect to the judgment.

Public opinion can also be an effective sanction. The role of reciprocity in international law observance should not be minimized. The international legal system is intrinsically different from municipal law. The principal participants of the international legal system states are all treated as equally sovereign. The international community is composed not of a homogeneous grouping of states, but rather a heterogeneous group of some nearly 200 states, which differ politically, economically, culturally and ideologically. States need to co-exist. International law was conceived and born out of such a need, and thus is designed to promote international peace and harmonization. The international legal system is a young, immature system, which is constantly evolving and developing. It is not simply lawyer's law. Politics play an influential role. (See Rebecca, p.4) International law is primarily formulated by international agreements, which create rules binding upon the signatories, and customary rules, which are basically state practices recognized by the community at large as laying down patterns of conduct that have to be complied with.

Contrary to popular belief states do observe international law, and violations are comparatively rare. However, such violations are well publicized and strike at the heart of the system, the creation and preservation of international peace and justice. But just as incidents of murder robbery and rape do occur within national legal orders without bringing down the whole edifice or stimulating citizens to deny that law exists, so analogously assaults upon international legal rules point up the weaknesses of the system without denigrating their validity or their necessity. In support of the above argument *Professor Louis Henkin*, observed, "Almost all nations observe almost all principles of international law and almost all of their obligations almost all of the time"

Scope of International Law: The scope of international law has expanded due to the inclusion of new subjects; establishment of International Organizations; the emergence of new states; and the emergence of new problems like nuclear weapons, expansion of international trade and trade related problems, development of transport and communications, etc., International law has expanded both in terms of its subjects and its content. Major problems of international law concern have been tackled collectively by states. This has proved, for example, more resource effective than attempting individual state action. The consequence has been a proliferation in the number of international organizations in the years since 1945. Modern technology has brought states and their populations into close and more frequent contact with each other, and rules have evolved to regulate such contact.

The subject matter of international law has correspondingly expanded. For example boundaries of nations on land or at sea, international servitudes, succession of states and governments, ports and inland waters, international rivers and lakes, territorial waters, contiguous zones, continental shelf, exclusive economic zones, international canals and straits, rights and duties of states on the high seas, fisheries, whaling and sealing, air navigation, polar regions, outer space, nationality and statelessness, rights of aliens, asylum, extradition, international communications, protection of minorities, human rights, governmental and state immunities, status and immunities of international organizations and their personnel, status of armed forces on foreign territory, limits of criminal jurisdiction, limits of anti-trust jurisdiction, enforcement of foreign judgments and commercial arbitral awards, validity of international treaties and agreements, interpretation and application and termination of treaties and agreements, validity and interpretation of international arbitral awards, pacific blockade, reprisals, indirect aggression and subversion, rights of neutrals, relations between belligerents and neutrals, violations of the laws of war, terrorism and

hijacking and overlying all of these , the limits of countermeasures and retaliatory measures designed to protect existing primary rules of international law and so on...

International law is a dynamic law. It has been changing since its inception. However, in the four decades changes have been so radical and tremendous that was not witnessed in the last four centuries. The process of change has resulted in reconstruction and development of international law and at the same time has created many faceted problems because of the demand of further changes. The most significant change that has taken place is the emergence of a number of new states, which hitherto were colonies, into independent states. However, international law still favors their power rather than the number.

International Law has been expanding its frontiers not only in terms of its subject matter but also in terms of its content and orientation. In addition to such new areas as international constitutional law, law of international institutions, international economic law, international communications and air law, law of outer space, human rights law and international humanitarian law, there have also emerged new sources of the law and of the ways by which new laws are made by means of declarations, resolutions and the use of consensus at the UN Security Council and the General Assembly. Either because or in spite of this expansion of its frontiers, traditional notions and attitudes are beginning to show a certain resilience and adaptability: the rigid assertion that only sovereign states are the subjects of international law is giving place to the idea that other entities, notably certain international organizations like the United Nations itself, as well as individuals are now also subjects of international law for most practical purposes.

One such entity has successfully litigated a case before the International Court of Justice in Certain Expenses case (1949) stated that the U.N was a subject of international law and could enforce its rights by bringing international claims. While in the *Fasla Case*, certain rights of the individual were recognized, albeit by way of appeal from the UN Administrative Tribunal. Indeed, the European Commission and the European Court of Human Rights have both been entertaining cases brought before them by individual citizens of the States of the Council of Europe. There also exists established machinery, although limited, for the implementation of the fundamental rights of the individual through state action. All these are recent developments in contemporary international law, which could not have taken place before 1945. The Euro centric character of international law has been greatly weakened in the last six decades and opinions; hopes and needs of other cultures and civilizations are beginning to play an increasing role in the evolution of world juridical system. Third World's concern for the recognition of sovereignty of states is complemented by their support of the U.N and its charter and supplement of their desire for economic self-determination or Right of permanent sovereignty over natural resources.

This expansion of international law into the field of economics is a major development of the 20th century and is evident by the creation of GATT, UNCATD and establishment of IMF and World Bank. The scope of international law today is immense. From the regulation of space explorations to the question of the division of ocean floor, and from the protection of human rights to the management of the international financial system, its involvement has spread out from the primacy concern with the preservation of peace to embrace all the interests of contemporary international life. The scope of international law today is immense from the regulation of space expeditions to the question of division of the ocean floor, and from the protection of human rights to the management of the international financial system, its involvement has spread out from the primary concern with the preservation of peace to all the interests of contemporary international life. The determining factor of international law

lies in its composition consisting of needs and characteristics of the international political system.

International organizations have now been accepted as possessing rights and duties of their own and are distinctive legal personalities. The international court of justice in 1949 delivered an advisory opinion that United Nations was a subject of international law and could enforce its rights by bringing international claims. Such a ruling can be applied to other international institutions like the ILO and the FAO which have a judicial character of their own. They have been joined by other non state entities whose importance is likely to grow in the near future. The growth of regional organizations should also be noted at the same time in this stage. Many of those were created for reasons of military security, for example, NATO and the opposing Warsaw Pact Organizations, others as an expression of regional and cultural identity, such as the OAU and OAS.

Development of International Law: There are two views on the development of international law. One view says that International Law is essentially a product of Christian civilization – middle Ages – Oppenheim. Another view opinioned that International Law is a product of ancient times: Ramayana & Mahabharata – S.S.Dhawan Development of International Law in ancient period (from ancient times to 10th century) Jews practiced international law in their relations with other nations. Inviolability of diplomatic agents was recognized and maintained. They recognised humanitarian rules of warfare. They entered treaties with other countries and sanctity was attached to treaties. Hindus: In ancient India international law was practiced. It operated in the Vedic age from 4000 B.C. to 100 B.C. between tribal heads known as Rajahs. The basis of international law in ancient India was religious teachings like Manu's Dharam Shastras and Kautiliya's Arthashastra. International law then had more sanctity because it was based on the concept of Dharma, which was sacrosanct for all Indian states. Then India was divided into many kingdoms having the same religion. They conducted their foreign relations through rajdoots who are known today as ambassadors.

Manusmriti prescribes qualifications of a good envoy and his functions. It also provided that an ambassador must be well versed in all branches of knowledge. He should be of noble lineage, of pure character, efficient and able to read minds through gestures and postures. Kautiliya expected the envoy to be endowed with power of persuasion, well trained in arts and with foresight, memory and enthusiasm and industry in addition to being in the enjoyment of good physique. According to Manu, inheritance, recovery from usurper and conquest as a result of enforcing of some right or settlement of dispute or could acquire territory by occupation of territory which was unoccupied. Cession of territory by dana (gift) to avoid war or as a token of matrimonial settlement was also prevalent. Foreigners were allowed entry by royal warrant—which we term as visa today—and they had to report at points of entry. There was practice of grant of asylum to political refugees who sought protection. The practice of *Pacta Sunt Servanda* was not to Hindu international law. Kautiliya required faith and honesty in carrying out international obligations. War was resorted to as the last step when everything else failed. Wars were divided into two categories: just war which was termed as *Dharma Yudha*, and unjust war – *Adharma Yudha*.

Ancient Greeks also practiced international law. It was during Greek period that the rule of international law requiring prior declaration of war was developed. The dead were given a decent burial even during the fury of war and prisoners of war could be exchanged. International law was followed on the basis of religion. City state relations were common at that time. Greeks were considered as superior race and non-Greeks were treated as

barbarians. It is said that Aristotle studied 158 city state constitutions at that time. Romans have contributed a fair amount to the rules of the international law as they exist today. *Jus Gentium*—International law—was the Roman device to deal with foreigners. This law consisted of commonly accepted rules among states based on law of nature. The rule of acquiring territory through means of occupation has been borrowed from Roman law. Romans have drafted elaborate rules of warfare and the doctrine of postliminium as we know today is based on *Jus Postliminii*.

Development of I.L. in middle Ages (from 11th century to 16th century) The supremacy of church and the universality of its laws; Feudalism; Sea Trade and the growth of Maritime Law; Renaissance and Reformation etc. have helped the growth of international law at that time.

Development of Modern I.L. (from 17th century to 20th centuries) the age of Discovery in the sixteenth and seventeenth centuries necessitated the evolution of rules governing the acquisition of territory. At the same time, the principle of freedom of the seas was articulated. International law grew out of necessity in response to the need of states to co-exist. During this period international law was developed by various jurists, international treaties and conferences and judicial and arbitral tribunals also helped.

1648 Westphalia peace treaty; Members of Holy Roman Empire attained sovereignty; International peace treaties started; French was common language; Alabama claims Award 1872; Maritime law convention of 1856 – Sea welfare rules were framed; the Hague conference of 1899 and 1907 – established the permanent court of arbitration; Development of International Law in 20th century was Before the World War I; Between World War I & II; After World War II and the establishment of the United Nations. Otherwise development of International law before the league of Nations, under the league of Nations and under the United Nations and its specialized agencies.

Basis of International Law or Theories of International Law: Natural Law Theory: According to this school, the Law of Nations is only part of the law of Nature. Previously, it is related to religion, Divine Law. From Greeks, Romans to 18th century this school dominated. States relations are regulated by higher law “the law of Nature”. Pufendorf and Vattel are the chief exponents of this school. Traces of the natural law theories survive today, albeit in a much less dogmatic form. Kelsen has said: The theory of natural law, which was dominant throughout the 17th and 18th centuries, after relapsing during the 19th has again in the 20th re-entered the foreground of social and legal philosophy, in company with religious and metaphysical speculation.

Positivist theory: Positivism begins from certain premises, that the state is a metaphysical reality with a value and significance of its own, and that endowed with such reality the state may also be regarded as having a will. This psychological notion of a state-will is derived from the great German philosopher, Hegel. To the state-will, the positivists attribute complete sovereignty and authority. The positivists base their views on the actual practices of states. Growth of International law to treaties and customs rather than human nature: Law is will of states. Chief Exponents of this school are Bynkershoek and Anzilotti.

Grotius's Theory: This theory propounded by Grotius – He is the father of International law. His principal work, *De Jure Belli ac Pacis*, was continually relied upon as a work of reference and authority in the decisions of courts, and in the textbooks of later writers of standing. His contribution to development of International law.

- a. According to Wheaton that “Grotius seems to have been the first to lay down rules of Justice would be binding on men living in a social state.
- b. Grotius tried to establish that law governed the totality of relations between states.
- c. He secularized the concept of law of Nature
- d. Grotius further recognized that the individuals and the state composed of the individual were essential identical.
- e. Grotius maintained a fine distinction between Just and Unjust Wars.
- f. Grotius developed the qualified Neutrality.
- g. Grotius emphasized the binding force of promises and agreements in international sphere.
- h. He supported peaceful settlements between states.
- i. Grotius recognized Fundamental Rights Freedom of the individuals.
- j. Grotius rejection of the reason of state.

Theory of consent: Supporters of this theory says consents of states in the basis for International Law. States observe International Law because they have given their consent for it. Chief exponent of this school – Anzilotti, Tripele, Oppenheim. This theory supported to the positivism. *Auto Limitation Theory:* According to this theory, international law is binding upon states because they have restricted their power through the process of auto – limitations. Each state has a will, which is completely independent and free from external influence. But process of limitation they can restrict their powers and follow the international law. Jellinck is the chief exponent of this theory. *Pacta Sunt Servanda:* According to Anzilotti the binding force of international law is based on the supreme fundamental norm or principle. Is known as Pacta Sunt Servanda. This means that the agreements entered into by states will be respect and followed by them in good faith. *Theory of fundamental rights:* this theory is based on Naturalist. According to this, prior to the existence of state, man lived in natural state; in that state he possessed some fundamental rights such as independence, equality, right of self-preservation. Like man state has possessed their rights because there was no world institution above the state.

Perspectives on International Law or Contribution of First, Second and Third World Countries to IL

Contribution of the first world countries: The foundation of International Law as it is understood today lie firmly in the development of western countries & political organizations. Ancient Greece & Rome were divided into small city-states & the mutual relation or these states are governed by some definite rules & principles. They deserved the credit of developing the laws of- War & peace; Resolving the dispute through Arbitration; Prior declaration before the commencement of the war. The modern International Law is ordinarily regarded as dating from sixteenth & seventeenth centuries, the medieval period, for its special character has been determined by that of the modern European National States system. Meanwhile, there were certain counter-factors leading to inmate & constant relations of the states with another as states could never be accepted as the final & perfect form or human association, so it would be necessary to recognize the existence of a wider unity - the rise of International Law was the recognition of this truth. The seventeenth & eighteenth (modern period) centuries are given birth to three different schools if International Law, namely –

The naturalists; The Positivists; & the Grotians: There were factors led to the development of International Law in the nineteenth & twentieth centuries. The twentieth century witnessed two World Wars & the aftermath was the transformation of European International Law into

Law of Nations or Universal International Law. As a result of this, the states & their mutual contracts had greatly increased during this periods, for e.g.-

- a) Hague Conferences of 1899 & 1907: It was the establishment of Permanent Court of Arbitration. It also emphasized the settlement of International disputes through peaceful means, formation of many rules of International Law relating to land & naval welfare.
- b) Treaty of Versailles 1919: The League of Nations was established under this.
- c) Geneva Convention 1929: It laid down rules relating reprisal of prisoners of wars.
- d) United Nations: The U.Ns was established in 1945 to ensure the maintenance of international peace & security.

Contribution of the second world countries: Classical Marxist theory described Law & politics as the means by which the ruling class maintained their domination of society. International Law as a method of exploitation would also be criticized by socialist states. Soviets theorists expressed the view that International Law was an inter-class law within two antagonistic class systems (Capitalism & Socialism) would also seek accommodation until the victory of socialist system. International Law was not a form of temporary compromise between capitalist states & U.S.S.R but rather a means of conducting the class war. The new approach in late 1930s was reflected in Russia's successful attempt to join League of Nations. But U.S.S.R was bound only by those rules of which accorded with its purposes. The years that followed the Second World War saw a tightening up the Soviet doctrine as the Cold War gathered pace and the law of transition and state was replaced by International Law of peaceful co-existence. Peaceful co-existence itself rested upon the certain basic concepts, e.g.- Non-intervention in the internal affairs of the others states; The sovereignty of states; Good neighborhood; International co-operation; The observance in good faith of international obligation. The concept was an attempt to reiterate the basic concepts of International Law in a way that was taken to reflect an ideological trend. But it must be emphasized that the principles themselves have long accepted by the international community.

With the decline of the Cold War & the dissolution of the Soviet Union a process of re-evolution in the field of international legal theory took place. Global inter-dependence & the necessity for international co-operation were emphasized. The essence of new Soviet thinking was started to lie in the priority of universal human values & the solution of global problems, which is directly linked to the growing importance of International Law in the world community.

Contribution of the third world countries: The old civilization like in Egypt & India had significant contribution in the history of International Law. The duties of the states in administrative & external matters; The privileges & immunities enjoyed by the diplomatic agents during war – are their contribution in the field of International Law. In the evolution of international affairs since Second World War one of the most decisive had been the disintegration of colonial empires & the birth of new states, in the so-called Third World. The new nations have eagerly embraced the ideas of sovereignty & equality of the states & the principles of non-aggression & non-intervention.

The Soviet emphasized on the territorial integrity & sovereignty proved a great attraction to the developing nations of the Third World anxious to established their own national identities & counteract western financial & cultural influences. The new internationalization of International Law that has destroyed the European based homogeneity & emphasized in universalistic scope, e.g., the Declaration on the Granting of Inter-dependence to colonial countries & Peoples of 1960 enshrined the rights of colonies to obtain their sovereignty with least possible delay for recognition of the principles of self-determination. Their concern for

the recognition of the sovereignty of the states complemented by the support of the U.N & its character & supplemented by their desire for economic self-determination. The interests the new states of Third World are often in conflict with these of industrialized nations, but contrary to many fears expressed in the early years of Decolonization saga, International Law has not been discarded & altered beyond recognition. The end of Cold War & rapid development of Russian-American co-operation lead to the development of Globalization in the sense of inter-dependence of High order of individuals, groups & corporation. Both public & private, across national boundaries & might be seen the triumph of one special particularism which had sometimes been used as a justification for Human Rights abuses free from international supervision or criticism

Differences between Public & Private International Law: Public International Law deals with states; private International Law deals with individuals. Private International Law is a part of Municipal Law. But Public International Law is not. Public International Law has Uniformity of rules: But private International Law is different. Private International Law determines as to which law will apply in a case having foreign element. No such provision in public International Law. Private International Law also determines the court which will have jurisdiction to decide the issue. It is not in Public International law. Breach of public International Law is possible. But not in Private International Law

Basic Principles of Modern International Law: In Municipal Legal systems we have well-established rules, organizations to regulate and control human behaviors, whereas in international law not so well developed rules, institutions to regulate or control the behavior of states. In the absence of the above system the international community had experienced two world wars and their effects. The United Nations was established in 1945 to prevent third world war and maintain peace and security in the world. In spite of the Charter Principles, international community suffered from two shortcomings, firstly, the principles won't apply states who are outside the UN system and secondly, emergence of new states. So to get reaffirmation from the international community the socialist and developing countries initiated process of revision of the UN Charter—the process was started in 1950s but it reached its climax in 1962, special committee was set up. Its work lasted several years and in 1970 a Declaration on Friendly Relations was adopted unanimously. Sovereign Equality of States; Good faith Principle; Peaceful Settlement of Disputes; Prohibition of force; International Cooperation; Non-intervention; Equal Rights and Self-determination.

New trends regarding basis of obligation in International Law: Since the beginning of modern international law, consent has been the basis of obligation under international law. Consent played a predominant role that it was even extended to explain the basis of customary rules of international law. The positivists tried to establish that international customs were based on "tacit-agreements" between states. The unanimity rule was the prevailing rule for every conference and treaty was bound by it. The United Nations charter introduced majority rules in all of its organs and which is having a binding force (like General assembly, Security Council etc.). A unique feature of new international law is that it is found not only in law making conferences but also in law creating conferences such as UNCTAD, GATT, IBRD, IMF, OECD, OPEC etc.

One of the most important change is that has taken place is that many a decisions at international conferences and General assembly of the UN are being adopted by 'consensus'. Though the unanimity rule has not been completely defeated, the basis of obligation in international law is changing from sovereignty oriented consent to community oriented consensus. The international court of justice has also lent its support to the above mentioned

change i.e. from sovereignty oriented consent to community oriented consensus. This undoubtedly is a clear triumph of community oriented consensus over sovereignty oriented consent. But the battle has not been finally won and the struggle is likely to a prolonged one. As a matter of fact, consent will continue to be a basis of obligation and there should be no objection to it, but in view of even widening scope of international law it has become necessary to recognize the importance and utility of 'consensus' as a basis of obligation in international law. It is therefore, necessary to enunciate a dynamic and comprehensive theory of basis of obligation so that it may take into account the interest and inspirations of international community as a whole.

Sources of International Law: The words 'Sources of Law' (i.e. '*source de droit*') has a variety of interpretations. In technological sense, the term 'sources' relates to the law making process. The most important source of International law for centuries was Customary Law, evolving from the practice of states. The recent attempt to codify international law and the conclusion of multinational treaties in many important areas, such as diplomatic and consular relations, the law of war or the law of the sea, have sought to clarify the law and to establish universally accepted norms. It has to be noted that, the changes in international society since 1945 have led to basic disputes on the sources of International law and it must be noted at the outset that they have become an area of considerable theoretical controversy. In particular, the two main traditional elements, customs and treaties, are now often difficult to distinguish clearly.

The question of how these sources are derived brings us to **Article 38 of the Statute of the International Court of Justice**. It provides that:

(1) The Court whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:

- (a) **International Conventions**, whether general or particular, establishing rules expressly recognized by the contesting states;
- (b) **International Custom**, as evidence of a general practice accepted as law;
- (c) **The General Principles of Law** recognized by Civilized Nations;
- (d) Subject to the provisions of Article 59, **judicial decisions** and **the teachings of the most highly qualified publicists** of the various nations, as a subsidiary means for determination of rules of law.

(2) This provision shall not prejudice the power of the Court to decide a case *ex aequo et bono*, if the parties agree.

Types of Sources: Now we come to the various types of sources. Sources are divided into: **Formal Sources** ('law creating') and **Material Sources** ('law identifying') also known as **Primary Sources** and **Secondary Sources**. A Formal or Primary Source of law, is a process by which a legal rule comes into existence i.e. it is law creating. Hence in International Law, Conventions, Customs and the General Principles of Law are considered formal sources (as they are law creating processes). Material Sources are those sources of law concerned with the substance and content of legal obligations i.e., they are law identifying. In this sense, state practice, judicial decisions, the writings of jurists and now even General Assembly resolutions are all considered as material sources. A few mentioned here, though are not in Article 38 are considered as material or secondary sources.

1. International Conventions (Treaties)¹: International Conventions or Treaties are considered the most important source of law, primarily because, it reflects the understanding of states, i.e. they are the only way states can consciously create law. Treaties are known by a variety of differing names such as Conventions, International Agreements, Pacts, General Acts, Charters, through to Statutes, Declarations and Covenants. According to Article 2 of Vienna Convention on Law of Treaties, 1969, “ A treaty is an agreement whereby two or more states establish or seek to establish relationship between them governed by international law.”

Prof. Schwarzenberger defines it as follows: “Treaties are agreements between subjects of international law creating a binding obligation in international law.” Prof. Oppenheim states that, “International treaties are agreements of a contractual character entered into between states or organization of states creating legal right and obligation.” All the above definitions show how the rights and duties of parties to a treaty are in the first instance, determined by an agreement between them. McNair gives the most appropriate definition². He says, “Treaty means a written agreement by which two or more states or international organizations create or intending to create relationship between them, operating within the sphere of international law.”

We can divide International Treaties into 2 types: (A) Law- making Treaties (B) Treaty Contracts.

(A) Law-making Treaties: Law making treaties are those treaties, entered into by a large number of States; they are the multilateral treaties that lay down rules of universal or general application. Hence, the provisions of a ‘law-making’ treaty are a direct source of international law. Law-making treaties can be divided into two: (a) Treaties enunciating rules of universal international law- The best example for such a treaty is the United Nations Charter, to which 192 States are members. (b) International treaties that lay down general principles- These are multilateral treaties entered into by a large number of countries. E.g.: Vienna Convention on the Law of Treaties, 1969, Vienna Convention on Diplomatic Relations, 1961. In order to understand treaty as a source of law, we need to look into the Principles Governing a Treaty: (i) Treaties are voluntary i.e., a treaty can bind no state, without the state having given its consent to be bound by one of the methods recognized as effective in international law for this purpose (i.e. signature, ratification, accession etc.). There is an exception to this general rule, as there are certain treaties, which contain rules available against the whole world known as *erga omnes*. This concept is being dealt with towards the end. (ii) Treaties require consent, once a state has signified its consent to a treaty, and then it is bound by the terms of the treaty. Here, I would like to explain the two types of consent: Express Consent – those states that are parties, are bound by the treaty, as the treaty has been formed as a result of their express agreement,

Tacit Consent – sometimes, if state practice develops along the lines of the treaty code, the result could be that new rules of custom, similar to those found in the treaty, come into being. When such a thing happens, the new customary law will bind non-parties- here the non-parties give their tacit consent to the treaty. E.g. the 1982, United Nations Convention on Law Of the Sea, crystallized the concept of Exclusive Economic Zone (EEZ). According to the ICJ in the *North Sea Continental Shelf Cases*³, for a treaty provision to give rise to a

¹ Article 38(1) (a)

² McNair on Law of Treaties

³ 1969

general customary law principle, it 'should be of a fundamentally norm-creating character such as could be regarded as forming the basis of a general rule of law'.

(B) Treaty Contracts: 'these are 'particular' treaties entered into between two or more sovereign states'. They are like contracts in national law, and hence are not directly a 'source' of international law, as they are not binding on states that are not parties to it. But treaty contracts may help in the development of a new customary rule as it indicates state practice. E.g. are Bilateral Treaties between states.

2. International Customs⁴: The essence of custom according to Article 38 is that, it should constitute 'evidence of a general practice accepted as law'. Before looking into what constitutes a custom, we need to have a general understanding of what a custom is. International Custom is the oldest and the original source of international law. Though it is said that, the role of international custom as a source of international law has diminished, it is undeniable that it still has, a significant role to play, as a dynamic source, in the development of new rules of international law.

Now, the terms 'custom' and 'usage' are often used interchangeably; but there is a clear distinction between the two. 'Usage' represents the initial stage of custom. It is an international habit of action that has not yet received, full legal attestation⁵. Hence, when the states in their international relations start behaving in a particular way, in certain circumstances, that behaviour is called usage. When this usage receives the general acceptance or recognition of the states, in their relations, the usage becomes a custom. A Custom is a usage that has obtained the full force of law. When a usage crystallizes (i.e. becomes clear and definite) it becomes a custom. Hence, custom begins where usage becomes general⁶. But an international customary rule emerges only when there is satisfactory evidence that the rule has been accepted generally by states. Hence, it is possible to detect 2 basic elements in the making of a Custom: (A) The Material Fact, i.e. the actual behaviour of States or State Practice and (B) The Psychological or Subjective belief that such behaviour is law, i.e., *opinio juris*. This has been pointed out in *Libya/Malta* case⁷, where it was held that the substance of customary law must be 'looked for primarily in the actual practice and *opinio juris* of states'.

(1) The Material Fact/ State Practice- Customary rules crystallize from usages or practices of States that evolve usually from three sets of circumstances: a) Diplomatic Relations Between States- Evidence of usages followed by states is found in acts or declarations by representatives of states, opinions of legal advisors to State Governments, bilateral treaties and press releases or official statements by governments. b) Practice Of International Organs- The practice of international organs, by conduct or declarations, may lead to the development of customary rules of international law concerning their status, or their powers and responsibilities. c) State Laws, Decisions Of State Courts, And State's Parliamentary Or Administrative Practices- This can be found by looking into statutes i.e. State's municipal laws, official books and documents or the internal regulations of a state's diplomatic and consular services.

There are certain points that ought to be considered in order to ascertain State Practice: (1) Duration of Practice – In municipal systems, there is a recognized time-scale for acceptance

⁴ Article 38(1) (b)

⁵ I.A. Shearer, Starke's INTERNATIONAL LAW, 11th ed. (2007), p. 31

⁶ *Supra* at n.6

⁷ ICJ (1985)

of a practice as customary law. For e.g. in British legal system it is time- immemorial, while in some continental countries it is thirty to forty years. But in international law, there is no such rigid time element. The ICJ also does not give any clear guideline as to what will the time required be for the formation of customary law. This is because it depends from case to case, as to how a custom evolves. In certain cases the progress is slow, but in certain fields, the need for rules to develop quickly becomes necessary. In such cases, 'instant' customary law is possible. This is often known as 'Custom on Demand'. For e.g. the principle of state sovereignty in Air Law and the principle of non-sovereignty in Space Law are examples of Instant Custom. Hence, the duration is not very important in constituting state practice.

(2) Uniformity and Consistency of Practice- This is one of the most important factors in determining State Practice. The basic rule regarding this was laid down in the *Asylum Case*⁸ where the Court held that a customary rule must be '*in accordance with a constant and uniform usage practiced by the States in question.*' The facts of the case are as follows:

Haya de la Torre, a Peruvian was sought after by his government after an unsuccessful revolt. He was granted asylum by Columbia's embassy in Lima, but Peru refused to grant safe passage for Haya de la Torre to leave the country. Columbia brought the matter before ICJ and stated that it wanted the right to try Torre in its country. The Columbian government stated that the practice of granting asylum existed in the Latin-American countries and that it was a regional custom. But the ICJ held that, what needs to be proved is an existing 'constant and uniform usage' or practice, by the states in question. Hence, Columbia's plea was rejected due to lack of 'uniformity and consistency'. Thus we can see that ICJ emphasizes on a certain degree of uniformity amongst state practices as essential before a custom could come into existence.⁹

(3) Generality of Practice – Though universality of practice is not required, ICJ requires that the practice should have been generally observed or repeated by numerous states, i.e. there should be a certain degree of continuity and also the practice must be common to a significant number of states. As an exception to generality of practice is the *Lotus Case*¹⁰ the facts says there was a collision on the high seas between The Lotus, French ship and The Boz – Kourt, Turkish ship. 8 crew- members of the Turkish ship died. Turkey alleged negligence and arrested the captain of the French ship, De Mones, when he arrived on the Turkish territory. The French government challenged the Turkish government stating that the jurisdiction to try the accused lies with the French government and hence, they should not be barred from trying him. The French State argued that there existed a custom of abstaining criminal proceedings by which states in similar situations and hence that practice ought to be given regard. The PCIJ rejected this argument and held that, abstention will form international customary rule 'only if such abstention were based on the states being conscious of a duty to abstain. Hence, this case shows how protests and acquiescence, as such will not form customary law. But, if there is a conscious abstention by states in general, then a particular rule may become customary law.

(B) The Psychological Element/ *Opinio Juris*- '*opinio juris sive necessitates*' is the factor that differentiates legal custom from mere social usage. It is the belief by a state, which behaved in a certain way that it was under a legal obligation to act that way. *The North Sea*

⁸ *Columbia v. Peru*, (1950) ICJ

⁹ *Anglo- Norwegian Fisheries Case* (1951) ICJ

¹⁰ *France v. Turkey*, (1927) PCIJ

*Continental Shelf Cases*¹¹ can explain the concept of *opinio juris*. The case is concerning the dispute between delimitation of continental shelf between Germany, Denmark and Netherlands. In this case, the ICJ laid down the two conditions for the existence of *opinio juris*. Not only should: 1) The act amount to a settled practice 2) The act must also be carried out in such a way, as to give evidence of a belief that a practice is obligatory by the existence of a rule of law. Hence, state practice along with *opinio juris* leads to the emergence of a customary rule of international law.

3. General Principles of Law¹²: According to clause 1 (c) of Article 38, the Court recognizes general principles of law, recognized by civilized nations, as a third source of international law. There are many opinions as to what constitutes 'general principles of law'. Generally, when the court finds that a principle has received general recognition, the court may apply it as a principle of international law. Some jurists believe that Article 38 (1) (c) incorporates natural law doctrines, and that they have a pre-existing legal validity, irrespective of whether they are contained in a treaty or custom. Then there are those principles and rules, common to all municipal legal systems. Given are important case- laws that have recognized the following rules as general principles:

(i) *Chorzow Factory Case*¹³ where the PCIJ applied the principle of *res judicata* and also held that one who violates a rule is liable to make reparation. (ii) *Mavrommatis Palestine Concessions Case*¹⁴ in this case the court applied the general principle of Subrogation. (iii) *Case Concerning the Temple of Preach Vihar*¹⁵ ICJ in this case recognized and applied the principle of estoppel. (iv) *Barcelona Traction Case*¹⁶ here also the principle of estoppel was applied by the ICJ

Other than these general principles that have gained their importance through application in the municipal sphere, there are other principles, which have gained international significance also. They are: Principle of *pacta sunt servanda*: The whole idea of binding international agreements rests upon this. This doctrine is also the basis of law of treaties¹⁷. Also mentioned in Article 2(2) of UN Charter are obligations resulting from international law, including treaties. Principle of Equity: 'Principles of equity have long been considered to constitute a part of international law and as such have often been applied by international tribunals.'¹⁸ Here, what needs to be understood is that usage of equitable principles in deciding cases is different from deciding a case under Article 38(2), i.e. deciding *ex aequo et bono* (according to fairness and good faith). Hence, while applying the Principle of Equity in the *Case of Rann of Kutch Arbitration*¹⁹, the Court emphasized that equity is not an abstract concept, but denotes the application of substantive rules of international law. Hence, it can be said that general principles help in validating certain important rules through them being applied in the process of deciding cases by various international courts and tribunals.

4. Judicial Decisions: Though described as a 'subsidiary' means²⁰ for the determination of law, judicial decisions can be of immense importance. This is because, in spite of Article 59,

¹¹ *Germany v. Denmark*, (1969) ICJ

¹² Article 38(1) (c)

¹³ (1928) PCIJ

¹⁴ (1925) PCIJ

¹⁵ (1962) ICJ

¹⁶ *Belgium v. Spain*, (1970) ICJ

¹⁷ Vienna Convention on Law of Treaties, 1969.

¹⁸ *The River Meuse Case, Netherlands v. Belgium*, (1937) PCIJ

¹⁹ *India v. Pakistan*, (1968) ICJ

²⁰ Article 38(1) (d)

which states that ‘ the decision of the Court has no binding force, except between the parties and in respect of that particular case’, the ICJ is more involved with the process of law creation. The best example is the *Anglo- Norwegian Fisheries* case, where the baselines from which to measure territorial waters were laid down. This was later incorporated in the Geneva Convention on Territorial Sea and Contiguous Zone, 1958. Hence, what is to be noted is that, while deciding cases these international courts may actually form a new treaty rule or provide evidence for the existence of a customary rule. In addition to the decisions and opinions given by the Permanent Court of International Justice and the International Court of Justice, ‘judicial decisions’ include International Arbitral awards and the rulings of national courts also. International Arbitral Tribunals, like the Permanent Court of Arbitration and Claims Tribunals like The Iran-US Claims Tribunal, are all significant in the development of international law.

5. Writers: Article 38 includes as a subsidiary means for the determination of rules of law, ‘the teachings of the most highly qualified publicists of the various nations’.²¹ Historically, the influence of academic writers on the development of international law was immense. Classic writers like Hugo Grotius and Gentili have contributed to help in determining the scope, form and content of international law. Similarly, writers like McNair on Law of Treaties and Jenks on Space Law, have all helped in the process of evolution of rules of law. But it is to be noted that ‘juristic works cannot be treated as an independent source of law’. They can only assist in the development of law in emerging areas. For example, jurists played a very significant role in the development of Air Law and also Law relating to Outer Space since its evolution. Other than the sources explicitly mentioned in Article 38 of the Statute of ICJ, there are a few other sources the existence and importance of which cannot be denied in the development of international law.

Decisions or Determinations of the Organs of International Institutions: In this come the resolutions and declarations of the General Assembly of the United Nations. The General Assembly has produced a large number of highly important resolutions and declarations, and hence, it is inevitable that they should have some impact on the development of modern international law. The biggest drawback is that General Assembly Resolutions are not binding, even if they are adopted unanimously, by voting of all states. But the importance of General Assembly Resolutions lies in the fact that, these resolutions may give evidence of state practice, which in turn may lead to the creation of a new customary rule in international law. An example for such a declaration is the Declaration on the Legal Principles Governing Activities of States in the Exploration and Use of Outer space (1963), where unanimous votes led to evidence of state practice and that in turn led to the formation a binding rule of customary law²². Similarly, the Declaration on Principles of International Law Concerning Friendly Relations and Co-operation among States also led to emergence of requisite opinio juris. Hence, General Assembly Resolutions, though not binding, may have normative value, and provide evidence important for establishing opinio juris. It is because of its non- binding nature that they are termed as ‘Soft Law’.

Soft Law is per se, not law. But it has a great influence in the development of treaties or laws in certain areas. The Helsinki Final Act, 1975 is an example of this. Though it is not a binding agreement, it is from this that the concept of International Human Rights Law has evolved. Similarly, in the area of International Economic Law and International Environmental Law, there are many such guidelines and recommendations which are though

²¹ *Ibid.*

²² This later crystallized into The Outer Space Treaty, 1967

non-binding instruments play an important role in the development of legally binding rules. Also bodies like the International Law Commission (ILC), The United Nations Commission on International Trade Law (UNCITRAL), The United Nations Conference on Trade and Development (UNCTAD), The International Labour Organisation (ILO), United Nations Educational, Scientific and Cultural Organisation (UNESCO) etc. are all specialized bodies playing a significant role in the development of international law by working from within their respective spheres.

Hence, though the rules made by these bodies are termed 'Soft Law', it is undeniable that there these organizations are instrumental and influential in creating legal norms.

Newly Emerging Concepts: Lastly, there are two more emerging concepts that give way to creating sources, which are slowly gaining significance. They are:

Jus Cogens and *Erga Omnes* Obligations: The concepts of *jus cogens* and *erga omnes* obligations, which are now at the heart of the concern for "serious breaches of obligations arising from a peremptory norm under general international law", are important new elements in the structure of international law. They are an attempt to signify that international law is, going beyond the bilateral and State centric interaction, becoming more and more responsive to the needs of more globalize international relations and the demands of increasingly integrated international community interests.²³

The concept of *Jus Cogens* was introduced in Article 53 of the Vienna Convention of Law of Treaties, 1969 which states that *jus cogens* is a peremptory norm of general international law, i.e. it is a norm accepted and recognized by the international community of States as a whole²⁴. Hence, a treaty is void, if at the time of its conclusion, it conflicts with a norm of such a nature. *Jus Cogens* is a norm from which no derogation is possible. Also, it can be modified only by a subsequent norm of general international law having the same nature. Examples of *jus cogens* norms are fundamental rules of humanitarian nature (like prohibition of genocide, slavery and racial discrimination), rules of sovereignty of States, the concept of Common Heritage of Mankind (in High Seas, Outer Space).

Next, is the concept of *Erga Omnes*. The ICJ laid down the concept of *erga omnes* obligation, in the *Barcelona Traction* case²⁵. It explained that, *erga omnes* is an obligation a State owes to the international community as a whole. This obligation, gives locus standi for any State to invoke the responsibility of a State, even if it is not directly injured by the wrongful conduct. Examples are obligations to outlaw genocide, protection from slavery etc. are issues that can be raised by any State, on behalf of the international community. Violation of these obligations is considered as a 'serious breach' of peremptory norms in international law²⁶.

²³ Pemmarajulu Sreenivasa Rao, "The Indian Position on Some General Principles of International Law", Bimal N. Patel (ed.), INDIA AND INTERNATIONAL LAW, 2n ed. 2001, p. 33

²⁴ Article 53 of Vienna Convention on Law of Treaties, 1969: "A treaty is void if, at the time of its conclusion, it conflicts with a peremptory norm of general international law. For the purpose of the present Convention, a peremptory norm of general international law is a norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only a subsequent norm of general international law having the same character."

²⁵ *Belgium v. Spain* (1970) ICJ

²⁶ ILC Draft Articles on State Responsibility, 2001

Subjects of International Law

Theories relating to subjects of International Law: "A subject of rules is a being upon which the rules confer rights and capacity and imposes duties and responsibility; whereas an object enjoys and is burdened by no such competence. The law commands its subjects but it merely regulates the use and disposition of the objects." Subjects of law are those upon whom law bestows a capacity to act. Capacity implies personality. Legal personality indicates that the entity may be capable of possessing international rights and duties. During the classical era of international law, the positivists were of the view that the only legitimate legal person on the international plane is the "state". While states remained the most important subject of international law, one feature of development since 1945 has been recognition of other legal persons. In principle it is for international law to determine firstly whether an entity has legal personality and secondly the scope of that personality. The other subjects of international law are International Organizations and certain non-state entities like NGOs, MNCs etc. and now even the individuals are also included in the realm of international law.

Following are the three main theories prevalent in regard to the subjects of international law:

- States alone are the subject of international law.
- Individuals alone are the subject of international law.
- States are the main subject of international law, but to a lesser extent individuals and certain non-state entities have certain rights and duties under international law.

State as a Subject of International Law: As we all know International Law is also called as 'Law of the Nations'. The term itself suggests that it is the law which operates amongst various states. States are traditional subject of international community; in the sense that they have been 'dramatis personae' (character of the play) on the international scene since its inception. The position could not have been expressed more clearly than by Oppenheim who observed in 1912: 'since the law of the nations is based on the common consent of the individual human beings, states solely and exclusively are the subjects of the international law'. Therefore with this background the paper will cover following points which are provided in the form of questions: What kind of states are the subjects of international law? Definition of state, traditional and modern concept of international law. Why are the states important in the international law? Role played by the states in the scenario of international law. How is the international law operating between states? Fundamental rights and duties of the states as a subject of international law. Admission case.

Definition of State: Many jurists have attempted the definition of STATE but no definition can be called as a complete one. Still some of them are optimized to cover characteristics of 'state'. According to Salmond 'State is a society of men established for the maintenance of order and justice within a given territory by way of force'. According to Oppenheim: 'the existence of state is possible only when people of the state have settled under highest government authority and habitually follow its order'. According to Kantarowicz 'a state as a jurist person endowed with the right to impose its will on the inhabitant of a given territory, of which right it cannot by law be deprived without its own consent'.

From above definitions we can define state – A group of society within defined geographical area united to ensure their mutual welfare and security. Today it is generally accepted that the legal criteria for statehood are those set in Art.1 of the Montevideo Convention on the Rights and Duties of the States (1933) which reads: The state as a person of the international law should possess the following qualifications –(a) a permanent population (b) defined territory

(c) a government and (d) Capacity to enter into relations with other states. All the above criteria set out are flexible. Statehood is recognized in the international law though they do not fulfill some of the criteria. These states may be condominium, federal states, protected states etc. From the outset the states has been at the centre of the international society. States are so important because State can only seek membership of the United Nations; State can only participate in litigation before the International Court; Only state commands the permanently organized armed forces; It is normally only state that can mobilize the large resources needed to relieve suffering and afford humanitarian relief.

As the subject of international law state are imposed with certain rights, duties and powers. In broad terms they may be expressed as: the doctrine of the equality of states; the principle of non-interference; the principle of independence of state; and the principle of self-preservation or self-defense. To some extent, these principles overlap and are but consequence of each other however in the interests of clarity it is sensible to segregate them.

These may be discussing in brief: The United Nation Charter (1945) Art.2 (1) expressly asserts that: 'The organization is based on the principles of sovereign equality of all its members'. In particular, sovereign equality includes the following elements: States are juridically equal; Each state enjoys the rights inherent in full sovereignty; Each state has duty to respect the personality of the other states; Each state has a right freely to choose and develop its political, social, economic and cultural systems; The territorial integrity and political independence of the other state; Each state has the duty to comply fully and in good faith with its international obligations and to live in peace with other states. It would be seem that the concept of equality indicates that the each state will be answerable in international law for its conduct. Independence is nothing but consequences of sovereignty. To an extent it is clear that sovereignty implies independence and independence implies jurisdiction.

Peaceful Co-Existence: The doctrine has been reworked to meet anxieties of cold war and nuclear age. It obtained legal recognition in Art.13 of the Charter of the Organization of the American States, Charter of the Organization of The African Unity (1963), and Declaration of the Principles of International Law (1970). The preamble in effect states seven principles which may be summarized as: State shall refrain in international relations from the threat or use of force. States shall settle their international disputes by peacefully means. States recognize a duty not to intervene matters within the jurisdiction of another state. State recognizes a duty to cooperate with one another in accordance with the United Nations Charter. States recognize the principle of equal rights and self determination of peoples. States recognize the principle of sovereign equality. States agree to fulfill in good faith the obligations assumed under the charter.

Admission Case [(1948) ICJ 61]: In the early years after 1945 cold war rivalry caused the Security Council to be reluctant to admit new States. In consequence, the General Assembly sought an Advisory Opinion from the ICJ on the criteria for admission; and the criteria that a State should have in mind when casting a vote for admission. In the Advisory Opinion on conditions of membership in United Nations the ICJ held by a majority that there were 5 conditions mainly that the applicant had to be A State; Peace loving; Accept the obligations of the charter; Be able to carry our these obligations; Be willing to do so. Secondly, the Court ruled that when casting a vote for admission a State should have these criteria in mind and no others. Nevertheless, the situation became less tense on admission after December 1955, when a 'Package Deal' was negotiated to enable 16 new States to become members.

In the International Law, States remain the principle subject. It is the only permanent entity which is broadly accepted as having legal rights and duties in the International scenario.

International Organisations as Subjects of International Law: One of the most important developments of the 20th century has been the establishment of numerous international Organisations for inter-state relations. International organisations are also generally counted among the subjects of International law together with states, individuals, and perhaps, some other entities like International corporations, national corporations, and national liberation movements as well. In accordance with the standard definition of ‘subjects’, they are deemed capable of independently bearing rights and obligations under International law. The question as to whether International Organisations could be regarded as subjects of International Law reverberated well into the second half of twentieth century. It is pertinent to note that even before the establishment of League of Nations, the problem of assuming international legal personality was in vogue. There is a long history of non- sovereign organisations performing acts in international law.

Classifications of International Organisations: The international organisations may be classified on various grounds such as the on the basis of functions they perform, the membership and their scope of jurisdiction. But they are mainly divided into two main categories: *Inter governmental Organisations* and *Non-governmental organisations*. Inter governmental Organisations have national governments as their members. Hundreds of IGO’s operate in all parts of the world. The United Nations and its agencies are IGO’s. They are again classified on the basis of the area of their operation. They are divided into **international** and **regional**. SAARC, OPEC, G8, Arab League and the African Union are the best examples of IGOs operating at regional level.

Importance of International Organisations: The main objective of all the international organizations has been welfare improvement of member countries. International organizations, such as International Trade Centre and World Trade Organization, assist member countries in promoting fair trade with each other. The World Bank and Institute of International Finance are international organizations that provide monetary help to member countries and to enhance sustainable economic development in the world. And they are facing the challenges of enhancement of international reforms and integrating developing countries on various measures.

International organisations play as necessary instruments for organising the growing relation of states *per se*. They are the institutions which represent that process and play significant roles in the contemporary world. International organisations have become indispensable instruments to deal with international problems confronted by international society.

International Organisations as a Subject: It was in the case of Reparations for injuries suffered in the services of United Nations (I.C.J Reports, 1949p.174), the international court of Justice held that the United Nations is a subject of international law and capable of possessing international rights and duties, and it has capacity to maintain its rights by bringing international claims. Hence the subjectivity of international organisations is cleared with the help of three indicators. They are, whether the organisation possesses the right to enter into international agreements? Whether they have the right to send and receive legations? Whether they can bring and receive international claims? These are not strict requirements as such. At best they can be viewed as indicators; to the extent that proposed subjects of International Law on any of these indicators, they can be deemed to be subjects of international law. And it was also held that the organisation was intended to exercise and

enjoy the functions and rights which can only be explained on the basis of the possession a large measure of international personality and the capacity to operate upon the international plane. Therefore, we can say that the idea of considering International organisations as subjects of international law emerged from the decision of the ICJ in this case where it pronounced that UN was not the same as a state, let alone a super state.

Position of International Organisations in Municipal Law: It is usually explicitly provided for in the constituent treaty of the organisation. Article 104 of the United Nations charter provides in this context that ‘The organisation shall enjoy in the territory of each of its members such legal capacity as may be necessary for the exercise of its functions and fulfillment of its purposes.’ And the ICJ has also stated that the organisation should be regarded as possessing the powers which even if they are not expressly stated in the charter are conferred upon the organisation as being essential to the discharge of its functions.

Contribution of United Nations in International Law: The United Nations is an international organization founded in 1945 after the Second World War by 51 countries committed to maintaining international peace and security, developing friendly relations among nations and promoting social progress, better living standards and human rights. Due to its unique international character, and the powers vested in its founding Charter, the Organization can take action on a wide range of issues, and provide a forum for its 192 Member States to express their views, through the General Assembly, the Security Council, the Economic and Social Council and other bodies and committees. The work of the United Nations reaches every corner of the globe. Although best known for peacekeeping, peace building, conflict prevention and humanitarian assistance, there are many other ways the United Nations and its System (specialized agencies, funds and programmes) affect our lives and make the world a better place. The Organization works on a broad range of fundamental issues, from sustainable development, environment and refugees protection, disaster relief, counter terrorism, disarmament and non-proliferation, to promoting democracy, human rights, governance, economic and social development and international health, clearing landmines, expanding food production, and more, in order to achieve its goals and coordinate efforts for a safer world for this and future generations.

The Changes Happening in the International Scenario: It may however, be noted that the Brettonwoods conference held in 1944, was the beginning point in the direction of a new International Economic Order. The establishment of WTO has marked the emergence of a new era of economic order of the world. As a result of Uruguay round of GATT negotiations for about 7 years, as many as 125 states including India formed by consensus, the world trade organisation which came into force on January 1, 1995. The WTO is playing an active role in setting up the trade policy agenda, working on consensus and basing itself on the fundamental principles of non- discrimination. WTO has become the world body to oversee a comprehensive set of rules and disciplines covering every aspect of world commerce including trade in services and intellectual property protection. Thus World trade organisation is the main organ for implementation of Multi lateral trade Agreements. It has become the negotiating forum for the member states. It is been regarded as the third economic pillar of world trade and commerce dimensions along with the International Monetary Fund and the International Bank for reconstruction and Development or World bank.

The paradigm of subjectivity of International law differs from subject to subject and even between various subjects of same category. It is because the scope of International law keeps on widening, thus making the corporations, individuals, and movements come into the ambit of subject of international law. There is a radical transformation from UNO to WTO in

controlling the international trade and administration of Multi-lateral Trade Agreements and also of the plurilateral Trade agreements.

Individual as Subjects of International Law: Subject of any law means an entity capable of possessing rights and duties. Similarly a subject is said to possess international personality if the entity is capable of possessing international rights and duties. Thus subject of international law owes responsibility to international community and enjoys rights that may be claimed and if denied may be enforced via legal procedure: that means the particular entity will have *procedural capacity*. To be recognized as a subject of international law is not a choice that an individual in his capacity as an individual has an option of subscribing to, unlike in the municipal legal arena where it is forcibly thrust upon an individual that he has to be the subject whether to his liking or not. Thus one may find in this particular field not lot of changes have taken place, at least in the theoretical concepts of traditional international law. The states themselves afford the status of subjects of international law to individuals, as every thing in international law is dependent on consent even if this does not concern the state but only individuals are affected by them. Even today though lot of inroads are made in traditional view point put forward by older jurists there still remains some hope and scope of improvement in different arenas where international law operates.

Scope on International Law and Changing Concepts of Subjects: In order to understand individual as a subject of international law one must understand the changing structure of scope of international law. The scope of international law have developed and expanded, so new entities have been admitted as subjects, but *the personality enjoyed by such subjects varies considerably*. In order to understand the evolution of the scope of international law one must look into the definition of international law given by various jurists. There were two schools of thought regarding the scope of international law one was the *traditionalistic* school of thought and the other was the *modernistic* school of thought. The traditionalistic scholars believed *state as the exclusive subjects of international law*.

Oppenheim was the most prominent exponent and as pointed by him “Since law of nations is based on the common consent of the individual states and not of the individual human being states solely and exclusively are the subjects of international law.” *Starke* was the most important exponent of modernistic theory and according to him, “international law may be defined as that body of law which is composed for its greater part of the principles and rules that state feel themselves bound to observe and therefore do commonly observe in their relation with each other and which include also the rules of law relating to the functioning of international institutions, their relations with each other and their relation with state and individual and certain rules relating to individuals and non-state entities are the common concern of international community. Today states are the primary subjects of international but hey are no longer the only subjects, international organizations, non-state entities and individuals are also considered as subjects of international law.” The scope of international law has widened as a result of greater international awareness of human rights, proliferation of international organization. “State possess international personality as inherent attribute of their statehood, all others do so only to the extent that their states allow i.e. their personality is derived from states. Thus, *personality of states may be characterized as original and that of the other entities as derivative*.

Individual as Subjects: Individual in general have very limited personality but contemporary international law recognizes that individual may possess international rights and duties. *Why is this so?* One of the reasons may be the greater awareness of human rights for individual through both international and regional regulation. As a consequence of this it

is being recognized that individuals may be responsible for certain conduct – earlier it was believed that states are exclusively the perpetrators of breach of international law but now this belief is not shattered but definitely dented, some of the examples are piracy-has been recognized under customary international law as international crime. Pirates are considered as *hostis humani generis* i.e. common enemies of mankind any state that apprehends them can punish them under international law. War crimes and crimes against humanity are recognized as international crimes and individuals may be held liable under the ICC. Nuremberg trial-Judge Jackson made an opening statement “Crimes against international law are committed by men and not by abstract entities and only by punishing individuals who commit such crimes can the provisions of international law be established.”

Convention on the prevention and punishment of the crime of genocide – article 4 – “*Genocide is punishable as crime irrespective of whether they are committed by A) Constitutionally responsible rulers B) Public officials and C) Private individuals.* As a natural corollary of this individuals are under obligation to refrain from such conduct. Individuals thus have limited rights and duties in international scene. There are also other acts that an individual may be personally held responsible for these are hijacking, sabotage, terrorism, drug trafficking and acts upon diplomats.

One point to be noted here is that individual responsibility derives from international law and is independent of law of the state for they may be responsible in municipal law also but the exception is that the responsibility is founded in international law.

Drawback: The most important drawback is that for individual exercising international personality is the lack of procedural capacity which is denied to them because of reluctance of states to grant them such capacity. Some instances though where international law affords procedural capacity are 1) Permanent court in Danzig railway official’s case recognized- “*Those exceptional treaties could create rights for individuals and in certain cases these rights could be enforced in municipal courts.*”

Vangenden Hoos V. Nederlandse Tarief Commissioner (1963) - where article 12 of the European community treaty was interpreted to read- “*The very object of international agreement, according to the intention of the contracting parties may be the adoption by the parties of some definite rules creating individual rights and obligations and enforceable by international courts*” Central American Court Of Justice – where for the recourse was made available to an individual for violation of international law (human rights)-1908- it was novel in the aspect that court had jurisdiction to deal with dispute between individual and states and individual “court had jurisdiction to hear dispute between private individual of any of the five contracting parties and any of the other contracting parties. Treaty Of Versailles –provided for claims by individuals against government and nationals of defeated state. Tribunal Established under Upper Silesian Convention-it was competent to hear cases brought by nationals of state against their own.

In modern international law individual definitely can be considered as a subject of international law there can be no arguments against this fact simply because it is a fact and not a myth. Any student of international law should know better than argue that individual is not a subject of international law, but to what extent is definitely a arguable issue not just for students of international law but also for any human being. The status of individual as a subject of international law is pointed towards an upward incline which is a relief for all human beings as evident from the case of Astronauts – they are considered as friends of mankind in general in respect of the. Asylum- every individual has a right to claim asylum in

any other country and other states may or may not consider them but if they do there is no practice of questing that particular states decision. Extradition- there is also a duty upon every state subject to the bilateral treaty between them to extradite criminals found in their territory wanted in other states. Slavery And Slave Trade- work they do for the development of humans hence there is a duty upon every state to actually render help and return any astronaut to their respective states upon entry into the earth from any mission. There is also a duty upon every individual and state to desist from slave trade and practicing slavery and every person has a right against slavery. Diplomats –diplomats as individuals have the variety of rights enumerated in Vienna convention on diplomatic agents (1961) and a person may be held liable for the crimes committed against them.

Non-State Entities as Subjects: All the legal persons in the international law apart from State are termed as non-state entities. In the 19th Century States were the only legal persons in International Law. But the position has changed in the last century, and international organisations, individuals and companies also acquired some degree of international legal personality. The problem of including new actors in the international legal system is reflected in very concept of legal personality, the central issue of which has been:- Capacity to bring claims arising from the violation of International law. To conclude valid international agreements. To enjoy privileges and immunities from national jurisdiction. Thus, International Court of Justice has noted that, 'the subject of law in any legal system is not necessarily identical in their nature or in the extent of their rights, and their nature depends upon the needs of the community. The non-state entities can be categorised under following heads namely:- International Organisations, Non-governmental Organisations, Multi-national Organisations, Insurgents and National Liberation Movements, Ethnic minorities, Indigenous people under International Law.

Non-Governmental Organisations: Non-governmental Organisations are those organisations which are not established by a government or by an agreement between states but, its members are private citizens or body corporate. International NGOs have proliferated considerably in past decades and are engaged in a broad variety of different areas, ranging from politics, the legal and judicial field, the social and economic domain, human rights and humanitarian relief, education, women, to the environment and sports. The role of NGOs in International Law is primarily of informal character. They have some effect on International law-making in certain areas by adding additional expertise and making procedures more transparent. They are essentially providers of information, lobbyists or pressure groups, and as such may properly be regarded as so-called non-state actors. From formal point of view, on global level there are no international legal standards governing the establishment and status of NGOs. The relevant law is that of the State where an NGO is based. This may cause problems in the case of international activities because national laws are different. Inter-governmental organisations may agree to grant NGOs a certain consultative or observer status (such as the exceptional case of the observer status granted by the UN General Assembly to the International Committee of Red Cross in 1991) and thereby a limited international status, but this does not make them a subject of international law. Since the beginning of this century, efforts have been made by the bodies such as the Institute of International Law (itself being an NGO) to improve the international legal standing of NGOs, but such efforts have remained fruitless in view of the doctrine of sovereignty. On the regional level, however, within the framework of the Council of Europe a common status for NGOs has been recently laid down in the European Convention on the Recognition of Legal Personality of International Governmental Organisations. The State which has ratified it attributes legal personality in any one of the state parties.

The problem as regards NGOs is that they are based in industrial part of the world. Therefore it is concentrated in few home countries like U.K., France, Belgium, Switzerland and U.S. As a resultant, it creates geographical imbalance. Although these countries are democracies, guaranteeing freedom of association, NGOs are sometimes misused by governments in their international dealings. Now the question which raised is- Is it really advisable that these non-territorial entities should seek to obtain a formal international status on the universal level? Owing to its work in the field of human rights, they are now generally acknowledged. But in regard to international law-making in general, it is unlikely that NGOs will be included in formal process in near future. As is said by one recent author, " As NGOs are not democratically authorised to realise common good, they often neglect the common good in pursuance of their specific interests."

Multi-National Corporations: MNCs are those corporations and associations that operate transnationally in the finance, transportation, communication and other areas of economic life. Because they operate across many state boundaries, they serve as a global vehicle to transfer and disseminate capital, skill and technology. They are profit oriented and hence are commonly treated as distinct from NGOs. The larger transnational corporations negotiate directly with nation-state representatives in a new form of democracy. Agreements with these corporate giants may surpass treaties between states in terms of values affected and the prescribing effect engendered. They have contributed greatly to the internationalization of production, finance, and ownership and to the growing integration of national economies into world economy. Though they are labelled multi-national, trans-national, or international, MNCs owe their creation to national laws. Their success in operation however, depends greatly on trans-national recognition of such national laws. MNCs are incorporated under domestic law of State of incorporation. But conflicting national laws are inadequate to deal with manifold problems of MNCs. Profit-oriented by nature, multinational corporations have come to be perceived variously as exploiters of the labour and physical resources of the developing countries, environmental polluters, manipulators of currencies and commodities, tax dodgers, practitioners of corrupt business practices, supporters of reactionary regimes, and instruments of their national governments. They have recently gained particular notoriety due to the exposure of the widespread business practice of bribery- corruption and conspiring with power elites to the detriment of democratic values and the masses of the population. As their operations expand in geographical reach and in magnitude of impact and grow in complexity, it has become increasingly apparent that conflicting national laws are inadequate to deal with manifold problems having to do with multinational corporations. So in 1972 Economic and Social Council called together a group of eminent experts to study the role and impact of MNCs and to recommend measures towards international accountability. In 1974 they established two permanent bodies to deal with problems of MNCs - Inter-governmental Commission on Transnational Corporation, consisting of 48 members. U.N. Centre on Transnational Corporations. The commission made it a top priority to develop code of conduct for activities of transnational corporations. This is because MNCs basically are also seen as a threat to nation-states because they possess more resources than most of these nation states. Hence the nation-states fear that their power would be undermined over their own nationals.

Insurgents and Non-Liberation Movements: Insurgents in civil war have long been recognised in international law as subjects having certain rights and duties because they control some territory and might become the effective new government of the state. This is also reflected in Articles 14 and 15 of the United Nations international Law commissions draft articles on state responsibility, according to which the whole old government is still in

power, a wrongful act of an insurrectional movement established in the territory of the state shall not be considered as an act of that state under international law (involving responsibility to other states for it). New problems emerged in the process of de-colonisation concerning the international legal status of liberation movements of 'peoples under colonial, alien or racist domination' having a representative organisation (such as SWAPO, the ANC or the PLO). With regard to such national liberation movements there have been conflicting positions of states on this issue in the past, which has now lost most of its former relevance.

Ethnic Minorities and Indigenous People: With the rise of ethno-national in many parts of the world, not only in the Balkans and in the former Soviet Union, the status of Ethnic Minorities and other groups in International Law has again become a central issue. This is witnessed in various recent efforts on the global and regional level to improve their legal protection. The question of international legal personality of minorities is more complicated than the issue of international legal personality of individuals or corporations. The problem of minorities has quite different political and legal dimensions. Indigenous people are not subjects of international law in any meaning full sense of the term and have not (yet achieved an international legal status any higher than that of individuals).

Relation between International Law and Municipal Law: International Law, in the present context, is considered as one of the most significant concepts, which has been gaining momentum at a fast pace in the world community. There has been several occasions, since the evolution of human civilization, where efforts have been put by mankind throughout the world in order to legitimise the concept of International Law in a broader perspective, with the sole objective of maintain universal brotherhood and keeping international war and conflicts at bay. Since the formation of the world community, especially after the Second World War (1939-44), inferences of International Law can be found quite frequently. The presence of International Law has increased by leaps and bounds which is quite evident from the fact that almost all the sovereign nations of the world, irrespective of their political, social, economic, religious or geographical background, have voluntarily accepted the authority of International Law.

With the due passage of time, the role of International Law has also widened accordingly and the concept of International Law is no more restricted only to the maintenance of international tranquility. The ambit of International Law has been growing expansively and hence, it becomes very essential to analyse what could be the possible aspects of international community, where the seeds of International Law can be sown. One can easily chalk out the significance of International Law with the presence of several agencies or sources of International Law, such as, International Organisations, Non-Governmental Organisations (NGOs), International Treaties and Conventions, Multi-National Corporations (MNCs), etc., which have been exhaustively assisting in the growth and development of International Law, with the establishment of the first inter – governmental organization in the year 1864, viz., the “International Telegraphic Union.” It is also essential to note that there has been a significant contribution on the part of the internal organs of the sovereign States, such as, the Legislature, the Executive, the Judiciary, etc. who have been making a valiant effort to uphold the principles of International Law in their own territory for achieving the ultimate goal, i.e., ‘international peace and security.’

The practice of States regarding the relationship of International Law and Municipal Law is divergent. Application of International Law depends largely upon the Legislature as well as the Judiciary of a State. They are expected to take cognizance and endeavour to honor the international obligations of the State. It has to be realized by them that neither Municipal Law

nor International Law is supreme, but they are concordant to each other. They both have been made to solve the problems of human beings in different areas. If they refuse to accept the rules of International Law, relations between the States would obviously become tense and the high ideals of 'maintaining international peace and security' will be at peril.

Theories as to the Relation between International Law and Municipal Law: The proper understanding of the concept of International Law is possible only when its relation with Municipal Law is analyzed in a comprehensive manner. Even though International Law regulates the conduct of international subjects, the question arises whether International Law has any impact on domestic legal systems or on subjects within those systems. The framework under which a domestic legal system relates to and applies international law is very important as it is this aspect that gives an effect to the domestic implementation of International Law in the domestic circuit. There are two major models for this relationship: dualism and monism.²⁷ In a dualist approach, the domestic and international legal systems are kept separate because they operate in different spheres. Monism, on the other hand, holds that the domestic and international legal systems are simply two connected areas of a single legal dimension. The two principal theories can be elaborately discussed as under:

Monism: Kelsen (1881-1973) is one of the chief protagonists of this theory. Besides Kelsen, the other supporters of monism are Lauterpacht, Fitzmaurice and Starke. According to monism, International Law and State Law are similar aspects of the same system, i.e., law in general. Monism considers that all law as a single unity is composed of binding legal rules, whether those rules are obligatory on States, on individuals or on entities other than States. Monists opine that the science of law is a unified field of knowledge and the decisive question that needs attention is whether or not International Law is true law. Once it is accepted that International Law is a system of rules that are of a true legal nature, it was impossible to deny that the two systems constitute part of that unity corresponding to the unity of legal science. Both Municipal Law and International Law are part of the same universal body of legal rules binding all human beings collectively or individually. It is the individual who lies at the root of the unity of all. Thus, any construction other than monism is bound to amount to a denial of the true legal character of International Law.

Dualism: In the 19th and 20th centuries, there developed a strong view towards the dualist view. The chief exponents of dualism have been the positivist writers Triepel and Anzilotti. For the positivists, with their consensual conception of International Law, it was natural to regard state law as a distinct system. Dualists state that International Law consists of principally of customary and treaty rules whereas, Municipal Law consists of in most part the legislative enactments and judicial legislation. The difference between International Law and Municipal Law is depicted by the dualists as under: Source: Under International Law, customs grown up among States and Law making treaties are the main sources, whereas, under Municipal Law, customs developed within the territory of the State and Statutes enacted by law-giving authority are the main sources. Operation: International Law operates between Relation of States, whereas, Municipal Law operates between the relations of individuals within the sway of the State. Substance: International Law is a weak law as it operates between the States and is not above them, whereas, Municipal Law is the supreme law where the law is the sovereign and operates over individuals. Subjects: States are considered as the subjects of International Law, whereas, Individuals are considered as the subjects of Municipal Law.

²⁷ Supra n. 24.

The question of primacy, i.e., whether International Law or Municipal Law is superior and in case of a conflict which should be given primacy. On the question of primacy, the monists are divided. Some of them give primacy to International Law. Kelsen has made structural analysis of International Law and Municipal Law. For this, he has applied his 'hierarchical' doctrine or 'grund norm'. On this basis, he asserts that each rule is conditioned by a superior rule for its validity, and thus, in turn, it derives validity from the fundamental rule, i.e., the grund norm. This grund norm is not exclusive in International Law and it may pertain either to International Law or Municipal Law. The primacy of Municipal Law is perfectly legitimate because the choice between either system could not be decided scientifically. As dualism attaches importance to the sovereignty of 'State Will', they give primacy to Municipal Law over International Law.

Transformation and Specific Adoption Theories: The application of International Law within the municipal sphere would be incomplete without referring to certain theories. On one hand, the positivists have put forward the view that the rules of International Law cannot directly be applied within the municipal sphere by state Courts or otherwise. In order to be so applied, such rules must undergo a process of specific adoption by Municipal Law. As according to positivists, International Law and Municipal Law constitute two distinct and structurally different systems, the former cannot be applied upon state law unless the latter allows its constitutional machinery to be used for that purpose. In the case of treaty rules, it is claimed that there must be a transformation of the treaty into state law, which is not merely a formal but a substantive requirement. The transformation theory is based on an alleged difference between treaties on one hand, and state laws or regulations on the other.

Delegation Theory: According to the exponents of this theory, there is delegated to each state Constitution by constitutional rules of International Law, the right to determine when the provisions of a treaty or convention are to come into force and the manner in which they are to be embodied into state law. The procedure and methods to be adopted for this purpose by the state are a continuation of the process begun with the conclusion of the treaty or convention. There is neither any transformation nor any fresh creation of rules or Municipal Law, but merely a prolongation of a single act of creation. Whatever are the ultimate merits of this theoretical controversy over the alleged necessity for a transformation or specific adoption of International Law by Municipal Law, the actual practice of states concerning the application of International Law within the sphere of Municipal Law must remain of critical importance. It is therefore essential to pass to a consideration of such state practice, and then to derive there from any necessary conclusions with regard to the matter.

Pre Independence Implementation of International Law in British India: Before the adoption of the Constitution, the British 'Doctrine of Incorporation' with certain qualifications as prevailing in Britain was followed in India. It is the part of the public policy that the Courts should in principle give effect to clearly established rules of international law. When a Municipal Court in England has decided as a preliminary issue that a rule of Customary or Treaty law is applicable to a case before it, the rule is applied as though it is a rule of the law of the forum.²⁸ In the sphere of customary international law, the doctrine of incorporation has become the main British approach.

Conditions for Implementation of Customary International Law in British Practice:²⁹ Consistency: Such rules should not be inconsistent with the British statutes, no matter whether the statute is earlier or later in date than the particular customary rule concerned.

²⁸ Ian Brownlie, *PRINCIPLES OF PUBLIC INTERNATIONAL LAW*, 5th ed. 1998, p. 42.

²⁹ I. A. Shearer, *STARKE'S INTERNATIONAL LAW*, 11th ed. 2007, p. 68.

Supremacy of the Court: If the scope of such customary rules has been determined by the final authority of the British courts, all British courts are thereafter bound by that determination, notwithstanding a divergent customary rule of international law developing later on.

‘Doctrine of Incorporation’: The British model of interpretation of the ‘Doctrine of Incorporation’ can be discussed as follows: In **Triquet v. Bath**,³⁰ the ‘Doctrine of Incorporation’ was quoted as “the Law of Nations, in its full extent was a part of the law of England.” This view was in practice for a subsequent period of time. But a departure in this practice of British Courts was noticed in the latter part of the 19th century. The majority of the Court refused to apply the ‘Doctrine of Incorporation’ and said that English Courts had no jurisdiction over crimes committed by foreigners within the maritime belt extending to three miles from the British coast, although such right existed under customary international law in **Franconia case (R. v. Keyn)**.³¹ The Court held that a rule of customary international law does not apply in England on its own force, but needs preliminary legislation. However, this decision of the Court was reversed by the territorial Waters Jurisdiction Act, 1878 of the British Parliament. In **West Rand Central Gold Mining Co. v. R.**,³² the Court observed that whatever has received the common consent of civilised nations must have received the assent of the country, which may properly be called ‘International Law’ and as such will be acknowledged and applied by the municipal tribunals of England. This was a partial return to the ‘Doctrine of Incorporation’. In **Chung Chi Cheung v. R.**,³³ Lord Atkin declared that the Courts acknowledge the existence of a body of rules which nations accept among themselves. On any judicial issue they seek to ascertain what the relevant rule is, and, having found it, they will treat it as incorporated into the domestic law, so far as it is not inconsistent with rules enacted by the Statutes or finally declared by their tribunals. It is a recognized prerequisite of the adoption in the Municipal Law of the British, a doctrine of Public International Law that it shall have attained the position of general acceptance by civilized nations as a rule of international conduct, evidenced by international treaties and conventions, authoritative textbooks, practice and judicial decisions. The Privy Council further observed that the Courts acknowledge the existence of that body of rules which are accepted by the nations themselves. Any international rule can be incorporated into the domestic law, so far as it is not inconsistent with rule enacted by Statutes or finally declared by the English tribunals. To conclude, it can be clearly observed that the English Courts did not apply any rule of customary international law if it is in conflict with the existing Parliamentary legislation or any clear judicial precedent. The same practice was also equally exercised in the pre independence implementation of the principles of international law in the Indian context as well.

Post-Independence Implementation of International Law in Independent India: The Constitution of India does not include any clear direction on treaties as found in the United States and French Constitutions. It, however, follows the British approach, namely, that treaties are not the part of internal law unless specifically adopted. But unlike Britain, India has a written Constitution and it contains several provisions which have the bearing on treaty making and treaty implementation in India, but at the same time, there is no provision making treaties as the supreme law of the land. The relevant provisions are Articles 37, 51, 53, 73, 77, 246 read along with Entries 10, 13 and particularly 14 of List I of the Seventh Schedule

³⁰ (1764) 3 Burr 1478 KB.

³¹ (1876) 2 Ex D 63.

³² (1905) 2 KB 391.

³³ 1939 AC 160.

(The Union List), as well as Article 253, 372(1). In accordance with these provisions, the Union Parliament has the exclusive power to legislate in the realm of treaties, i.e., for the making of treaties and their implementation. But Parliament has not yet legislated; it is instructive, therefore, to refer to the Indian practice, as reflected in the constitutional provisions and the judicial precedents.

Article 37, which provides that the provisions contained in Part IV shall not be enforceable by any Court, also states that the principles laid therein are nevertheless fundamental in the governance of the country and it shall be the duty of the State to apply these principles in making laws.

Article 51 strengthens the common law principle that International Law is a part of Indian Law which reads as follows: “Promotion of International Peace and Security – The State shall endeavour to – (a) International Peace and Security (b) Maintain just and honourable relations between nations (c) Foster respect for International Law and treaty obligations in the dealings of organised people with one another (d) Encourage settlement of international disputes through arbitration” Article 51 does not give any clear guidance regarding the position of International Law in India as it since it is included in Part IV of the Constitution of India which is unenforceable by the Indian Courts. However, it would be wrong to contend that Article 51 is of no relevance and provides no guidance at all.

Article 73(1) states that “Subject to the provisions of this Constitution, the executive power of the Union shall extend: (a) To the matters with respect to which Parliament has power to make laws and (b) To the exercise of such rights, authority and jurisdiction as are exercisable by the Government of India by virtue of any agreement or treaty”.

Article 246 empowers the Parliament to legislate on Entry 14 (of the Union List), which it has not done yet, and until it does so, the President’s treaty making power remains unfettered by any internal constitutional restrictions. Hence, the Executive will be very much within its power to bind India internationally under a valid treaty, without referring to the Parliament, or require legislation sanctioning money expenditure, or require a change in existing laws for implementation of the treaty obligations of the Union.

Article 253 of the Constitution of India confers exclusive power upon the Parliament to make law for giving effect to any treaty, agreement or convention with any other country or countries or any decision or any decision made at any international conference. Article 253 of the Constitution provides that “Notwithstanding in the foregoing provisions of Chapter XI of Part XI, the Parliament has power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at an international conference, association or other body.”

Article 372(1) provides that “Notwithstanding the repeal by this Constitution of the enactments referred to in Article 395 but subject to other provisions of this Constitution, all the laws in force in the territory of India immediately before the commencement of this Constitution, shall continue in force therein before until altered or repealed or amended by a competent Legislature or any competent authority.” This Article contemplates the fact that before the adoption of the Constitution of India, the British practice was prevalent in India which has been continued even after the adoption of the Constitution by virtue of the provisions of Article 372.

Indian Judiciary and International Law: Before independence, the Common Law Principles of the British, which practised customary rules of International Law as part of the land, applied in India as well. Prior to the Constitution of 1950, Indian Courts were following the British practice of enforcing International Law in the domestic circle. The Constitution of India contains a specific provision in Article 51 (which is stated under Part IV of the Constitution of India, i.e., the Directive Principles of State Policy) a direction to the State, which shows that the intention of the founding fathers towards International Law.

The British practice of the ‘Doctrine of Incorporation’ continues still in India by virtue of Article 372(1) of the Constitution as was held in *T.K. Varred v. State of Travancore-Cochin*.³⁴

In the case of *A.M.S.S.V.M. & Co. v. The State of Madras*,³⁵ the question was whether the State was entitled to abolish private right in the exploitation of chank fish in Palk Bay. The Madras High Court, in its judgment relied on principles of English Common Law and corresponding rules of International Law relating to fisheries, maritime belt, harbours and estuaries, particularly the historic title based on prescription. It held that chank fish cannot be treated as fisheries proper, since they do not move away from the seabed. The rulers of the State adjacent to the sea had acquired the right from the time immemorial to exploit chank fish in the bay. The Court held that particular part of the seabed, though outside the three-mile limit, vested in the Crown and thus, the Government had the right to abolish private right to exploitation of the chank fish in the Bay.

In *Birma v. State of Rajasthan*,³⁶ the Court held that the Courts that are part of International Law do not form part of the law of the land unless expressly made so by the legislative authority. In *Motilal v. U.P. Government*,³⁷ it was held that any obligations or arising out of international treaties do not have the force in India and they can be enforced in the territory of India only through proper legislations. In *Keshavananda Bharati v. State of Kerala*,³⁸ it was opined that in view of Article 51 of the Directive Principles, the Court must interpret language of the Constitution, if not intractable, which is after all a Municipal Law, in the light of the United Nations Charter and the solemn declaration subscribed to by India.

In *Shri Krishna Sharma v. State of West Bengal*,³⁹ the Calcutta High Court held that the Indian Courts would apply rules of internal law which includes The Constitution of India, the Statute enacted by the Parliament of India and the Statutes enacted by the State Legislatures. The Court held: “If the Indian Statutes are in conflict with any principle of International Law, the Indian Courts will have to obey the laws enacted by the legislature of that country to which they owe their allegiance. In interpreting and applying Municipal Law, the Courts will try to adopt such a construction as will not bring into conflict with the rights and obligations deductible from the rules of internal law. If such rule or rights and obligations are inconsistent with the positive regulation of Municipal Law, the Courts override the latter. It is futile in such circumstances to seek to reconcile, by strained construction which are really irreconcilable.”

³⁴ AIR 1956 SC 142.

³⁵ MLJ (2-1957) 587.

³⁶ AIR 1951 Raj. 127.

³⁷ AIR 1951 All. 257.

³⁸ (1973) 4 SCC 225; AIR 1973 SC 1461.

³⁹ AIR 1954 Cal 591.

In *Maharaja Vikram Kishore of Tripura v. Province of Assam*,⁴⁰ the Court held similarly as the above case and stated that it is a well established rule of construction that a statute will not be construed as overriding International Law unless the words of the statute compel the Court to put such a construction upon it. In *A.D.M. Jabalpur v. Shivakant Shukla*,⁴¹ popularly known as the “Habeas Corpus case”, one of the questions for consideration of the Supreme Court was whether the Universal Declaration of Human Rights, 1948 and the two International Covenants on Civil and Political Rights and Economic, Social and Cultural Rights, 1966 were part of Indian Municipal Law. By majority, the Supreme Court held that they were not part of Indian Municipal Law. In his dissenting opinion, however, H.R. Khanna, J. held that if there was a conflict between the provisions of a International Treaty and the Municipal Law, it is the latter that will prevail. But if two constructions of the Municipal Law is possible, the Court should give that construction as might bring about harmony between Municipal Law and International Law or Treaty. In his view, the constitutional provision should be construed in such a way as to avoid conflict with the Universal Declaration of Human Rights, 1948, which seems to be more rational and better.

In *Gramophone Co. of India v. Birendra Bahadur Pandey*,⁴² the Supreme Court accepted the binding force of international Law with certain limitations. The Court’s observation in this regard is relevant: “There can be no question that nations must march with the international community and Municipal Law must respect rules of International Law. The Comity of Nations requires that rules of International Law may be sanction with Acts of Parliament. But when they do run into such conflict, the sovereignty and the integrity of the Republic and the supremacy of the constituted legislatures in making the laws may not be subjected to external rules except to the extent legitimately accepted by the constituted legislatures themselves. The doctrine of incorporation also recognises the position that the rules of International Law are incorporated into national law and considered to be part of national law, unless they are in conflict with an Act of Parliament. Comity of Nation or no, Municipal Law must prevail in case of conflict. National Courts cannot say ‘yes’ if Parliament has said ‘no’ to a principle of International Law. National Courts will endorse International Law but not if it conflicts with Municipal Law. National Courts being organs of the State and not organs of International Law must per force apply national law if International Law conflicts with it.”

In *People’s Union for Civil Liberties (PUCL) v. Union of India*,⁴³ the Supreme Court of India held that it is almost an accepted proposition of law that the rules of customary International Law which are not contrary to the Municipal Law shall be deemed to be incorporated in Municipal Law. In *Daya Singh Lahoria v. Union of India*,⁴⁴ the Apex Court has observed that there is no rule of International Law which imposes any duty on a state to surrender a fugitive in the absence of an Extradition Treaty. This question is decided by national courts on the basis of international commitments as well as rules of International Law relating to the subject. In *State of Madras v. G.G. Menon*,⁴⁵ the question before the Apex Court was whether any legislative enactment which was prevalent in pre Independence period is applicable to the post-independence era by the reason of the provisions of Article 372 of the Constitution of India, without any alteration or repeal or amendment of the pre Independence legislative enactment by a competent Legislature or any other competent authority. In this case, the Supreme Court held that such a legislative enactment cannot be enforced in the

⁴⁰ (1948) 15 ILR 64.

⁴¹ AIR 1976 SC 1207; (1976) 2 SCC 521.

⁴² AIR 1984 SC 667; (1984) 2 SCC 534.

⁴³ (1997) 1 SCC 301.

⁴⁴ (2001) 4 SCC 516.

⁴⁵ AIR 1964 SC 517.

Indian territory notwithstanding Article 372. In *Shiv Kumar Sharma and Others v. The Union of India and Others*,⁴⁶ the Delhi High Court held that in India, treaties do not have the force of law and consequently obligations arising there from will not be enforceable in Municipal Courts unless backed by legislation. Settlement of dispute as to boundary arises no such obligation requiring implementation in Municipal Courts. Cases may arise where a domestic law is in express terms extended to a named city and that city as a result of treaty settling a dispute like the present, has to be handed over to another country. In that case, legislation may be necessary.

In *Maghanbhai Ishwarbhai Patel and Others v. Union of India*,⁴⁷ the Supreme Court opined that international treaties are enforceable in India by the Municipal Courts only when there is a legislation with that regard as treaties do not have the force of law. In *Civil Rights Vigilance Committee, Bangalore v. Union of India*,⁴⁸ the Karnataka High Court observed that if the Parliament does not enact any law for implementing the obligations under a treaty entered in to by the Government of India with foreign countries, Courts cannot compel Parliament to make such law. In the absence of such law, Court cannot also enforce obedience of the Government of India to its treaty obligations with foreign countries. In this case, the question was as to whether Geoff Boycott and Geoff Cook, the two cricket players shall be allowed to visit India and to play cricket matches as members of the English cricket team against India in view of their links with South Africa which was practicing the policy of apartheid. Here, the Petitioner contended that the action of the Government of India in permitting these two cricket players to enter into India and to play cricket in India was in breach of its obligations under the Gleneagles Accord and obligations attached to its membership to the United Nations. The Court held that the Government of India's obligations under the Gleneagles Accord and obligations attached to its membership to the United Nations, cannot be enforced, at the instance of citizens of this country, or associations of such citizens, by Courts in India, unless such obligations are made part of the law of this country by means of appropriate legislation.

In *Vineet Narain v. Union of India*,⁴⁹ the Supreme Court held that it is the duty of the Executive to fill the vacuum by executive orders because its field is conterminous with that of the Legislature and where there is inaction even by the Executive, for whatever reason, the Judiciary must step in, in exercise of its constitutional obligations to provide a solution till such time as the Legislature acts to perform its role by enacting proper legislation to cover the field. In *Jolly George Varghese v. Bank of Cochin*,⁵⁰ the question was in case of a conflict between a provision of an International Treaty (such as Article 11 of the International Covenant on Civil and Political Rights) to which India is a party and a provision of a State Statute (such as Section 51 of the Code of Civil Procedure), it is the latter which shall prevail if the International Treaty in the question has neither been specifically adopted in the domestic field nor has gone under transformation.

In *Union of India v. Association for Democratic Reforms*,⁵¹ the Supreme Court held that the foundation of a healthy democracy is to have well informed citizen voters. The reason to have right to information with regard to the antecedents of the candidate is that voter can judge & decide in whose favour he should cast his vote, which is considered as an important aspect of

⁴⁶ AIR (1968) Del. 64.

⁴⁷ AIR 1969 SC 783.

⁴⁸ AIR (1983) Kar. 85.

⁴⁹ AIR 1998 SC 889.

⁵⁰ AIR 1980 SC 470.

⁵¹ (2002) 5 SCC 294; AIR 2002 SC 2112.

International Law which promotes fair and free elections. In *Sunil Batra v. Delhi Administration*,⁵² it was observed by the Court that as a police officer is vested with power to restrain a person by handcuffing him, there is simultaneous restraint by the law on the police officer as to the exercise of the power. The handcuffs should not be used in routine manner. The minimum freedom of movement which even an under trial prisoner is entitled to under Article 19 of the Constitution, cannot be cut down cruelly by application of handcuffs or other hoops. This is in accordance with Universal Declaration on Human Rights, 1948.

In *Prem Shankar Shukla v. Delhi Administration*,⁵³ the Supreme Court emphasised that handcuffs should be used in the “rarest of the rare cases” and only when the person is ‘desperate’, ‘rowdy’ or one who was involved in a non-bailable offence. Krishna Iyer J., speaking for the Court held that ‘to manacle man is more than to mortify him. It is to dehumanise him and, therefore, to violate his very personhood; too often using mask of dangerousness and security. The Supreme Court also opined that involvement of the prisoner in a score of criminal cases is no ground for handcuffing. Nor can a person be handcuffed only because he is charged with a grave offence. It cannot be used only for the convenience of the escort party. The rules, regulations and manuals of various states authorising the police to use handcuffs have been struck down as violative of Article 14 of the Constitution of India. This opinion of the Supreme Court is in accordance with the Universal Declaration on Human Rights, 1948.

In *Sheela Barse v. Secretary, Children’s Aid Society*,⁵⁴ the Supreme Court stressed on the role played by the International Instruments and highlight the fact that these Instruments cast an obligation on the Indian State to gender sensitise its laws and the Courts are under an obligation to see that the message of the International Instruments is not allowed to be drowned. This Court and Counsel must never forget the core principle embodied in the International Conventions and Instruments and as far as possible give effects to the principles contained in those International Instruments. The Courts are under an obligation to give due regard to International Conventions and Norms for construing domestic laws more so when there is no inconsistency between them and there is a void in domestic law. The President can validly exercise his treaty-making power without an authorising legislation of the Parliament. This was clearly stated in *Union of India v. Manmull Jain*,⁵⁵ where the validity of the treaty relating to the transfer of the Chandannagore, a former French possession, without the prior parliamentary legislation was questioned. The Court observed that “Making a treaty is an executive act and not a legislative act. Legislation may be and is often required to give effect to the terms of a treaty.

In *Rai Sahib Ram Jawaya Kapur v. State of Punjab*,⁵⁶ the Supreme Court laid down that for the exercise of the executive power (of which treaty making is one), under Article 73, the Union legislation is not a pre-requisite. In *Jayanti Lal v. Rana*,⁵⁷ the above decision was taken into consideration by the Supreme Court. In *Nirmal Bose v. Union of India*,⁵⁸ emphasis was laid on Article 253 of the Constitution of India which talks about the Parliamentary power to implement in the whole or any part of the Indian territory, any treaty, agreement or convention with any other country or countries or any decision made at any international

⁵² AIR 1978 SC 1675.

⁵³ AIR 1980 SC 1535.

⁵⁴ AIR 1987 SC 656.

⁵⁵ AIR 1954 Cal. 615.

⁵⁶ AIR 1955 SC 549.

⁵⁷ AIR 1964 SC 648.

⁵⁸ AIR (1959) Cal. 606.

conference, association or other body. In *Union of India v. Sukumar Sengupta*,⁵⁹ the Government of India leased in perpetuity “Teen Bigha” connecting Bangladesh enclaves of Dahagram and Angerpota, surrounded by Indian Territory, with Panbari Manza of Bangladesh in accordance with 1974 and 1982 agreements between India and Bangladesh, so as to enable Bangladesh to exercise her sovereignty over those enclaves. The Court held that the implementation of these agreements, as far as “Teen Bigha” was concerned, did not amount to cession of the said territory or transfer of sovereignty in respect of the same and did not require any constitutional amendment.

Legislations in connotation to International Law: International Treaties are enforceable in India when they are incorporated into domestic law by Parliamentary legislations, which can be seen in a number of legislations, such as:

- The Diplomatic Relations (Vienna Convention) Act, 1972.
- The SAARC Convention (Suppression of Terrorism) Act, 1993.
- The Territorial Water, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act, 1976.
- The Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981.
- The Chemical Weapons Convention Act, 2000.

Domestic Implementation of International Air Law in India: Globally, civil aviation is undergoing technological advances in several areas which have impact on agreements. A major supporting development for the aviation industry in most parts of the world has been the globalization and liberalization of economies and an increasingly active role for the private sector in the economic development of the countries. These economic changes brought about structural changes in civil aviation throughout the world and also in the approach towards bilateral agreements and open skies. In 1944, the international aviation community and representatives of various States organised a major international conference in Chicago to consider regulation of international air transport with a view to developing and ensuring safe secure, efficient, and economical international air transport services and to avoid arbitrary action of the States which could hinder such development. This conference culminated in signing of three major agreements, which may be described as follows:

(a) Convention on International Civil Aviation (The Chicago Convention):

The first agreement was the Chicago Convention to which presently 189 States, including India are signatories. This Convention established the International Civil Aviation Organisation (ICAO) and the primary basis for the regulation and development of international airports. The provisions of the Convention are binding on all the Contracting States. The ICAO has a General Assembly which meets at least every three years. It has also a permanent governing Council with 36 members of which India is a member.

(b) International Air Services Transit Agreement: This agreement provided for multilateral exchange of first two rights of freedom, namely, Overflight, i.e., the right to fly across the territory of other contracting States without landing. And Non traffic stop for scheduled air services among its contracting States, i.e., the right to land for non-traffic purposes.

As many as 122 States have ratified this agreement, including India.

(c) International Air Transport Agreement:

This agreement was intended to for grant of the right to five freedoms of air. This agreement was to have a far reaching effect in liberalising international air transport operation and grant

⁵⁹ AIR 1990 SC 1692.

of traffic rights. However, only 19 States could ratify this agreement, thus, this agreement is of no proper use in the international air transport regime. India is not a signatory to this agreement. Had this agreement been ratified by the States, the shape of international air transport would have been different from what it is today, as there would be no need of any bilateral or regional agreements. India today has a large civil aviation network. There are 122 airports in the country today, out of which 11 are international airports, which are maintained by the International Airport Authority of India, established in 1986.

There are a number of legislations that have come into practice on the pipeline of international air law norms, such as, the Airship Act, 1911, a pre-independence Act which in itself is a unique feature in the world, the Air Corporations (Transfer of Undertakings and Repeal) Act, 1994 which came into existence after the repeal of the previous Airport Corporation Act, 1953, the Airport Authority Act, 1994, w.e.f. 1995, the Aircraft Rules, 1937, the Airport Infrastructure Policy, 1997, the Aviation Policy, 2000, to name a few. At the normative level, the Aircraft Act, 1934 created the fundamental legislative framework for manufacture, possession, use, operation, sale, import and export of aircraft in India while the Carriage By Air Act, 1972 implemented the Warsaw Convention, 1929 in India. These legislations have been supplemented by host of statutory rules and notifications covering different aspects of aircraft operations and several security related enactments like the Tokyo Convention Act, 1975 and the Anti Hijacking Act, 1982.

After years of talks and negotiation, the “open skies” Air Transport Agreement between the United States of America and India was signed on 14.04.2005 opening a new era in civil aviation partnership. Although there are a number of rules and regulations that have been covering the aviation sector in India, but still there are a number of problems that are prevalent even today which need immediate attention. In spite of all such struggle, the Indian aviation industry is one of the most prosperous one in the world which needs a positive effort from the Indian government to implement various international Conventions.

MODULE – II
INTRODUCTION TO
INTERNATIONAL
AIR LAW

MODULE – II: INTRODUCTION TO INTERNATIONAL AIR LAW

Introduction: International aviation law is an important phase of international law which has undergone massive change since the 1st world war. It's mostly because of the momentous technological developments of the present century, but the legal rules have a varied and an interesting history not all of which can be classified as modern. Paris convention in the year of 1919 was one of the 1st developments in terms of international law, the question of the control of international aviation has been opened in the modern period by the turn of the present century international aviation law in common with other branches of the law of nations has drawn extensively upon other segments of judicial science. This has been especially true in its relation to maritime law.

International Aviation Law covers the rules which apply to both domestic as well as international aviation. These rules are the one which govern the complex relationship between states, service providers and the passengers. The rules also rule the impact of aviation on the environment and on the individuals affected by aircrafts operations as well. Air law is found on the grounds of aviation in the process of achieving the next phase of development and interest in larger circles as well for example when a person boards a flight from London to Singapore and he suddenly reads the small print on the ticket actually he is bound by the terms and conditions of the Warsaw convention. It will be useful to possess some means of appreciating the benefits and disadvantages of the rules to which he has become bound. Besides, Air law is intertwined with other areas of laws. It involves many aspects of Constitution law, Administrative Law, Civil law, Commercial law and especially Criminal Law. Its international nature is always paramount.

History of Aviation and Air Regulations: The history of aviation is indeed one of the major success stories of the mankind the early flying started with the kites, then it slowly graduated to balloons and then to heavy air machines. The early aviators and experimenters worked hard and risked their lives to achieve the feat of flying, which ultimately could be accomplished. It is one of the most important discoveries it reminds us to remember in the thanks giving of the most important adventure made by man that flying became the most safe, fast and efficient way of travelling . In this chapter, an endeavor has been made to recapitulate the story of aviation in a historical perspective, collating certain scarcely known facts and recently researched manuscripts.

The Early Attempts: The annals record that an English Monk and philosopher Roger Bacon (1214-1294) has designed the flying chariot. So had the famous Italian artist- scientist Leonardo da Vinci (1452- 1519). He also designed a mechanism which would enable man to operate a pair of flapping the wings by leg power but unfortunately this machine could never get built or tested . In 1507, John Damian, a philosopher and physician at the Court of James IV of Scotland, made for himself a pair of wings and launched from the high wall of the Sterling Castle in an attempt to fly; he fell to the ground and was lucky to escape with just a broken leg.⁶⁰ Several other similar attempts to fly with winged contraptions or dives from hilltops to achieve soft landing appear to have been undertaken for thrill and adventure, but with limited or no success. Many such experiments took a toll of tragedy caused by much the same blend of zeal and experimentation.

⁶⁰ Ibid, p.9.

Flight with Kites: The Kites were an instrument of man's earliest success in making a object which is heavier than air to fly in the air.⁶¹ It is on the record that kites of a huge size had been developed that could have lift a man and are known to have been used even for military purpose as early as by 17th century by the Chinese and the Japanese as well.⁶² There were initial attempts that the Greek general, Archytas, in the 40th BC, made several attempts to get airborne. One day, the Greek general stumbled upon a sharp incline which broke the fall and saved the Greek General. A Korean general had also once suspended a lantern from a kite as a morale boosting signal to his troops. And a Japanese bandit in an ingenious attempt stole his way into a castle by suspending himself from a large kite, presumable to steal some fish.

Airlift through Balloons: Another line of flying was the production of balloons, which provided ascent, gave freedom of movement to fly but precious little control. A priest named Francisco de Lana Terzi is believed to have produced the balloons which provided ascent, gave freedom of movement to fly but with precious little control. A Jesuit priest named Francisco de Lana Terzi is believed to have produced the first known design for a lighter-than-air craft in 1670. He had toyed with the idea of a "flying boat" with four hollow metallic spheres that would become lighter and float in the air; but it failed.⁶³ It was only in the latter half of the 18th century that enough knowledge had been gained and gathered in the Europe to travel through the medium of air by hot air balloon. The Montgolfier brothers, Joseph and Etienne followed this line of research to obtain lift to rise above the ground ad experiment with paper bags in the kitchen of their farm- houses near Lyon. Later, on 5 June, 1783, the two brothers, built a roaring fire in the market place of their native village, Annonay, and ascended a smoke filled balloon made of paper and linen."⁶⁴

On 19 September 1783, the Montgolfier's successfully demonstrated "in the presence of Louis XIV and his Court, in sending to a height of about 1500 feet, a silk balloon filled with hot air carrying a rooster, a sheep and a duck in a small gondola. All emerged safe from the experiment except that the rooster suffered a broken leg, probably from a kick by the sheep."⁶⁵ Shortly after this success, the king of France offered a criminal for experimentation in manned flight, but considering such pursuits worthy of "officers and gentlemen" two daring French courtiers went up instead. Thus, the marquis of Arlandes and M Pilatre de Rozier were to share the honor of being the first men to fly. They made a successful ascent in a wicker gondola swinging beneath a Montgolfier hot-air balloon from Bois de Boulogne, Paris on 21 November 1783. The aerostats, as the fliers were then called, stayed aloft for twenty-five minutes, rose at least 300 feet, covered a short distance of 25 miles and made a safe return to the ground."⁶⁶ The era of lighter-than-air craft had been ushered. In fact, the balloons soon became a common sight in the French skies and thereafter, the British, Americans, Russians, Poles and Italians joined the French pioneers in the balloon parade. They manufactured balloons for assorted uses.

⁶¹ Kites are believed to have been invented in China around 1000 B.C.

⁶² PC Swanborough, *Aircraft and Airpower*, (London, 1958), p. 2.

⁶³ John WR Taylor, ed., *Combat aircraft of the World*, (London, 1969), p. 8. However, Chinese are believed to have known for many centuries before that heated air weighs less and played with toys of hollow paper dragons inflated with hot air to send these aloft.

⁶⁴ Lynn Poole, *Ballooning in the Space Age*, (New York, 1958), p.11.

⁶⁵ DHN Johnson, *Rights in Air Space*, (Manchester, Manchester University Press, 1965), p. 7.

⁶⁶ Sir Robert Saundby, *Early Aviation—Man Conquers the Air*, (New York, 1971), p. 11. Also refer Lynn Poole, *Ballooning in the Space Age*, (New York, 1958). P. 14.

The scientists soon discovered that hydrogen being lighter than air could be used instead of hot air because as air cools it becomes relatively less lighter and the balloon tends to descend. So hydrogen balloons could ascend higher and stay longer in the sky. In 1783, J.A.C. Charles, a French physicist, had filled a silk balloon with hydrogen gas and sent aloft. But these were "free balloons" and depended on the mercy of winds. Till then, balloons could not be steered and perforce floated with the wind rather unmanoeuvred. These were unsatisfactory and hazardous too. Nevertheless, enthusiastic balloonists had been undertaking flights for the exhilarating experience or for scientific investigation. It is, of course, on record that balloons have ascended to the troposphere and even the stratosphere. The record height flown in a balloon so far is 1,02,000 feet. Chronicles have it that in August 1931, Piccard flew in a balloon to an altitude of nine and a half miles above the earth.⁶⁷

Airships and Dirigibles: The next stage of development was the construction of airships called "dirigibles or blimps" which remained aloft by buoyancy alone. These were based on the Archimedean principle and were actually an adaption of the balloons. It was designed in 1784 in cigar like shape by Meusnier, a French army officer but with no propulsion as the steam engine then existing was too heavy. For its success, the concept had to wait till the invention of petrol-driven engine in 1890. As yet, these had neither propelling force nor steering systems. But controls were gradually improvised. On 9 August 1884 a controlled flight in an electrically powered dirigible was accomplished. It was the airship, "La France" fabricated by Charles Renard and AC Krebs. It consisted of an envelope of Chinese silk and a car of bamboo trolley work. It possessed power and controls sufficient to return to the point of ascent and it made a circular flight of five miles.⁶⁸

Shortly afterwards in 1900, Count Graf Ferdinand von Zeppelin, a German army officer, developed an airship that was made of aluminum in large cigar-shaped streamlined hull, inside which were compartments filled with hydrogen gas. It had air-screws propelled by petrol engine. In July 1900 he flew in it over Lake Konstanz. Zeppelin was successful. By 1910 he had put in the air large passenger and cargo carrying airships which were self-propelled dirigibles, albeit lighter than air.⁶⁹ During the WW I, Zeppelins were used by German Air Force for dropping bombs over London. Later, in 1919, the huge German airship "Graf Zeppelin" flew round the world in twenty-one days. The success was widely hailed. Generically airships had many disadvantages, inter alia, their shape and huge size which made its control difficult in strong winds. Even greater danger came from fire because hydrogen catches fire easily. As a result, over the years the airships were involved in a series of accidents, and worst of these happened in 1937 to "Hindenberg" while landing at Lakehurst, New Jersey, U.S.A., in which 36 lives were lost and this brought an end to the age of airships. The tragedy was awesome and confidence shaken.

The Conquest of Air: Sir George Cayley, an English scientist (who died in 1857) is generally credited with establishing the basic principles of heavier-than-air flight.⁷⁰ He invented the glider in 1804 and foretold that given a suitable engine it could be converted into a flying machine. But it took pretty long to accomplish this aeronautical theory into practical application.

⁶⁷ Lynn Poole, *Ibid*, p.440.

⁶⁸ *Encyclopedia Britannica*, 1969. P.468.

⁶⁹ Zeppelin's LZ-13, *HANSA*, was a passenger carrying ship.

⁷⁰ REG Davies, *A History of World Airlines*, (London, 1954), p. 3.

Similar flights in heavier-than-air craft were made in 1855 by De Bris in a glider constructed on the principle of the wings of an albatross.⁷¹ But this flight too, primarily, remained at the mercy of the winds and afforded scant control to the flyer. Nevertheless, several similar flights in motor-less crafts were attempted by Lilienthal, Pilcher, Chanute and many others before the end of the nineteenth century. Aviation in Ancient India: Latest researches into ancient Sanskrit literature have established evidence of flying in India in the hoary past. They have revealed the existence of certain manuscripts, one of which is entitled “*Yantra Sarwaswa*” or Encyclopaedia of Machines. This tome is believed to be written by Maharshi Bharadwaj presumably around 2000 B.C. A part of this encyclopedia is captioned *Vimanika Sastra* (Aircraft Manual). The script of this *Shastra* is in Sanskrit and has been retold by word of mouth down the generations. In the recent past this has been expounded and predicated by Subbaraya Sastri nearly a century ago. This has now been translated and published in English.⁷²

It is interesting to find in this book, intricate details of aerodynamic designs, manufacturing technology, metallurgical composition and construction procedures of aircraft. It contains designs of VTOL vehicles as also double and treble-decker aircraft. It bears amazing concepts of sophisticated radio and radar and precision photography. It also mentions of techniques to harness different types of energies, integral and ambient, though “*Darpan*” meaning mirrors and lens. In all probability this is an allusion to harnessing of solar energy. A few *slokas* (stanzas) of this *Shastra* even deal with the qualification and training of pilots and the kind of food and clothing to be provided according to seasons to keep them fit for flying. It discusses of specially processed, treated and anointed clothing. Regarding food it recommends five meals a day and food balls described as “*Tadabhavaay-Satva Golavaah*” which seems comparable to energy/vitamin pills of today. As per this text a flier is not only a trained professional, but a Yogi who has mastered 32 secrets of the “*Vimaan*”, the aircraft hardware, and “*Uddaan*”, the flying skill. It is hard to dismiss this manuscript as fantasy, or as a feat of clairvoyance; it sure is a glory of ancient India that stayed hidden for long in the sands of time.

Authenticated First Flight: In the recent past the first ever authenticated, controlled or sustained flight by a man in a power driven, heavier than air machines was achieved in the United States of America on 17th December 1903 by the wright brothers Orville and Wilbur Wright. Their vehicle was a biplane which was equipped with an elevator, rudder and wrapping wings which measured 40 feet from end to end and was about 6 feet apart. The engine was placed little right to the center on the lower wing and pilot had to lie flat on his stomach to the left of the center to keep the machine in the balance. It was powered by the petrol engine driving of air screws now days called a propeller. A series of five making flights were taken by the wright brothers on a flat beach at the foot of the Big Kill Devil sand dunes near Kitty Hawk, North Carolina, U.S.A the first flight flown in by Orville lasted for about 12 seconds and landed 120 feet from the point of the takeoff it was a small flight, but an important invention and a big forward movement which a man had conquered the air. There was a lot of initial disbelief but as patience is the key to everything the Wright brothers kept on working at their invention to improving it in various ways. By 1905 aero plane could fly an hour covering a distance of almost 25 miles.

There is, however another school of aviation history and research headed by Major William O’ Dwyer , which apparently says that the Wright brothers were beaten into the air by more

⁷¹ Shawcross, Beaumont and Browne, *Shawcross and Beaumont on Air Law*, (London, 2nd Edition, 1951), p. 3.

⁷² Maharishi Bharadwaj, *Vyamaanika Shastra-Aeronautics*, propounded by Subbaraya Sastri and translated into English by GR Josyer, published for International Academy for Sanskrit Research, Mysore in 1973.

than 2 years. According to the Major William the first to fly airplane was Gustav Whitehead, a German engineer and an immigrant, who dies in Bridgeport in 1927 at the age of 53. Whitehead's flight was undertaken in 1901 off Lordship beach in Connecticut, USA and the Major General William flew in a butterfly shaped acetylene powered monoplane. Initially there were attempts to fly an aircraft by steam engines but in such an effort it crashed against a wall hence the attention was switched towards acetylene engine. In the end the aircraft was built with 3 such engines linked to the two large propellers. The wings of the aircraft could be folded so that it could have been driven out to the field it was an aircraft which flew on 14th august 1901 it was initially flown for half a mile at an height not less than 3 feet above the ground.

Experiments in Europe: It is quiet contrary that similar experiments were also being made in Europe at that point of time when experiments were being conducted in some parts of the USA. There was a practical aircraft designed by Langley which was capable of flight under its own power. Again Alberto Santo Dumont, a Brazilian engineer, experimented in France to get airborne. The other experiments and the later successful aviators were Lilienthal, Ferber and Cody. Success came early for Dumont and he was the first one to get airborne in Europe in an Aero Plane which was on 13th September 1906. This accomplishment stirred a lot of public enthusiasm and evinced great interest. On this news, Lord Northcliffe, the British press magnate commented: "This news is not that man can fly, but that England is no longer an island."⁷³ Then even on 25th July 1909, Bleriot was one of the first men to fly across the English Channel the vehicle was a monoplane and was flown from Baroques near Calais to Dover and during the same time on 3rd November 1909 Henry Farman flew 144 miles in approximately 4 hours and 6 minutes with these proven flights which gave people a new realization, the traditional foundations of the military strategy and the age old concepts of the national defense were rudely shaken. The security of international boundaries can no longer be achieved by land fortifications or the navy blockades the mankind had conquered a new frontier and nations now had no aerial shores.

The Early Uses of Aircraft: There is no doubt about the fact that the aircrafts were initially used for military purposes and its exploitation for the combat roles. Therefore in the beginning itself only the aircraft which were of military potential and sporting uses were envisioned and recognized. The airships and aero planes were then deployed for tactical reconnaissance and even for bombing purposes as well reflecting the potential that aerial warfare can be a new trend in order to fight the war, Orville Wright in 1917 wrote "what a dream it was, what a nightmare it has become."⁷⁴ However on the other hand, flying was a passion for the enthusiast, hobby for the rich people who generally took part in the air races, aerial demonstrations and for the joy rides. Despite these romantic exploits of adventure, the aircraft was also used for functional purposes such as the airmail services which soon proved the potential of the aircraft for other purposes rather than military. There was a new vista for the new mode of transportation which had been opened, and the suitability for commercial transport of mail, passenger and even cargo became very viable pretty soon.

Further development of aviation has been between two conflicting architectural requirements and circumstantial compulsions for the combat as well as for commerce. During the wars, it was the combat demands which led to the development and during the time when world was at peace the commercial utilization got the fillip. This was due to the fact of maneuverability

⁷³ Eugene M Emme, *The Impact of Air Power*, (1965), p. 5.

⁷⁴ John Taylor, n. 6 *supra*, p. 13.

and stability in aeronautics which are mutually antithetical. It's a proven fact that combat needs speed and maneuverability and commerce demands stability and safety. It is a recent development that both lines of requirement, defense and civil have got separated and at the same time harmoniously shared the fruit of technological advance while continuing to grow their own stature, identity and the specific roles as well.

The Growth of Air Carriers: The main credit for the formation of a genuine operating company established was with a view to carry passengers to go to Germany. Even before the WW-I, Count von Zeppelin, the fanatical crusader and the main visionary of the air travel, had formed an airline named DELAG on 16th October 1990, with a capital of around 3 million marks and with a fleet of 6 Zeppelin airships. The airline operated scheduled services between Friedrichshafen and Dusseldorf. However there is a controversy to the fact that whether DELAG was the world's first regular passenger airline or not or was it mostly for the joy ride purposes and for the pleasure trips. But with the stats from the period of March 1912 to November 1913 there were around 881 flights which were undertaken and covered around 65,000 miles and carried around 19,100 passengers.⁷⁵

However this data cannot be the one which can be completely banked given the fact that those were the times when aviation was not very developed the aircrafts had small capacity and the speeds were in fact quite low of the aircraft at that point of time. Even in the United States, the flights which were made by the wright brothers elicited no official recognition as such and neither there was any state patronage as well. The public at large were quite indifferent, towards this brilliant development. Despite the development happening quite early the first attempt to operate the commercial flight was taken in 1914 by a company called St. Petersburg-Tampa airboat line in 1914. In the USA, commercial aviation took off quite slow there were multiple factors such as wide distances which made air travel not very feasible and there were other modes of comfortable transportation also available too.

England too, though well aware of the aviation developments in Europe and elsewhere, made little contribution on its part in the early stages of the growth of aviation. In France, however, greater interest was stimulated but it was largely oriented towards military applications of aviation technology. For the Soviet Union no authentic records of the development of aviation are readily available and very little is known of any chronicled efforts. Nevertheless, Aeroflot, the domestic and international flag carrier of the Soviet Union (till its disintegration), was acknowledged as the largest airline in the world despite its classified balance sheet and well-guarded secret of aircraft possessions.

Formation of Air Force: Historically, France was one of the first nations to have an air force in the world with approximately 200 planes. Its fleet mostly comprised of the Farman biplanes, the Newport's and Antoinette monoplanes. With the development of the military aero planes it ensured faster speed, greater maneuverability, altitude attainment, higher payload and suitability for multiple weapon configurations as well.

Gradually, the concept of air power became more clearer and specific aircrafts were used for specialized roles for example, air superiority, air defense, ground attack, tactical air support, tactical and strategic reconnaissance, deep penetration strikes, strategic bombings have been designed and manufactured as well.

On military transport side there has been huge developments on similar lines for discrete requirement of air communication, medium transport and strategic airlift and so on. The

⁷⁵ Davies, n. 15 *supra*, p. 5.

military specification has often been harmonized with the civil considerations of transport airlines as well. However in terms and design and technology the development has been made continuously and the military transport aircraft have a low demand for comfort and noise abatement.

The Legacy of First World War: Over a period of time aircraft slowly and steadily aircraft continued to improve in size, strength, speed, power, range, capacity. The aviation industry banked upon these technological improvements and design developments in high urgency due to the outbreak of the WWI. During this period of time a few aircrafts flew in the European skies and majority of the resources were requisitioned in order to support the military objectives. Aircrafts came to be acknowledged as a valuable instrument of war and a proven man made soldier for defense. With the end of the war in 1919, where majority of the impact was in the Europe it finally woke up from the nightmare of war and an unprecedented supply of the military aircraft. Then with so many aircrafts in abundance there were efforts on exploring alternative uses and feasibility of converting the combat aircraft to the tools of commerce.

There were constant moves going on in Britain, France and Germany to convert the military aircraft which would be suitable for civil transport as well. With the outbreak of war major European nations had developed viable networks of airfields, an infrastructure of allied facilities, a conducive environment for air mindedness and moreover a viable fund of trained manpower. Despite Germany's defeat in the WWI it was one of the first nations to introduce a commercial service between Berlin and Weimar on 5Th February 1919. Soon a company named DLR was founded by a syndicate of AEG, Zeppelin and other companies, and then Farman operated air services in France with Goliath aircraft which provided a cabin to protect its passengers from the elements of nature. Then in the year 1920 KLM established its presence on the aerial map with a service from Amsterdam to London. By 1924 Imperial Airways had also been formed in Britain with the merger of Hedley Page, Daimler and other companies there were air carriers in Europe growing around. Without any doubt the Germans were the ones who started the first sustained, schedule passenger services in the world, the French were quickly able to establish a wide network easily heading in the field of volume of infrastructure, the British were able to set a new standards of concentrated service with regularity and punctuality as well. All this happened within a few months during the 1919, the first year of the air transport⁷⁶. The aviation developments were happening pretty fast and 1919 was again the year when first international convention on aerial navigation emerged. The commercial air traffic soon increased and led to the adoption of another convention on liability for air accidents or for the unification of certain rules relating to international carriage by air, which is known as the Warsaw convention, 1929.

In the United States, however, there was an initial hesitation in the recognition of the aero plane as a potential mode of passenger transport reason being that since the speed of aircraft provided insufficient advantage over luxury trains like the American Pullman. That's the main reason majorly because of which air carrier was treated purely incidental and no incentives were received from the government as well.

Influence of the Second War: After almost completion of two decades since the WWI, the development of aeronautics made rapid progress in aircraft technology, avionics and operation of international airlines as well. The aircraft manufacturing had also changed from

⁷⁶ Davies, Ibid, p. 11.

an open air stick and string biplane to a comfortably cabined all metal monoplanes. The multiple engine aircraft which provided improved performance, greater safety and increased dependability and even on the economic front, with a continued reliance of the airlines on state subsidies was resented by the managers of exchequers so that this economic dependence had to be minimized, if not completely eliminated. Then with outbreak of another war in the year 1939, it resulted in the diversion of majority of resources towards the military. Majority of the private and commercial flying remain suspended during the time of war, however there were exceptions such as civil air services operated by the British overseas airlines corporation over the neutral territories.

In this particular war the air forces played a major role over the years, the brood of aircraft and supporting manpower increased exponentially. Small wonder at the end was for the civil aviation a benign and rich legacy of wide variety of aircrafts, number of airfields, skilled aviators and vast developed infrastructure facilities as well. With these benefits it was fully exploited by the industry and airline route map was well established on the globe as well and moreover there was a definite shape reflecting maturity and density of operations. The civil aviation became a matter of national prestige and almost every nation endeavored to own a flag carrier fleet. Operating an airline became a matter of a status symbol the aviation industry was self-sustaining and after a while it became a profitable commercial business as well and the air travel became a popular mode of transportation and a necessity for communicating long distances was fast becoming a compulsion as well.⁷⁷

The air carriage also became truly international with the introduction of the international flights and came in sharp relief as a problem concerning the lack of uniformity and standardization in the international carriage by air and in the concomitant liability regime with vivid focus on the inadequacies of the Warsaw convention as well. This period also witnessed the emergence of several international organizations which were exclusive in the field of the international civil aviation such as the IATA which was responsible for the coordinated and nurtured interline cooperation. The International Civil Aviation organizations which was established under the Chicago Convention of 1944 which is responsible for the aerial traffic management, flight safety and the navigational standards along with this there were a few regional organizations which were also formed in Europe and the American continent in order to monitor and co-ordinate the local commercial aspects of the aviation as well.

The Jet Revolution: The Development initiated during the WWII reached the highest point in the late 50s in the jet revolution where a crop of fast and sophisticated breed of airliners like Boeings and DC versions which were relatively faster , luxurious , comfortable and incredibly commodious as well .⁷⁸ Air Transport became a competitive alternative and an attractive mode of international travel the air mindedness was growing at a speedy pace and so was the traffic for carriage of goods by the air. To meet the ever growing demand for airliners, manufacturers manufactured efficient aircrafts which produced efficient powers, speed and payload with the jet breed of engine and wide body airframes as well. Hence, aircrafts like the B747 the Jumbo Jet which is high in capacity and speed. The Concorde aircraft which was developed by the French and the TU 155(Supersonic Transport) of the

⁷⁷ Davies, Ibid, p. 398.

⁷⁸ Pan-American Airways was the first airline to introduce Boeing 707 jet aircraft in 1958.

Soviet Union. However these aircrafts were not such as Concorde and TU 144 were not very popular reasons being because of the noise, boom and the high amount of pollution as well.⁷⁹

The Future Aircraft: Over the years, there has been a massive change in aircrafts in terms of cruising speed, flight safety, payloads, maneuverability, avionics and the military punch. With the coming of the jet revolution it has been like a blessing in disguise with a greater thrust on speed as well as altitude as a result combat as well as commercial aircraft came to be designed and manufactured with judicious combinations of power as well as aerodynamics by blending the refined jet engines to a suitable airframe structure whether the wide body or narrow body sleek aero dynamic delta wings and swing wings for the supersonics as well. The cargo liners are currently being designed to take off with over 4, 53,000 kg of AUW(all-up-weight) and gross payload of 1, 54, 00o kg to fly nonstop over a range of 6800 KM with a facility of inflight fueling as well.⁸⁰

However, now days there are trends to develop the aircraft of greater economic viability with better passenger comfort. Therefore the future airliners like B777-300ER, B747-8 and A350XWB are valuable asset for an airline which is able to achieve an optimum mix of passenger as well as cargo and give the airlines optimal profits. Even on the technology front as well there has been a revolution in terms of the aircraft material and transmission system. The new types of aircrafts which are manufactured with materials consisting of carbon fiber re- enforced plastic and graphite- epoxy composites. Even, for the pilot as well flying has becomes easier with the technological advancement and other gadgets such as the weather radar now a days majority of the cockpit are digital which controls the flight.

Genesis of Air Regulations: Isolated instances and incumbent exigencies have led to the birth of Air Regulations which as composite corpus constitute Air Law. This development has neither been systematic nor planned nor holistic but sporadic and need-based to address the challenges faced like issue of sovereignty in airspace, law on hijacking and terrorist threats or liability regimes to harmonies airline-passenger relationships and so on. Even today, Air Law faces the same dilemma. This section researches the genesis of various air regulations and their ultimate culmination into treaty law of international standing and binding nature. This effort is illustrative and not comprehensive. It sure needs attention of dedicated scholars.

The First Air Law: The earliest known regulation of aerial activity dates back to 1783 AD. That was the era of hot-air balloons and these had become particularly popular and promiscuous in France. The fashion for hot-air balloons spread to the extent of being used as an alternative to other modes of transportation, apart as an hobby sport. For example, Alberto Dumont, a Brazilian business magnate, settled in Paris was accustomed to using his air balloon to commute to his club in promiscuous display of wealth. Thus hot-air balloons became a common sight in France and particularly in the Paris skies. These came to be used for adventure and sport as well as for scientific experiments and military uses. The congestion in the airspace became acute for safety of all; and crowds of watchers so disturbing to smooth traffic and public order. As a precaution to curb reckless flying and unsafe experimentation, the Paris Police issued a Decree in 1794 mandating to procure a

⁷⁹ The US also, in the mid-sixties of the last century, commenced development of SST, but this project was abandoned in 1971 for “political, environmental and socio-economic reasons.” See Nawal K Taneja, *The Commercial Airline Industry*, (Lexington, 1976), p. 15.

⁸⁰ *ICAO Bulletin*, December, 1958.

permit or so called license for flying of a Montgolfier balloon.⁸¹ This was, sort of a first air law to regulate and control aerial activity in public interest and for the safety considerations.

The First Passport: A document resembling in purpose and object of the passport was first created in the U.S.A in 1793. It happened because of the fashion of balloon flying spread to the British, American and the Russian enthusiast. Blanchard, a well-known flyer, decided to undertake a cross country flying expedition in a hot-air balloon. For his safety, Blanchard was issued a letter by the US government addressed to the people of the United States of America by declaring his identity and not to harm him. It had become necessary because of the recent balloon crash in rural- side England where the local farmers took the heaving balloon as a devil and beat it up in all this it led the pilot to sustain injuries. This letter was signed by George Washington, the then president of the USA and incidentally, this was to be the first letter flown by air on 9th January, 1793.⁸²

Regulation of Aerial Navigation: The crowded skies of Paris were scaring for accidents and law and order. But apart from regulation through permits to mitigate the menace, no serious effort was made at effective management of the aerial navigation. On the contrary the problem became less severe with the introduction of the licensing curbs and was forgotten till commercial aviation took to the skies and ventured into international destinations. Then Sovereignty in the air became an important issue. From times immemorial the right to airspace customarily vested in the land owner is respect to superjacent air over his fields. This customary norm has been based on the maxim, “*cujus est solum, ejus debet esse usque ad coelum*” meaning the owner of land rightfully owns his sky.⁸³ This maxim was accorded judicial approval in the case of *Bury vs. Pope* (1586 AD) where this norm constitutes the *ratio* of the judgment.⁸⁴ This view, however, changed, in public interest policy, when aircraft started using airspace.⁸⁵

The French jurist, Paul Fauchille was the first to draw attention to this concern and suggested to frame regulations for aerial navigation in early twentieth century. As commercial international air carriage had started taking roots, he along with continental colleagues, suggested of Free Air Theory where there was freedom to navigate in airspace without let or hindrance. But in contrast, the scholars of British Empire like Coke and Blackstone stressed on property rights and advocated national sovereignty over national airspace.⁸⁶

The First World War: The argument was rationalized for the reasons of safety, security and national defense because of the experience of the WWI which was still fresh in the minds of the countries. During the time of the world war one civil aircraft flew while other kinds of military aircraft were developed by the belligerent parties. Aircrafts were used in massive numbers and in all sorts of roles, such as aerial combat, reconnaissance, bombing, ground attacks and even the naval warfare. After the WWI from 1914-19 the aerial technology had gone major changes as well as improvements as well. The thinking has also developed about the awareness of the connection between national security and national sovereignty of the

⁸¹ CN Shawcross, KM Beaumont and PRE Brown, *Shawcross and Beaumont on Air Law* (London, 2nd Edition, 1951), vol. I, p. 3.

⁸² Lynn Poole, *Ballooning in the Space Age*, (New York, 1958), p.440. Incidentally, in the US, the first ascent in a balloon was made in 1784 by Edward Warren, a 13-year old boy, at Baltimore, Maryland. Refer CN Shawcross at n. 27 supra, p. 15.

⁸³ A Mc Nair, *The Law of the Air*, (London, Stevens & Sons, 1964), p. 395.

⁸⁴ Ibid. p. 396

⁸⁵ For a detailed analysis on the historical aspect refer GS Sachdeva, “Sovereignty in the Air” in *IJIL*, Vol 22, No 3&4, July-December, 1982.

⁸⁶ DHN Johnson, *Rights in Air Space*, (Manchester, Manchester University Press, 1965), p. 14.

airspace. Europe was one of the first continent where scheduled air services began the first air services began between Paris and London in February 1919 and then between Paris and Brussels in March the same Year. This need for the already existing agreements to be gathered into a convention led to a second Paris Convention in 1919.

The Paris Convention of 1919: After the end of the WWI in the year 1919 post war peace conference took place in Paris where all major parties of the world community had assembled. The Paris convention was one of the first legal instruments to enter into force in the field of the air law, but although it took time to be implemented in the efficient manner. The convention was ratified by 32 states, the outcome of the convention showed stronger support for complete and exclusive sovereignty of the air space. This convention despite being successful was never implemented by the United States and the majority of the South American Republics. These nations adopted their own convention nine years later; in Havana the convention's first article confirmed what had become customary law and thereby was also applicable to states not parties of the 1919 Convention The Paris Convention of 1919 discussed about the issue of freedom of innocent passage but there was nothing about the freedom of civil aviation that it does not include the right to land in a foreign country. Overall, the convention established a system with rules overseeing the use and flight if aircraft over the territories of and between the member states. There was permanent committee established as well to administer of the convention. Then there were annexes which were added regarding other things which include the standard of airworthiness and the certificates of competency for the crewmembers. Further, the convention also established the International Commission of Air Navigation, ICAN was given a wide range of supervisory powers in the technological area as well. The convention also included the first accepted definition of the aircraft the definition was overtaken by the 1944 Chicago Convention and has not changed until the 1967 when the ICAO produced the new definition. Civil aviation was practically nonexistent at the time of the Paris Convention and the only major branches of flying were either military or postal.

Passenger Liability in Air Accidents: Count Von Zeppelin, a German crusader and a visionary for air travel, was one of the first to form an airline called DELAG in 1909. The airline operated scheduled services between Friedrichshafen and Dusseldorf by self-propelled dirigibles, albeit lighter than the air. However these huge German airships were too difficult to control in strong winds and there was a bigger danger which arose from the inflammability of the Hydrogen gas.⁸⁷ Over the years a lot of accidents happened due to airships but the worst one happened in Hindenburg as Lakehurst, New Jersey in which around 36 lives were lost with the liability claims it les DELAG bankrupt. Following the footsteps of Germany, airlines grew around Europe and Americas. Most of the airlines had its own ticketing format and contractual conditions. Liability was unlimited but passengers had to face a lot of harassment for the claims and carries most of the time were successful in evading the compensation. Protection of passengers was a necessity and with those efforts it resulted in IATA common code of 1919 and Paris convention of 1925. The IATA code was an eye wash as it still carried pro-carrier bias which had a significant risk factor and the peculiarities of carriage by air vis a vis other modes of transport as well. Another blow to the passengers came from the traditional view of the British courts which had accepted the plea of common carriers to contract out liability obligations almost to the limit of unconscionable and arbitrary. The case in question is *Nicolson vs. William*.⁸⁸

⁸⁷ Zeppelin's LZ-13, *HANSA*, was a passenger carrying airship.

⁸⁸ 102 ER 1164 (KB 1804)

However on the contrary the American courts were more inclined towards the public interest and have been favorable to a public policy which limits the quantum of damages to a reasonable ceiling.⁸⁹ This seemed like a necessity for the computation of risk and even for the insurance policy. This aspect was later viewed in the Warsaw convention as well. Then came the Warsaw Convention, 1929. This almost equalized the interest of both parties and stood on equity. This Convention unified rules of procedure and standardized contract documents. It put a ceiling on global liability per passenger to provide air carriers certainty on quantum of compensation payable and thus seek underwriting of their risk. Lastly, it simplified evidentiary procedure under the principle of *res ipsa loquitur*.⁹⁰ The Warsaw Convention has been amended and updated resulting in an improved version called Montreal Convention, 1999.

In Between Wars: In the following years more conferences were held regarding the development of civil aviation. The 1926 Madrid conference had close resemblance to that of the Paris convention. The 1928 Havana conference was a small step forward, it was neither very technical in nature like the Paris convention of 1919 nor there were many measures taken in terms of uniformity in air traffic regulations or something in terms of ICAN. The Havana convention was more Pan American on Civil Aviation; the convention's article 4 spoke of the freedom of innocent overflight but did not contain any sort of regulation in the freedom of the regular airlines. The Havana convention was equivalent to the Paris convention for the United States and the South American states. With the political situation stabilizing in Europe the nations were keen on tapping the potential of aviation. The aircraft development entered a new stage the flying machines became bigger, faster and efficient when entered upon.

For example, the annual international competition between countries for the Schneider Trophy had since 1913 occupied the minds of many of the European and American aircraft constructors. It continued after World War One and the British winner of the competition in 1931, which brought the trophy permanently to Great Britain, after winning three consecutive races, was built by Super marine and was the forerunner of the famous Spitfire fighter of World War Two. The first functional jet engine was developed in 1933 but was not yet ready to supersede the propeller engine.

However there were only a few passengers' planes which were developed during the period of peace as new series of conflicts broke out in Asia and Europe, then there was a bigger need for the strategic bombers and transporters became a necessary commodity for the allied power and their counterparts as well. These were later to stand as a model for pure passenger aircrafts or they were simply rebuilt after the war to serve in general. After 1939 crossing the oceans became a reality reason being the WWII where major efforts were put to find a common legal basis for international civil aviation indefinitely. The world stage was set for a new convention that would replace all the parallel conventions above.

Liability for Third-Party Damage on the Surface: Aerial activity is hazardous by the in general nature of flying and there is a constant dependency on the skills of the pilot and are also subjected to the external conditions such as the meteorological conditions and the technical failures. Therefore chances of accidents are minimal as there is utmost caution

⁸⁹ Georgette Miller, *Liability in International Air Transport*, (New York, 1977), p. 177. Cited from JC Batra, *International Air Law*, (New Delhi, Reliance Publishing House, 2003), pp.31-2.

⁹⁰ For a detailed analysis on the subject, refer GS Sachdeva, *International Transportation:law of Carriage by Air*, (New Delhi, Deep & Deep Publications, 1987).

exercised in order to maintain the aircrafts as well keeping the weather into consideration. For Example. If an aircraft is flying from Kochi to Agatti Island in Lakshadweep the pilots will be in constant touch with the metrological department of Agatti Island and if the weather worsens in route the pilots will immediately turn back the aircraft to Kochi. This dictum gets support from one of the earliest recorded accident that occurred in 1822. It was a case of bad landing by an air balloon that crashed onto the standing crop causing much loss and distress to the owner of the field. The case went to the Court for judgment on liability and compensation of loss suffered by the farmer. The Judge “imposed absolute and unlimited liability on the unfortunate aviator.”⁹¹ The judgment disregarded mitigating circumstances pleaded by the flyer and strict third-party liability was upheld and damages awarded as per principle of “*restitutio in integrum*.”⁹² In a way, this was the harbinger of liability regime of aviation and direct ancestor of the Rome Convention, 1952.⁹³

Laws of Offences against Aviation: In the beginning aircraft was viewed as a sight with awe and admiration. The Air Travel initially was very expensive and only the ultra-rich could afford to travel. The Air Travelers were viewed with an awe, etiquette and for a snob value. Therefore there was no chance of Crime on board the aircraft. But human nature unfortunately was always contradictory in nature; the passengers specially the first timers were constantly needed to be reminded of their duty to keep their seat belts fastened at all times especially when the captain switches on the seat belt sign. Therefore in order to meet this necessity, apart from help and hospitality, air hostess were recruited as a cadre of cabin crew that has grown with a purpose and responsibilities. The first air hostess to be appointed was Ellen Churchill in the year 1930. In the early years only the ultra-rich could afford to fly and their behavior was mostly in decent towards the air hostess. However when fliers were pampered with drinks in flight there was an in general change in the attitudes of the, air passengers grew a bit rowdy and started expecting quid pro quo for the money which they had paid. Indiscipline became a common sight as a result of it once the aircraft pushed back from the gate the captain of the flight was given the powers to taken major decisions and to ensure order in flight and the overall safety of the crew as well as aircraft. In a recent incident, a maniac passenger tried to bite an air hostess but was overpowered by fellow passengers.⁹⁴

The commander of the aircraft is given the legal powers to overpower the rowdy and unruly air passenger, which poses the risk to safety of flight and even to the other fellow passengers as well. These powers as well as the legal immunity are mentioned in article 10 of the Chicago convention of the year 1944 and were reiterated in the Tokyo convention, of 1963. But the worst was even the hijacking of the aircrafts, damages at airports, parked aircrafts and the cybercrimes. Today aviation safety is threatened in many ways in the air as well on the ground mostly because of the presence of the terrorist groups in and around the world. Thus, it is this innocuous clause on powers of the commander which has grown into a large corpus of law of offences against aviation security comprising The Hague Convention, 1970, the Montreal Convention, 1971, the Montreal Protocol, 1988 and the Convention on Marking of Explosive Material and the Beijing Convention, 2014.

⁹¹ Aleksander Tobolewski, *Monetary Limitations of Liability in Air Law*, (Montreal, 1986), p. 72.

⁹² A Kocourek, *Sources of Ancient and Primitive Laws, Part III*, (Boston, 1915), p.123. Cited from JC Batra, *International Air Law*, (New Delhi, Reliance Publishing House, 2003), p. 29.

⁹³ *Convention on Damage caused by Foreign Aircraft to Third-Parties on the Surface*. Signed at Rome on 7 October, 1952.

⁹⁴ *The Times of India*, (Chandigarh Edition), November 4, 2011

Regulation of Military Uses of Aircraft: Aerial vehicles right from the time of kites and balloons have been used for offensive as well as defensive purposes as well. The strategic deployment of the balloon did not taste any success and caused more collateral damage than the targeted objects, Reason being that the bombs were dropped manually without the aid of the optical telescopic devices and these objects fell because of the speed which is determined by the gravity. This was quite often disturbed by weather conditions like wind speed, clouds and rain etc. The damage to the civil property and death and injuries of the civilians was totally unacceptable and there was an in general public outrage at such gross misuse of weapons that was inaccurate. These developments led to the Hague conference in July, 1899 which deliberated an international declaration which prohibits the discharge of projectiles and explosive from the air balloons. Subsequently many more prohibitions, like ban on napalm bombs, from aircraft have been promulgated leading to a considerable corpus on the laws of Air Warfare yet the Hague Declaration remains the seed for regulation of military uses of aircraft.

The Chicago Convention on International Civil Aviation: On 1st November 1944, when the allied powers started slowly and steadily toward victory in Europe and Asia, the president of the U.S.A invited all the allied powers together with neutral governments for a conference in Chicago regarding civil aviation. The aim was to come together for the future and make the best use of the air and space in as efficient manner as possible. The U.S.A president Franklin .D. Roosevelt described the need of global air communication as a necessity and the potential of air and space needs to be tapped as early as possible and there were announcements also made regarding the availability of large number of transport planes as soon as the enemy in Europe and Japan had been defeated. Because of the conflict availability of trained pilots and airports was not a problem. President Roosevelt further urged the participating states to start creating mutual trust among them and avoid dominance over each other. A month later, on 7th December, 53 States signed the convention along with other agreements supplementing it.

The convention needed around 26 ratifications to enter into force on the 4th April 1947 the convention became operational. The convention and its two annexing agreements meant that the contracting states recognized each other's right to fly through national air space and to use certain areas of their sovereign territories as landing sites as well. With the forecasting of the transatlantic commercial air traffic the United States and the Great Britain struck an agreement in 1935 in terms of aerial navigation on international flights everywhere in the British Empire, except the commonwealth territories, and the American territories. Then similar agreements were made between the U.S.A and Canada as well as South Africa. On the same day the convention also became functional and its administrative organizations also came into being.

Understanding Aviation Law: Aviation law is that branch of law which concerns flight, air travel and associated legal as well as business concerns. Some of its areas overlap the marine law and in many cases, aviation law is considered a matter of international law due to the nature of air travel. The business aspect of air operators mostly includes the airlines and there regulations fall under the aviation law. Aviation law has the power to govern all the individuals which are connected to the operations of aircrafts as well as the maintenance of aviation facilities. International air law mostly covers the rules which apply to both the domestic as well as international aviation. There is a complex relationship between the states, service providers as well as the passenger's. The rules also govern the impact of aviation on the environment and even on individuals which are affected by the aircraft operations.

Aviation is a highly specialized field of law which encompasses most facts of air travel, as well as the operational and business regulations issues related to air travel, which requires comprehensive knowledge of the FAA regulations, specific law in regard with flight and an in depth understanding of the aviation as well. Aviation law is related to all individuals connected to the operation aspect as well as the maintenance aspect of the aircrafts as well. The practice of Aviation law could include litigation on behalf of the families who suffered loss or injury due to an aircraft tragedy and the defense of an aviation professional accused of violating Federal Aviation Regulations as well.

Majority aspects of aviation law fall under the sight of the FAA however the, air traffic regulation policies, law and administrative agencies have been created by both the federal and state governments, where certain restrictions prevent the states from regulating routes, services, or the rates of all air carriers which are authorized to provide interstate air transportation by the FAA act. States may alter existing remedies and enact state laws consistent with federal mandate, though. Additionally, Federal law does not preempt state products liability law, and more often than not, in most defective product cases, aviation manufacturers may be held strictly liable.

Sources of Aviation Law: Air law has an international character which has emerged on an international plane almost from the beginning, that is, the first flights between Paris and London the with the conclusion of the Paris convention the first flights took place. Due to the developments in aviation and the lawmakers kept pace with the customs it has been largely bypassed as a source of law, but the air law is mainly a written law. Treaty law includes all international treaties under which multiple conventions are the primary source of air law. As a matter of fact the subject participants like the states, the airport owners, the airports operators, the passengers, the owners of the on-board goods and so on their rights are the ones which are properly guarded with the achievements of the major elements of the air law. With the implementations measures which are found in international agreements and the conventions another major classifications which is relevant for the air law are the bilateral instruments such as the national laws, the contracts between states and the airline companies or the contracts between airline companies as well as the general principle of international laws. Then international customs are other major constituents of international law which are applicable in the absence of agreement which are complementing it. With the view of the development of the treaty laws, the application of international customs is not much in the domain of aviation as the time goes by. The litigation between national and the international law, and moreover between private and public law is applicable in air law as well. Private international law, comprises of the series of rules which govern the relations between private persons who are involved in the operations as well as use of the aircraft, whereas the public international law is the legal norms which pertains to the relations involving the states as well as international organizations with respect to those activity in aviation with problems of political, technical, economic, financial, social and of legal nature

Scope and Limitation of Aviation Law: State sovereignty is one of the fundamental principles of international law. The concepts of international law are based on the state. The state in its turn lies upon the foundation of the sovereignty, which expresses the supremacy of the governmental institutions and externally the supremacy of the state as a legal person. But sovereignty itself, with its retinue of legal rights and duties, is founded upon the fact of territory. Without territory a legal person cannot be a state. It is undoubtedly the basic characteristic of a state and the one most widely accepted and understood. There are currently some 200 distinct territorial units, each one subject to a different territorial sovereignty and

jurisdiction. However, the term is very often used in a political sense, with differing interpretations depending on context and intention. The notion of sovereignty is dynamic, evolving with the development of the global institutional environment. In aviation, sovereignty refers to the ownership of airspace. In other words, to the exclusive competence of a State to exercise its legislative, administrative and judicial powers within its national airspace.⁹⁵

The central role of territory in the scheme of international law may be seen by noting the development of legal rules protecting its inviolability. The principle of respect for the territorial integrity of states is well founded as one of the linchpins of the international system, as is the norm prohibiting interference in the internal affairs of other states. A number of factors, however, have tended to reduce the territorial exclusivity of the state in international law. Technological and economic changes have had an impact as interdependence becomes more evident and the rise of such transnational concerns as human rights and self-determination have tended to impinge upon this exclusivity. The growth of international organisations is another relevant factor, as is the development of the „common heritage“ concept in the context of the law of the sea and air law.

The essence of territorial sovereignty is contained in the notion of title. This term relates to both the factual and legal conditions under which territory is deemed to belong to one particular authority or another. In other words, it refers to the existence of those facts required under international law to entail the legal consequences of a change in the juridical status of a particular territory.⁹⁶ Air Law is a series of rules which govern the use of airspace and its benefits for the aviation, the general public and the nations of the world. Definition of which is plenty but it cannot be applied indiscriminately or without exceptions. Like, the terms of Aviation Law and, or Navigation Law are become outdated, the designation of Air Transportation Law has been employed on occasions, but the areas it covers are only conveying a narrow interpretation. In presence, the term of Aeronautical Law is currently being used especially in Romance languages, while Air Law is practically adopted in the rest regimes.

Theories of Airspace Sovereignty: Efforts to ascertain the breadth of the layer of air comprised within the air territory so as to establish a consensus and acceptable principle of sovereignty over the air space had generated a lot of controversy amongst jurists. This controversy had given rise to theories propounded on a stage by stage basis which subsequently led to the birth of the principle of sovereignty over the air space.

The theories of sovereignty over the air space propounded by the jurists were initially grouped in to two main schools of thought. These are the theory which maintained that the air space is by its nature free and that which maintained the theory of sovereignty of the subjacent state in the air space above its territory. Notwithstanding the various theories and in spite of the existing uncertainty as to where the air space, that is, the atmosphere of our planet ends and the outer space begins, the basic and fundamental principle of air law is that every state has complete and exclusive sovereignty over the air space above its territory. By this principle, no air craft of one state can enter the air space of another state without the permission of that other state sought and obtained. The theories on the legal status of the airspace may be summarized as follows:

⁹⁵ International Civil Aviation Organization “Worldwide Air Transport Conference (ATCONF) Sixth Meeting” Montréal, 18 To 22 March 2013.

⁹⁶ Malcom Shaw, 2008, *International Law* 6th Edition .Pg 490.

- a) **Theory Of The Unlimited Freedom:** this theory is supported by those who, having seen the advantages that the absolute freedom of the seas have brought to the International community, thought that the same criteria could be applied to the air navigation.
- b) **Theory Of The Absolute Sovereignty:** completely opposed to the previous one: it refused the principle of freedom and conversely claimed the State sovereignty over the atmosphere. It also inherited the idea that the Roman Law had applied to the land property in order to define its unconditional character and to reject any claim from the other States (the already mentioned principle *dominus soli est dominus usque ad sidera et usque ad inferos*).
- c) **Intermediate Theories:** it tried to combine the States' claims with the creation of an efficient International air navigation system. One of the most famous theories was formulated in 1901 by the French jurist Paul Fauchille, who claimed that the air is free, and its freedom may only be limited by strictly defined rights belonging to the State underneath. According to this scholar the sovereignty of the land owner over the air space was limited to the maximum height of the buildings it could build; beyond this limit the atmosphere was free and freely exploitable.
- d) **Theory Of The Limited Sovereignty:** it stemmed from the principle that the atmosphere is subject to the State power, but it introduced some limitations in favour of the air traffic of adequate means whose airworthiness could be proved by specific international certifications. This theory anticipated the following regime which was based upon a functional and not just spatial idea of the air navigation.

The Principle of Sovereignty over the Airspace: State sovereignty over its territorial airspace is the basic principle underlying the whole system of International Air Law. Irrespective of whether the airspace can be regarded as a part of a state's territory, it generally recognized that it is a sovereign right over the airspace above its land and territorial waters. After the collapse of the short lived concept of freedom of the air in the first decade of 19th century, air law theory is based on the concept of air sovereignty as airspace is regarded as an extension of state's land and maritime territorial or its complementary element. States have exercised sovereignty over the space above land at least as far back as the Roman Empire. Roman law (and the law of succeeding States) recognized, regulated, and protected private rights in space above the surface. Because a State cannot impose its will within the territory of another State, these States therefore all claimed territorial sovereignty above their surface territory. Although writers generally agree that Roman law recognized private rights in air space, the writers do not agree on the extent of the right recognized.

At the beginning of the twentieth century "*international flight was practically unregulated.*" In 1902, Paul Fauchille of France, Rapporteur for the Institute of International Law on the subject of the legal status of the airships, proposed that States should only have exclusive rights in the airspace immediately over their territory up to an altitude of 1,500 meters (4,920 feet). Some of Fauchille's proposals were translated by Professor John C. Cooper as:

"The air is free—States having only rights necessary for their self-preservation, such rights relating to the prevention of spying, to the customs, to the sanitary police, and to the necessities of defence; subject to certain exceptions, air navigation is prohibited in a "security" zone extending 1500 meters up from the surface territory of a State; only public aircraft of a State are permitted to fly freely in the security zone of that State; the subjacent

*State may also regulate landing and departure through the security zone above its territory.*⁹⁷

The opposite view was expressed in 1906 by Professor John Westlake of the United Kingdom who advocated no upward limit of State sovereignty. In the air the higher one ascends, the more damage the fall of objects will cause on the earth. If there exists a limit as to the sovereignty of the State over the oceanic space, none exists for the sovereignty of the State over the air space. The right of the subjacent State remains the same whatever may be the distance. The first concerted attempt at codification on an international scale took place before 1910, when German balloons repeatedly made flights above French territory. The French Government was of the opinion that for safety reasons it would be desirable for the two governments involved to try to reach an agreement to resolve the problem. As a result the Paris Conference of 1910 was convened. The tendency of the conference did not adopt the idea of „freedom of the air“ but was in favour of the sovereignty of states in the space above their territories, which was reflected on the draft convention at the plenary session of the conference.

Although the diplomatic conference adjourned without signing a convention, it had completed most of the clauses of a draft convention. The 1910 conference “first evidenced general international agreement that usable space above the lands and waters of a State is part of the territory of that State” and that no general right of innocent passage through the usable space above a State existed for aircraft. The conference did not set a vertical limit on State sovereignty. After the 1910 Paris conference ended without agreement, many European States asserted absolute vertical sovereignty. After WWI, the Aeronautical Commission of the Peace Conference in Paris met to examine fundamental principles for air navigation. The Commission consisted of delegates from many European States as well as Japan, Cuba, Brazil and the U.S. The Commission drafted the Convention Relating to the Regulation of Aerial Navigation, known as the Paris Convention. Article 1 of the Convention recognized the exclusive sovereignty of all States over the air space above their territory, including above territorial waters. The Paris Convention did not define the term “air space.” After the Paris Convention entered into force, an annex was adopted which defined aircraft as “all machines which can derive support in the atmosphere from reactions of the air.”

However, according to Professor Cooper, this did not limit a State’s vertical sovereignty, “*the Paris Convention is not to be construed as meaning that in international law States have territorial rights only in this airspace. The airspace was accepted as part of State territory but no international determination was made as to the regions of space above.*” The Paris Convention did not provide for a right of innocent passage, but it did encourage States to allow innocent passage, saying “*each contracting State undertakes in time of peace to accord freedom of innocent passage above its territory to the aircraft of the other contracting States.*” (Article 2) However, apparently the idea of innocent passage was not looked upon favourably; **Article 15** which provided in part that “*every aircraft of a contracting State has the right to cross the air space of another State without landing*” was amended in 1929 to make this right conditional. The new paragraph 4 of article 15 said, “*Every contracting State may make conditional on its prior authorisation the establishment of international airways and the creation and operation of regular international air navigation lines, with or without landing on its territory.*”

⁹⁷ ohn Cobb Cooper, A Study on the Legal Status of Aircraft [hereinafter Cooper, A Study], reprinted In Cooper, Explorations In Aerospace Law, supra note 18, at 205, 218.

The right of innocent passage provided for by **Article 2** [was] thus largely limited to civil aircraft used for pleasure or occasional commercial flights. The Paris Convention was ratified by most European States and its statement of airspace sovereignty became an accepted part of international law.

The 1944 Convention on International Civil Aviation (known as the Chicago Convention) also reaffirms in its **Article 1** that all States have complete and exclusive sovereignty over the airspace above their territory. A State's territorial airspace includes the area above its territorial waters, there exists no right of innocent passage and scheduled international air services are only allowed with special permission of the contracting States. Accordingly, the international law rules protecting sovereignty of states apply to the airspace as they do to the land below. As the International Court noted in the *Nicaragua case*, '*The principle of respect for territorial sovereignty is also directly infringed by the unauthorised overflight of a state's territory by aircraft belonging to or under the control of the government of another state.*' The Court noted in the *Benin/Niger case* that '*a boundary represents the line of separation between areas of state sovereignty, not only on the earth's surface but also in the subsoil and in the superjacent column of air*'.

Problems of National Jurisdictions Regarding Airspace Sovereignty: There is no general system of international laws in relation with the definition as well as scope of national laws and its jurisdiction. The basic rules of the international law recognizes the complete as well as the exclusive sovereignty of the states over the state's territorial airspace which involves the prohibition of the unauthorized flights and to conform the territorial laws as well as the regulation of the foreign aircrafts as well. For example the No Fly Zone area 51 in the U.S.A where flying activities are not permitted and only the aircrafts with special permission can fly over the zone. International law does not provide any immediate measure to protect the airspace and in order ceases the violation as well. Freedom of air is the basic rule and no state can have absolute sovereignty over it.

A state sovereignty in territorial airspace and its legal consequences cover:

1. freedom of air navigation in non-territorial airspace;
2. nationality of aircraft involving control, responsibility;
3. right of protection assigned to the registered state⁹⁸ of the flag;
4. use of lawful means to suppress unlawful use of aircraft;
5. recognition either of exclusive jurisdiction of the territorial state or of state of the aircraft's nationality; and
6. Concurrent jurisdictions in other areas of civil aviation activities.

The fundamental rules of the customary international law underlines the regulatory system of the international civil aviation, the major part of it is formed by the treaty law. Although customary rules had been provided a basic premise for the application of treaty obligation, state practice also seems to be indicative of the direction in which the development of international air law is likely to go. The main fundamental rules of the customary

⁹⁸ Art 1(2) of Tokyo Convention stating that „this convention shall apply in respect of offences committed or acts done by a person on board any aircraft registered in a contracting state, while that aircraft is in flight or on the surface of the high seas or of any other area outside the territory of any state.

international law is to underline the regulatory system of the international civil aviation, the major part of it is formed by the treaty law. Although the customary rules have been provided a basic premise for the application of the treaty obligation, state practice also seems to be the indicative for the direction in which the development of the international air law is likely to go.

The Bilateral air agreement, while using the notion of the airline nationality is associated with the ownership as well as the effective control, with the recognition of transfer of responsibility from the rule of the state of aircraft operator, refraining from the interference by the territorial state with the order prevailing on board the foreign aircraft. As a result of the evolving technological revolution and even with the expansion of international as well as extra-terrestrial activities, there will also be a potential conflict of the states jurisdiction's in the matter of certain cases.

Penal Law and Aviation: In the recent past few years, with the development of the new rules as well as sanctions were tensed due to the increase happenings of the criminal offence more frequently. There were 3 international conventions of the penal law of aviation.

1. The Convention of offences and certain other acts committed on Board Aircraft, signed at Tokyo on 14th September 1963(The Tokyo Convention)
2. The Convention for the suppression of Unlawful Seizure of Aircraft, signed at the Hague on 16th December 1970 (The Hague Convention)
3. The Convention for the suppression of the unlawful acts against the safety of civil aviation , signed at Montreal on 23rd September 1971(The Montreal Convention)

It is very important to determine, the basic concept of the international character of the aviation and the air law, which state has the competency to exercise the jurisdiction in the cases of the criminal offence which happened on board the aircraft. In 1910 the Paris convention expressed the principle of law that the state sovereignty over the airspace above the territory which was also indicated in the 1944's Chicago convention as well. However, the situation may arise sometimes in which there are a lot of complications where a state other than the state in which the aircrafts is registered attempts to exercise its jurisdiction with regard to the offence committed on board such aircrafts, due to offence which is committed above the territories which are not subject to the sovereignty of any particular state like high seas, or place which cannot be distinguished properly. We may find number of occasions discussed and recorded on the agenda of the International Law Association, the draft convention was worked out by the ICAO legal committee in Munich 1959 and Rome 1962 and other cities. The final text of Tokyo Convention was concluded at the Diplomatic conference held in Tokyo in 1963.

According to the various draft conventions and materials as above mentioned, an analysis of the following theories regarding jurisdiction to which is resorted:

1. The Territorial Theory – The law of the state in whose airspace the offence has taken place will be applies by its national courts. Many at times it is not always possible to determine the exact position of the aircraft at the time where the offence was committed, for that reason it is impractical for the state to base its jurisdiction solely on this principle.

2. *The National Theory* – According to this theory of the state where the aircraft is registered is always applied.
3. *The Mixed Theory* – side by side with the law of the aircraft's nationality and the law of the state over which the aircraft passes is enforceable whenever the security or public order of such state is threatened by offences committed on board.
4. The theory of the law of the state of departure.
5. The theory of the law of the state of landing.

Main Organizations in Aviation: ICAO – The International Civil Aviation Organization: ICAO is one of the world's first major organization on the matters of civil aviation. The ICAO came into existence after the 1944's Chicago convention. The main aim to set up is for the generation in the field of aviation in form of structural innovations in terms of international co-operation and with the making of law post WWII. The daily business is run by the council, a permanent body which performs a variety of duties in the legal, technical as well as the economic field as well. There are over 150 members who are a part of ICAO and its operations are under the assembly with important budgetary powers. The ICAO also has a presence of the legal committee, which is responsible for preparing and drafting of the international treaties and the conventions in relation to the air law. One of the major roles of the council is for the settlement of the disputes and request for the legal opinions from the international court of justice, the ICJ presence at the Hague offers interpretation of the treaties and conventions, and also acts as a mediator if there arises any dispute.

The International Air Transportation Association (IATA): IATA is not the official body but its aim and its objectives are clearly set out in its incorporation acts for the safe, regular and economical air transport for the benefit of the air aviation, to foster the air commerce and also to study the problems connected by means of collaboration among the airlines engaged directly or indirectly in the international air transport services. Its job is to always work with the ICAO and the other main international organizations, which lies on the technical as well as the commercial sector as well. IATA has another important function which is to perform a clearing house, handle the ticket prices for airlines under the responsibility of the financial committee since 1947 in London, later it shifted to Geneva. The other main function of the IATA is to also fix the tariff rates for the international air transport, its activities find their expression in resolutions and recommended practices which are adopted by the traffic conferences which become the binding members when given approval by the interested governments.

The Civil Air Navigation Services Organization (CANSO): The Civil Air Navigation Services Organizations (CANSO) is the main representative body of companies which provide air traffic control. It represents the interest of the Air Navigation Service Providers. The CANSO members are the ones who are responsible for supporting over 85% of the world air traffic, and through its workgroups, the members of it share information and develop new policies with the aim of improving the air navigation services from the ground as well as in the air. CANSO also represents its members view in terms of regularity and the industry forums, which include the ICAO, where it has the official observer status as well. Full membership is open to all the ANSPs despite their regard even of their legal status. This includes ANSPs who are integrated within government structures and departments. Members who are not separated from their governments are able to sign an article of membership which explicitly recognizes that CANSO does not represent the national government of the

ANSP's home state in any way. The membership of CANSO is drawn from the companies as well as organizations from the aviation industry who are involved with the delivery of the air traffic services. Membership offers the chance to network both formally as well as informally with the clients as well as the decision makers as well. Associate Members may contribute to CANSO's work programs and help it improve the delivery of Air Navigation Services. CANSO is member of the Air Transport Action Group (ATAG).

An air navigation service provider (ANSP): It is a public or a private legal entity which provides air navigation services.^[1] It manages the air traffic on behalf of the company, region or country. Depending on the specific mandate an ANSP provides following services to the airspace users.

1. Air Traffic Management (ATM)
2. Communications, navigation and surveillance systems (CNS)
3. Meteorological service for air navigation (MET)
4. Search and rescue (SAR)
5. Aeronautical information services/aeronautical information management (AIS/AIM).

These services are provided to air traffic during all the phases of operations during approach, at airport and in-route. The Air navigation services providers are government departments, state-owned companies and private organizations. The world's largest air navigation service providers are members of the CANSO which is located at Amsterdam Schiphol Airport. Airports Council International (ACI): The only global representative of the world's airport authorities. It was established in the Year 1991. The ACI watches the interest of the government's as well as the international organizations, develops standards, policies and recommends practices for the airports; it also provides information and training opportunities to increase the standards around the world. The main of the ACI is to provide a safe, secure, efficient and an environment friendly air transport system. The ACI is governed by the governing body; The ACI is located in Montreal, Quebec Canada. The ACI works on a daily basis with the ICAO and is a member of the Air Transport Action Group.

Conclusion:

Extensive researches are being undertaken to establish the existence of flying and aerial vehicles in ancient times, yet aviation as visible today appears to be a recent phenomenon and a remarkable feat of modern science and technology. Aviation has travelled a long way in a short span of almost a century. From the primitive lumbering flying machine of the Wright brothers to the supersonic jet fighters, with armament loads disastrously lethal, of the developed air forces. Further, aerospace reusable vehicles, which cruise at many times the speed of sound at altitudes incredibly high or near-earth orbits, with avionics highly sophisticated are at technical demonstration stage.

On the air transport front also advances have indeed been spectacular. From a humble beginning of inconvenient gondolas attached to balloons, diminutive machines of remote ancestry, and doubtful reliability, the international civil aviation has grown dynamically into a gigantic international transport industry participated by nearly 300 companies belonging to over 100 nations, which to-day possess and operate a great armada of aircraft flying over 1000 billion passenger kilometers and about 40 billion ton-kilometers of freight annually across the territories of about 180 sovereign states. Indeed the world has shrunk, the horizons have drawn closer and international air travel is here to stay as a necessity, as a habit and as a time-saver.

The science of aeronautics is still rapidly advancing and harmoniously maturing into astronautics. The future aero-space vehicles may be relatively different from those conventionally known so far, yet air travel and air combat seem inseparable from our present civilization. Thus the story of flight may be complete, yet the tale of aviation and aero-space flight continues, because the saga of development and advancement is unending and continues to march ahead. The snippets on Air Regulations are just illustrative of the genesis of air regulations that have culminated into improved versions and binding laws through obligatory conventions and protocols. This aspect deserves a lot more interest and needs serious further research.

MODULE – III

**CHICAGO
CONFERENCE,
ANNEXES & AVIATION
DISPUTE
SETTLEMENT**

MODULE III: CHICAGO CONFERENCE, ANNEXES & AVIATION DISPUTE SETTLEMENT

Events Leading to the Chicago Conference

Background: The idea of freedom to fly over the other countries is based on the principle which was published by Hugo Grotius, defending the rights of the Dutch Indian Company to trade with the Far East which is also called as freedom of seas which stated that any countries can sail on the seas without the restrictions by the other nations. The question of the national air space arose when the balloons were used during the France-Persia war in 1870-71. After the end of the war there was a question as to whether the air should be treated like the high seas, or should be free for the use for all. Or whether a nation should have control to use it. The issue became more relevant after the powered flight in 1909, when the French Pilot Louis Bleriot crossed the English Channel to England.⁹⁹ The Paris Air Navigation Conference of 1910, diplomats failed to reach an agreement on the question.

In 1911, the British Parliament passed the Aerial Navigation act, which gave Britain the power to close the British airspace, including the parts of the English Channel, for all the foreign aircrafts¹⁰⁰. At that point of time, Europe was going in the preparation mode for the WWI and many European countries followed the same suit in order to protect themselves from their enemy. After the end of the WWI, 26 countries met in Paris in 1919 and drew the convention in relation to the regulation of Air Navigation and a number of basic principles were laid down. Majority of the nations voted for the complete and exclusive sovereignty over the airspace above its territory. Neither the United States nor Russia signed the agreement.¹⁰¹ The delegates also established the International commission of Air Navigation as a platform to discuss the rules for allowing foreign aircraft to use its sovereign airspace.

Then, Even the Havana convention on Civil Aviation was drafted in 1928 and was ratified by 21 Western Hemisphere countries, the convention gave the right of innocent passage of aircraft by 21 Western Hemisphere countries, the convention formulated the rules of international air navigation between the contracting states in relation to the aircraft identification, landing facilities and with regard to the standards for the pilots. It also stated the right of each country to set the route to be flown over its territory.

In 1910, a conference on international air law code, attended by representatives of 18 European nations, was convened in Paris, France. In 1919, following World War I, the Paris Peace Conference created the International Air Convention to govern aspects of civil aviation. The Convention, ratified by 38 nations, began the process of creating an International Commission for Air Navigation (ICAN); ICAN established headquarters in Paris in December 1922, with Albert Roper as general secretary. The commission was to meet at least once a year and concern itself with technical matters. An international committee of jurists was also established, to concern itself with the intricate legal questions created by cross-border aviation. In 1928, a Pan-American convention on commercial aviation was adopted at a conference held in Havana to deal with problems then emerging as international flights became more frequent in the Western Hemisphere. Although some progress in obtaining agreement on international flight regulations had been made by the end

⁹⁹ Anthony Sampson, *Empires of the Sky: The Politics, Contests and Cartels of World Airlines*, 1984,65.

¹⁰⁰ Ibid.

¹⁰¹ www.icao.int

of the 1930s, most nations still granted very few concessions to each other's airlines, and no agreement existed permitting foreign planes to fly nonstop over the territory of one country en route to another country.

The tremendous development of aviation during World War II demonstrated the need for an international organization to assist and regulate international flight for peaceful purposes, covering all aspects of flying, including technical, economic, and legal problems. For these reasons, in early 1944, the United States conducted exploratory discussions with its World War II allies, on the basis of which invitations were sent to 55 allied and neutral states to meet in Chicago in November 1944. The Convention on International Civil Aviation, drafted in 1944 by 54 nations, was established to promote cooperation and “create and preserve friendship and understanding among the nations and peoples of the world.” Known more commonly today as the ‘Chicago Convention’, this landmark agreement established the core principles permitting international transport by air, and led to the creation of the specialized agency which has helped States to cooperate together under it ever since – the International Civil Aviation Organization (ICAO).

The Second World War was a powerful catalyst for the technical development of the aeroplane. A vast network of passenger and freight carriage was set up during this period, but there were many obstacles, both political and technical, to evolving these facilities and routes to their new civilian purposes. Subsequent to several studies initiated by the United States, as well as various consultations it undertook with its Major Allies, the U.S. government extended an invitation to 55 States to attend an International Civil Aviation Conference in Chicago in 1944. These delegates met during a still-violent period of WWII and travelled to Chicago at great personal risk. Many of the countries they represented were still occupied. In the end, 54 of the 55 States invited attended the Chicago Conference, and by its conclusion, on 7 December 1944, 52 nations had signed the new Convention on International Civil Aviation which had been realized.

The Chicago conference ran from November 1 to December 7, 1944 and was attended by 700 delegates from 52 States. Known then and today more commonly as the ‘Chicago Convention’, this landmark agreement laid the foundation for the standards and procedures for peaceful global air navigation. It set out as its prime objective the development of international civil aviation “...in a safe and orderly manner”, and such that air transport services would be established globally “on the basis of equality of opportunity.” The Chicago Convention also formalized the expectation that a specialized International Civil Aviation Organization (ICAO) should be established to organize and support the intensive international cooperation which the fledgling global air transport network would require. It was this conference that framed the constitution of the International Civil Aviation Organization—the Convention on International Civil Aviation, also called the Chicago Convention. This convention stipulated that ICAO would come into being after the convention was ratified by 26 nations. To respond to the immediate needs of civil aviation, a provisional organization was created and functioned for 20 months until, on 4 April 1947, ICAO officially came into existence.

In essence, the conference was faced with two questions: (1) whether universally recognized navigational signals and other navigational and technical standards could be agreed upon, and (2) whether international rules concerning the economics of air transport could be established. One group of countries, led by the United States, wanted an international organization empowered only to make recommendations regarding standard technical

procedures and equipment. In its economic aspects, these countries believed, air transportation should be freely competitive. This policy would also best serve the interests of the "consumer nations" that had no international airlines of their own. Another group of countries, led by the United Kingdom, favored a stronger organization, which would have a great deal to say about the economics of civil aviation. It would be empowered to allocate the international routes that the airlines of different countries would be allowed to fly, regulate the frequency of flights, and fix rates. A radical proposal, advanced by New Zealand and supported by Australia, called for international ownership and operation of international air transport.

ICAO's core mandate, then as today, was to help States work together to achieve the highest possible degree of uniformity in civil aviation regulations, standards, procedures, and organization. Because of the usual delays expected in ratifying the Convention, the Chicago Conference presciently signed an Interim Agreement which foresaw the creation of a Provisional ICAO (PICAO) to serve as a temporary advisory and coordinating body while ratifications proceeded. The PICAO consisted of an Interim Council and an Interim Assembly, and from June 1945 the Interim Council met continuously in Montreal, Canada, and consisted of representatives from 21 Member States. The first Interim Assembly of the PICAO, the precursor to ICAO's triennial Assemblies in the modern era, was also held in Montreal in June of 1946. On 4 April 1947, when sufficient ratifications to the Chicago Convention had been submitted, PICAO became ICAO and the international civil aviation era was officially inaugurated.

During this march to the modern air transport era, the Convention's Annexes have increased in number and evolved to include more than 12,000 international standards and recommended practices (SARPs). Each and every one of these have been agreed on a consensus-basis by ICAO's Member States, which at the present time total 193 countries in every corner of the world. These SARPs, alongside the tremendous technological and other progress achieved in the intervening decades on behalf of air transport operators and manufacturers, helped humanity to realize what is now well-recognized as a critical driver of socio-economic development and one of our greatest collective and cooperative achievements – the modern and truly global air transport network.

In 1929, the Delegates of the Warsaw Convention, which included the United States, agreed upon to limit the passenger compensation for the loss of property or harm to a passenger by an airline to \$8,300.¹⁰² This amount was measured gold based on the value of the French Franc. However Aviation during the WWII resulted in a lot of tragic loss of the human resource but the silver lining in the dark cloud was that it made the technical as well as operational possibilities at an advanced stage in terms of air transport which finally found the peace again. On the contrary, for the first time large number of people and goods were transported for long distances and ground facilities were developed to permit this in an orderly and expeditious manner. In 1943 US initiated the studies for the development of aviation post war however there were problems which were to be tackled on an international scale otherwise it would not have been possible to use it as one of the main principle elements for the economic development of the world and the first available means to start healing the wound of the war as President Roosevelt had put in.¹⁰³ As a part of the efforts, the then US president Roosevelt invited the representative for a conference on the

¹⁰² Tory A. Weigand, Accident, Exclusivity, and Passenger Disturbances Under the Warsaw Convention, 16 Am. U. Int'l L. Rev, 2001, 891

¹⁰³ History of Civil Aviation, Encarta Encyclopedia, www.enacarta.com

international civil aviation in Chicago. In response to the invitation of the U.S government, in total representatives from 54 nations met at Chicago from 1st November to 7th December, 1944.¹⁰⁴

In November 1944, in response to the British initiative, the US president invited the allied powers and a few of the neutral governments for a conference at Chicago in regard to the regulation of the civil aviation. The background work was done by the Paris Peace conference and the other regional conferences during the previous 2 decades, the countries have very high expectations from this conference. During the conference there were 4 crucial theories on rather than that school of thought prevailing on the regulation of civil aviation.

1. American School of Thought which was for the motion of complete freedom of the competition in air transport
2. The British School of thought suggested the creation of an international organization in regard with the coordination of air transport and assume the duties of apportioning the world's air routes and making on frequencies as well as tariffs.
3. The Canadian Trend which supported the proposal which was put forth by the British but also suggested a more elaborate version with regard to the same.
4. The Australia and New Zealand which proposed internalization of major airlines under the direction of a single authority in which all the states would participate.

However, none of the proposals could work which resulted ultimately in the Chicago conference which was adopted by the principle of complete as well as exclusive sovereignty over the air space above its territory which was articulated in the Paris Peace conference.

Significance of Chicago Conference: The International Civil Aviation conference turned out to be one of the most successful, productive as well as influential conference ever held, at the Stevens Hotel in Chicago which had been the host. As a result, ICAO became the main universal institution of the international public aviation rights, which were superseding the Paris convention on 1919 as well as the Havana convention of 1928. As a result, ICAO became the sole universal institute of the international public aviation rights, superseding the Paris Convention of 1919 and the Havana Convention of 1928. For the first time in the history of the international aviation, an authority would facilitate the order in the air, introduce the maximum standardization in the technical matters to unify the methods of the exploitation and settle any differences that may occur. The convention of International Civil aviation was established to promote the cooperation and create and preserve friendship and understand among the nations and peoples of the world known more commonly as the Chicago Convention. This Landmark agreement established the core principles which permitted international transport by air, and led to the creation of the specialized agency which has been overseen since then- The International Civil Aviation Organization.

Outcomes of Chicago Conference: Among the major achievements of the Conference were the drafting, adoption and opening for signature of one major convention, three Agreements, a standard form of bilateral for provisional air routes and the text of 12 technical Annexes. The Convention was intended to formulate certain agreed principles and agreements to ensure safe and orderly development of the international civil aviation on the basis of equality of the opportunity and to ensure that air transport operates Sound, safe as well as economically. The Chicago constitution became a viable constitution for the post war global air world. The Final

¹⁰⁴ Ibid.

act of the Chicago conference was adopted as well as signed by the 52 states. The Final Act contained 12 Resolutions and the following six appendices.

- ✚ The interim agreement on the international Civil Aviation
- ✚ The convention on the international Civil Aviation
- ✚ The international air service transit agreement (Two Freedoms Agreement)
- ✚ The international air transport agreement (Five Freedoms Agreement)
- ✚ Drafts of Technical Annexes
- ✚ A standard form of Bilateral Agreement

The Interim Agreement on the International Civil Aviation: The interim agreement on the international civil aviation was for the setting up of for the provisions of the international civil aviation organization and it also established rules for international aviation in the period before the commencement of ICAO it became effective in 6th June 1945 and expired on 4th April 1947. PICAQ had the organs similar to those of the ICAO such as the Interim Assembly, the Interim Council, the Secretary General as well as the Canadian Headquarters.

The Convention on International Civil Aviation: The convention on International Civil Aviation is the result of the conference and is generally referred to as the Chicago Convention 1944. The most significant result of the conference was with the drafting and adoption of the convention, which was signed by 35 states participating in the conference on 7th December, 1944. The Convention came into picture on 4th April 1947, after ratification of the 26 States. At present there are 185 parties to the Chicago Convention and these states also form the membership of the ICAO as well.

The Convention has been one of the most widely ratified international multilateral instruments. The Chicago Convention, 1944 has been divided into four parts through 22 chapters and 96 articles. Part I on air navigation, Part II, is devoted to the International Civil Aviation Organization, Part III on International Air Transport and Part IV devoted to the Final Provisions.

Part I on Air Navigation has sub divided into 6 chapters from article 1-42: Chapter I General principles and application of the convention discussed above the state sovereignty, territory, civil and state aircraft as well as the use of civil aviation. Whole air law is developed on the concept of the state sovereignty in civil aviation. According to Article I the contracting states recognizes that every state has complete as well as exclusive sovereignty over airspace above its territory.

Chapter II Flight over territory of contracting states Article (5-16) with the issues relating to the scheduled and non-scheduled air services, Cabotage, pilotless aircrafts, prohibited areas landing at custom airports, air rules and regulations, airport charges and so on. According to article 6 it does not permit scheduled international air services which may be operated over or into the territory of a the contracting state, except with regard to the special permission or authorization of the state, and in accordance with the terms of permission as well as authorization, The Nationality of the aircraft is an important issue in the international civil aviation, which is dealt in chapter III from article 17 to 21 of the Chicago Convention. The Article 17 says that aircraft have the nationality of the state in which they are registered however other important provisions with regard to the nationality of the aircrafts includes the dual registration, national laws which govern registration, display or marks as well as reports of registration.

Chapter IV from articles 22-26 of the Chicago Convention deals with the measures to facilitate air navigation. There were provisions made for the facilitation of the flight of the aircrafts, giving assistance to the aircraft in the time of distress , aiding in investigations of accidents, exempt aircraft from seizure by reason of patent claims or with regard to infringements , and by the adoption of the standards as well as the recommended practices in respect to the airports, radio services , meteorological services as well as other air navigation services facilities, standard communication procedures , codes, markings, signals, lighting as well as publication of charts as well as maps.

Conditions to be fulfilled with respect to aircraft including documents carried in aircraft, aircraft radio equipment, certificate of airworthiness, licenses of personnel, recognition of certificates and licenses, journey log books, cargo restriction and photographic apparatus are covered in Chapter V from articles 29-36 of the convention. Adoption and implementation of International Standards and Recommended Practices (SARPs) in international civil aviation is very essential because of technical nature of civil aviation. These international Standards and recommended practices are covered in Chapter VI from articles 37 to 42 covered the adoption and departures of international standards, procedures, endorsement of certificates and licenses and their validity, recognition of airworthiness and so on are covered in this Chapter.

The Chicago Convention has also established principles, structures and procedures for the International Civil Aviation Organization (ICAO) have been covered in Part II from Articles 43 to 66 of the Convention: The ICAO has been the one for establishing the guidelines for the navigational aids, technical rules for landing areas, aircraft certification, licensing for pilots and the other specialized areas in terms of flight operation. The Chicago convention was the one which was the main base for the development of the International civil aviation and its established principles, its structures as well as procedures for the working of the ICAO. Under article 44 of the convention, the ICAO aims to develop the main principles as well as techniques for the international air navigation as well as air transport.

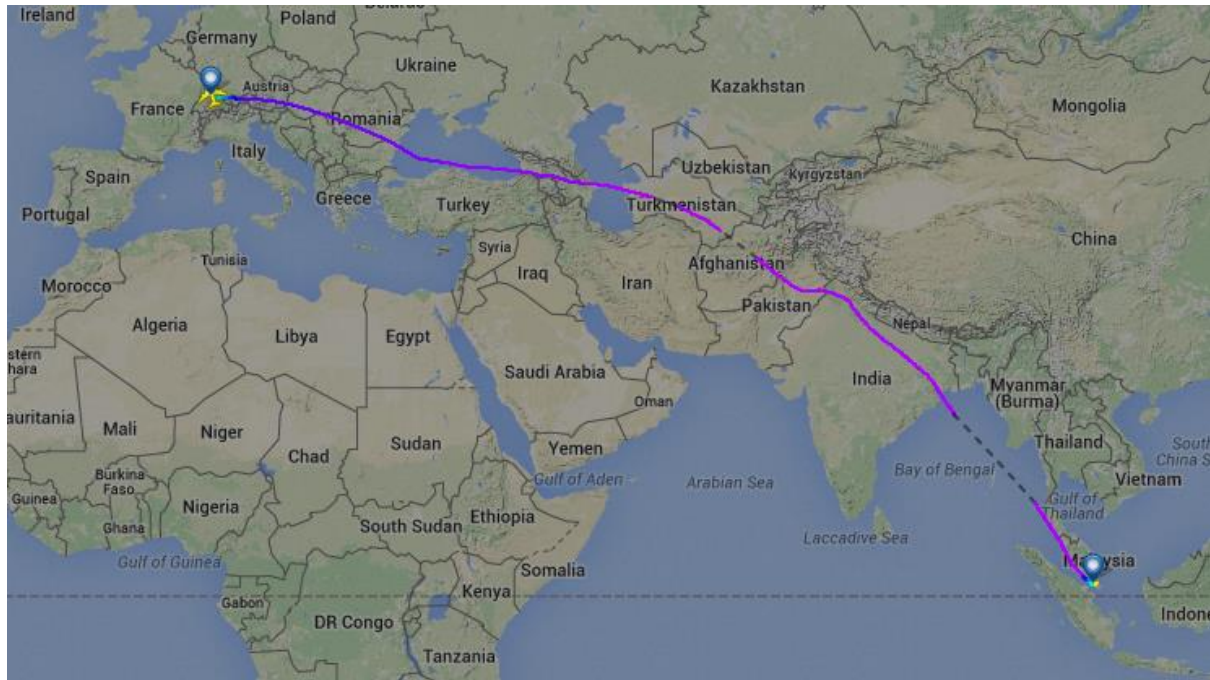
Various Provisions relating to International air transport are covered in part III from articles 67 to 79 of the Chicago Convention: Under chapter 14, the states have to file their reports with the council, Chapter 15 covers the various airports as well as air navigation facilities which includes the designation of routes and airports, pumping of money in air navigation facilities , improvement of air navigation facilities, acquire of land as well as its use, expenditure and the assessment of revenue and so on. Joint operating organizations have pooled services which are covered chapter 16 of the convention as well.

Part IV the Financial Provisions of the convention from articles 80-96 are covered other aeronautical agreements as well as arrangements including the Paris as well as Havana convention , registration of existing agreements , abolition of inconsistent arrangements and registration of new arrangements. Settlements of disputes through arbitration and so on are covered in chapter 17 of the convention. Other provisions in relation with the settlement of the disputes include appeals, penalty for non-conformity of airlines as well as non-conformity of states and so on.

With the adoption as well as amendment of annexes are covered under chapter 20. The ICAO aim is to maintain and improve safety, security and so on cover personal licensing which aim to maintain and improve safety, security and so on. The ICAO ensures the highest degree of air safety on global bases. Chapter 21 of the convention covers the adherence, amendments as

well as denunciation. Chapter 22 of the Chicago convention defines the air services, Airlines, international air services as well as stop for non-traffic purposes and so on.

The International Air Service Transit Agreement: This agreement is also known as the two – freedom agreement, which gives: The privilege to fly across the territory of a state without landing and the privilege to land for non-traffic purposes (right to stop for refueling, repairs, or emergency on board medical or technical).



The above mentioned picture is the example of an airline route from Singapore to Zurich where the flight flies over the airspace of countries like Malaysia, Thailand, India, Pakistan, Afghanistan, Turkmenistan, Turkey, and Romania onwards to Switzerland. This is the example of the two freedom agreement to overfly airspace of different country in order to reach the flights designated destination.



The above mentioned picture is of the Indigo A321NEO which flies the Delhi to Istanbul Route however when the Tensions with Pakistan had escalated to all time after the air strikes it resulted in Pakistan closing its airspace which made flight carry additional fuel as it had to take a longer route in order to reach Delhi and flight time had to increase. So this particular aircraft had to make a technical stop at Doha Qatar for refueling purpose which is an example of the privilege for landing for non-traffic purpose.

The International Air Transport Agreement: This agreement is known as the Five Freedom agreement. The first two being for the air transit agreement. The other three freedoms are

1. The Right to Discharge passenger, mail and cargo taken from the home ports
2. The Right to pick up passengers , mail and cargo taken from the home ports
3. The Right to pick up as well as discharge passengers, mail as well as Cargo to and from any other contracting states.

The Drafts of Technical Annexes: The Final act of the Chicago convention contains the draft of the technical annexes. It does not require signature. It covers the different phases of technical field of aviation, being exposition of suggested technical matters for further study in international aviation. It contains various recommendations which were studied, revised as well as agreed upon.

The Chicago Convention, the ICAO and the Development of International Standards and Recommended Practices (SARPs): Recommended practices in order to deal with a wide range of matters which are concerned with the safety, regularity as well as efficiency of the air navigation, the current standards and the recommended practices are published by the ICAO as annexes to the Chicago Convention. There is a standard which is defined by the

ICAO assembly, is specifications for the physical characteristics, configuration , material , performances , personal as well as procedural the uniform application of which is recognized as necessary for the safety as well as regularity of the international air navigation and to which all members will adhere to. Standards include specifications for matters such as the length of the runways, the materials which should be used for the manufacturing of the aircrafts, the basic minimum universal qualifications which are required to become a pilot flying an international route. A recommendation in any such specification, the uniform application which is recognized in the interest of safety, regularity as well as efficiency of the international air navigation and to which the member states will confirm.

Preparation as well as revision of standards as well as recommendations is largely responsible for the ICAO'S Air Navigation commission, which planes, coordinates and examines all of the ICAO'S activities in the field of air navigation. The commission consists of 15 persons, who are appointed by the council which approves the text; it is submitted to the member states. While recommendations are not binding, standards automatically become the binding factor on all states, except for the ones who find it impracticable to comply and file a difference under article 38 of the Chicago convention.

The various standards and recommendations that have been adopted by ICAO are grouped into 18 annexes to the Chicago Convention. The aim of most of the annexes is to promote progress in flight safety, particularly by guaranteeing satisfactory minimum standards of training and safety procedures and by ensuring uniform international practices. The 18 annexes are the following:

1. Personnel Licensing—licensing of flight crews, air traffic controllers, and aircraft maintenance personnel.
2. Rules of the Air—rules relating to the conduct of visual and instrument flights.
3. Meteorological Services—provision of meteorological services for international air navigation and reporting of meteorological observations from aircraft.
4. Aeronautical Charts—specifications for aeronautical charts for use in international aviation.
5. Units of Measurement—dimensional systems to be used in air-ground communications.
6. Operation of Aircraft. Part I: International Commercial Air Transport; Part II: International General Aviation; Part III: International Operations—Helicopters. These specifications will ensure in similar operations throughout the world a level of safety above a prescribed minimum.
7. Aircraft Nationality and Registration Marks—requirements for registration and identification of aircraft.
8. Airworthiness of Aircraft—certification and inspection of aircraft according to uniform procedures.
9. Facilitation—simplification of customs, immigration, and health inspection regulations at international airports.
10. Aeronautical Telecommunications—standardization of communications equipment and systems and of communications procedures.
11. Air Traffic Services—establishment and operation of air traffic control, flight information, and alerting services.
12. Search and Rescue—organization and operation of facilities and services necessary for search and rescue.

13. Aircraft Accident Investigation—uniformity in the notification, investigation, and reporting of aircraft accidents.
14. Aerodromes—specifications for the design and equipment of aerodromes.
15. Aeronautical Information Services—methods for the collection and dissemination of aeronautical information required for flight operations.
16. Environmental Protection. Vol. I: Aircraft Noise—specifications for aircraft noise certification, noise monitoring, and noise exposure units for land-use planning; Vol. II: Aircraft Engine Emissions—standards relating to vented fuel and emissions certification requirements.
17. Security—specifications for safeguarding international civil aviation against acts of unlawful interference.
18. Safe Transport of Dangerous Goods by Air—specifications for the labeling, packing, and shipping of dangerous cargo.
19. Safety Management System

The Relationship between the Convention and its Technical Annexes: Many of the American republics, including the United States, have strict constitutional and legislative provisions applicable to the ratification of a treaty and of any amendment to it before the same can become effective. One of the major objectives of the Chicago Convention is, as stated in the preamble, to agree on "certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner" To meet similar objectives the Paris Convention had contained technical annexes designed to assure uniform regulations wherever the Convention was in effect. These annexes were parts of the Convention, but nevertheless could be modified by the internal machinery provided in the Convention without the amendments going back to states for formal ratification. A weakness of the Havana Convention was that it had no adequate machinery for the adoption of uniform regulations.

One of the major problems behind the scenes at Chicago was how to provide practical international uniformity of flight regulations without infringing on the constitutional procedures of those states which require formal ratification of treaty amendments. A compromise was finally adopted which I believe has worked well. Article 37 contains a statement that each contracting state undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures, and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which uniformity will facilitate and improve air navigation. ICAO is then directed to adopt and amend from time to time international standards and recommended practices and procedures dealing with such matters as communications systems and air navigation aids, characteristics of airports, rules of the air and traffic control practices, licensing of operating and mechanical personnel, air worthiness of aircraft, registration and identification of aircraft, meteorological information, maps, customs and immigration procedures, aircraft in distress and investigation of accidents and "such other matters concerned with the safety, regularity and efficiency of air navigation as may from time to time appear appropriate."

Article 38 requires member states of ICAO to notify it when any state finds it impracticable to comply with such standards or to bring its own regulations or practices into full accord therewith. Article 54 directs the Council of ICAO to adopt such international standards and recommended practices and "for convenience designate them as annexes to this Convention." It was fully understood at Chicago, and is apparent from the text of the Convention, that the annexes when adopted do not thereby become parts of the Convention. But in practice, so I

understand, wide uniformity of regulations has nevertheless resulted. At the same time the convention has been ratified by many states which would have had difficulty in accepting it with a delegation of power to ICAO which might have resulted in modifying the annexes as parts of the Convention without re-ratification. I believe that the compromise arrived at in Chicago was wise and has been successful.

In the Department of State Bulletin of March 11, 1945, published shortly after the Chicago Conference, Mr. Stephen Latchford, then air law adviser in the aviation division of the State Department and one of the advisers to the United States delegation at Chicago, wrote:

“Although it is evident from the proceedings and Final Act of the Chicago Aviation Conference that it is expected and urged that all the countries becoming parties to the Convention shall cooperate with a view to attaining the highest degree of uniformity with reference to the application of international standards and practices, it was realized by the delegates at Chicago that there might be some exceptional cases where a particular country would find it highly desirable and necessary to adopt some departure from an international standard. This, it is believed, will not constitute any serious impediment to the general acceptance and application of uniform international standards and practices and it is thought that the various states will accept and apply them to the greatest extent possible. After twenty years I am convinced that Mr. Latchford's statement was sound.”

Annexes to the Chicago Convention: The Convention on International Civil Aviation, signed in Chicago on 7 December 1944 (the Chicago Convention), came into force on 4 April 1947. The Convention established certain principles and arrangements so international civil aviation can develop in a safe and orderly manner, and that international air transport services be established on the basis of equality of opportunity and operated soundly and economically. Recommended practices dealing with a wide range of matters concerned with the safety, regularity and efficiency of air navigation. The current standards and recommended practices are published by ICAO as Annexes to the Chicago Convention. This list also shows the agency responsible for each Annex.

A standard, as defined by the first ICAO Assembly, is "any specification for physical characteristics, configuration, material, performance, personnel, or procedures, the uniform application of which is recognized as *necessary* for the safety or regularity of international air navigation and to which member states *will conform*." Standards may thus include specifications for such matters as the length of runways, the materials to be used in aircraft construction, and the qualifications to be required of a pilot flying an international route. A recommendation is any such specification, the uniform application of which is recognized as "desirable in the interest of safety, regularity, or efficiency of international air navigation and to which member states will *endeavor to conform*."

Preparing and revising these standards and recommendations is largely the responsibility of ICAO's Air Navigation Commission, which plans, coordinates, and examines all of ICAO's activities in the field of air navigation. The commission consists of 15 persons, appointed by the council from among persons nominated by member states. If the council approves the text, it is submitted to the member states. While recommendations are not binding, standards automatically become binding on all member states, except for those who find it impracticable to comply and file a difference under Article 38 of the Chicago Convention. The various standards and recommendations that have been adopted by ICAO are grouped

into 19 annexes to the Chicago Convention. The aim of most of the annexes is to promote progress in flight safety, particularly by guaranteeing satisfactory minimum standards of training and safety procedures and by ensuring uniform international practices.

Annex 1: Personnel Licensing: Standards as well as recommended practices for the licensing for the flight crew members such as Pilots, Flight Engineers as well as flight navigators, air traffic controllers, aeronautical station operators, maintenance technicians as well as flight dispatcher, are provided by Annex 1 of the convention on International civil aviation. Training manuals provide the guidance for the states for the scope as well as depth of training which will ensure the confidence in safe air navigation, as intended by the convention as well as annex 1, is maintained. These manuals provide guidance for the training of other aviation personnel such as aerodrome emergency crews, flight operations officers, radio operators as well as individuals involved in other related disciplines.

Annex 1 and the ICAO manuals describe the necessary skills to build the proficiency at various levels of Jobs, thereby contributing to the occupational competency. The medical standards of the annex, in requirement of the periodic health examinations, which serve as an early warning for the possible incapacitating medical conditions and contribute towards the in general well-being of flight crews as well as controllers. The ICAO'S objective is to improve safety in aviation by making states more aware of it and be more responsive towards the importance of human factors in the civil aviation operations. To accomplish this task, Annex I is regularly amended to reflect the rapidly changing environment.

Annex 2: Rules of the Air: Air Travel must be safe as well as efficient, this requires, a set of internationally agreed rules of the air. The rules developed by ICAO- consists of the general rules, visual flights rules as well as instrument flight rules which are contained in the Annex 2- apply without the exception over the high seas and over the national territories to the extent that they do not conflict with the rules of the states being overflown. The pilot in-command of an aircraft is the one who is responsible with the compliance of the rules once the aircraft is airborne. The Visual flight rules permits the flight crew to remain clear of clouds by a distance of over 1500 meters horizontally and at least 300 meters (1000feet) vertically and there should be forward visibility of about at least 8km. However for flights in some parts of the airspace and even at low altitudes there are exceptions, the requirements are less stringent. The aircraft cannot be flown under the Visual flight rule at night or above 6 feet 100 meters except by special permissions. Even the balloons are classified as aircrafts, but unmanned free balloons can be flown under specified conditions which are detailed in the annex. With regard to the interceptions of civil aircrafts as in all cases, potentially hazardous, the council of the ICAO has formulated special recommendations in annex 2 in which states are urged to implement through the appropriate regulatory as well as administrative actions. These special recommendations are contained in attachment A to the Annex. All these rules are complied with all concerned, which help make our flight safe and comfortable.

Annex 3 : Meteorological Service for International Air Navigation : Meteorological service for the International Air Navigation pilots are supposed to be informed about the Weather conditions in route and at the destination airport as well. The objectives of the meteorological services have been outlined in Annex 3 which contributes to the safety, efficiency as well as regularity of air navigation. Necessary meteorological information is to be provided to the airport operator, flight crew members, air traffic service units, search rescue units, airport management and other concerned with aviation. Coordination is a must between those giving the meteorological information and those using it. Close coordination is

a must between those who are giving the meteorological information and those who are using it. Then telecommunications between the meteorological office and control towers or approach control offices should be in such a manner that the required points may be normally contacted within the span of 15 seconds. Then airport report includes surface wind, visibility, runway visual range, present weather, cloud base, air and dew-point temperature and atmospheric pressure and is issued either half hour or hourly. To provide aircraft in flight with information about significant changes in weather, meteorological watch offices are maintained. The weather offices give warnings of hazardous weather conditions, including thunderstorms, tropical cyclones, severe squall lines, heavy hail, severe turbulence, severe icing, mountain waves, sandstorms, dust storms as well as volcanic ash clouds. These offices issue airport warnings of meteorological conditions which could affect aircrafts as well as facilities on the ground: for example, warning of expected snowstorms. Then warnings are also issued for climb out as well as approach paths. Furthermore , aircraft in flight are required to report the ATC if they encounter any weather in route at a particular flight level for example A flight has planned to fly at 36,000 feet however due to weather being reported by other aircrafts at flight level 360 then it will help the pilots of the particular flight to fly at a lower altitude where chances of encountering weather are low.

These reports are disseminated by the air traffic services units to all aircraft concerned. In order to provide for the observation and reporting of volcanic ash clouds and the issuance of warnings to pilots and airlines, ICAO, with the assistance of other international organizations, has established an international airways volcano watch (IAVW).



The above mentioned picture is the example of the weather radar which is present in all the aircrafts so the green as well as red patches indicate that the flight may run into bad weather if it flies through that route so if the flight initial planned route has weather warning it can deviate from its original route and take a longer route by notifying the ATC citing reason for weather Deviation.

Annex 4: Aeronautical Charts: Aeronautical charts not only provide the two dimensional information in most maps, but alongside also portrays three dimensional air traffic service systems. Almost all the ICAO states produce the aeronautical charts and most segments of aviation make reference to planning, air traffic control as well as for the navigation purpose. Without the global standards of aeronautical charts it would be very difficult for the pilots and other chart users to effectively find as well as interpret important navigation information as well. The safe as well as efficient flow of air traffic is facilitated by the aeronautical charts which are drawn to accept ICAO standards. The goal is to satisfy the requirement for uniformity and consistency for the provisions of aeronautical charts which contain appropriate information of a defined quality.

When a published aeronautical chart contains “ICAO” in its title, this indicates that the chart producer has conformed to both general Annex 4 Standards and those pertaining to a particular ICAO chart type. The ICAO series of aeronautical charts now consists of twenty-one types, each intended to serve specialized purposes. The World Aeronautical Chart — ICAO 1: 1 000 000 charts provide complete world coverage. The Aeronautical Chart — ICAO 1:500 000 series supplies more detail and provides a suitable medium for pilot and navigation training. Type of charts are- The in route Chart, the Plotting Chart, the Plotting Chart, Standard Departure Chart, The Instrument Approach Chart, The Aerodrome/Heliport Chart, Aerodrome Obstacle Chart. Annex 4, Chapter 20 Electronic Aeronautical Chart Display — ICAO provides basic requirements aimed at standardizing electronic aeronautical chart displays while not unduly limiting the development of this new cartographic technology.

Annex 5: Units of Measurement to be used in Air and Ground Operations: A special committee was established to look into the questions as a result of the first assembly of ICAO in 1947 which adopted a resolution recommending a system of units to be issued as an ICAO standard as soon as possible. The first edition of annex 5 was adopted in the year 1948. This contained an ICAO table of units which were based essentially on the metric system, but it also contained the four additional interim table of units for use by those states which were unable to use the primary table. Annex 5 was initially applicable only for those units used in communications between aircrafts and the ground stations. By 1961 the number of table of units in the annex had been reduced to two, which remained until the time of amendment 13 which was adopted in March 1979. Amendment 13 extended the all possible considerable scope of ICAO’s rule in terms of standardizing units of measurements to cover all the aspects of air as well as ground operations and it should be not only limited to air ground communications. It also introduced the International System of Units, known as SI from the “*Système International d’Unités*”, as the basic standardized system to be used in civil aviation. In addition to the SI units the amendment recognized a number of non-SI units which may be used permanently in conjunction with SI units in aviation. These include the liter, the degree Celsius, the degree for measuring plane angle, etc. Amendments 14 and 15 to Annex 5 introduced a new definition of the meter, and references to temporary non-SI units were deleted.

Annex 6: Operation of Aircraft (Parts I, II and III): The essence of annex 6, simply put is that with the operation of the aircraft engaged in international air transport must be standardized to the highest levels of safety as well as efficiency. The standards as well as the recommended practices with relation to the operation of aircrafts are engaged in international commercial air transport on the basis of part 1 of annex 6. The second part to annex 6, which dealt exclusively with the international general aviation, became applicable in September

1969. Then the third part of the annex 6, deals with all the international helicopter operations, which became applicable from November 1986 onwards. Then another major development has been the introduction of provisions generally referred to as the ETOPS which is to basically ensure safe operation by twin engine aero planes which are operative over extended ranged , often over water. This type of operation has arisen because of attractive economics of the large twin-engined aircrafts which are now available.



The above mentioned image is of the British Airways A318 which operates from London City Airport to New York JFK with a stop at Shannon Ireland for refueling purpose and even for passengers U.S Immigration which happens at Shannon itself where when passengers land at New York they disembark from the aircraft as a domestic passenger where there is no requirement for immigration. This aircraft is also the example of ETOPS.

Annex 7: Aircraft Nationality and Registration Marks: How are aircraft classified as well as identified, and how to determine the nationality of the aircraft? These are the two questions which are answered in the briefest of ICAO annex, which deals with the aircrafts nationality as well as the registration marks and also classifies aircraft that how they can sustain flights in the air. The annex is based on article 17 to 20 of the Chicago convention. Since article 77 of the convention permits joint operating organizations, the amendment³ was introduced to define the common mark, common mark registration authority as well as international operation agency, to enable aircraft of international operating agencies to be registered on other than the national basis. This principle determines that each provisions of the international operations agency must be assigned as a distinctive common mark by the ICAO, being selected from a series of symbols included in the radio call signs allocated by the International telecommunication Union (ITU).

Annex 8: Airworthiness of Aircraft: In the interest of safety of the aircrafts it must be designed as well manufactured in such a manner that it is eligible to be operated in compliance with the appropriate airworthiness requirements of the state of registry of the aircraft. Then consequently the aircraft is issued with the certificate of airworthiness declaring that the aircraft is fit to fly .Annex 8 is divided into four parts. Part I includes

definitions; Part II deals with procedures for certification and continuing airworthiness of aircraft; Part III includes technical requirements for the certification of new large aero plane designs; Part IV deals with helicopters. Article 33 of the Convention on International Civil Aviation places the burden on the State of Registry to recognize and render valid an airworthiness certificate issued by another Contracting State, subject to the condition that the airworthiness requirements under which such a certificate is issued or rendered valid are equal to or above the minimum standards which may be established by ICAO from time to time pursuant to the Convention.

Annex 9: Facilitation: The Standards and Recommended Practices (SARPs) on Facilitation (FAL) are derived from several provisions of the Chicago Convention. Article 37 obliges ICAO to adopt and amend from time to time international standards and recommended practices and procedures dealing with, inter alia, customs and immigration procedures. Article 22 obliges each Contracting State to adopt all practicable measures to facilitate and expedite navigation by aircraft between the territories of Contracting States, and to prevent unnecessary delays to aircraft, crews, passengers, and cargo, especially in the administration of the laws relating to immigration, quarantine, customs and clearance. Article 23 of the Convention expresses the undertaking of each Contracting State to establish customs and immigration procedures affecting international air navigation in accordance with the practices established or recommended pursuant to the Convention. A number of other articles have special pertinence to the provisions of the FAL Annex and have been taken into account in its preparation. These include: Article 10, which requires all aircraft entering the territory of a Contracting State to land at, and depart from, an airport designated by that State for customs and other examination; Article 13, which require compliance of a Contracting State's entry, clearance, immigration, passports, customs and quarantine laws and regulations, by or on behalf of passengers, crew or cargo; Article 14, which obliges each Contracting State to take effective measures to prevent the spread by means of air navigation of communicable diseases; and Article 24 (customs duty), Article 29 (documents carried in aircraft) and Article 35 (cargo restrictions).

Annex 10: Aeronautical Telecommunications (Volumes I, II, III, IV and V)

Three of the most complex and essential elements of international civil aviation are aeronautical communications, navigation and surveillance. These elements are covered by Annex 10 to the Convention. Annex 10 is divided into five volumes:

Volume I — Radio Navigation Aids

Volume II — Communications Procedures including those with PANS status

Volume III — Communication Systems

Part 1 — Digital Data Communication Systems

Part 2 — Voice Communication Systems

Volume IV — Surveillance Radar and Collision Avoidance Systems

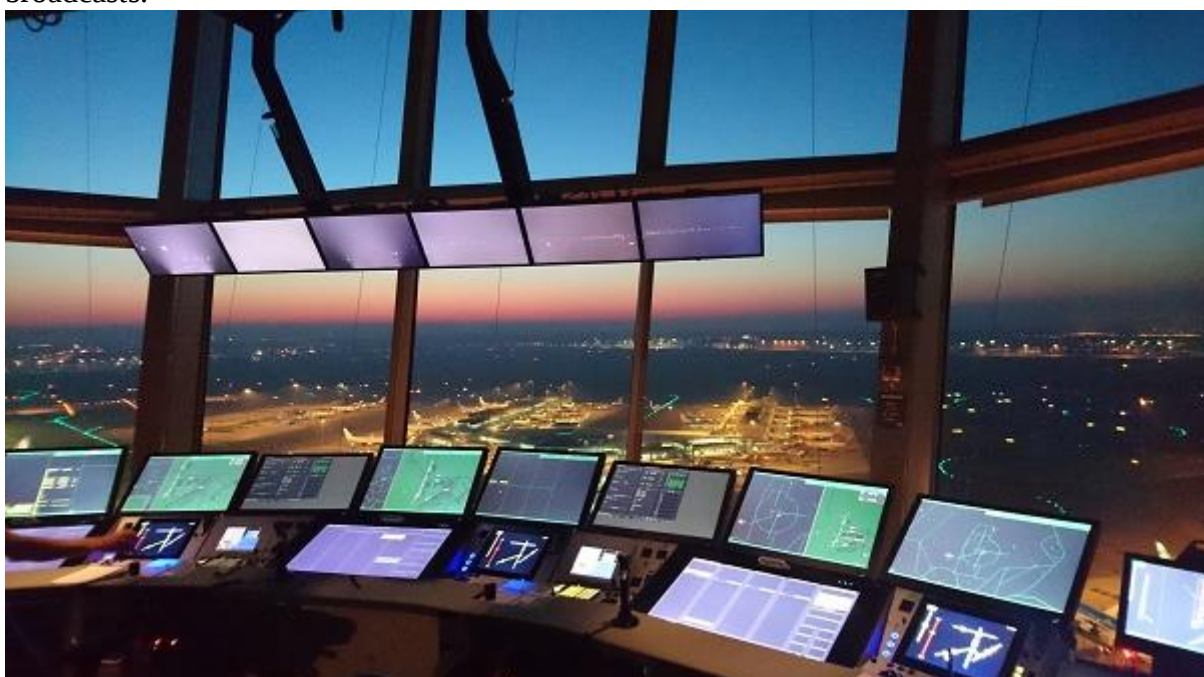
Volume V — Aeronautical Radio Frequency Spectrum Utilization

The five volumes of this Annex contain Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS) and guidance material on aeronautical communication, navigation and surveillance systems.

Volume I of Annex 10 is a technical document which defines for international aircraft operations the systems necessary to provide radio navigation aids used by aircraft in all phases of flight. The SARPs and guidance material of this volume list essential parameter specifications for radio navigation aids such as the global navigation satellite system (GNSS), instrument landing system (ILS), microwave landing system (MLS), very high frequency

(VHF) omnidirectional radio range (VOR), non-directional radio beacon (NDB) and distance measuring equipment (DME). The information contained in this volume includes aspects of power requirements, frequency, modulation, signal characteristics and monitoring needed to ensure that suitably equipped aircraft will be able to receive navigation signals in all parts of the world with the requisite degree of reliability. Volumes II and III cover two general categories of voice and data communications that serve international civil aviation. They are the ground-ground communication between points on the ground and the air-ground communication between aircraft and points on the ground. An important element of the ground-ground communication is the aeronautical fixed telecommunications network (AFTN), a worldwide network organized to meet the specific requirements of international civil aviation. Volume IV of Annex 10 contains SARPs and guidance material for secondary surveillance radar (SSR) and airborne collision avoidance systems (ACAS), including SARPs for SSR Mode A, Mode C and Mode S, and the technical characteristics of ACAS. Volume V contains information on the assignment planning of individual aeronautical radio stations operating or planned to operate in different frequency bands.

Annex 11: Air Traffic Services: The world's airspace is divided in a series of contiguous flight information regions within which all the air traffic services are provided. The main objective of the air traffic services, as defined in the annex is to prevent the collisions between aircraft, whether taxiing on the ground, taking off, landing, in route or during the time of holding pattern at the destination airport. The annex also deals with the ways in which it can be expedited as well as orderly flow of air traffic can be maintained for air traffic and also to provide advice as well as information and advice for the safe and sound efficient conduct of flights and alerting the aircraft in distress. To meet these objectives, ICAO provisions call for the establishments of the flight information centers as well as air traffic units. All aircraft have to fly in accordance with either instrument flight rules (IFR) and air traffic control units. Under IFR, the aircraft fly from one radio aid to the next or by reference to self-contained airborne navigation equipment from which the pilot can determine the aircraft's position at all times. VFR flight also receives information on weather conditions which would make visual flight impractical. Annex 11 contains specifications for operational flight information services broadcasts, including automated terminal information service broadcasts.



Annex 12: Search and Rescue: The Annex, which is complemented by a three-part search and Rescue Manual which deals with the SAR organizations, managements as well as procedures, sets forth the provisions for the establishment, maintenance as well for operation of search and rescue services by ICAO by contracting state in their territories as well as over high seas. Three distinct phases categorize emergency situations. The first is the uncertainty phase which commonly is declared when radio contact with the aircraft gets lost and re-establishment of it becomes difficult or when the aircraft fails to arrive at its destination. For example the sudden MH370 disappearance in which search and rescue operations was carried out by various countries such as. Then AI 182 crash which happened in the year 1985 when the aircraft was flying over the Irish airspace over Shannon then it had lost contact with the Shannon ATC which made the Irish authorities do a search and Rescue operations and ultimately a Canadian Cargo ship found the wreckage of the Air India this crash is one of the worst air crashes which has occurred over the Irish Air Space. During this phase the Rescue Coordination Centre (RCC) concerned may be activated. The RCC collects and evaluates reports and data pertaining to the subject aircraft. Depending on the situation, the uncertainty phase may develop into an "Alert Phase", at which time the RCC alerts appropriate SAR units and initiates further action. The "Distress Phase" is declared when there is reasonable certainty that an aircraft is in distress. In this phase, the RCC is responsible for taking action to assist the aircraft and to determine its location as rapidly as possible. In compliance with a predetermined set of procedures, the aircraft operator, State of Registry, air traffic services units concerned, adjacent RCCs and appropriate accident investigation authorities are informed; a plan for the conduct of the search and rescue operation is drawn up and its execution is coordinated.

Annex 13: Aircraft Accident and Incident Investigation: The Annex spells out that which states may participate in the investigation, such as the states of the occurrence, Registry, OPERATOR, Design and the Manufacturer. Then even the rights as well as responsibility of the States are also defined. The 9th edition of the Annex 13 consists of eight chapters, an appendix as well as four chapters. The first 3 chapters include the protection of evidence as well as the responsibility of the state of occurrence for the custody as well as the removal of the aircraft. Then definition regarding the handling of the state must be requested for the custody as well as the removal of the aircraft. Then it also defines that how state must handle request for participation in the investigation from the other states. All the states can be involved if an investigation is properly notified for the occurrence. Then procedures for this notification are given in chapter 4. Chapter 5 addresses the investigation process. Then Chapter 6 contains the standards as well as the recommended practices which deal with the development as well as publication of the final report of the investigation. Then chapter 7 addresses the reporting requirements of the ADREP system which is by the means of preliminary and accident/ incident data reports. The Chapter 8 deals with the accident prevention measures.

Annex 14: Aerodromes (Volumes I and II): It extends from the planning of airports and heliports to such details as switch over times for the backup power supply; from civil engineering to illumination engineering; from provisions of having proper rescue as well as firefighting equipment to even have simple requirements for keeping airports clear of birds. Volume I deal with the airport design as well as operations and volume II deals with the heliport design. In recent years more focus has been given towards the operations of the airports. The current addition of the Annex 14, Volume I include the specifications on the maintenance of airports, then particular focus is also given to the pavement areas as well as visual aids. Attention is also given for the eliminating features of airports such as birds as

they possess significant amount of threat to the aircrafts and even endanger aircraft operations as well. Then the rescue as well as firefighting service which, according to Annex 14, is mandatory for all the International Airports to have. The Annex sets forth the agents to be used, their amounts and the time limits in which they must be delivered to the scene of an aircraft accident.

Provisions for heliports are included in Volume II of Annex 14. These specifications complement those in Volume I which, in some cases, are also applicable to heliports. The provisions address the physical characteristics and obstacle limitation surfaces required for helicopter operations from surface level and elevated on-shore heliports and helidecks, under both visual and instrument meteorological conditions. Material dealing with the marking and lighting of heliports, as well as rescue and firefighting requirements for heliports, also has been included in Volume II. Although specifications on marking and lighting of heliports are only applicable to operations in visual meteorological conditions, work is under way on the development of appropriate visual aids for helicopter operations in instrument meteorological conditions.

Annex 15: Aeronautical Information Services: The object of the aeronautical information service is for the insurance of information which is necessary for the safety, in order to ensure regularity as well as efficiency of international air navigation. Annex 15 defines how an aeronautical information service shall receive and to originate, collate as well as assemble, edit, format as well as specified aeronautical information/ data. The goal is to satisfy the need for uniformity and consistency in the provision of aeronautical information/data that is required for the operational use by international civil aviation.

Annex 16: Environmental Protection (Volumes I and II): Annex 16 deals with the various aspects of aircraft noise problems which were adopted in 1971 on the basis of the recommendations of the 1969 Special meeting on the aircraft noise in the vicinity of the airports. These included procedures for describing as well as measuring aircraft noise, human tolerance to the aircraft noise, then certification for aircraft noise, criteria for the establishment of aircraft noise abatement procedures, land use control as well as ground run-up noise abatement procedures. The noise evaluation measures are effective with a perceived noise level, expressed in EPNDB. In the volume I, different aircraft are classified in terms of the basis of noise certification. These classifications included the supersonic jet aero planes for which the application for the prototype was accepted before 6th October 1977. For those accepted on or after the date for the propeller driven aircrafts over 5700 kg for those which are not exceeding the mas, even supersonic aero planes for which application for the certification of the prototype was accepted before 1st January 1975 and for helicopters for which the application for certification of the prototype was accepted on or after 1 January 1980. In Volume II of Annex 16, there are Standards which prohibit the intentional venting of raw fuel to the atmosphere from all turbine engine powered aircraft manufactured after 18 February 1982.



The above mentioned picture is of the Sydney Airport in Australia which is the major gateway however the airport despite being one of the busiest has a night time curfew hours because of the location of the Airport which is in the near the residential area and due to the complaints of the increased aircraft noise this decision was taken in the year 1995 where the Australian government passed the Sydney Airport Curfew act. Airlines which violate the curfew hours are heavily penalized as well.

Annex 17: Security - Safeguarding International Civil Aviation against Acts of Unlawful Interference: Annex 17 is primarily concerned with the administrative as well as the co-ordination aspects, as well as with the technical measures for the protection of the security of the international air transport, requiring each contracting states to establish its own civil aviation security programmes where additional security measures may be proposed by the other appropriate bodies as well. The Annex is maintained under the constant review to ensure that the specifications are current as well as effective. This document sets the minimum standards for the aviation security worldwide, it is subject to careful scrutiny before undergoing any changes, additions as well as deletions. Since its publications, annex 17 has been amended ten times in response to the needs which are identified by the states and is kept under review by the Aviation security panel. This group of experts are appointed by the council which includes the representatives from Argentina, Australia, Belgium, Brazil, Canada, Ethiopia, France, Germany, Greece, India, Italy, Japan, Jordan, Mexico, Nigeria, the Russian Federation, Senegal, Spain, Switzerland, the United Kingdom and the United States, as well as international organizations such as the Airports Council International (ACI), the International Air Transport Association (IATA), the International Federation of Airlines Pilots Association (IFALPA) and the International Criminal Police Organization (ICPO-INTERPOL). The aviation security specifications in Annex 17 and the other Annexes are amplified by detailed guidance material contained in the Security Manual for Safeguarding Civil Aviation against Acts of Unlawful Interference which was first published in 1971.

Annex 18: the Safe Transport of Dangerous Goods by Air: Annex 18 specifies the broad Standards and Recommended Practices to be followed to enable dangerous goods to be carried safely. The Annex contains fairly stable material requiring only infrequent

amendment using the normal Annex amendment process. The Annex also makes binding upon Contracting States the provisions of the Technical Instructions, which contain the very detailed and numerous instructions necessary for the correct handling of dangerous cargo. These require frequent updating as developments occur in the chemical, manufacturing and packaging industries, and a special procedure has been established by the Council to allow the Technical Instructions to be revised and reissued regularly to keep up with new products and advances in technology. The nine hazard classes are those determined by the United Nations Committee of Experts and are used for all modes of transport.

Annex 19: Safety Management Systems (SMS): Performance based approaches to management of safety are best exemplified by Safety Management Systems (SMS) and the maturity achieved by the SMS concept allows for its implementation on global basis. Certain approaches for the management of safety are set in motion only after some triggering event, such as an accident, incident or reportable event, discloses a safety concern. For this reason, such approaches may be considered outcome-driven and reactive. They need an outcome in order to react and engage the safety management process. In these approaches, responsibility for monitoring outcomes and the remedial action to the safety concerns that are underlying such outcomes may be scattered within the organization, depending on the sector(s) involved (flight operations, maintenance, ramp, cabin and so forth) in the event leading to the outcome. Furthermore, lines of accountability for safety monitoring and safety responses may not always be clearly articulated and, if they are, safety accountability generally stops at the middle management. SMS, on the other hand, involve the on-going and routine collection and analysis of safety data during the course of the activities that an organization must pursue every day while conducting its core business functions, in addition to reacting to outcome data. For this reason, SMS may be considered process-driven and proactive. They continuously collect and analyze big volumes of data that provides for a principled basis to the definition of activities and the allocation of resources to address safety concerns in a proactive manner. The term system conveys the notion of an integrated set of processes aimed at managing safety that crosses departmental boundaries, thus addressing safety concerns from an integrated, broad perspective. An SMS is thus a systemic approach to the management of safety, that includes the necessary organizational structure, accountabilities, policies and procedures. In order to reinforce the notion of safety management being a managerial business process, SMS requirements include provisions for an organization to establish lines of safety accountability throughout the organization, as well as at the senior management level. IATA is an active participant of the ICAO Safety Management Panel and was involved in the drafting of the newest ICAO Annex, namely Annex 19 – Safety Management, which became applicable on 14 November 2013. A Safety Management System (SMS) is a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures. As per ICAO requirements, service providers are responsible for establishing an SMS, which is accepted and overseen by their State.

Types of service providers

- Approved training organizations that are exposed to safety risks during the provision of their services
- Aircraft operators
- Approved maintenance organizations
- Organizations responsible for type design and/or manufacture of aircraft
- Air traffic services providers
- Certified aerodromes

Under the requirements, the service provider must implement an SMS accepted by their State that, as a minimum

- Identifies safety hazards
- Ensures that remedial action necessary to maintain an acceptable level of safety is implemented
- Provides for continuous monitoring and regular assessment of the safety level achieved
- Aims to make continuous improvement to the overall level of safety

Alongside the ICAO requirements, SMS requirements have been incorporated into the IATA Operational Safety Audit (IOSA). Industry has been implementing the Safety Management System (SMS) framework elements for a number of years. As demonstrated through IOSA audit results, there are varying degrees of implementation to date. Recognizing the need to progress the implementation of SMS by Industry, in April IATA introduced the IOSA SMS Strategy. This Strategy provides:

Bilateral Air Transport Agreements: Bilateral regulations are the regulations which are undertaken jointly by two parties or mostly by two states in terms of the development of international civil aviation. The main objective of the bilateral agreement is the conclusion, implementation or the continuance of some kind of the intergovernmental agreement as well as understanding concerning air services between the territories of the two parties. A significant amount of the intergovernmental bilateral regulatory activities involves the formal consultations which are undertaken to concluded as well as interpret , expand as well as amend or resolve a dispute under an intergovernmental agreement or understanding concerning international air services. Unlike national as well as multilateral regulation, the bilateral regulation of international air transport does not have an organizational structure. However, it does have a legal regulatory structure which is composed of several thousand bilateral agreements as well as understandings.

Evolution of the Bilateral Regulations: Although international air transport services were first developed in the early 1920s, few bilateral intergovernmental agreements were concluded in those early decades due to the small volume of international air transport activities and then to the virtual cessations of many commercial flights during the 1939-1945 (World War I) period. Bilateral agreements now in force, largely date from after the 1944 Chicago Convention. The Chicago Convention established the rules under which international aviation operates. It also established the International Civil Aviation Organization (ICAO), the United Nations organization responsible for fostering the planning and development of international air transport. In the aftermath of war, with many nations struggling to rebuild their shattered economies, it is easy to understand why protectionist elements were incorporated into the drafting of the Chicago Convention. The treaty determined that no scheduled international air service may be operated over or into the territory of a contracting state without their express permission. Over the following years, ICAO developed a series of traffic rights, known as freedoms of the air. These freedoms continue to form the basis of rights exchanged in air services negotiations today. Governments must continually negotiate new treaties to allow international aviation to grow and to expand their carriers' access to new and emerging markets. This type of trade arrangement does not exist in any other sector. The Australian Government is working to move beyond the bilateral system through multilateral organizations including ICAO, the World Trade Organization and APEC (Asia Pacific Economic Cooperation). This is a long term goal, but an important one.

In the meantime, many countries are working within the bilateral system to liberalize air services arrangements and progressively remove restrictions on routes, capacity and airline ownership. The bilateral system has its weaknesses, but it can also be flexible and allow rapid change, where parties agree. Despite its limitations, the bilateral system has allowed international aviation to grow into the vibrant industry we have today.

Why Bilateral Agreements? Article 1 of the Chicago convention states has complete as well as exclusive sovereignty over the territory. Agreement on the requirement for special permission or other authorization to operate the schedule international air services over or into the territory of a contracting state. Then lack of success for efforts to establish a multilateral regime for the commercial aspects for the international air transport.

The Bermuda I Agreement of 1946 between UK & USA: This agreement was the result of the compromise which took place between two broad approaches in regard with the regulation of international air services which had emerged out of the Chicago conference and are yet to be resolved.

- i) At one extreme it was held that there should be no regulation of capacity or tariffs nor narrow definitions of routes.
- ii) The opposite view was that capacity should be pre-determined, tariffs regulated by an international agency and routes specified.
- iii) Under the compromise agreement, tariffs were to be established by the Airlines through IATA, subject to the approval of both parties. Capacity was to be determined by the Airlines and routes were specified.

Typical Provisions of Bilateral Air Transport (Services) Agreements

1. The **Preamble**, which is the initial part of the agreement, identifies the **contracting parties** or simply **parties** (the two involved governments), presents their reasons for entering into the agreement, and declares that they have agreed to what will follow in subsequent parts of the agreement.
2. A **definitions article**, often the first article of the agreement, assigns meanings for the purposes of that agreement to terms used in the text, typically those used more than once.
3. A **grant of rights article** expresses the main purpose of the agreement, that of the grant by each contracting party to the other contracting party of rights specified in that article or elsewhere, such as in the Route Schedule(s), to operate the agreed air services.
4. A **fair and equal opportunity article** (or some variant thereof such as “fair and equitable” or “fair”) sets forth a general principle which each party to an agreement may rely upon to ensure against discrimination or unfair competitive practices affecting its designated carrier(s). Alternatively, the principle may be stated in a clause in the capacity article or elsewhere in the agreement. The article is sometimes expanded to specifically require consideration of the interests of the other party and its air carrier(s). The opportunity provided is for the designated carrier(s) of each party and may be stated as “to compete” or “to operate.”
5. A **designation and authorization article** grants the right to name an air carrier, or more than one air carrier, to operate the agreed services and establishes the limited conditions under which the other party may deny an operating authorization to such carrier(s). The conditions for denying (including withholding) of an operating authorization are typically those of substantial ownership and effective control not

being vested in the designating party or in its nationals, and/or an insufficient disposition to conform to the laws and regulations of the receiving party and/or an inability to meet airworthiness standards.

6. A **revocation or suspension of operating authorization article** grants each party a right to revoke or suspend the operating authorization already granted to an air carrier of the other party if the carrier no longer meets a specified condition, usually one of the same conditions established for the grant of such authorization.
7. A **capacity article** lays down the agreed principles or method for regulation of the amount(s) of services offered or to be offered under the agreement. Detailed models of a pre-determination type capacity article, a Bermuda I type capacity article, and a free-determination type article were developed by ICAO to provide guidance on three alternative regulatory approaches to capacity clauses and may be found in ICAO Doc 9587.
8. A **tariff article** establishes procedures for the establishment and regulations of prices on the agreed air services. Detailed models of a double approval clause, a country of origin clause and a dual disapproval clause were developed by ICAO to provide guidance on three alternative regulatory approaches to tariff clauses or articles and may be found in ICAO Doc 9587, along with discussion of further alternative approaches to tariff regulation, such as “tariff zone” and “country of designation.”
9. A **statistics article** typically provides for exchange of airline traffic data related to the agreed services, either periodically or as needed for the regulation of capacity, for route evaluations, or for other purposes.
10. A **Commercial operations article** or **commercial opportunities article** (or articles) specifies the rights granted to each party’s designated air carrier(s) to carry out commercial activities in the territory of the other party. These rights are sometimes referred to as “**doing business rights**” or “**soft rights**” and are likely to include the establishment and extent of foreign staffing of airline offices, sales in local or convertible currency, ground handling options, currency conversion and remittance of funds by airlines, and in some cases, access to landing and take-off slots at airports and/or use of computer reservation systems (CRS). An **airport slots article** and/or a **computer reservation systems article** are sometimes used to cover the latter two “soft rights” separately. “**Hard rights**” has come into some use as a collective term of contrast to include route, traffic, operational and capacity rights which are considered more valuable and enduring, hence “hard”. Pricing rights are sometimes in the other. In some agreements, one or more of the “doing business rights” listed above are given their own distinct articles.
11. An **airworthiness article** typically provides for the mutual recognition by the parties of each other’s certificates of airworthiness, certificates of competency and licences.
12. An **aviation security article**, an addition in recent years to many bilateral air transport agreements, sets forth procedures for co-operation between the parties to avoid or deal with situations involving acts or treats of unlawful interference with the security of civil aviation. In 1996 the Council of ICAO adopted a model bilateral aviation security clause for the use of Contracting States (see Appendix I to the manual).
13. A **customs duties and taxes article** requires each party to exempt from duties, taxes and charges, the aircraft fuel, spare parts and supplies used by the other party’s air carrier(s) (see also ICAO’s Policies on Taxation in the field of International Air Transport, Doc 8632).
14. A **taxation article** (in the absence of a separate tax agreement) exempts from taxation the corporate earnings of the air carrier(s) of the other party and may, in some cases,

extend to cover the earned incomes of air carrier employees (see also ICAO Doc 8632).

15. A **user charges article** sets forth agreed principles regarding charges for the use of airports and route air navigation facilities by the designated air carrier(s) of the other party (see Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services, ICAO Doc 9082).
16. An **application of laws article** establishes that the national laws of one party related to the operation, navigation, and admission and departure of aircraft apply to the air carriers(s) of the other party.
17. A **consultation article** sets forth the agreed procedures for consultation between the parties or their aeronautical authorities (often with a time requirement for the consultation to take place) and may include an **amendment clause** (sometimes a separate **amendment article**) which establishes procedures for amending or modifying the agreement.
18. A **settlement of disputes article** sets forth agreed measures for resolving disputes between the parties. Such measures routinely include consultation and sometimes arbitration.
19. A **termination article or denunciation article** specifies how a party may end its commitments under the agreement, typically one year after receipt by the other party of a formal notice to that effect. Some agreements provide for a shorter notice period, such as six months, or in exceptional cases, allow for denunciation or termination of only parts of the agreement.
20. A **multilateral agreement article** provides that if a multilateral agreement accepted by both parties, concerning any matter covered by the agreement, enters into force, the agreement shall be amended so as to conform with the provisions of the multilateral agreement.
21. A **registration article** reiterates the obligations of the contracting parties (when both are Contracting States of ICAO) to register the agreement with ICAO, as required under Articles 81 and 83 of the Chicago Convention.
22. An **entry into force article** establishes how and when the agreement will take effect, typically upon the conclusion of an exchange of diplomatic notes. It may specify provisional effectiveness and may or may not anticipate a process of ratification by either or both parties.
23. The **signature provisions** at the end of the agreement indicate the date and place of signature and specify the language versions. Although most agreements having more than one language version provide that each version is equally authentic, agreements can provide that in the event of conflict between the language versions, the text of one specified language will prevail.

International Civil Aviation and Dispute Settlement: Dispute means disagreement on a point of law or fact, a conflict of legal views or of the interests between two persons. The term international disputes has a wider connotation that includes within it the interstate dispute as well as dispute which arises between the states as well as individuals, corporate bodies as well as non-state entities which are subject to international regulations. Then settlement means the act or the instances of being settled or in settlement mode. Dispute settlement is an ambiguous term; it may refer to the settlement in the sense that that the disputing parties agree to end their dispute, with the assistance of the 3rd Party, or alternatively that it may refer to the mechanism for a decision by the court, arbitral tribunal as well as a comparable body. Therefore with respect to international dispute it must have a wider connotation that covers within its ambit the interstate disputes as well as disputes

which happen between states as well as individuals, the corporate bodies as well as non-state entities which are subject to the international regulations.

Under the International law it is mandatory for the parties to settle the dispute in peaceful means. Article 2(3), the U.N charter enjoins the members to settle their international disputes by peaceful means. The peaceful means are given under article 33 for the charter as negotiations, enquiry, mediation, conciliation, arbitration. Judicial settlement, resort to the regional agencies as well as other peaceful means. The international disputes which are related to aviation have mostly been resolved through arbitration. This chapter covers a discussion on various disputes that have arisen under various bilateral and multilateral international agreements including the Chicago Convention.

Aviation laws and the regulations govern the national as well as international issues which affect the operation of aircrafts, flights, air travel, and maintenance of aviation facilities as well as airport matters. Aviation laws as well as regulations monitor the duties, the rights as well as liabilities of the commercial businesses as well as private individuals. The settlement of international aviation disputes takes place under the multiple umbrellas of the convention on the international civil aviation as well as multilateral and bilateral agreements between states including the bilateral air services agreements. Whenever there is trade, the potential for conflict arises. In no other industry is this assertion more common than aviation, where the government policies traditionally has been very severe and the trade relations are based on the bilateral agreements rather than one big multilateral treaty.

Before 1970 aviation disputes were very few as well. During the first 30 years of the international aviation the aviation industry, both domestic as well as international, was subsidized as well as regulated to such a degree that disputes were unheard of. Several legislations were successfully deregulated the US's domestic market which prompted to seek deregulation internationally.

Bermuda I, a bilateral air service agreement, which took place in 1946 between the United States as well Great Britain, , which provided the model for most bilateral air service agreements that the USA had subsequently negotiated. While majority of the states sought to apply these agreements which were designed for only one carrier per route, in majority of the cases the carter administration used to designate many new carriers for the routes as well. This approach allowed the existing airlines to expand their routes and open the markets for many new operators as well.

Aviation disputes may be classified as either:

-  Commercial, that is arising out of the application and interpretation of bilateral agreements.
-  Non-commercial, that is, between states and involving interpretation of obligations under the Chicago Convention.

Non-commercial aviation disputes:

Non-commercial air transport dispute generally involves the application as well as interpretation of the Chicago conventions with article 9 which includes prohibited zones and 15 airport and similar charges, which generate inter-state disputes which suggest that conflicts involve article 15 of the Chicago convention which often result from the revenue generating actions, with the state whose designated airline is subjected to the increased charges which object on the grounds that are discriminatory in nature. Sometimes these

kinds of dispute have a lot of political differences. Commercial aviation disputes major commercial aviation disputes which revolve around the bilateral air transport agreements which incorporate provisions from the Chicago convention. Major commercial aviation disputes around the bilateral air transport agreements which themselves incorporate the provisions from the Chicago convention.

While many of these agreements are very similar in important respects, there may be differences in how they handle the disputes resolutions. Back in 1952, then main Secretariat of the ICAO has analyzed over two hundred such agreements and classified them according to their provisions on dispute settlement. While some failed to address dispute resolution at all, others provided for the recognition of the competence of a tribunal for the exclusive competence of the ICAO in all the events of the dispute. Then in 1962, the eminent scholar Bin Cheng found that almost all the contained dispute settlement provisions , principally providing for the arbitration and the UK, provides an example of dispute resolutions under a bilateral agreement structure. In the event of a disagreement it provides for

- (1) Formal consultations or
- (2) If formal consultations fail, arbitration by a tribunal of three arbitrators.

If arbitrators are not appointed then either party may request the President of the International Court of Justice (ICJ) to make such appointment. The approach embodied in the Agreement is one of negotiation and if that fails, arbitration. Parties to aviation disputes: states carrying the interests of national carriers Although the formal parties to disputes relating to bilateral agreements may be two states, it is quite possible that the dispute may have initially existed between an airline of one state (a private entity) and an airport authority, which possesses appropriate regulatory powers, including power to increase airport fees. Where informal settlement attempts fail, the airline involved may request that its government involve itself in the dispute. In this way what begins as a private dispute becomes an inter-state dispute, ‘a dispute between sovereign authorities’. Whether or not that dispute is resolved according to the procedures laid down in Bermuda type bilateral agreements is very much in the hands of the disputing states. In practice, states may resort to a number of approaches. In the absence of a universal mandatory approach they may, for example, resort to using

- (1) Unilateral coercive means; or
- (2) Political means; or
- (3) Legal means to resolve the dispute.

Arguably, some states demonstrate a preference for political/diplomatic means of settlement. This tends to preserve the relative power relationship between the parties to a dispute and is often preferred by the more powerful states because it advances their interests. Where unilateral or political means of resolution are not employed, states may engage in a variety of dispute resolution techniques when faced with bilateral aviation disputes.

The significant disputes arisen under Bilateral Air Transport Agreements are:

-  United States v. France (1963)
-  United States v. Italy (1965)
-  United States v. France (1978)
-  Belgium v. Ireland (1981)

- ✚ United States v. United Kingdom (1992)
- ✚ Australia v. United States (1993)

The significant disputes placed before the ICAO Council as per the provisions of the Chicago Convention are:

- ✚ India v. Pakistan (1952)
- ✚ United Kingdom v. Spain (1969)
- ✚ Pakistan v. India (1971)
- ✚ Cuba v. United States (1998)
- ✚ The United States v. The European Union (2000)

The significant disputes placed before The International Court of Justice

- ✚ Libya v. United States (1992)
- ✚ Iran v. United States (1996)
- ✚ Pakistan v. India (2000)

International Aviation Disputes have been resolved by primarily two methods i.e.

- ✚ Political means of Dispute Resolution; and
- ✚ Legal Means of Dispute Resolution

Alternate means to Dispute Resolution under Chicago

Negotiation: Negotiation is the most common used method in terms of dispute resolution. Mostly states are placed under the obligation to go by the Chicago convention's article 84, which requires them to do prior judicial proceedings before the ICAO council. In point of fact, most bilateral air transport agreements also stipulate that the parties should first negotiate before taking the next step. Main characteristics of negotiation are that it is restricted to the parties which are involved in the dispute. There is no recourse to either the third party at all. The main apparent disadvantage of negotiation is that it can be very time consuming with the parties sometime acting difficult in respect to certain entrenched positions. Where the parties wish to achieve the maximum outcome of temptation for the negotiators to exaggerate as well as overstate positions as well. Further, the large amount of trade disputes as well as the detail associated with each dispute renders negotiations between states an impractical as well as expensive approach for each dispute as well. States are involved on behalf of carriers, and negotiations don't go well, there is also a possibility of certain dispute for example airport access or additional charges which are placed on flag designated carriers which widening to encompass the broader bilateral relationship which exist between two states.

Fact-finding: Fact-finding provides a preliminary mechanism for the subsequent resolution of disputes using other dispute resolution techniques. Fact-finding, through Commissions of Inquiry, paves the way for such resolution by correctly identifying the relevant facts in dispute. A standard approach for employing fact-finding is for the parties to the dispute to agree on the formation and composition of a panel of individuals whose role it is to make enquiries to identify the relevant facts surrounding the dispute or incident. This panel does not make recommendations or suggestions; it merely identifies the salient facts. The notion is that this process speeds up the resolution process with the facts no longer subject to dispute. While accident investigation of an aircraft disaster, under Article 26 of the Chicago Convention, may be conducted by the state where the disaster took place, or the state of registry of the aircraft if the disaster did not occur within a particular state's territory, there is at least one major example of ICAO becoming involved in a major air crash by way of

completing not one but, eventually, two fact finding enquiries into the event. I refer to the infamous incident in which a Soviet jet fighter shot down a Korean Airlines flight (KE007) over the Sea of Japan in 1983. Against the backdrop of a situation where the Republic of Korea could not avail itself of Article 26 to launch an investigation because 'the Soviet Union insisted that the aircraft had invaded, and was shot down inside Soviet airspace,' ICAO initiated its own investigation.

While the ICAO role in relation to Article 26 is limited to laying out the procedure to be followed by the contracting state taking jurisdiction, in the light of this dispute, the ICAO Council adopted a resolution empowering the Secretary- General 'to institute an investigation to determine the facts and technical aspects' associated with the KAL flight and its destruction. The ICAO Council, in empowering the Secretary- General to investigate, relied on Article 55(e) of the Chicago Convention which permits ICAO investigation to take place where there is an 'avoidable obstacle to the development of international air navigation'. Due to the uncooperativeness of Soviet authorities, the 1983 ICAO investigation has been described by Tompkins and Harakas as 'cursory at best and deficient in many respects'. Critical evidence was not available to the ICAO, such as wreckage lost at sea and cockpit and control tower voice recordings. Although the Secretary-General's investigative team presented two possible explanations for the course deviation taken by Flight KE007, each of the two scenarios presented in the 1983 report, despite being ostensibly findings of fact, lacked the certainty that could only be provided by the missing data.

A feature of the ICAO investigation was that, although ICAO possesses the authority to mandate that parties to the Chicago Convention empower the investigative process, ICAO has no such investigative procedures of its own. For example, it lacked the power to subpoena documents, require individuals to testify or obtain state compliance. The novel situation encountered in this instance was not a situation envisaged by the founders of ICAO or the drafters of the Chicago Convention. Subsequently the ICAO Council referred the Secretary-General's report to the Air Navigation Commission (ANC), 'the highest technical body of ICAO'. The subsequent report prepared by the ANC noted the 'incomplete and contradictory elements' of the 1983 report, its reliance on 'unverified facts and assumptions', especially relating to its flight path, and the ANC failed to endorse the findings of the 1983 report. As a consequence the ICAO Council did not adopt the 1983 report of the Secretary-General.

Although ICAO never adopted the 1983 report, the disintegration of the old Soviet Union led to the eventual availability of the Cockpit Voice Recorder (CVR) and DFDR tapes. On the recommendation of representatives of the Republic of Korea, the Russian Federation, the United States of America and Japan, and on receipt of the original CVR and DFDR tapes ICAO undertook, in 1992, to complete its investigation into the crash of Flight KE007. The 1993 ICAO report that resulted, given its access to evidence concealed in 1983, did contain findings of fact relating to this air crash. Tompkins and Harakas remained critical of aspects of the 1993 report, suggesting that assumptions were still made in it that were not explained. Given the essential fact-finding brief, it would seem necessary for any assumptions made to be supported by findings of fact. Arguably, from a structural point of view, the KE007 fact-finding investigations of ICAO lay bare more deficiencies, in the processes and procedures surrounding these investigations, than strengths. How then, can the system be improved? Or should ICAO not take up the challenge of such investigations? Is there a need to empower some other body in like circumstances? Given that ICAO may again meet a similar

challenge a minimum reform would be for member states to confer full authority on ICAO to ‘search out all of the relevant factors’ so that the complete record is scrutinized and provides a sound basis for fact-finding. An argument could be mounted that the Chicago Convention ought to be amended to decree the mandatory cooperation of states involved in the disaster, placing upon them the obligation to invest the ICAO investigative team with such powers. Another related lesson to be learned is that international politics do not mix well with meaningful aircraft accident investigation, which has as its goal the search for the ultimate truth so as to prevent, as far as humanly possible, a recurrence. Although even the ICAO Council has lamented the sluggish movement of states when it comes to reform of the Chicago Convention, the need for reform to deal better with KE007-like circumstances remains.

Good offices: Good offices has been characterized as a moderately valuable ADR technique that is sometimes employed by, among others, ICAO. It involves the use of a third party to improve communication between the parties. The third party may, for example, encourage the parties to the dispute to communicate in a more constructive manner than they had prior to the third party’s involvement. Generally, this role has occurred where there is a clear need to improve communication prior to engaging in mediation or negotiation to resolve the dispute.

While ICAO has been infrequently involved in the settlement of ‘commercial disputes between states trading in air services’ it has exercised its good offices on a number of occasions in the context of disputes falling under the umbrella of the Chicago Convention. First, where ICAO is performing its judicial role in respect of a dispute its own Rules of Procedure for Settlement of Differences (Article 14) permit it to provide its good offices to states in dispute to expedite settlement. Despite the fact that ICAO has only exercised its good offices on three occasions in this judicial context it has received credit for using its good offices, along with mediation, to bring India and Pakistan to the point where settlement of their 1952 dispute regarding the erection of a ‘prohibited zone’ took place. Maniatis suggests⁴⁶ that Articles 54(j) and 54(k) of the Chicago Convention may provide a basis for ICAO exercising its good offices where there is a dispute between two member states of ICAO.

Mediation: Mediation has been variously described as (1) a process in which ‘the participants, together with the assistance of a neutral person or persons, systematically isolate disputed issues in order to develop options, consider alternatives and reach a consensual settlement that will accommodate their needs’ and as (2) a structured negotiation in which a neutral third party, the mediator, uses a number of techniques to assist the parties to the dispute to frame their own agreement to resolve the dispute’. Court-ordered or court-annexed mediation in the context of private international air law disputes, most often between individuals (passengers) and airlines, occurs in a number of common law jurisdictions. Court ordered mediation has been defined as ‘a process by which disputants pursuant to an order of the court engage the assistance of a neutral accredited mediator to help them resolve their dispute by negotiated agreement without adjudication’.

As mentioned above, along with negotiation, mediation played a role in the settlement of the 1952 India–Pakistan dispute. As mediation is generally voluntarily entered into by states it is indicative of a desire to resolve the impasse or differences between states. It complements negotiations in particular and may be ‘needs based’ (i.e. it focuses on the real needs of each party to the dispute as against ‘positional based’ negotiation) and the parties themselves play

a pivotal role in shaping a resolution as against having a solution imposed upon them by an arbitral tribunal or third party expert.

There are different types of mediation with the following types most likely to draw scrutiny in the context of international aviation disputes:

- (1) Facilitative mediation, where the dispute is defined in terms of the parties' underlying interests;
- (2) Settlement mediation (or 'compromise mediation') in which a 'high status' mediator determines the parties' 'bottom line' and attempts to achieve compromise; and
- (3) Evaluative mediation, where the mediator provides additional information and advice to the parties in attempting to influence the parties in their negotiations through the use of his/her professional expertise.

Advantages of mediation include:

- (1) Speedy settlement of disputes with reduced costs;
- (2) Flexibility in the shaping of a settlement that is not found in litigation;
- (3) Elimination of the chance of an unacceptable and unpredictable result;
- (4) Avoidance of public disclosure of private information;
- (5) Facilitation of a real understanding of the 'other' party's position and promotion of a reasonable compromise in structuring an agreement for resolution of the matter in dispute;
- (6) Retention by the parties of some control over the process which, of itself, promotes ownership over the process; and
- (7) Elimination of the opportunities for coercion and nullification of power imbalances between the parties.

It has been argued that there are five elements that are common to all forms of mediation. They are, its voluntariness, its confidential nature, that it involves negotiation to reach a consensus, its involvement of a neutral third party, and that the mediator acts as a facilitator, encouraging the parties to reach agreement but not adjudicating on the dispute. While mediation has been widely adopted in many situations and by many legal systems and is generally seen as a valuable additional means of seeking a speedy and cost effective resolution to disputes, it has been infrequently employed in the 'big picture' aviation disputes. Is there then a need to build in a mediation phase prior to ICAO or ICJ involvement?

Such an early dispute procedure would match those practiced in a number of common law jurisdictions where court annexed or court referred mediation is widely practiced. Because ultimately the success of mediation is based on the voluntariness of states it will only ever be practically activated where states are prepared to compromise. If state parties are not really prepared to submit their dispute to mediation, that is, to accept the process, then the mediator will make the appropriate recommendation and the dispute will rapidly move to the next stage. At present asking the question, 'Will you submit the dispute to mediation?' is not built into the 'big picture' systems or conventions. While mediation is an extremely valuable tool, it is by no means a panacea to all aviation disputes, in particular aviation disputes between states. It should be acknowledged that

Mediation is least effective where:

- (1) There is intense hostility and distrust between parties to the dispute;
- (2) The parties refuse to assume responsibility for a negotiated resolution; or
- (3) There is an extreme power imbalance.

Where extreme hostility exists between the parties this severely limits the possibilities for rational and honest discussion between them. In order for a mediation to lead to an acceptable outcome there is a clear need for parties to assume responsibility for an acceptable outcome.

Conciliation: Conciliation has been defined as ‘a method of alternative dispute resolution in which a third party attempts to facilitate an agreed resolution of a dispute in accordance with relevant legal principles, and as a process in which a conciliation commission ‘proceeds to the impartial examination of the dispute and attempts to define the terms of settlement susceptible to being accepted by them’.

A conciliation commission actively enquires into the facts of the dispute and advances proposals for its resolution. Although conciliation has occasionally been employed in the context of Chicago Convention disputes its use has been infrequent. However, in 1958 conciliation was selected as the settlement option for an incident in which France diverted an aircraft carrying leaders of the Algerian revolt. The aircraft was, at the time of interception, flying in international airspace (and, thus, subject to the provisions of the Chicago Convention) in route from Morocco to Tunis. Maniatis observes that conciliation ‘plays a greater role in politically motivated disputes’.

Despite its acceptability as a dispute settlement mechanism in ‘big picture’ disputes with political content, conciliation, nevertheless, has certain drawbacks that make it less appealing in a commercial context, such as its costliness and its ‘time-consuming formal process’. While conciliation may have had a very limited role in resolving aviation law disputes it still enjoys significant support in the trade law context of complex, multiparty disputes with the United Nations Commission on International Trade Law (UNCITRAL) recently producing a Model Law on International Commercial Conciliation. One feature of the UNCITRAL Model Law on Conciliation is its preservation of confidentiality at the request of parties in respect of sensitive information provided to the Conciliation Commission through its Articles (Disclosure of Information) and (Confidentiality).

Arbitration and the Chicago Convention: As previously referred to, the Chicago Convention itself provides a unique procedure for the handling of disputes. Article 84 provides a procedure for settlement of disputes between two or more contracting states relating to the interpretation and application of the Chicago Convention. Under this provision the Council of the International Civil Aviation Organization (ICAO) performs an adjudicative function. However, such decision by the ICAO Council may be appealed either to an ad hoc arbitral tribunal or the Permanent Court of International Justice (ICJ). Article 85 uniquely provides for this appeal. If a member state involved in a dispute does not accept the Statute of the International Court of Justice and the contracting parties are unable to reach an agreement as to the choice of the arbitral tribunal, each of the disputing states names a single arbitrator from a list of arbitrators maintained by the ICAO Council. If the disputing parties cannot agree on someone from this list the President of ICAO chooses an

‘umpire’ from the list. The arbitrators and the umpire then constitute the arbitral tribunal hearing the appeal.

Significantly, Article 84 decrees the binding nature of the decision of the ICJ or the arbitral tribunal. Because of the binding nature of this process it carries with it the advantage of traditional legal processes in the certainty of the result achieved. The decisions rendered are also likely to be rule based and so it serves to equalize power imbalances between states. There is a disadvantage in this equalizing effect for the more powerful states that may not wish to lose their relative strength in negotiation. To further endorse the binding nature of the decision the Convention addresses the issue of enforcement in Article 88, with the ICAO Assembly having the right to suspend the recalcitrant state’s voting rights. Balfour notes the silence of the Convention as to the procedure when both parties agree to ICJ jurisdiction but cannot agree on the forum. He notes also the silence of the Convention on the issue of the scope of the appellate review; for example, whether or not new matters may be introduced. These arguably minor issues point to the need for the ‘system’ to be further refined and developed. Arbitration under bilateral air services agreements Balfour reports that a 1952 ICAO study of more than 200 such agreements revealed significant differences in their dispute resolution provisions.

The Secretariat found ten major variants, ranging from agreements which recognized the exclusive competence of the ICAO Council, through agreements which recognized the competence of another arbitral tribunal, to those which contained no provisions concerning dispute resolution. Subsequently, a study by Buerghenthal indicated a shift away from providing the ICAO Council with exclusive competence. Bin Cheng, in his seminal study of air law, indicates the significant role that arbitration plays under a range of bilateral air services agreements. The reality of the current structure is that there is, at ICAO level, a significant emphasis on the resolution of disputes through negotiation prior to their reaching the point that arbitration is necessary.

Although arbitration is a favoured source of dispute resolution by virtue of its inclusion in the bilateral agreements, in practice it is used relatively infrequently. Thus far arbitration under the bilateral agreements has only been used five times, in the following disputes:

The issue in the 1963 arbitration was whether or not a US carrier could rightfully operate between the US and Turkey via Paris and whether or not it could carry non-US originating or destined passengers between Paris and Turkey. Specifically, the question to be resolved was did the words ‘Near East’ in the France/US Air Services Agreement of 1946 include Istanbul, Beirut and Tehran. While each party appointed an arbitrator there was no agreement as to who should be the third arbitrator. A referral to the President of ICAO took place, in accordance with the procedure outlined in the bilateral agreement between the disputing parties, and the President of ICAO then appointed the third arbitrator who was Professor Robert Ago of Italy.

The final outcome of the arbitration was a unanimous decision that favored the US on many, but not all, issues. However, the path to this final decision was circuitous. It was initially ruled that the French were correct in arguing that the intention of the parties to the 1946 Agreement was not to include Istanbul and Tehran in the Near East. However, Professor Ago held that the US had acquired rights through ‘uscapio’, because of the belated protest and because France had allowed Pan Am to operate nonetheless. The arbitral tribunal ruled

that Pan Am, the US carrier involved, could continue to fly to Turkey via Paris ‘as a result of French consent to the service, confirmed by an exchange of notes’.

The 1965 dispute between Italy and the US resulted from US attempts (again involving Pan Am) to operate an all-cargo service between the two countries. The Italian concern was for the position of its carrier, Alitalia, and its inability to cope with the increased competition represented by the all-cargo service.²³ The Italian view was that the bilateral agreement between the two countries, the US–Italy Air Transport Services Agreement 1948, did not permit such a service. Once again, negotiations in 1964 failed to resolve the disagreement.

In this instance the parties agreed on the third arbitrator. The arbitration resulted in a favorable outcome for the United States with the tribunal considering ‘that the Agreement was intended to govern all kinds of scheduled air transport between the two countries in a flexible manner and that the Bermuda Agreement does not contain any express provision excluding all-cargo services.’ However, after the then Civil Aeronautics Board (CAB) authorized a third carrier to provide an all-cargo service in 1966, Italy reacted by denouncing the bilateral agreement between the two countries. Only after rounds of negotiation, during which strictly limited services between the two countries were maintained, was a new bilateral between the two states transacted.

The 1978 dispute, between France and the US, once again involved a Pan Am service, this time between San Francisco and Paris via London. Pan Am wanted to change gauge in London, that is, to change the type of aircraft in London, offloading B747 passengers onto a B727 aircraft for the final leg of the journey. France objected to this change of gauge on the basis that it was contra the bilateral air services agreement between the two states. The US argued that it was permissible under the bilateral. At issue also was the US right to take retaliatory measures when France imposed a restriction on Pan Am’s service. In fact, France had seized Pan Am’s B727 at Paris Orly Airport in May 1978. In subsequent events the US had threatened to suspend Air France’s Los Angeles service in order to pressure France into arbitration proceedings to resolve the dispute. Once again, the outcome of the arbitration was favorable to the US with the tribunal holding that a change of gauge was permitted as long as the continuous service was maintained.

It also held that retaliatory measures were justified, as long as they were proportionate. Both parties to the dispute then requested the arbitral panel to clarify the meaning of the ruling. Was the confirmation of Pan Am traffic rights with (the French view) or without (the US view) limitation of the frequency of the services? The arbitrators’ ruling was that this meant ‘with capacity limitation’, which resulted in the parties resuming negotiations. In delivering the decision, Dutch arbitrator Rifkind opined that ‘all that is not prohibited is permitted’ instead of ‘all that is not permitted is prohibited’. It is ironic that, subsequent to this favourable decision, Pan Am did not take advantage by way of resuming its service until some years later. And when they did resume this service it was without change of gauge in London.

This is not an example of arbitration operating at its most effective. At least one commentator described the process as ‘lengthy, cumbersome and expensive’ and noted that the drafting of the Arbitration Compromise to refine the issues between the parties takes weeks. The 1981 dispute between Belgium and Ireland concerned interpretation of the capacity clauses in the bilateral air services agreement between the two countries, the issue being whether the Brussels-Dublin route was suffering from excess capacity ‘and whether

Sabena enjoyed fair and equal access to the market'. A single arbitrator, Mr Henry Winberg, elected by the parties in accordance with the bilateral, conducted the arbitration and determined that there was excess capacity on the route, ordering Sabena to discontinue one weekly round trip service and Aer Lingus to discontinue two weekly round trips. This was a very successful arbitration with both parties accepting the conclusions of the arbitrator. The 1992 arbitration involved a dispute between the US and the UK, specifically that user charges imposed by the British Airports Authority on US airlines were in breach of the bilateral air services agreement between the two countries. In this instance, in accordance with the procedure outlined in the bilateral, each state nominated an arbitrator and then the arbitrators themselves agreed on the third arbitrator. The decision of the arbitral tribunal was that the UK had 'infringed certain obligations under the bilateral in respect of airport charges'.

Overview of use of arbitration procedure under the bilateral agreements: Although the bilateral agreements grasp at achieving a uniform approach, attested to by the prevalence of arbitration clauses, the use of arbitration tends to be the last recourse and variations in procedure for choosing the third arbitrator, for example, persist. Balfour writes of 'the great variety of models which appear, both in multilateral agreements and in bilateral agreements ... This would seem to suggest that no particular preferable formula has yet evolved, and that there are certainly many options from which to choose.'

There is an ongoing debate in respect of the role of arbitration in resolving disputes under the bilateral agreements. One view is that the bilateral agreements focus heavily on self-enforcement, which is achieved through consultation between aeronautical authorities. Where disputes escalate through the negotiation/consultation stage, states can act to terminate the bilateral agreement in question. A referral to arbitration, in the context of a particular dispute, may simply not occur. The political dimension of bilateral air services agreements, in that they also represent an aspect of the relations between states, is ever present and appears to be the only explanation for overlooking the possibilities for arbitration in the context of many disputes.

The route from the consultation phase to the point of termination of the agreement leaves, in fact, no room for arbitration. Mr Balfour explains this on the basis that states are reluctant to risk a breakdown in their relations. It would seem that the sensitive nature of the bilateral agreements stands in the path of more widespread use of arbitration. Although arbitration has been used infrequently under the bilateral agreements, it has demonstrably been successful in each case at fashioning an acceptable outcome.

The 1981 Belgium/Ireland dispute exemplifies arbitration at its most effective in the context of bilateral air services agreements. Belgium argued over-capacity and for equal distribution of opportunities for capacity and the avoidance of undue effect on the other carrier's services, while Ireland argued that there was no over-capacity and that a reduction in capacity was against the public interest. Given the respective positions of the parties, the subsequent arbitral award was timely, in that it was delivered within two months. The decision, which held that each airline should reduce its capacity with the least possible effect on the other's services, was based upon the concepts of passenger capacity and profitability of airline services. The issue of 'acceptable load factor' was dealt with on the basis of evidence of traffic potential. Thus, the decision did not limit future capacity or its distribution, but established platforms so that a balance could be achieved gradually.

The outcome was, as **Naveau** asserts, extremely pragmatic. An issue of considerable importance is the role of ICAO. To date the arbitrations conducted under the bilateral agreements have mostly been on an ad hoc basis, which inevitably result in a lack of legal certainty in terms of their non-binding effect on subsequent ad hoc arbitral tribunals. While greater certainty would result if ICAO exercised its arbitration function under the bilateral agreements it has been quite reluctant to embrace this role, preferring to emphasize the political/diplomatic solution of disputes through negotiation and its own brand of mediation. Not all commentators agree that the approach of ICAO on this issue is the best one:

The best interests of international civil aviation are not served by the Council's generally negative attitude towards the arbitral functions assigned to the ICAO by various multilateral and bilateral agreements. ... The present practice, which puts a premium on negotiated settlements that often leave the underlying legal issues unresolved, is certainly far from satisfactory ... Perhaps both ICAO and those who are critical of ICAO over its reluctance to use arbitration as a dispute resolution mechanism are right. Mediation, properly used, tends to structure a win-win outcome around the parties' willingness to compromise. The best arbitrations also achieve a pragmatic outcome, as the 1981 Belgium/Ireland arbitration demonstrates. Most significantly, as already noted, this arbitration involved but one arbitrator. Perhaps the diplomatic window dressing that is the three member panel approach needs to be dropped in favor of one person arbitration. Concurrently, the ideal of a uniform approach is not evident in practice.

Conclusion:

In disputes between states we have noted a clear preference for political and diplomatic means of settlement, for negotiated settlement without recourse to a neutral third party. Nevertheless the ICAO Council possesses certain fact finding and dispute resolution powers under Article 84 of the Chicago Convention. Further, ICAO's own rules of Procedure for Settlement of Differences, Article 14, permits it to exercise its good offices to expedite the settlement of differences between states. Arbitration is perhaps the most frequently used form of ADR in the context of aviation related disputes between states and it is sanctioned under both Article 84 of the Chicago Convention and under the bilateral air services agreements between states. However, the requirement for three adjudicators to sit on the bench of arbitral tribunals is a wasteful exercise where each state involved in the dispute makes its own appointment. In effect, the decisive views then become those of the third, and only independent, panel member. Under these circumstances it may be argued that the state-appointed representatives are no longer necessary.

One of the little really successful arbitration was in the Irish/Belgium dispute in the 1970s where the states parties chose, by common agreement, a high ranking Scandinavian civil aviation official resulting in resolution of the matter within weeks and in both parties accepting the conclusions. One observer of this dispute argued that 'in order to be accepted, arbitration must be quick, cheap and ... the most important thing is that both parties trust the Arbitrator.' Under this view a single arbitrator would provide an effective, less expensive and timely approach – all outcomes that are acceptable to states. Further, the formal dispute resolution system for dispute resolution of these big picture disagreements between states allows no recourse to other additional or alternative dispute resolution techniques, such as mediation or early case appraisal. ICAO itself needs to realise there is a need to develop this underdeveloped part of the governing regime.

MODULE – IV

**ICAO AND
INTERNATIONAL
AIR LAW**

MODULE IV: ICAO AND INTERNATIONAL AIR LAW

Introduction: The International Civil Aviation organization is a UN specialized agency, which was established by the states in 1944 to manage and govern the convention on International Civil Aviation (Chicago Convention). Article 43-65, Part II of the Chicago convention deals with the provisions which are related to the ICAO, it works with the convention of 192 Member states as well as industry groups to reach upon consensus on International Civil Aviation standards as well as recommended practices and policies for the support of safe, efficient, secure, economic and environment sustainable civil aviation sector. These SARP'S as well as policies are used by the ICAO member states to ensure that their local as well as civil aviation operations and the regulations meet the global norms, which permits more than 100,000 daily flight operations in the global aviation network in order to operate safely as well as reliably in every region of the world.

In addition to its core work which resolves consensus- driven international SARP's and policies among its member states as well as industry, and among many other priorities and programmes , ICAO also coordinates assistance as well as capacity building for the states in order to support numerous aviation development objectives , such as produce global planes to coordinate the multilateral strategic progress for safety as well as air navigation; monitoring and reporting on numerous air transport sector performance metrics and audit states' then the civil aviation capabilities in the areas of safety as well as security.

The History of ICAO and The Chicago Convention: The Second World was a powerful turning point for the technical development of the aero plane. A robust network of passengers as well as freight carriage was set up during this period of time, but there were many hurdles, both political as well as technical, to evolve these facilities as well as routes in order to view the new civilian purposes as well. There were many studies which were initiated by the USA, as well as various consultations which were undertaken with its major allies as well.

The US government had extended an invitation to 55 states to attend an International Civil Aviation conference in Chicago in 1944. The delegates meeting happened at a very dark period time in terms of human history, many of the countries which were represented were still occupied. In the end 54 of the 55 nations which were invited attended the conference and its conclusion came by 7th December, 1944, 52 nations signed the new convention on the International Civil Aviation which had been realized which was known then and in today's time known more commonly as the Chicago convention as well, this agreement laid the foundation stone for the standards as well as procedures for the peaceful global air navigation. A prime objective was set for the development of the International civil aviation which was in a safe as well as an orderly manner, and on such basis that air transport services would be established on the motto of equality of opportunity which operated soundly as well as economically.

The Chicago convention also formalized the exception that a specialized international civil aviation organization would be established in order to organize and support the intensive international co-operation which would fledge the global air transport network. The ICAO'S core mandate is to help the states achieve highest possible degree of uniformity in terms of civil aviation. Because of the usual delays expected in ratifying the Convention, the Chicago Conference presciently signed an Interim Agreement which foresaw the creation of a *Provisional ICAO* (PICAO) to serve as a temporary advisory and coordinating body. The PICAO consisted of an Interim Council and an Interim Assembly, and from June 1945 the

Interim Council met continuously in Montreal, Canada, and consisted of representatives from 21 Member States. The first Interim Assembly of the PICAQ, the precursor to ICAO's triennial Assemblies in the modern era, was also held in Montreal in June of 1946.

On 4 April 1947, upon sufficient ratifications to the Chicago Convention, the provisional aspects of the PICAQ were no longer relevant and it officially became known as ICAO. The first official ICAO Assembly was held in Montreal in May of that year. During this march (2018) to the modern air transport era, the Convention's Annexes have increased in number and evolved such that they now include more than 12,000 international standards and recommended practices (SARPs), all of which have been agreed by consensus by ICAO's now 192 Member States. These SARPs, alongside the tremendous technological progress and contributions in the intervening decades on behalf of air transport operators and manufacturers, have enabled the realization of what can now be recognized as a critical driver of socio-economic development and one of humanity's greatest cooperative achievements – the modern international air transport network.

Civil Aviation pre ICAO: Few people must be aware that ICAO had a precursor. The international commission for the Air Navigation was created by the Paris convention on 13th October, 1919 which was as a part of post-world war I international re-organization as well. France was one of the first countries which established a non-government and a non-profit organization to promote aeronautical and astronautical activities worldwide, in the area of air sports and to encourage skills related to safety measures as well. There is an acceptance that 1919 was the year when the International air industry was born, despite the fact that the first scheduled air service had already operated across Tampa Bay which is in Florida USA in the initial four months of 1914.

1919 year marked the beginning when the precursor of the current International Air Transport Association was established when representatives of 5 air transport companies from Denmark, Germany, The UK, Sweden and Norway meet at The Hague, Netherlands, to sign an agreement to form an International Air Traffic Association. Pre 1919, and even many years afterwards as well much of the world's commercial air traffic was focused more on the carriage of airmail only. From 1919 to 1944, a number of additional as well as important civil aviation developments took place which helped in making a strong base for the Chicago Convention as well.

In 1925 for instance, the First international conference for Private Air Law took place in Paris to examine the airlines legal obligations and even to codify the immense work on the private air law. The final protocol of this conference which was called for the creation of a special committee of experts. In 1926, an Iberian- American convention was developed under the leadership of Spain, with Portugal and the states of Latin America, while the United States and the United Kingdom passed regulations in relation with the governance of air commerce in their territories as well.

In the year of 1929, the convention for the unification of certain rules in relation to International Carriage by Air was signed at Warsaw. It came into force in early 1933. The Warsaw convention established the conditions of international air transport with respect to the documents which is used for transportation of the liability of the air carrier.

In 1933, the Convention in relation to Damage which was caused by foreign aircraft to the 3rd parties on the surface of 1933 was signed in Rome Italy. This was later amended by the Brussels protocol of 1938 to permit some basic defenses for the insurers. Then in the year of

1933 the first international sanitary convention for aerial navigation was signed at the Hague to protect the communities against the diseases which would be liable to be imported by an aircraft, or either by the flying personal against diseases due to flying. The 1930's era saw an in general cooperation amongst the world airlines to advance rapidly under IATA, where many new technical standards as well as commercial air transport regulations were being developed. This included the technical standardization of the cockpits, fire prevention, marine airports as well as ice accumulation, as well as standards which govern revenue accounting as well as traffic management. There was however a break on the growth of the Civilian air transport development which was interrupted by the 2nd world war from 1940-45, the advances which were made during this period was instrumental to the realization of the eventual global framework which is now managed through the ICAO.

ICAO and the United Nations: At the Chicago conference, the drafters of the Convention on the ICAO had anticipated the emergence of the United Nations type of a post war organization. Accordingly, they wrote into the Convention a provision covering the possibility of ICAO becoming a constituent of such organization as follows: **Article 64:** The Organization may, with respect to air matters within its competence directly affecting world security, by vote of the Assembly, enter into appropriate arrangements with any general organization set up by the nations of the world to preserve peace.

At the first ICAO assembly which was held in May 1947, Resolution A1-2 was adopted by the unanimous vote of the 32 contracting states which represented the 3rd plenary meeting. This approved the agreement of relationship with the UN and authorized the President of the council to sign the protocol which brings into force the agreement which concerns a relationship between the UN as well as the ICAO. President Warner signed the protocol on 3 October 1947 and ICAO became a UN specialized agency. By this agreement, each organization undertakes to fulfill certain requirements whereby the other may participate in its work in the measure required for fulfilment of certain articles of the Chicago Convention and the Charter of the UN. While ICAO remained an independent and autonomous agency, its acquisition of constituency status in the United Nations Organization was a major step, which greatly benefited many of its Contracting States in the years which followed, mainly through the United Nations Programme of Technical Assistance.

As a Specialized Agency of the UN, ICAO works closely with the UN, and particularly with the Economic and Social Council. In light of its technical mandate, ICAO also works closely with other UN Specialized Agencies and International Organizations, such as:

1. The International Telecommunications Union (ITU);
2. The International Atomic Energy Agency (IAEA);
3. The International Labour Organization (ILO);
4. The International Maritime Organization (IMO);
5. The Universal Postal Union (UPU);
6. The World Meteorological Organization (WMO);
7. The World Health Organization (WHO); and
8. The World Tourism Organization (UNWTO).

International Civil Aviation Conference: In response to the invitation of the United States Government, representatives of 54 nations met at Chicago from November 1 to December 7, 1944, to "make arrangements for the immediate establishment of provisional world air routes and services" and "to set up an interim council to collect, record and study data concerning international aviation and to make recommendations for its improvement." The Conference

was also invited to "discuss the principles and methods to be followed in the adoption of a new aviation convention."

Purpose and Objectives of ICAO: The Convention on International Civil Aviation set forth the purpose of ICAO:

"WHEREAS the future development of international civil aviation can greatly help to create and preserve friendship and understanding among the nations and peoples of the world, yet its abuse can become a threat to the general security; and

WHEREAS it is desirable to avoid friction and to promote that co-operation between nations and peoples upon which the peace of the world depends;

THEREFORE, the undersigned governments having agreed on certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically;

Have accordingly concluded this Convention to that end."

Apart from its purpose ICAO also retains certain important objectives for the development of international air law. Article 44 of the convention states "The aims and objectives of the Organization are to develop the principles and techniques of international air navigation and to foster the planning and development of international air transport so as to : (a) Insure the safe and orderly growth of international civil aviation throughout the world; (b) Encourage the arts of aircraft design and operation for peaceful purposes; (c) Encourage the development of airways, airports, and air navigation facilities for international civil aviation; (d) Meet the needs of the peoples of the world for safe, regular, efficient and economical air transport; (e) Prevent economic waste caused by unreasonable competition; (f) Insure that the right of contracting States are fully respected and that every contracting State has a fair opportunity to operate international airlines; (g) Avoid discrimination between contracting States; (h) Promote safety of flight in international air navigation; (i) Promote generally the development of all aspects of international civil aeronautics."

Legal Capacity of the Organization (Article 47): The Organization shall enjoy in the territory of each contracting State such legal capacity as may be necessary for the performance of its functions. Full juridical personality shall be granted wherever compatible with the constitution and laws of the State concerned.

Admission and Membership to ICAO (Article 92 – 94): The Chicago conference took place during the time when the 2nd world war was at its last stage with the result of the war which was largely known to the entire world. The United States capitalized its strategic position and it convened the conference and the allied powers were the one which dictated most of the terms and conditions of the conference. The first members of the UN were mostly members of the allied power. The initial membership of the ICAO was mostly open to members of the UN or the associated members of those states which remained neutral during the time of war. The neutral states were the one which could become the member without following any special procedure. Articles 92 to 94 were the ones which indirectly laid down the rules regarding the membership. Then under article 92, it dealt with the general privileges which are given to the member of the UN as well as their associated member states

to adhere with the provisions of the convention. Such privileges were also given to the states which remained neutral during the time of WWII. ICAO initially began with a closed membership. The question arises as to whether the adherence with regard to the provisions of the conventions was equivalent to accept the position of the member in ICAO. This question is sought to be answered in the second part of the provision according to which there is adherence to a process which is affected by the notification which is addressed to the government of the USA and shall take effect from the 13th day of the receipt of the notification by the government of the USA, which shall notify all the contracting States.

United States being the host of the Chicago Conference and that too at such a crucial time where the World War II was almost on the verge of ending reserved the right and authority of being a depository for the ratifications of the Chicago Convention.

Article 93 provides for clear provision on admission of other states and lays down that those states apart from the states classified in the previous provisions can be admitted as members but subject to such approvals by any general international organization set up by the nations of the world to preserve peace. However the conditions do not end there. Such nominated states should thereafter get four-fifths vote of the Assembly in support of their membership application. Apart from these two mandatory requirements the state which has so applied to the Assembly for membership to ICAO should fulfill any other reasonable conditions which the ICAO requires it to fulfill. If such a state has invaded or attacked any state during the then on-going world war, then the assent of such invaded or attacked state was also necessary for the said member state.

However Article 93 bis clearly lays down as to which categories of states are barred from membership to ICAO. These states are:

- A State whose government the General Assembly of the United Nations has recommended be debarred from membership in international agencies established by or brought into relationship with the United Nations shall automatically cease to be a member of the International Civil Aviation Organization;
- A State which has been expelled from membership in the United Nations shall automatically cease to be a member of the International Civil Aviation Organization unless the General Assembly of the United Nations attaches to its act of expulsion a recommendation to the contrary.

A State which ceases to be a member of the International Civil Aviation Organization as a result of the provisions of previous paragraph, after approval by the General Assembly of the United Nations, be readmitted to the International Civil Aviation Organization upon application and upon approval by a majority of the Council. Members of the Organization which are suspended from the exercise of the rights and privileges of membership in the United Nations shall, upon the request of the latter, be suspended from the rights and privileges of membership in this Organization. Several Member States issued stamps and first day covers to commemorate their admission to ICAO. In addition to that, two States issued covers to commemorate their admission to ICAO, that is the Republic of Albania and the Democratic Republic of Korea.

On 6 June 1945, the required 26 States, including each of the 20 States elected to the Council, had accepted the Interim Agreement on International Civil Aviation. Thus, as per Article 1 - Section 1 of the latter Agreement, the Provisional Organization (PICAO) was born, within six months after the closing of the Chicago Convention.

On 5 March 1947, Spain was the 26th state to deposit, with the Government of the USA, its instrument of ratification to the Chicago Convention. Consequently, this Convention came into force on 4 April 1947 (i.e. 30 days later), among the states having thus ratified. However, it is to be noted that the additional conditions clause which the 'other states' have to fulfill in order to secure membership to ICAO has been put under a lot of criticism primarily due to lack of transparency. For instance, in 1947, Italy a former ally of Germany was admitted without any conditions.

ICAO's success is evidenced by the dynamic and sustained increases in the number of States adhering to its Convention on International Civil Aviation. The following table shows a summary of progress in terms of submitted instruments of ratification of this Convention. However, two factors contributed largely to ICAO's growth in terms of Member States: The emancipation in Africa, especially between 1960 and 1962. New countries were created by the decolonization; in a few years, 23 new States joined ICAO; and The breakup of the Socialist Federal Republic of Yugoslavia (in the 1990s) and the dissolution of the Soviet Union (starting from December 1991) led to the emergence of new States, which joined ICAO. South Sudan became an independent state on 9 July 2011 and became the 191st member of ICAO on 10 November 2011, 30 days after South Sudan's notification of adherence was received, on 11 October 2011.

Organizational Structure of ICAO (Article 43): ICAO is the main standing body which is in charge of the implementation of the principles of the convention in order to ensure the safe as well as orderly development of the global civil aviation. The ICAO constitution is the convention on the International Civil Aviation, which is drawn up by the conference in Chicago in November and December 1944, to which each ICAO contracting party is a state.

Article 43 of the convention states that an organization which is to be named the International Composition Civil Aviation organization is formed by the convention. It is made up of an assembly, a council and other such bodies as may be necessary. It could be therefore inferred from the provision that, the organization is made up of an assembly; a council of limited membership with various subordinates bodies as well as secretariat. The chief officers are the President of the council as well as the secretary general. Such as tripartite structure has been a common organizational format of invariably all the international assemblies that have been established since the end of 19th century.

The Assembly (Article 48-49): The assembly is composed of representatives from majority of the contracting states. The meeting takes places after every 3 years, which reviews the work of the organization and sets up policy for the upcoming years. It votes even for the triennial budget as well. Each member state has one vote in the assembly, and decisions are made according to simple majority vote which is otherwise specified according to the Chicago convention. Sessions have been conducted in many different cities as well. An extraordinary meeting of the Assembly may be held at any time upon the call of the Council or at the request of not less than one-fifth of the total number of contracting States addressed to the Secretary General. A majority of the contracting States is required to constitute a quorum for the meetings of the Assembly. Unless otherwise provided in this Convention, decisions of the Assembly shall be taken by a majority of the votes cast.

Powers and Duties of the Assembly (Article 49): The powers and duties of the Assembly shall be to:

- a. Elect at each meeting its President and other officers;

- b. the contracting States to be represented on the Council, in accordance with the provisions of Chapter IX;
- c. Examine and take appropriate action on the reports of the Council and decide on any matter referred to it by the Council;
- d. Determine its own rules of procedure and establish such subsidiary commissions as it may consider to be necessary or desirable;
- e. Vote annual budgets and determine the financial arrangements of the Organization, in accordance with the provisions of Chapter XII;
- f. Review expenditures and approve the accounts of the Organization;
- g. Refer, at its discretion, to the Council, to subsidiary commissions, or to any other body any matter within its sphere of action;
- h. Delegate to the Council the powers and authority necessary or desirable for the discharge of the duties of the Organization and revoke or modify the delegations of authority at any time;
- i. Carry out the appropriate provisions of Chapter XIII;
- j. Consider proposals for the modification or amendment of the provisions of this Convention and, if it approves of the proposals, recommend them to the contracting States in accordance with the provisions of Chapter XXI;
- k. Deal with any matter within the sphere of action of the Organization not specifically assigned to the Council.

The assembly makes policy recommendations, reviews the work of ICAO, offers guidance to the other ICAO bodies, elects the council and determines the budget as well. The assembly is amended by the ICAO constitution by the 2/3rd majority vote, and it has been done on several occasions as well. The amendment's came into for the states which ratified only after the ratification by the 2/3rd of the ICAO members which were specified by the assembly. The assembly possesses a rather prerogative wide ratification of the amendment which it has adopted; if the member states does not ratify the particular amendment within the specified period of time, the assembly can even revoke that particular country's membership as well. However, this provision (Article 94[b]) has never been invoked.

The first meeting of the ICAO assembly was conducted by the Interim council of PICA0 in accordance with article 46 of the convention. The first meeting was conducted at Montreal within a month of its establishment. The frequency of the assembly is governed under the 48th article of the Chicago convention however this provision has been twice amended. The initial provision mandated the assembly to meet annually and be convened at a suitable time and place as well. However extraordinary meetings can be held upon anytime upon the call of the council at the request of the 10 contracting states which is to be addressed to the secretary general. The annual sessions are useful as they bring the contracting states together on one or more platform of the regular basis as well and it also allows them to control the program as well as the budget of the council as well.

The 8th session of the provision, which calls upon the annual meetings was amended and replaced by the triennial sessions of the assembly as well. This was kept in regards with the expenses which were borne by the states parties to send their national delegates to attend the session and it was intended to limit for the same as well. However no changes were made to the requirement of the Extra-ordinary General Meetings. Gradually even the duration of these sessions were reduced from more than three weeks to some twelve calendar day. All this was done for the sake of economy. As a result, the pertinent issues were not addressed properly and gradually the role of assembly weakened. As far the extraordinary sessions are concerned,

in the history of ICAO, there have been merely nine such sessions and have been convened for a very short duration. These sessions were primarily concerned with either amending the convention or filling up the vacancy on the council.

In light of the expanding membership of the ICAO, the provision on extraordinary sessions was also amended. In 1962, in the fourteenth session of the Assembly, this provision was amended according to which prior to calling of an extra-ordinary general meeting, the approval of at-least one-fifth of the member states was required. Hence with the current membership of 190 states, the consent of at least 38 states was required to call such a meeting.

The Council (Article 50-55): The council, the governing body is elected by the assembly for the three year term, is composed of 36 states. The assembly chooses the council member states under three headings: States of chief importance in air transport, states which make the largest contribution for the facilities for air navigation, and states whose designation will ensure that all major areas of the world are represented. The council in the event of the vacancy in the council shall be same immediately and be soon filled by the next possible assembly and the contracting states which are so elected shall hold the office for the unexpired portion of the predecessor's term of the office. In order to avoid conflict of interest the provisions also require that No representative of a contracting State on the Council shall be actively associated with the operation of an international air service or financially interested in such a service. Decisions in the Council shall be approved by a majority of the council members.

Composition of Election Council (Article 50):

(a) The Council shall be a permanent body responsible to the Assembly. It shall be composed of twenty one contracting States elected by the Assembly. An election shall be held at the first meeting of the Assembly and thereafter every three years, and the members of the Council so elected shall hold office until the next following election.

(b) In electing the members of the Council, the Assembly shall give adequate representation to (1) the States of chief importance in air transport; (2) the States not otherwise included which make the largest contribution to the provision of facilities for international civil air navigation; and (3) the States not otherwise included whose designation will insure that all the major geographic areas of the world are represented on the Council. Any vacancy on the Council shall be filled by the Assembly as soon as possible; any contracting State so elected to the Council shall hold office for the unexpired portion of its predecessor's term of office.

(c) No representative of a contracting State on the Council shall be actively associated with the operation of an international air service or financially interested in such a service.

President of the Council (Article 51): The President shall be elected for a period of three years and can be re-elected as well. However the President shall not have a right to vote. However when a Vice-President is acting in the capacity of the President while the latter's office is lying vacant, then the Vice-President can retain its voting power.

The duties of the President shall be to:

- a. Convene meetings of the Council, the Air Transport Committee, and the Air Navigation Commission;
- b. Serve as representative of the Council; and
- c. Carry out on behalf of the Council the functions which the Council assigns to him.

Voting in Council (Article 52): Decisions by the Council shall require approval by a majority of its members. The Council may delegate authority with respect to any particular matter to a committee of its members. Decisions of any committee of the Council may be appealed to the Council by any interested contracting State.

Participation without a vote (Article 53): Participation Any contracting State may participate, without a vote, in the consideration by the Council and by its committees and commissions of any question which especially affects its interests. No member of the Council shall vote in the consideration by the Council of a dispute to which it is a party.

Mandatory Functions of the Council (Article 54): The Council shall –

- a. Submit annual reports to the Assembly;
- b. Carry out the directions of the Assembly and discharge the duties and obligations which are laid on it by this Convention;
- c. Determine its organization and rules of procedure;
- d. Appoint and define the duties of an Air Transport Committee, which shall be chosen from among the representatives of the members of the Council, and which shall be responsible to it;
- e. Establish an Air Navigation Commission, in accordance with the provisions of Chapter X;
- f. Administer the finances of the Organization in accordance with the provisions of Chapters XII and XV;
- g. Determine the emoluments of the President of the Council;
- h. Appoint a chief executive officer who shall be called the Secretary General, and make provision for the appointment of such other personnel as may be necessary, in accordance with the provisions of Chapter XI;
- i. Request, collect, examine and publish information relating to the advancement of air navigation and the operation of international air services, including information about the costs of operation and particulars of subsidies paid to airlines from public funds;
- j. Report to contracting States any infraction of this Convention, as well as any failure to carry out recommendations or determinations of the Council;
- k. Report to the Assembly any infraction of this Convention where a contracting State has failed to take appropriate action within a reasonable time after notice of the infraction;
- l. Adopt, in accordance with the provisions of Chapter VI of this Convention, international standards and recommended practices; for convenience, designate them as Annexes to this Convention; and notify all contracting States of the action taken;
- m. Consider recommendations of the Air Navigation Commission for amendment of the Annexes and take action in accordance with the provisions of Chapter XX;
- n. Consider any matter relating to the Convention which any contracting State refers to it.

Permissive Functions of the Council (Article 55): The council may -

- a. Where appropriate and as experience may show to be desirable, create subordinate air transport commissions on a regional or other basis and define groups of states or airlines with through which it may deal to facilitate the carrying out of the aims of this Convention;
- b. Delegate to the Air Navigation Commission duties additional to those set forth in the Convention and revoke or modify such delegations of authority at any time;

- c. Conduct research into all aspects of air transport and air navigation which are of international importance, communicate the results of its research to the contracting States, and facilitate the exchange of information between contracting States on air transport and air navigation matters;
- d. Study any matters affecting the organization and operation of international air transport, including the international ownership and operation of international air services on trunk routes, and submit to the Assembly plans in relation thereto;
- e. Investigate, at the request of any contracting State, any situation which may appear to present avoidable obstacles to the development of international air navigation; and, after such investigation, issue such reports as may appear to it desirable.

As the governing body, the Council gives continuing direction to the work of ICAO. It is in the Council that Standards and Recommended Practices are adopted and incorporated as Annexes to the Convention on International Civil Aviation. The Council is assisted by the Air Navigation Commission (technical matters), the Air Transport Committee (economic matters), the Committee on Joint Support of Air Navigation Services and the Finance Committee, Legal Committee. The council is entrusted with numerous duties of technical, economic and legal nature.

Legal Committee: ICAO legal committee is entrusted with the functions of studying and preparing the draft conventions which it then submits to the Assembly in plenary session for approval. In the next stage the convention has to be approved by a Diplomatic Conference. The Comité International Technique d'Experts Juridiques Aériens (CITEJA) was created pursuant to a recommendation adopted at the First International Conference on Private Air Law, held in Paris in 1925, to develop a code of private international air law through the preparation of draft international conventions for final adoption at periodic international conferences on private air law. Four International Conferences on Private Air Law were held until the war interrupted the work of CITEJA and further unification of private air law.

In pursuance of the recommendation made by the delegates to the Chicago Conference held in 1944 with regard to the resumption of the work of the CITEJA and the desirability of coordinating the activities of CITEJA with those organizations within the field of public international law, the 14th Plenary Session of CITEJA, i.e. the first session to be held since the outbreak of the war, was convened in Paris from 22 to 29 January 1946; thirty-two countries were represented at that session. It adopted several resolutions taking into consideration the creation of the Provisional International Civil Aviation (PICAO) in 1945, and agreed in principle to a liaison and cooperation with PICAO and to transmit to the Council of PICAO the drafts on international air law conventions. However, CITEJA wished to remain with its own secretariat, annual budget, rules of procedure, and Contracting States.

The 1st Interim Assembly of PICAO, held at Montreal from 21 May to 7 June 1946, adopted Resolution 31 foreseeing the establishment of a Permanent Committee on International Air Law (i.e. a Legal Committee) after the creation of ICAO. CITEJA fully agreed with the view of PICAO Assembly and held its last working meeting (i.e. the 15th Plenary Session) at Cairo from 14 to 19 November 1946, where it recommended that a Committee on International Air Law be established within ICAO. The 1st Session of the ICAO Assembly, held in Montreal from 6 to 27 May 1947, adopted Resolution A1-46 creating the Legal Committee as permanent body of the Organization replacing the CITEJA. At the same time of the 1st Assembly, CITEJA held its final meeting and decided on its dissolution. Thus, the permanent Legal Committee came into being on 23 May 1947; it was a committee of the Assembly, but

operated largely under the direction of the Council and its duties were rather straightforward: to study any legal matters referred to it by the Council. It was comprised of legal experts appointed by the Member States. The Legal Committee held its first full session in Brussels from 10 to 25 September 1947.

Any draft convention which the Legal Committee considers as ready for presentation to States as a final draft is to be transmitted to the ICAO Council. Such drafts, after comments and circulation to States, are considered with a view of approval by a Diplomatic Conference or International Conference on Air Law. The resulting legal instrument is then open for signature at the close of such conference. ICAO has been very productive in international law-making and the Legal Committee since 1947 has prepared many drafts which led to the adoption of air instruments.

Since 1947, the Legal Committee has considered questions of both private and public international air law. Its constitution has been amended slightly since 1947, and its annual sessions rarely coincide with the meetings of the ICAO Assembly. The Legal Committee, along with the Air Navigation Commission and the Air Transport Committee became the central permanent committees of ICAO.

Secretariat: The secretariat, which is headed by the secretary general, is divided into five main divisions: The air navigation Bureau, the air transport bureau, the technical co-operating bureau, the legal Bureau and the Bureau of administration and services. In order that the work of the secretariat reflects the truly international approach, professionals are recruited on a broad geographical basis as well. The ICAO Council appoints a Chief Executive Officer of the Secretariat who shall be called Secretary General. The Secretary General is appointed for a period of three years, a term of office that may be renewed once for the same period of time. In almost 70 years of existence of the Organization, the Secretariat has been run by 11 Secretaries General. The first Secretary General of ICAO was Albert Roper from France.

Air Navigation Commission (Article 56-57): The Air Navigation Commission is comprised of sixteen members who are appointed by the Council from among the persons nominated by the contracting state. These persons are required to possess suitable qualifications and experience in the field of science and practice of aeronautics. The President of the Commission shall be appointed by the Council.

The functions of the Commission are as follows:

- a. Consider, and recommend to the Council for adoption, modifications of the Annexes to this Convention;
- b. Establish technical sub-commissions on which any contracting State may be represented, if it so desires;
- c. Advise the Council concerning the collection and communication to the contracting States of all information which it considers necessary and useful for the advancement of air navigation

Air Transport Commission: The committee on Air transport was established by the interim council on 28th August 1945. Two technical sub-committees were established under the authority of the ATC: Facilitation of international air transport and statistics. It is to remind that the customs sub-committee was established under the aegis of the air navigation committee it was then transferred on 21st November 1945 to the Air Transport committee and

its name was changed to sub-committee on the facilitation of the international air transport. The FAL division met for the first time in Montreal from 24th January to 2nd February 1946 and established a set for the provisional standards which were there to standardize procedures as well as minimize government documentary requirements for the aircraft entering the foreign territories. In 1945, the ATC of the Provisional Organization set up a statistical reporting system by which each Contracting State would report on the activities of its international airlines on a monthly and annual basis by means of standardized forms; this reporting system was partly based on statistical tables used by the International Commission for Air navigation (ICAN) before the war.

External Relations Bureau: The Bureau is responsible for reviewing, advising as well as coordinating ICAO'S relation with the member as well as nonmember states. The Bureau monitors activities of the international system which are of mutual interest to ICAO, the United Nations and other international organizations, directs attention to international affairs and political developments which may affect ICAO, and makes arrangements for the representation of the Organization at meetings of other organizations. The Bureau also provides policy guidance and advice on matters relating to the privileges and immunities granted to the Organization, national representatives and staff of the Secretariat. It acts as the focal point for ICAO's relations with the Host States of the Organization's Headquarters and of the Regional Offices, and is responsible for arranging and supervising the ICAO Familiarization Course.

Legal Affairs Bureau: The Bureau provides advice and assistance to the Secretary General and through him to Council and other bodies of the Organization and to ICAO Member States on constitutional, administrative and procedural matters, on problems of international law, air law, commercial law, labor law and related matters. The Bureau also conducts research and studies in the field of private and public international air law, prepares documentation for, and serves as the Secretariat of the Legal Committee: relevant bodies of the Assembly; and Diplomatic Conferences which adopt multilateral treaties on international air law. The Bureau is responsible for the depositary functions of ICAO under several treaties, as well as the registration of agreements or arrangements pursuant to Articles 81 and 83 of the Chicago Convention. The functions of the Legal Bureau also include cooperation and coordination in legal activities with the United Nations and other international organizations, including the implementation of ICAO's Policy on Regional Cooperation involving Regional Organizations and regional civil aviation bodies.

ICAO works in close cooperation with other members of the United Nations family such as the World Meteorological Organization (WMO), the International Telecommunication Union (ITU), the Universal Postal Union (UPU), the World Health Organization (WHO), the World Tourism Organization (UNWTO) and the International Maritime Organization (IMO). Non-governmental organizations which also participate in ICAO's work include the Airports Council International (ACI), the Civil Air Navigation Services Organisation (CANSO), the International Air Transport Association (IATA), the International Business Aviation Council (IBAC), International Coordinating Council of Aerospace Industries Associations (ICCAIA), the International Council of Aircraft Owner and Pilot Associations (IAOPA), the International Federation of Air Line Pilots' Associations (IFALPA) and the International Federation of Air Traffic Controllers' Associations (IFATCA).

Chief Activities of ICAO

Standardization: One of the main activities of the ICAO is the standardization, the establishment of international standards for the recommended practices as well as procedures which cover the technical field of aviation, licensing of the personal rules of the air, aeronautical meteorology, then aeronautical charts , units of measurement , in regard to the operation of the aircraft, its nationality as well as registration marks . Then its air worthiness, aeronautical telecommunications, air traffic services , search as well as rescue operations , aircraft accident investigation, aerodromes, aeronautical information services, aircraft noise and engine missions, security and the safe transport of dangerous goods. After a Standard is adopted it is put into effect by each ICAO Contracting State in its own territories. As aviation technology continues to develop rapidly, the Standards are kept under constant review and amended as necessary. In keeping pace with the rapid development of international civil aviation, ICAO is conscious of the need to adopt in its specifications modern systems and techniques. In recent years, extensive work has been undertaken by ICAO in the areas of reporting aircraft accident and incident data, all-weather operations, automation of air traffic services, the application of computers in meteorological services, aircraft noise, engine emissions and the carriage of dangerous goods by air. ICAO has dealt with the subject of unlawful interference with civil aviation and with questions regarding aviation and the human environment.

CNS/ATM: Among the ICAO'S recent main significant achievement has been with regard to the satellite based concept to meet the future communications, navigation as well as surveillance for the air traffic management needs of the civil aviation. The CAN/ATM, is the future of air navigation concept, with the development of this concept it will help the aviation's ever growing operational needs. It will also reduce the cost of today's expensive ground-based equipment, which uses the line- of -sight technology and has inherent limitations as well.¹⁰⁵

It will also economically produce efficiency as well as greater safety. It will also help the global system with consequential changes in the way of air traffic services which are organized as well as operated.¹⁰⁶ The CNS/ATM systems concept, which has received the endorsement of ICAO Member States, is now in its implementation phase. This major task includes the development of standards, recommended practices and guidance material which will be applied well into the 21st century.

Many of the aviation problems cannot be dealt on a world wide scale and many objects are considered **Regional planning:** even on the regional basis as well. ICAO, therefore also recognizes the 9 geographical regions which must be treated individually for the planning of the provisions of the air navigation facilities as well as services which are required on the ground by flying the aircraft in these regions.¹⁰⁷ In each of these regions, the objective of seamless global air traffic units, as well as the search and rescue bases of the thousands of the facilities which are to be established and operated by the service which are to be rendered.

The planning which is done at ICAO regional air navigation meetings, are held in time to time for each of the regions where facilities as well as services need to be carefully considered as

¹⁰⁵ Thomas Burgenthal, Law Making in the International Civil Aviation Organization, 1st ed., 1969, p.111

¹⁰⁶ Ibid.

¹⁰⁷ Ministry of Civil Aviation (South Africa), Report of National Aviation Safety Committee, 1998, p.21.

well as decided upon.¹⁰⁸ The plan which is emerged from a regional meeting is designed in such a manner that states which are concerned implement it, which will lead to the integration of an efficient system as well.

When states require assistance in this regard, it will be available through the ICAO's seven regional offices which are accredited to the group of the contracting states. These offices have, their main function to encourage, assist, expedite and follow up the implementation of the air navigation plans as well as maintain it up to date. In addition, regional planning as well as implementation groups have been established in the ICAO's regions to assist the regional offices in keeping the regional plans which are up-to date in terms of fostering their implementation as well.

As financial and technical resources vary widely between nations, and as air transport's demands involve some complex and costly equipment and well-qualified personnel for staffing and maintaining the facilities, there may be uneven implementation of parts of the Air Navigation Plans. ICAO can assist States through its technical assistance activities. It has succeeded, also, in a few cases, in arranging for "joint financing" certain facilities in the North Atlantic are financed by the States whose airlines make use of them: communication systems for transmitting messages of interest to aviation, and air navigation aids and meteorological and air traffic control facilities in Greenland and Iceland.¹⁰⁹

Facilitation: The challenges faced by the customs, immigration, public health as well as other formalities on a free as well as unimpeded passage of passengers as well as cargo operations across the international boundaries have been a serious impediment to air travel as well. The problem is inherent in the speed of the air travel itself. The ICAO has persuaded its contracting states to reduce red tapeism, and adopt to an international standard on the facilitation which have been adopted to place an upper limit on what the states may demand. Then ICAO's efforts have also been aimed at providing adequate terminal building space for passengers and well as their baggage for the air cargo related activities as well.¹¹⁰

Economics: The Convention on International Civil Aviation requires that international air transport services be established on the basis of equality of opportunity and operated soundly and economically. In fact, ICAO's basic objective is the development of safe, regular, efficient and economical air transport. To assist States in planning their air transport services, ICAO collects and publishes comprehensive world aviation statistical data, and undertakes extensive economic studies in line with Resolutions of the ICAO Assembly and Recommendations of worldwide conferences. ICAO also produces manuals for the guidance of States in such areas as statistics, air traffic forecasting, airport and air navigation facility tariffs, the economic regulation of air transport and the establishment of air fares and rates.¹¹¹ Workshop meetings are conducted in various regions to provide States with information and advice on ICAO activities and to exchange pertinent information and views.

¹⁰⁸ Herbert V. Morais, Compliance & Enforcement In International Law: Achieving Global Uniformity In Aviation Safety, 30 N.C. J. Int'l L. & Com. Reg. 1,2004,p.62.

¹⁰⁹ ICAO Secretariat, ICAO Technical Work, ICAO Bulletin, 24th April, 2000, p.21.

¹¹⁰ R.I.R. Abeyratne, Facilitation and the ICAO Role--A Prologue for the Nineties, 15 Annals of Air & Space L. 3, 1990,p.13.

¹¹¹ John Saba, Worldwide Safe Flight: Will the International Financial Facility for Aviation Safety Help It Happen?, 68 J. Air L. & Com., 2003, p.537

Technical Co-Operation for Development: From the beginning man has lived in communities connected to or separated from one another by surface conditions. Jungles and swamps, mountains and rivers and deserts have in the past presented almost insurmountable obstacles to his movement a condition which is characteristic even today in so many developing countries where road and railway networks are insufficient or non-existent. The aero plane's advantage here is obvious: it moves along a boundless highway in the sky and the only actual roadway it needs is that which is necessary for take-off and landing. By the creation of an airstrip remote towns and villages can be linked quickly to the modern world, whereas surface connections could take years or even generations to build. ICAO therefore pays special attention to promoting civil aviation in developing countries. An important instrument in this work has been the United Nations Development Program. So far most of the Organization's work in this area has been directed toward the development of the ground services required for civil aviation and, in particular, toward aerodromes, air traffic control, communications and meteorological services; in the past few years, and with the advent of larger and more complex aircraft, requests for assistance in the more sophisticated fields of aviation, including airports operations, have been increasing in number.

In response to the alarming incidents in recent years of acts of unlawful interference against aircraft and airports, ICAO also provides assistance to States in order to improve their aviation security facilities and procedures.¹¹² Assistance in general has consisted of advising on the organization of government civil aviation departments and on the location and operation of facilities and services, and particularly in the recruitment and administration of experts, fellowships training and procurement of equipment. Many large civil aviation training centres have been created or assisted by ICAO in, for example, Egypt, India, Indonesia, Jordan, Kenya, Morocco, Nigeria, Pakistan, Thailand and Tunisia; in most cases these are regional training centres which take students of many nationalities and for which the local governments pay a large share of the costs and take over complete operation of the projects after a set time.¹¹³ Smaller national training centers have also been established by ICAO technical co-operation missions, and nationals of many countries have received ICAO fellowships for study abroad.

ICAO technical co-operation missions consisting of one or more technical experts have gone to nearly one hundred States all over the world. Over 100,000 students have attended training schools registered with ICAO. The promotion of civil aviation in developing countries which includes the provision of assistance to states in order to improve their aviation security facilities and procedures. This has involved the creation or assistance of many large civil aviation training centers.

Law: Within the more than one hundred and eighty Contracting States of ICAO there are many legal philosophies and many different systems of jurisprudence. There is need, therefore, for a unifying influence, in certain areas, for the development of a code of international air law. It is a function of ICAO to facilitate the adoption of international air law instruments and to promote their general acceptance. So far international air law instruments have been adopted under the Organization's auspices involving such varied subjects as the international recognition of property rights in aircraft, damage done by aircraft to third parties on the surface, the liability of the air carrier to its passengers, crimes committed on board

¹¹² www.icao.int/facilitation_2.htm

¹¹³ www.icao.int/technical_coop.html

aircraft, the marking of plastic explosives for detection and unlawful interference with civil aviation.¹¹⁴

ICAO's Contribution to International Air Law: It has been seen that in the field of the quasi-legislation ICAO has done great amount of work in the promotion of the international uniformity in the aeronautical regulations, procedures, standards as well as practices. These are mostly followed by even the non-members. ICAO is also forging ahead in the pre-legislative field in the development of the private air law convention as well, although the pace of it was quiet slow and the ICAO has also done useful work in the promotion of the international uniformity of the aeronautical regulations, procedures, standards as well as practices as well.

It is really only in the judicial sphere that ICAO could be said to be found seriously wanting. ICAO has never been able to gain sufficient support to successfully sponsor a multilateral convention for the exchange of commercial rights in air navigation. Instead, States have had to base their dealings on bilateral agreements between them. These treaties are a problem in international law because they serve as instruments of economic discrimination. It has been said that bilateral agreements in this field 'sectionalize the world and make air transport both more expensive and less convenient than it should be'.

The fact that ICAO has made the contribution it has to the law of international organizations and to practice in general international law is sufficient justification for its existence. These material contributions plus the fact that ICAO and its promulgated regulations and other practices are in existence and operation provide a point of reference to all States, members or not, when they are ordering their affairs as regards international civil aviation. They may or may not always follow the direction ICAO indicates or would prefer, but it is submitted that they are more likely to do so if they can see these indications and also know that the vast majority of international air transport is regulated by them. Perhaps this is ICAO's most important contribution to international law. Following are few notable contribution of ICAO towards the development of International Aviation Law:

A. International Legislative Process: The feature that differentiates international 'legislation' from municipal enactments is that treaties and international agreements in international law can bind only their signatories and no other international legal persons (though in time adherence to a principle originally enunciated in an international compact by many non-signatory States may engender it international customary law, and so binding on all subjects of international law). This distinction should be borne in mind during the discussion that follows.

ICAO's legislative powers are subject to a two-fold classification. The first, 'quasi-legislative' functions, are so called because, although they are law in the making, they do not bind members against their will. These consist basically of technical regulations promulgated by the ICAO Council. 'Pre-legislative' functions are tasks performed with a view to further legislation, though at that stage no actual change in the legal situation is achieved, as in the drafting of multilateral conventions. However, it seems that in performing these latter functions ICAO is actually creating law in the making, for though such law will not take

¹¹⁴ Paul Stephen Dempsey, *Aviation Security: The Role of Law in the War Against Terrorism*, 41 Colum. J. Transnat'l L., 2003, 649.

effect until sufficient States ratify, the terms of the future law as laid down in the convention have been determined by ICAO.

ICAO and SARPs: ICAO adopts under article international standards and recommended practices and procedures in relation to aircraft, personnel, airways and auxiliary services. Under this article the Organization is to adopt and amend standards and practices as and when necessary, dealing with the eleven matters listed in paragraphs (a) to (k). In the main these matters concern navigational aids, flight regulation in the air, personnel licensing, airworthiness of aircraft, the collection and exchange of information, the simplification of procedures, and the safety of aviation. ICAO may also adopt standards, practices or procedures for such other matters concerned with the safety, efficiency and regularity of air navigation as may arise. It is for the Council to adopt these standards and practices under article 54, paragraph (1). For convenience they are to be designated as Annexes to the Convention. The Council also amends the Annexes.

Adoption of Annexes requires a two-thirds vote by the Council at a meeting called for the purpose. The Annexes are then to be submitted to each contracting State and become effective within three months of submission or at the end of a longer period if prescribed by the Council. It is open to the majority of notified States to register their disapproval with the Council, which may prevent the Annex taking effect. Article 90 does not refer to Annexes in its first sentence so Professor Cheng has argued that a special Council meeting need not be called to introduce an amendment, and that two-thirds vote by the Council in favour of an amendment is not necessary. This same sentence refers back to article 54, paragraph (I), which also omits mention of amendments. The second sentence of article 90 does however refer to amendments so that they become binding three months after notified to contracting States unless a longer period is specified by the Council or unless a majority of contracting States register disapproval with the Council, in which case the amendment fails to take effect. States may depart from international standards and procedures, or amendments thereto, by article 38. A State which finds it impracticable to comply with any standard or procedure in all respects, or which deems it necessary to adopt regulations and practices differing in any respect from those adopted in an international standard is to notify ICAO immediately of such differences. This notification may be given at any time, not necessarily before the Annex is effective under article 90.

Article 38 also governs a State's departure from amended international standards. The State may do this by failing to bring its own regulations or practices into full accord with any amended standard or procedure. In this case it must notify the Council within 60 days of adoption of the amendment or otherwise indicate its proposed action. The Council then immediately notifies all other States of the differences existing between that standard and the State's practice. A literal interpretation of article 38 prevents States departing from an amendment if they fail to notify an intention to do so within 60 days. That 60 days begins to run when the Council adopts the amendment, not when contracting States are actually notified. Article 90 makes immediate notification a necessity only where an Annex is adopted. When an Annex is amended the Council may notify whenever it wishes. The Council could therefore adopt an amendment and, by failing to notify contracting States for more than 60 days, preclude contracting States from validly notifying differences. If it were to do this the Council would be exercising. ICAO has also contributed to the legal aspect of the promulgation of standards and practices by defining their status for the guidance of members. PICAQ framed definitions but ICAO adopted its own in the first Assembly de facto power of binding legislation, not mere quasi-legislation.

ICAO & PANS: ICAO also formulates Procedures for Air Navigation Services (PANS) which are approved by the Council for universal application. Somewhat related are the Region Supplementary Procedures (SUPPS) approved by the Council for application in specific regions. Neither PANS nor SUPPS are issued directly under a provision of the Convention, but are merely 'approved' by the Council, and it has been argued that they are not mandatory despite the use of 'shall' in their texts? States are not obliged to notify differences observed in practice but the Council has invited notification where such knowledge is important for the safety of air navigation. The Council does not see fit to elevate them to the status of standards or practices because they consist of operating procedures not regarded as having sufficient maturity for such official adoption, or because material of a more permanent nature is too detailed for incorporation into an Annex or is susceptible to frequent amendment for which the process of the Convention is too elaborate.

ICAO & Multilateral Treaties: There are a number of multilateral treaties and conventions that have been sponsored by ICAO, and which represent a major contribution to international air law such as:

The Hague Protocol on International Air Carriage Rules: The Hague Protocol³² has its roots in the Warsaw Convention which had been drafted by The CIDPA¹¹⁵ and the *Comité International Technique d'Experts Juridiques Aériens* (CITEJA)¹¹⁶ and, and was the only multilateral convention to gain almost universal acceptance before the Second World War. It established uniform rules governing the rights and liabilities of international air carriers, passengers, consignors and consignees of goods in States parties to the Convention.

The Guadalajara Convention on International Air Carriage Rules: While the Warsaw Convention provided for damage by successive carriers, each compensating for the damage occurring during his part of the carriage, it did not cover 'sub-contracting' by the agreed carrier to a second carrier. The need for certainty increased as the hire and charter of aircraft became more common so ICAO intervened to have the Guadalajara Convention drafted and presented for signature.

Geneva Convention on The International Recognition of Rights in Aircraft: After the Second World War it was found that the growth of the aviation industry brought with it much importing of aircraft. In many cases these aircraft were obtained on credit terms. The creditors had to be protected where the aircraft and other equipment were situated abroad or where registration was transferred. The ICAO Legal Committee presented a final draft of a convention to deal with this problem to the ICAO Assembly, not a specially convened diplomatic conference. This was the Geneva Convention. The draft was designed to secure that where an aircraft is registered in a State party to the Convention and rights in that aircraft are recorded in a public record in the State of registration, and such rights are valid in that State, other parties to the Convention will recognize those rights and give priority to them over all other rights except salvage claims.

¹¹⁵ The International Private Air Law Congress (CIDPA) was a product of ICAN's 1925 session in Paris. ICAN could work in only the field of public international law and it contained as members only parties to the Paris Convention. CIDPA was formed to fill the need felt by many States for a uniform code of private air law. In its turn CIDPA formed an International Technical Commission of Juridical Experts in Air Law (CITEJA) which was to draft conventions. Between 1925 and 1938 CITEJA provided several draft conventions for CIDPA to consider in the few sessions it held.

Rome Convention on Surface Damage Caused by Foreign Aircraft: Following meetings between the ICAO Legal Committee and the Legal Commission of the ICAO Assembly between 1948 and 1950 final draft of a convention on damage caused by foreign aircraft to third parties on the surface was concluded and submitted to a conference on air law in Rome. The Rome Convention of 1952 aims to adequately compensate persons suffering damage and at the same time reasonably limit the operators' liability. It also aims to unify the rules as to liability incurred for such damage in different States.

Tokyo Convention on Inflight Offences: The ICAO Legal Committee prepared a draft convention on the issues relating to aviation crimes and other acts committed on board aircraft. This draft was submitted to a diplomatic conference in Tokyo in 1963. This Conference adopted the present text and the Convention, known as the Tokyo Convention. The Tokyo Convention covers acts which are penal offences and acts which, though not offences, may or do jeopardize good order and discipline on board.

Draft Convention on Aerial Collisions: The draft convention to have emerged from the ICAO Legal Committee is the Draft Convention on Aerial Collisions (1964). This draft was presented to the ICAO Assembly. The Convention aims to provide rules and establish limits for the liability of operators of aircraft involved in a collision for damage caused to the other aircraft and passengers and goods thereon.

B. Definition of Scheduled and Non-scheduled Flight: The effect of article 5 of the Chicago convention is to give the aircraft of the contracting states which are not engaged in schedule international air services with the right to fly into or over the territory of the other contracting states and to make it up for the non-traffic purpose as well without having to obtain the prior permission as well. This right is subject to observe the terms of the Chicago convention to the right of the state to require landing rights to the prescribed routes which require prior permission if the aircrafts fly over the inaccessible regions without proper air navigation facilities. Article 5 goes as far as to allow the taking on or the discharge of the passengers mail or cargo in any of the contracting states but it is not the subject of the right of the state of embarkation on the discharge of the imposition of such regulations, conditions and the limitations which are considered desirable as well.

Then article 6 denies any privileges to the scheduled international air services unless the state has to be flown over to give permission to fly. The International air services transit agreement was drafted in order to provide some type of similar exchange even for the scheduled air services as well. Thus the privileges which are accorded to the aircraft depend upon whether it is engaged in the scheduled or non-scheduled air services as well. The convention does not define the what is a scheduled or a non-scheduled air service.

The ICAO Council set out to arrive at some definition of these terms for the guidance of members. The definition was published in 1952. A scheduled international air service is a series of flights that possesses all the following characteristics: (a) it passes through the airspace above the territory of more than one State; (b) it is performed by aircraft for the transport of passengers, mail or cargo for remuneration in such a manner that each flight is open to use by members of the public; (c) it is operated, so as to serve traffic between the same two or more points, either (i) according to a published time-table, or (ii) with flights so regular or frequent that they constitute a recognizable systematic series. This definition was plainly needed and, even if not binding, provides a reference point for parties interested in ascertaining whether a given service is scheduled. Knowledge of this fact is important in the

determination of privileges exchanged by the Chicago Convention as well as to the interpretation of provisions of other international agreements such as the International Air Services Transit Agreement (1944), the International Air Transport Agreement (1944), and the Multilateral Agreement on Commercial Rights in Non-Scheduled Air Services in Europe (1956) .

C. Nationality of Aircraft-Joint Operating Organizations - International Operating Agencies-Pooled Services: Chapter I of the Chicago Convention regulates the nationality of aircraft of ICAO member States. Under article 17 registrations governs the nationality of an aircraft. Article 18 prohibits dual registration but sanctions the transfer of registration of aircraft. Article 19 provides that the 'registration or transfer of registration of aircraft in any contracting State shall be made in accordance with its laws and regulations'. Article 20 requires every aircraft engaged in international air navigation to bear appropriate nationality and registration marks. ICAO and contracting States are empowered under article 20 to demand information on the registration and ownership of any aircraft registered in any contracting State. ICAO may also make regulations under which contracting States are to furnish reports giving such pertinent data as may be available concerning the ownership and control of aircraft registered in those States and habitually engaged in international air navigation.

The prohibition on dual registration in article 18 is perhaps difficult to reconcile with provision in article 77 for joint operating organizations, international operating agencies and pooled services in which two or more States are involved and where registration in one State alone would appear impossible. ICAO has gone far in its study of the problem of international operating agencies and their validity under the Chicago Convention. The ICAO Council's Legal Committee has adopted a consensus, reached by its Sub-committee that the second sentence of article 77 of the Chicago Convention, without amendment, gives the Council full power to determine how the provisions of the Convention relating to nationality will apply to the aircraft of an international operating agency even though they do not have a nationality. This somewhat daring consensus runs counter to the long-held concept that if civil aircraft are to fly internationally, they must have a nationality.

Settlement of Disputes at ICAO: This section examines the provisions of the Chicago Convention with respect to the settlement of disputes, the procedures currently in force regarding the presentation of an application before the Council, the scope of the jurisdiction of the ICAO Council for the settlement of disputes, as well as the previous cases brought before the Council.

Chicago Convention Provisions for the Settlement of Disputes: The dispute settlement provisions are set out in Chapter XVIII (Articles 84 to 88) of the Chicago Convention. Article 84 provides that if any disagreement between two or more contracting States relating to the interpretation or application of this Convention and its Annexes it shall, on the application of any State concerned in the disagreement, be decided by the Council. This provision also stipulates that no member of the Council shall vote in the consideration by the Council of any dispute to which it is a party. A party to a dispute can appeal to the International Court of Justice (ICJ) a decision taken by the ICAO Council. Article 85 provides for the situation that a State party to a dispute which wishes to appeal a decision of the Council is not a party to the ICJ Statute. Currently, this provision seems to be no longer relevant since all 191 ICAO Member States are also members of the United Nations and therefore parties to the UN Charter and have accepted *de facto* the Statute of the ICJ.⁶ Moreover, Article 86 stipulates

that any decision of the Council on whether an international airline is operating in conformity with the provisions of the Chicago Convention shall remain in effect unless reversed on appeal and that the decisions of the Council, if appealed, shall be suspended until the appeal is decided. The decisions of the ICJ or an arbitral tribunal shall be final and binding. In order to ensure compliance with decisions under Chapter XVIII, the Chicago Convention sets out two distinct types of sanctions: one for individual airlines and the other for States. The first is set out by Article 87 which provides that each contracting State undertakes not to allow the operation of an airline of a contracting State through the airspace if the Council has decided that the airline concerned is not conforming to a final decision rendered in accordance with Article 86. With respect to the sanction for States, Article 88 stipulates that the ICAO Assembly shall suspend the voting rights in the Assembly and in the Council of any contracting State that is found in default under the provision of this chapter. These sanctions have encountered a certain number of critics over the years.

The Rules of Procedures for the Settlement of Differences: The provisions of the Chicago Convention with respect to disputes are supplemented by the *Rules of Procedure for the Settlement of Differences* (the Rules) adopted by the Council. These Rules set out the procedures for a State to introduce an application to the Council. Under these Rules, the Council functions as a judicial body. The Council takes its decisions on the basis of the submission of written documents by the parties (memorials and counter memorials) as well as on the basis of oral hearings. Another important aspect of the Rules is the importance given to mediation and conciliation either before or during the proceedings. For instance, it is provided at Article 14 of the Rules that any contracting State submitting a disagreement to the Council for settlement shall demonstrate that negotiations to settle the disagreement have taken place between the parties but were not successful. Also, at any stage of the proceedings, the Council may invite the parties in dispute to engage in direct negotiations in order to settle the dispute or to narrow the issues. Moreover, in order to facilitate the negotiations, the Council may designate an individual or a group of individuals to act as conciliators between the parties.

Another interesting aspect of the Rules is the fact that they are closely aligned with the *Rules of the Court of International Justice*. This similarity may to some extent create certain problems, as the ICJ is a judicial body and operates strictly as a tribunal. Therefore, the Rules adopted by the Council may not be adapted for a political body that does not operate according to the traditions of a court of justice. The Rules were first adopted in 1957 and subsequently amended in 1975, but have not been modified since then. To this end, some have recently argued in favor of a review of these Rules by the Council, which could potentially be a good opportunity to take into account the political specificity of this organ.

Jurisdiction of the ICAO Council over the Settlement of Disputes: The council can adjudicate the legal disputes concerning with the interpretation and the application of the Chicago convention. Since the entry into force of the Chicago convention, there have, five disputes under article 84. Apart from its mandate for the settlement of disputes, the council, by virtue of article 66 of the Chicago convention, has also jurisdiction over the settlement of disputes under the International Air Service Transit Agreement and the International Air Transport Agreement. The council has been entrusted by the assembly, during its first session in 1947, to act as an arbitral body for dispute arising among contracting states which are relating to the international civil aviation matters. A number of early bilateral agreements designated the ICAO council as their disputes settlement body in case of any infringement by a party to such an agreement. In today's time, the bilateral air agreements have largely been

abandoned without any reference to the ICAO council in its capacity of the adjudicatory forum, most of the disputes under the bilateral agreements are resolved through the arbitration.

The council also has the duty to report to the assembly of any violation with regard to the Chicago convention and to even consider any matter relating to the convention which any of the contracting states refers to, the Council may investigate any situation which may appear to present avoidable obstacles to the development of international air navigation.

Cases Referred to the ICAO Council: Five cases have been brought to the attention of the Council under article 84 with regard to Chicago convention. The first dispute happened in the year 1952 and it was between India and Pakistan with respect to the interpretation and application of the Chicago convention. India made an application before the council but eventually the dispute got settled by the negotiation between the parties. The 2nd Dispute was between the UK and Spain which took place in 1967 and it was mainly due to the Spanish ban on the overflight of the approach to Gibraltar. The case was brought to the council but the parties subsequently requested the council in 1969 to defer the dispute.

The third case took place again between India and Pakistan in 1971 where Indian Aviation authorities suspended overflying of the Pakistani aircraft over the Indian Air space. India even submitted preliminary objections to the council denying its jurisdiction. ICAO rejected India's claim which made India lodge an appeal to the ICJ, which confirmed the council's decision. This case finally came to an end in 1976 following a joint statement with the parties announcing to discontinue the proceeding. The fourth case was between the United States and Cuba when the aircrafts right to fly over its territory over Canada. After the hearing got over the parties, the president as well as the council who acted as the conciliator as well as the parties came to an agreement. The fifth as well as the most recent dispute took place again between the USA and the 15 EU nations. The issue was regard to the noise of the aircraft engines, which is also known at the hushkit regulation.

The application of this regulation would have had the consequences of denying all the US carriers to fly their older aircrafts into the EU. The 15 EU states submitted a preliminary objection which was regarding the concern of the jurisdiction of the council. The objection was however rejected by the ICAO and the parties proceeded with the hearing on the substances as well. The council then decided to appoint the President as a conciliator and the case finally got settled with the EU.

The Council has never issued a decision on the merits. It seems that at every occasion, mediation as well as the use of the good offices of the President of the Council contributed to resolving the dispute. The fact that the machinery set out in Chapter XVIII of the Chicago Convention has not been able to produce over the years a decision on the merits is certainly one of the main reasons why many authors believe that this mechanism is a "failure". On the contrary, other authors believe that the incapacity of the Council ever to render a final adjudication does not necessarily indicate that the machinery under Chapter XVIII of the Chicago Convention is inefficient. According to these authors the inability for the Council to render decisions on the merits demonstrates that States prefer to settle their aviation disputes through the channel of diplomacy rather than adjudication. In fact, it is probably more advantageous for States to settle their dispute through negotiation rather than letting the Council decide for them.

The Performance of Quasi-Judicial Functions by the ICAO Council: In theory, when the Council is performing the duties set out under Chapter XVIII of the Chicago Convention, it “must consider itself an international judicial organ and act in accordance with rules of international law governing judicial proceedings. Thus, *inter alia*, members of the Council, even though they may be national representatives nominated by Governments must, [...] act in an impartial and judicial capacity.” However, it seems that in practice, the Council does not act as impartially and judicially as the statement above suggests. Since the signature of the Chicago Convention in 1944, a number of authors have raised concerns with respect to the judicial functions of the ICAO Council. These concerns are related to the fact that Council Members are neither necessarily independent nor always qualified in order to perform a judicial duty. The Council is composed of thirty-six sovereign States elected by the Assembly. The Representatives are nominated by their States as diplomatic agents rather than independent experts - unlike the Air Navigation Commissioners. Therefore, Council Members are not independent *per se*.

In opposition to ICJ judges, who are bound by their oath of office to act independently, the Council Members, when they adjudicate disputes decide on the basis of the interests of their own State and most likely following precise instructions. For example, during the hearing of the second case *Pakistan v. India* (1971) a number of Representatives requested the postponement of a vote, in order to seek instructions from their respective administrations. Council Members are appointed by their governments based on their expertise in the field of civil aviation. The Chicago Convention itself only stipulates that no Representative shall be actively associated with the operation of an international air service or have any financial interest in such service. Consequently, the academic and professional background of the representatives is diverse and most of them are not necessarily lawyers by trade nor have exercised any judicial functions prior to their appointment. The ability of the Members of the Council to fully assume their judicial functions and render proper decisions based on the applicable law is therefore questionable.

Nevertheless, we should mention that despite its apparent lack of independence, the Council has not faced any serious criticism caused by its absence judicial capacity over the years. One explanation given by an author is that most cases brought before the Council were very specific, localized and they concerned bilateral disputes. Consequently, the Council was able to be seen as neutral and, to a certain extent, able to preserve its independence. Finally, considering the appeal mechanism that exists at the ICJ, a decision apparently unreasonably taken by the Council could be reversed on appeal.

Clearly any decision taken by the Council following a demand under Article 84 of the Chicago Convention would most likely be based largely on political grounds. We can certainly question whether such a method of adjudicating disputes is fit for our purpose in the present context. In fact, the first president of the ICAO Council, Dr. Edward Warner was already of the opinion in 1945 that “no international agency composed of representatives of States could be expected to bring judicial detachment to the consideration of particular cases in which large national interests were involved.”

MODULE - V

APPLICATION OF NEW AND EMERGING TECHNOLOGIES IN CIVIL AVIATION INDUSTRY

MODULE V: APPLICATION OF NEW AND EMERGING TECHNOLOGIES IN CIVIL AVIATION INDUSTRY

Introduction: Significant technological advances are being made across a range of fields, including information communications technology (ICT); artificial intelligence (AI), particularly in terms of machine learning and robotics; nanotechnology; space technology; biotechnology; and quantum computing to name but a few. These breakthroughs are expected to be highly disruptive and bring about major transformative shifts in how societies function. The technological advances in question are driven by a digital revolution that commenced more than four decades ago. These innovations are centered on the gathering, processing, and analyzing of enormous reams of data emerging from the information sciences with implications for countless areas of research and development.

These advances promise significant social and economic benefits, increased efficiency, and enhanced productivity across a host of sectors. But there are mounting concerns that these technologies and how they are used will pose serious challenges, including labor force dislocations and other market disruptions, exacerbated inequalities, and new risks to public safety and national security. The technologies are mostly dual use, in that they can be used as much to serve malicious or lethal purposes as they can be harnessed to enhance social and economic development, rendering efforts to manage them much more complex.¹ Relatively easy to access and use, most of them are inherently vulnerable to exploitation and disruption from both near and far.

Technological innovation is largely taking place beyond the purview of governments. In many cases, the rate of innovation is outpacing states' ability to keep abreast of the latest developments and their potential societal impacts. And even if one or a handful of national governments devise policies for managing these effects, the global reach of many emerging technologies and their impacts requires new approaches to multilateral governance that are much more difficult to agree on. A greater number and variety of actors must be involved to initiate, shape, and implement both technical and normative solutions.

New technologies poses risks that the legal system must respond to and the regulation of technologies by law presents several difficulties. Regulation often has to deal with technologies at the forefront of techno-scientific knowledge, not even fully understandable by experts in the scientific field. By their nature, these encounters between law and technology are unpredictable and new encounters might need new legal frameworks while old frameworks might take on different functions (Larsson, 2011). This requires an investigation into the basis for existing legal concepts to see if the "essence" of the norm applies in the present case or not (Svensson, 2013). On the other side, law makers can also be blinded by technological promises, not at least technologies in the service as expert knowledge in courts (Mandel, 2007). Mandel (2007) also claims that regulation often happens in the early stages of technical development when the knowledge about the social consequences of the technology is limited and time is not available for making new laws, so preexisting frameworks have to be used.

Emerging technologies are developing at an ever accelerating pace, whereas legal mechanisms for potential oversight are, if anything, slowing down. Legislation is often gridlocked, regulation is frequently ossified, and judicial proceedings are sometimes described as proceeding at a glacial pace. There are two consequences of this mismatch between the speeds of technology and law. First, some problems are overseen by regulatory

frameworks that are increasingly obsolete and outdated. Second, other problems lack any meaningful oversight altogether. To address this growing gap between law and regulation, new legal tools, approaches and mechanisms will be needed. Business as usual will not suffice. Keywords Emerging technologies-Law and technology-Technology regulation-Technology acceleration-Legal reform.

The future of Air Travel in a new age of technology: The aviation industry is not untouched from the effects of the digital wave, which has created a ripple effect across industries and organizations. However, it is not among the pioneers of the digital revolution. Instead, it is simply reacting to the new wave of technology and following the trends to stay abreast with the demands and expectations of the modern passengers.

In the past few years, low-cost carriers have become the preferred choice for passengers. The travelers now expect a completely personalized experience, right from the booking stage till after they have completed their journey. The aviation industry can leverage Sentiment Analysis to determine their customers' needs and then formulate their customer strategy accordingly. The International Air Transport Association (IATA) has determined the technologies and factors that will define how aviation industry will shape up in its recent report on "Future of the Airline Industry 2035." The report identified cyber security, robotics and automation, 3D printing, new manufacturing techniques, virtual reality, augmented reality, IoT, big data, alternative fuels and energy sources, new aircraft designs, alternative modes of rapid transit, and geospatial technology to be prominent in the future of the aviation sector.

There are five major drivers of the changing aviation industry – Society, Environment, Politics, Economy, and Technology. While the societal, environmental, political, and economical factors are somewhat impossible to control, technology is becoming the prime concern for the aviation industry. With futuristic, alternate travel modes such as Hyperloop, with the growing prominence of the highly sophisticated AR/VR technology, the aviation industry is in a rather dynamic state. Although, air travel is still the preferred mode for long-distance journeys, the tables might turn on the sector if it fails to adapt and align with the latest technologies.

Covid-19 and Technology: SARS CoV-2 infection is spreading similar to wildfire across the globe. There have been already more than 2.5 million documented infected cases, causing more than 177 thousand fatalities.¹¹⁷ The fact is that it took ninety three days to the first million people, but for the second million, it took only thirteen days to happen.¹¹⁸ A large part of the globe is under lockdown with despair lingering, and this universe in disarray. We need to look for competent and advanced technological solutions to combat this pandemic (and similar epidemics and pandemics in the future); otherwise, we could be staring at an unmanageable crisis. Surge demands of critical care facilities have broken down the best health-care models in the world and facilities.¹¹⁹

¹¹⁷ Coronavirus – Worldometer, available at <https://www.worldometers.info/coronavirus/>, last seen on 20th April 2020

¹¹⁸ . *Covid-19 Outbreak: It Took the World 13 Days to Get its Second Million*. Hindustan Times; 16th April 2020 <https://www.hindustantimes.com/india-news/covid-19-outbreak-it-took-the-world-13-days-to-get-its-second-million-cases/story-EUpP3YyAvbrnEF5Zq3qO0H.htm>, last seen on September 9, 2020

¹¹⁹ Xiaoxia Q. *How Next-Generation Information Technologies Tackled COVID-19 in China*. World Economic Forum; 8th April 2020 <https://www.weforum.org/agenda/2020/04/how-next-generation-information-technologies-tackled-covid-19-in-china/>.

The best industries have failed in providing even the simple protective suits to their governments. There is a need to rethink why the health-care sector has been so ineffective in treating such an infectious disease. We believe and recommend that the latest emerging technologies be urgently adopted at the global level, and the governments need to reinvest resources in making healthy nations, not powerful nations. Significantly more investment in health care is the need of the day, especially in preventive medicine, community health, and disaster management. The most critical asset in fighting this disease is our frontline doctors and health-care workers.

However, unfortunately, our system has failed in saving them from this infection also. South Korea, Japan, China, the USA, and many other developed countries are trying to use the latest technologies to minimize the effect of this pandemic and decrease the loss of life and loss to the economy. The COVID-19 pandemic has taken the world as a surprise, and the majority of governments has failed to judge the magnitude of the problem and could not prepare themselves, in time.

Thus, they lost the opportunity to add more¹²⁰ resources and deploy the latest technologies. This pandemic has triggered an unprecedented demand for critical resources, and they need to adopt all the emerging technologies to help to combat this pandemic by way of several applications, such as for population screening, infection tracking, vaccine development, effective quarantine, prioritizing the use and allocation of resources, and designing targeted responses. To avoid coming in contact with human beings and physical objects, which may be potentially infected, several innovative and emerging technologies are being considered by the health-care authorities to protect their workers and also to deliver the treatment and other facilities to the needy patients.

The impact of the coronavirus (COVID-19) is being felt by all businesses around the world. Leaders are navigating a broad range of interrelated issues that span from keeping their employees and customer safe, shoring-up cash and liquidity, reorienting operations and navigating complicated government support programs.¹²¹ Technology powered by artificial intelligence (AI) is helping track the outbreak, clean hospitals, deliver supplies and develop vaccines, with Asian governments encouraging universities and corporations to expedite innovations.¹²²

How will it affect the Emerging technologies Worldwide? The COVID-19 pandemic has provided most of us with more disruption and change in a few months than we have experienced in decades. The short-term effects of lockdown, health tragedies, and severe economic downturn are all too apparent. But we all know that there will be a post-COVID world, and it makes sense to try and predict what role technology will play in that recovery. At the highest levels, COVID-19 has forced an acceleration of many technological and societal trends that were already in progress. For instance, it seems clear that there will be an

¹²⁰ Raju Vaishya, Abhishek Vaish, Abid Haleem, Md. Jawed, Emerging Technologies to Combat the COVID-19 Pandemic, Journal of Clinical and Experimental Hepatology, available at https://www.researchgate.net/publication/341167896_Emerging_technologies_to_combat_COVID-19_pandemic?enrichId=rgreq-09cbe700efd7fcfa4b5718ffdee81406-XXX&enrichSource=Y292ZXJQYWdlOzM0MTE2Nzg5NjB1ZDZlODg5NzY1Nzk3ODAwMjMDIAMSU4ODk1OTk0MTIzNA%3D%3D&el=1_x_2&_esc=publicationCoverPdf, last seen on September 9, 2020

¹²¹ *Embedding resilience- Addressing the business challenges presented by the coronavirus*, KPMG, available at <https://home.kpmg/xx/en/home/insights/2020/03/the-business-implications-of-coronavirus.html>, last seen on September 9, 2020

¹²² Wang CJ, Ng CY, Brook RH. *Response to COVID-19 in Taiwan: big data analytics, new technology, and proactive testing*. JAMA. 2020;323:1341–1342. Last seen on September 9, 2020

accelerated migration to cloud services. But, on the other hand, COVID-19 may end up putting the brakes on the long-running globalization trend.¹²³

For most businesses, the immediate impact of the pandemic was twofold. First, there was an abrupt need to transition to a work-from-home model. Second, there was a sudden shift in product demand. For the majority of businesses, this change was negative, as economic hardship reduced demand across the board. But for some companies, an abrupt spike in traffic was experienced—think Netflix or Zoom or any other business that improved work or life from home.¹²⁴

Businesses which had the most difficulty adapting to these two factors were those with substantial on-premise computing infrastructure. Some enterprises had limited ability for *any* employee to work from home, let alone *all* employees. At best, sudden scaling of VPN access was required and, at worst, rationing of services was needed. For instance, in some banks, employees were required to log in to fetch their emails only at scheduled and limited times during the day.¹²⁵ Enterprises that were utilizing cloud services for internal and customer-facing systems generally suffered from none of these problems. As we move into the recovery phase, we can be confident that all enterprises will accelerate cloud enablement to mitigate the impact of a potential second pandemic wave.

The relatively abrupt transition to home work has opened up significant vulnerabilities for many enterprises, which were previously relying on firewalls and “border security” to protect their mission-critical systems. In some cases, systems that were once protected by very high levels of security are now only as secure as an employee’s home router. This increase in vulnerability comes at a time of amplified economic insecurity, leading to an increased probability of cybercrime. There is also significant reason to believe that state actors are poised to take advantage of the weakened security of government and enterprise systems.¹²⁶ Consequently, it seems extremely likely that there will be an increased focus on cyber security over the next 12 to 18 months.

One of the most promising technologies for combating the pandemic is the mobile tracing and tracking applications which utilize Bluetooth to keep track of contacts between individuals who may have become infected. Unfortunately, this also represents yet another diminishment in our privacy and takes us one step closer to ubiquitous surveillance. The IT industry and policy-makers must work hard to ensure that privacy is not abandoned as we work toward a COVID-safe world.¹²⁷ Certain AI programmes have been successful in predicting the spread of the disease by providing key insights to authorities to take the necessary steps.

Robots have been widely deployed in countries such as China and South Korea to deliver food and medicines to COVID-19 patients. Robots and drones have also been used to implement social distancing measures, cleaning and disinfection, and patient examination.

¹²³Guy Harrison, *How Will COVID-19 Affect Emerging Technologies?*, available at <https://www.dbta.com/Editorial/News-Flashes/How-Will-COVID-19-Affect-Emerging-Technologies-141252.aspx>, last seen on September 9, 2020

¹²⁴ ¹²⁴Guy Harrison, *How Will COVID-19 Affect Emerging Technologies?*, available at <https://www.dbta.com/Editorial/News-Flashes/How-Will-COVID-19-Affect-Emerging-Technologies-141252.aspx>, last seen on September 9, 2020

¹²⁵*Ibid.*

¹²⁶*Ibid.*

¹²⁷*Ibid.*

3D printing is being leveraged to manufacture much-needed healthcare equipment such as face masks, nasal swabs for test kits and personal protection equipment. The technology is also being used to support medical device manufacturers in producing key components for critical care devices such as ventilators.¹²⁸

Digitization: Digitization is transforming not only the airline industry, but extends to the entire travel ecosystem. Airline customers increasingly expect more comprehensive travel support throughout the entire travel life cycle. Airlines must focus their digital transformation initiatives on individual-centered offerings and adopting a more cooperative position in the travel ecosystem. In this way, airlines will be differentiated.

Modern cyberspace was enabled by three technologies:

1. Digital computing (especially using silicon integrated circuits), which allows storage and processing of information by machines
2. Internet networking, which allows for the connection and unification of different types of networks according to a single standard, namely internet protocol
3. Cryptography, which allows for unrelated users to share data and infrastructure while maintaining data confidentiality and integrity

All three technologies were actively supported by the U.S. government. This support was crucial to the development of the internet from its early inception in the 1970s through the mid- 1990s, when the internet took on a more commercial nature. The International Air Transport Association (IATA) expects 7.2 billion airline passengers in 2035 – almost twice the 3.8 billion air travelers in 2016. This is a dramatic rise in just under two decades. Given the high costs associated with aviation infrastructure, it is not likely that a simple expansion in physical framework will be a sufficient response towards addressing these massive numbers. A very substantial enhancement in efficiencies will play a crucial part in handling this escalation in volume.

The commercial aviation industry is, in fact, one of the more obvious candidates for digital transformation. It is probably accurate to say that such an evolution is essential for the industry to continue to deliver the high standards of service that passengers have become accustomed to. The aviation industry faces several challenges in addressing its anticipated exponential growth – it needs to address rising customer expectations, meet more stringent environmental regulations, make optimal use of resources, maintain and improve upon safety records and control costs through it all. As with other process-oriented industries, collating and interpreting data is the key to unleashing the untapped potential of the aviation business. To this end, the industry is leveraging automation, several AI-enabled processes, big data analytics, internet of things, cyber security, mobility and block chain, among other innovations.

Technology-driven innovation is set to optimize every aspect of aviation. SITA's Air Transport IT Trends Insights 2017 reports that more than half of the airlines that were part of the study are planning significant artificial intelligence (AI) initiatives over the next three years. From real time predictive pricing and personalized (offers) air travel experience to chat bots that recommend upgrades or ancillary services based on the customer profile and

¹²⁸ Real-world evidence the most impactful emerging technology in COVID-19 management: Poll, available at <https://www.pharmaceutical-technology.com/news/emerging-technologies-for-covid-19-management-real-world-evidence/>, last seen on September 9, 2020

consumption habits. AI and big data analytics will allow airlines the adoption of a new business model based on merchandizing and retailing on individual-centered offerings which at the end, will increase airline revenue and customer satisfaction. In addition, AI will allow the aviation industry to operate at optimal cost to profit ratios through targeted sales.

AI will also radically transform customer experience and engagement at airports. Malaysian low- cost carrier Air Asia has initiated the use of self-check in kiosks that utilize facial recognition technology to confirm the identity of a customer by running a match to the passport photo they have submitted. Others, like JetBlue, Delta, and Scandinavian Airlines initiated the use of biometrics in the boarding process as well, expediting the boarding process and reducing turnaround times which optimize their fleet utilization. Lufthansa to enable passengers to experience the airline's premium economy class services, seats and legroom before they board, which has sharply escalated the rate of upgrades from the regular economy class. United Airlines has a tie-up with Amazon Alexa that manages the entire flight experience for their customers – from receiving ongoing updates and offers regarding their flights, to automating the check-in process.

The aviation industry is experiencing a strong growth in the adoption of cloud-based applications and the use of big data. Machine learning automates the collection and processing of huge volumes of data, enabling real time actionable insights that impact internal as well as customer facing processes – introducing unprecedented efficiencies and maximized returns. Virtual AI assistants are yet another emerging innovation that will allow airlines to be more productive and deliver remarkable standards in safety. These AI automated assistants will help pilots with repetitive tasks like changing radio channels or reconciling weather and wind forecasts with flight plans and paths.

Optimal, agile and proactive processes will deliver enhanced services and boost profits. Airlines are using digital transformation to deliver real time pricing, agile operational capabilities, enhanced systemic integration and transparency in processes. The impact will be felt across the entire supply chain through upgraded passenger experience— in-flight and at the airport — and operational efficiencies actualized through streamlined maintenance, operations, and services costs. There is a widespread acknowledgement among aviation sector stakeholders that deploying an effective digital strategy is a non-negotiable prerequisite for long-term success. No longer are the benefits accrued from digital technology limited to small gains in process efficiency or marginally lowered operating costs. The emergence of several of the latest generation of digital technologies holds the promise of truly dramatic transformation. What's more, in a highly competitive market, digital technologies provide aviation companies a means to leap frog established competitors through the means of innovative solutions – as well as warding off competition from disruptive upstarts that are empowered by being effectively digital native.

The relationship between law and technology forms two distinct areas for discussion and debate, but both are intertwined and no discussion is complete without acknowledging the other. In any conversation on the future of the legal profession, there must be real consideration of the role that technology takes to shape and enhance that future. Similarly, any discussion on technology must involve proper acknowledgement and consideration of the legal framework in which it operates.

The initiation of the concept of liberalization, privatization and globalization with highly advanced technology blended with information technology has completely transformed the economic behavior of the world. Civil aviation is one of the most widespread and extensively

interconnected international infrastructures in the world connecting everyone, every time and in every place. ‘Airports’ and ‘Airlines’ are the economic engines for the growth and development of a nation. Civil aviation is a glamorous industry but sensitive and yet its abuse has become a threat to the general security of passengers, crew members and aviation industry as a whole due to the misuse of information technology. Market conditions and industry developments affect the growth of any business. The increase in traffic and competitive pressure has been adversely impacting the financial sustainability of the airline industry.

As the technology sector moves forward faster than other industries can keep up, the future seems at once both exciting and worrying i.e. issues such as cyber security becomes more and more challenging at a faster and faster rate. The current global market conditions and industry developments coupled with evolving technological trends and customer preferences are introducing more challenges than ever before. IT automation has removed barriers and changed the landscape of aviation industry. It helps the industry in cutting costs, improving relationships with the customers and clients, and improving the financial performance in a sustainable way. The aviation operations since decades are based on IT industry. The aviation industry widely uses a variety of applications through the digitalization of different procedures.

Today every airport, airline and the air traffic control systems are based on intelligent transport system i.e. the information and communication technology (ICT). Aviation has become the backbone of our global economy bringing people to business, tourists to vacation destinations and products to markets. “Aviation” is the business of freedom. In recent years, however, airline efforts to restructure and reengineer their businesses have resulted in a historic strengthening of the bottom line. If we look at aviation in a broad sense, the industry is facing a whole complexity of new challenges. Airports are going through an era of hyper-competition which means an increasing number of airports are competing for a diminishing number of resources. The bigger hub airports face competition both from rival domestic hubs, but also from the global ‘mega hubs’. At the same time smaller airports are engaged in pitched battles with other regional airports in a bid to attract and retain carriers.

The impact of mobile and digital technologies has a lot to do with this and airports will have to embrace digital technologies quickly if they are to meet rising customer demands.

- *Firstly*, in answering this question we must recognize that no airport is the same and accordingly, airports will have different needs and priorities when it comes to implementing digital technologies.
- *Secondly*, airports are at various stages when it comes to implementation. While most airports are transitioning away from Airport 2.0 (self-service and process efficiency) to Airport 3.0 (using digital to optimize flow monitoring and passenger processing) this masks a number of differences in airports’ understanding, freedom of action and overall strategy.

Impact of ICT on Aviation Industry: Role of Information Technology in Aviation Industry
Air travel has always been closely connected with the Information and Communication Technologies (ICT), benefiting from the technological developments and, in the same time contributing to its evolution. The air travel linked with tourism industry is highly fragmented and diverse, linking a “worldwide supplier community” with passengers/consumers being distributed globally. The evolution of ICTs demonstrated that centralizing data is a key

element in the development of air travel and tourism as well as transforming distribution into an electronic marketplace. The pioneers of the technical developments in the air travel and tourism industry were the Computer Reservation Systems (CRS) in the 1970s and the Global Distribution Systems (GDS) in the 1980s, among the first multi-organizational and global information systems⁸ followed by the Internet in 1990s a first step associated to the development of the “world wide web” under the 20th century. However, the 21st century has witnessed an advanced technological development which has transformed the aviation industry.

Digital technologies have been the driving factor for improving airlines’ operational efficiency. Custom software application development has become a major contributor to a company’s competitive advantage and garners exponential growth in business. It helps the industry to leverage its technology and services by extracting full potential. It also facilitates the implementation and development of global standards and delivers value to the airline business firms. The advent of technology and social media is increasing the customers’ expectation to build and increase their relationship with the organization.

Understanding customers’ preferences, IT innovation and modernization help the airlines re-engineer their business processes by addressing the industry challenges and opportunities and transform its practices to a customer-centric approach. This conventional approach increases the connectivity and enhances the customers’ satisfaction and innovative software applications provide real-time value to the customers. A catalogue of solutions can be found helping airlines manage a variety of processes, such as electronic documentation, aircraft performance and flight planning optimization, crew management or fuel efficiency. Other new services have recently become available, such as solutions for live flight tracking.

Big Data: Big data is reshaping business. This is particularly the case in the airline industry, where on numerous occasions a big data case study has proven the industry is evolving. Computing power has developed to the point where airlines can now gather and process the vast amounts of data they need to analyze fuel usage on a per-trip basis. Airlines can collect data directly from sensors embedded within their aircraft, including information on wind speeds, ambient temperatures, plane weight, and thrust. Real-time access to data in the 21st-century is the fuel that allows organizations to take informed steps towards operational efficiency. At 17% of overall operating costs, fuel is the second- highest expense for airlines after labor, making fuel efficiency a critical metric. Airlines are now using big data in aviation to help squeeze new efficiencies into their fuel usage.

This data can be fed into an analytics engine that marries it with operational data around fuel, passenger, and cargo loads, along with weather data, to search for patterns with the highest levels of trip profitability. With the emergence of aviation data analytics, the airline industry hopes that this data mining will produce actionable intelligence around decisions such as adding or subtracting flights to routes, setting fuel loads for each aircraft, and selling additional passenger tickets. They can also give this intelligence to pilots in the air. However, analyzing vast swathes of data is not new for the sector. For instance, engine manufacturers have utilized trend monitoring and operating parameters for decades. This meticulous approach to performance has translated into huge savings for airlines, providing them with up-to-the-minute operational data. Moreover, a Boeing 787 creates half a terabyte of data on every flight. Combined with weather forecasts, customer service data, ticketing information, and airport communications, this vast ocean of data offers a wealth of business intelligence.

However, many airlines are not taking full advantage of the data they have. With an enormous reservoir of data at their disposal, big data technology can transform the way airlines do business. By prioritizing data collection and analysis, even small airlines can respond to customer demands and market trends with precision and agility.

Key benefits of leveraging big data: Leveraging insights into big data can give airlines a huge advantage over competitors. From booking, check in, boarding, and even during the flight, airlines can learn a huge amount about their client base. Along with loyalty programs, airlines arguably generate more customer data than any other industry. Within this information lies an enormous quantity of valuable intelligence that impacts operations, efficiency, and service.

Smarter maintenance: Big data helps airlines to better maintain their aircraft. Take fuel for example; fuel accounts for 17% of all airline operating costs, making it the most significant overhead after labor. Therefore, fuel efficiency is a critical metric. ⁶With big data, airlines can identify new efficiencies. Greater computational power has allowed airlines to gather and process huge volumes of data that enable them to analyze fuel consumption on a per-trip basis. For instance, Southwest Airlines collects data from sensors embedded in aircraft that measure wind speed, temperature, and plane weight alongside fuel consumption.

Airlines have discovered that with the right analytics platforms, aviation data analytics can be used to eliminate inefficiencies due to redundancy, predict routes their passengers are likely to need, and improve safety. Engines are also equipped with sensors capturing details of every aspect of their operations, meaning that the impact of humidity, air pressure and temperature can be assessed more accurately.

Safer flights: By capturing flight incident data, regulators can improve safety across the aviation industry. Recently, the European Aviation Safety Agency launched the Data4Safety program, which collects and analyzes in-flight telemetry data, air traffic control information, and weather forecasts to detect risk. The program will allow regulators to determine safety risks and advise stakeholders.

With total worldwide air traffic predicted to double over the next twenty years, it's apparent that airlines need to keep innovating with big data. By amassing data from flight incidents, regulators can improve safety across the entire industry. Data analytics software will enable regulators to identify the biggest safety risks and determine whether industry stakeholders are taking the right actions to mitigate them. By combing through terabytes of data, they will be able to locate weak links in the aviation chain and dole out insightful improvements to ensure that the safety of their passengers is a top priority.

Taking the IT into consideration, presently, several companies are promising increased efficiencies in different contexts like the

- Navblue, an Airbus company, offering the N-software, able to produce best-in-class aero data targeting airspace re-design;
- Sky-breath, offered by Open Airlines, promises to exceed 2% on fuel savings thanks to big data analysis;
- Honeywell software helps airline flight operations managers to quickly understand fuel consumption trends, identify savings opportunities, monitor progress of savings initiatives and demonstrate results;
- PACE offers a more effective fuel management through improvement of daily operations, strategic planning and operational efficiency;

- UTC offers enabling improvements in operational efficiency by integrating flight planning, avionics data, flight performance tracking and weather data with real-time updates and notifications.
- In addition, Flight Scanner, offered by Safety Line, offers to automatically identify the factors associated with hazardous situations based on all flight data;
- Last but not least, Inn axis coordinates the Safe-Clouds.eu research project which develops new data analytic techniques for a variety of airline and air traffic control operational contexts.

Artificial Intelligence: Artificial Intelligence (AI) is among the most exciting and disruptive technologies in industry today. And there's a growing awareness of the possibilities around AI in airlines too. Indeed, the market for AI in airlines is expected to reach \$2.2bn by 2025, showing just how much the industry is investing in this technology. While AI and data science in airlines is still at a relatively early stage of development, the future looks promising - for revenues, safety and customer experience. Engineers have found AI can help the aviation industry with machine vision, machine learning, robotics, and natural language processing. Artificial intelligence plays a significant role in cutting costs, reducing the design cycle time, simulation, prototyping, optimization, maintenance, manufacturing and updating products and is all set to drive many developments in the aerospace sector in the next 15 years. Advances in AI could help aerospace companies optimize their manufacturing processes. However, there is limited adoption of machine learning techniques in the aviation industry and the main reason for this is the lack of access to high-quality data, increased dependability on simple models as compared to complex models and a lack of skilled workforce.

Artificial has been found to be highly potent and various researches have shown how the use of artificial intelligence can bring significant changes in aviation. Few airlines now use artificial intelligence for predictive analytics, pattern recognition, auto scheduling, targeted advertising, and customer feedback analysis showing promising results for better flight experience. Airlines and airports are now embracing new technologies and turning to artificial intelligence (AI) to support their customer service. Aircraft manufacturers and airlines are investing significant resources in AI technologies in applications that span from the flight deck to the customer's experience.

Major aircraft manufacturers such as Airbus are already phasing in AI. Artificial intelligence is almost ubiquitous today, and its potential is huge. AI solutions are based on the extensive data that is already available from the many different solutions used by broad international customer base. The aim is to make even more effective use of the limited resources available without compromising the stability of the systems. The airline sector has commenced reshaping because of emerging technologies like IoT, VR, AI, and AR. The advances in Artificial Intelligence (AI) are reshaping the future for the airlines, in particular in utility areas like ticketing, flight maintenance, crew management, and passenger identification. Here are some of the cases the place these new technologies are being used.

Technology is going to play a much bigger role at airports than it ever has in the past and will be the key driver in creating every facet of a seamless travel journey. Airports are settings that involve so many different parties including airport and airline employees, security personnel, national aviation authorities and outside vendors. Adopting new technology helps them operate more efficiently and sustainably. AI will fundamentally change the way software solutions are developed. Instead of programming fixed or parameterized business processes,

the algorithms of the future will be derived from data. AI-based technologies are paving the way for the digital future.

The use of AI (Artificial Intelligence) technology in commercial aviation has brought some significant changes in the ways flights are being operated today. World's leading airliner service providers are now using AI tools and technologies to deliver a more personalized traveling experience to their customers. From building AI-powered airport kiosks to using it for automating airline operations and security checking, AI will play even more critical roles in the aviation industry.

AI & Machine Learning: During the past couple of years, the air transport industry has been showing a great commitment to realising the full potential of artificial intelligence (AI) with a plethora of use cases. On one side, we have seen airlines and airports adopting chatbots to communicate with passengers, and on the other to improve operations. In terms of chatbot applications, last year AirAsia developed and launched its AirAsia Virtual Allstar (AVA), a continuously learning AI-powered chat platform, which won the Silver Award at the FTE APEX Asia EXPO Awards 2019 for the Best Passenger Experience Initiative in the Airline category.

One of the highlights during Ed Bastian's keynote at CES was a proprietary AI-driven platform to be implemented this year, that will help Delta's professionals make even smarter operational decisions. The airline claims that it is applying AI-driven machine learning on a scale that's never been done before by an airline. The proprietary AI-driven platform analyses millions of operational data points – from aircraft positions to flight crew restrictions to airport conditions – to create hypothetical outcomes that help Delta's staff make critical decisions before, during and after large-scale disruptions. During his keynote, Bastian said: "Our leading source of innovation is our people. Our people shouldn't be spending all their time taking tickets and scanning boarding passes. They're too talented for that."

Elsewhere, KLM has embarked on a unique partnership with Boston Consulting Group (BCG) which has the potential to "revolutionise global airline operations". In a recent interview with FTE, Daan Debie, Director Engineering & Architecture, KLM Royal Dutch Airlines, explained that KLM has developed a suite of advanced optimisation tools for the Operations Control Centre to help set up robust schedules by implementing smart tail assignment, manage and solve disruptions, and help with decision-making. He pointed out: "This has led to huge savings in non-performance costs." The benefits for passengers are clear too – minimising the impact of disruptions through real-time updates, reducing baggage delays and personalising information that has been provided to the customer through digital channels.

Identification of Passengers: There's no need to explain how modern inventions are contributing towards the betterment of mankind and AI can help in air transportation in numerous ways. Check-in before boarding is a vital task for an airline and they can simply take the help of artificial intelligence to do it easily, the same technology can be also used for identifying the passengers as well. American airline company Delta Airlines took the initiative in 2017. Their online check-in via Delta mobile app and ticketing kiosks have shown promising results and nowadays you can see many airlines taking similar features to the whole new level.

Check in: Checking in at the airport before boarding the flight is a vital task. AI technology can be used for this purpose in addition to identifying passengers. Many airlines are already using AI for online check-in via mobile apps and ticketing kiosks for a better flight

experience. AI technology will make the process of passenger identification faster and easier. Security scanners and biometric identification with AI will also help security personnel on duty to be more efficient.

Customer Service Agents: AI can be used to assist customers in many ways, including assisting check-in requests, providing accurate information on future flights and status of current flights, answering common questions and more on Internet-enabled devices, and so on. AI can also be used in air cargo for such purposes as revenue and safety management.

Baggage Screening: Baggage screening is another important task at any airport. AI can help duty managers simplify this process. AI-based technology like Syntech ONE comes handy in such applications. It can detect threats at x-ray and CT security checkpoints with automated screening. The system can be installed at airports to screen baggage in multiple passenger lanes.

Maintenance Prediction: AI technology can also be used to predict potential failure of aircraft. Leading aircraft manufacturers use cloud-based data storing systems to improve reliability of aircraft maintenance. This allows the fleet to collect and record a huge amount of real-time data. AI-based predictive analysis provides a systematic approach for aircraft maintenance. Use of AI makes the process of maintenance easy and reduces failure rates.

Aircraft maintenance is necessary to ensure its safety. There are many unexpected maintenance issues concerning an aircraft. Aviation companies are using predictive maintenance enabled by AI to resolve these issues. Predictive maintenance allows for faster identification and reporting of potential failures in real-time. It predicts the repair timeline and ensures that the process schedule is smoother and faster. A huge amount of data is given as the input and with use of AI and predictive maintenance solutions, data points and meaningful insights are deduced as output. The entire process helps in fixing an issue before it arises.

Fuel Efficiency: Fuel efficiency is one of the top parameters of aerospace OEMs and this can be optimized with the help of artificial intelligence. Any minor improvement in fuel efficiency can have a major impact on the aircraft's emission and this is achieved by manufacturing lightweight aircraft components. AI is helping pilots during flights by analyzing critical data like the fuel system, system status, weather conditions as well as other major parameters that can be assessed in real-time to optimize a flight path. Additionally, AI helps in optimizing time-consuming activities in the aerospace industry and paves the way to better human-machine collaboration.

Assisting customers: AI can be used to assist customers in the airport and it can help a company reduce its operational costs and labor costs at the same time. Airlines companies are now using AI technologies to help their customers to resolve issues quickly by getting accurate information on future flights trips on their internet-enabled devices. More than 52% of airlines companies across the world have planned to install AI-based tools to improve their customer service functions in the next five years.

Artificial Intelligence can answer various common questions of the customers, assisting them for check-in requests, the status of the flight and more. Nowadays artificial intelligence is also used in air cargo for different purposes such as revenue management, safety, and maintenance and it has shown impressive results till date.

Generative Design: Artificial intelligence is increasingly being used to create efficient, faster and lighter parts in the aerospace industry and is applied to find innovative ways to design them. Based on the existing requirements new innovative product designs are being created using machine learning techniques. Multiple options are available in a very short span to find the best design, making it easier for engineers and product designers

Supply Chain Management: Implementing AI in the supply chain is making operations in the aviation industry more streamlined. Increased supply chain efficiency enables maintaining the equipment and its regular repairs much easier than doing it manually and also saves money and cuts the downtime as it is known in prior to knowing exactly when to conduct the repair tasks. Automated data collection makes it easy to improve the efficiency of supply chain management.

Quality: Quality assurance is all about ensuring that the desired level of quality in a product or service is maintained. This is done by giving a special level of attention during each and every stage of the process of production. By automating the QA with the help of an autonomous AI solution can save a lot of time and resources. Automating quality testing with the help of machine learning has increased the rate of defect detection by almost 90%.

Training: Artificial intelligence can be used to enhance pilot training facilities with pilots being provided with a realistic simulation experience with the help of AI-enabled simulators coupled with virtual reality systems. These simulators can also be used to collect and analyze several data with regards to training for creating personalized training data with biometrics to track an individual's performance. The aviation industry relies heavily on data that are derived from a great deal of research, design, and production of its products and services. Machine learning has played a major role in developing the aerospace industry by providing valuable information that might otherwise be difficult to be obtained via conventional methods.

AI Robotic Pilot: Robots replacing human pilots are not good news for the latter. In principle, an autonomous combat aircraft capable of carrying out air-to-air and ground-attack missions is technically feasible. And these autonomous aircrafts are already available in limited areas. Like any other industry, the aviation industry will embrace cost-cutting using robots. With advanced AI technology, more and more aircraft controls are being entrusted to AI systems. Robots and cognitive machines are already more advanced than humans at most jobs. But replacing human pilots by AI is a complex mission, and would involve technical, legal and political aspects. Auto-pilot feature to an extent can fly a plane but it generally involves some human interaction. Complete automation without human intervention is not an easy task. Moreover, to get an auto-pilot certified by a regulatory body is a massive undertaking.

As artificial intelligence (AI) continues to evolve and expand, companies are seeing huge changes in the field of aviation. Big brands are investing in AI technology to enhance their products and services to better serve their customers. Artificial intelligence (AI) tools and technologies are used by some of the world's leading airliner service providers to deliver more personalized traveling experiences to their customers. AI, machine learning, machine vision, robotics and natural language processing are the future of the aviation industry. Predictive analytics, customer feedback analysis, auto-scheduling, pattern recognition and targeted advertising are all part of AI technology taking the aviation industry to a whole new level.

AI technology is becoming more advanced and complex, and is finding applications in the aviation industry in multiple ways, including auto-pilot features. Due to factors like cost savings and shortage of qualified pilots, many companies have expressed an interest in reducing or even eliminating the number of pilots in the cockpit. There have been speculations that AI may someday replace human pilots. This article covers the various applications of AI in aviation and discusses how close AI is to replacing human pilots in the future. Autonomous commercial aircraft would also require updating entire ATC systems. If an ATC needs to reroute the plane, or issue a change in course, currently it is handled via person-to-person communication. Some kind of command to the plane via data link would be needed to do it via an automated system. Thus, automation will be needed both in aircraft and the ATC system.

A UCAV has some intelligence along with the capability of flying to a pre-determined location. Dropping some mines and then returning to a base location might be militarily cost-effective. But we cannot compare auto-pilot features in commercial planes with UCAVs, because UCAVs have limited features and control functions. There are many risks involved with pilot-less commercial planes. Therefore experts feel that fully-functional commercial planes without human pilots may not be feasible in the next decade or so.

Flight Engineers and Pilots: A flight engineer is a member of an aircraft's flight crew, who monitors and operates complex aircraft systems. He or she is also responsible for pre- and post-flight aircraft inspections, and ensuring that weight and balance of aircraft is correctly calculated to ensure centre of gravity is within limits.

Now, the flight engineer's role has been replaced largely by computerized engine systems. Any malfunction, abnormality or emergency is displayed on an electronic display panel, and the computer automatically initiates corrective action to rectify the abnormal condition. While some non-pilot crew members have been replaced by AI, human pilots still maintain their skills in the cockpit, monitoring the systems. With advanced AI technology, hands-on piloting by human pilots might be reduced. Then, human pilots might be able to issue commands to the computer rather than having direct manual control.

Bomber Pilots: During the Gulf War, 297 missions were flown by AI-based autonomous aircraft without anyone onboard or any remote human pilot controlling them. Many explosive payloads were delivered to targets by such aircraft that flew hundreds of kilometers.

Ground Attack Pilots: Some ground attacks are now carried by unmanned combat aerial vehicles (UCAVs) managed by remote pilots instead of manned aircraft. These UCAVs are intended to have full autonomy. Here, the main human interaction with the aircraft is not piloting it but authorizing firing of weapons.

Helicopter Pilots: In some remote areas, power-line inspection is being carried out from helicopters with human pilots, but this can be replaced with AI-based autonomous drones.

New and Emerging Technologies: The term New and Emerging Technologies (NET) encompasses the most novel, advanced, and prominent innovations that are developed within various fields of current modern technology. The current examples of NET include, for example, zero-emission cars that run on hydrogen, next-generation robotics, genetic engineering techniques, developments in artificial intelligence; nanotechnology, social networking, etc. The scope of the term New and Emerging Technologies (NET) has been in a process of continuous expansion.

Two decades ago, most NET were related to artificial intelligence machines. The popularity of augmented reality, nanotechnology, Internet of Things, and 3D printing started growing at the beginning of the current century. The emerging technologies of VR, AI, and IoT Automation, Big Data, Block chain, 3D printing, Cyber technology, Cloud Computing, Crypto Currency, Drones, Energy, Genetic, Geo special, Mobile, Machine learning, Nano, Robotic technologies etc. have garnered an incredible amount of attention and changing the living patterns of the human being. Major legal issues concerning these technologies including State Jurisdiction, State Responsibility, Privacy, Security, IP Protection, Taxation, use of e-evidence etc.

Internet of Things (IoT): Early on, the aviation industry embraced the Internet of Things (IoT). For those unfamiliar, this technology allows electronic devices to communicate with one another without the need of a host computer. Even before airlines knew what to do with the information, they had begun gathering loads of data through sensors placed throughout the interior and exterior of planes. Today, maintenance, repair and overhaul professionals (MROs) can communicate with plane sensors using tablets. This allows them to scan aircraft systems easily, identifying components in need of replacement or repair. These sensors even have implications for tracking within the supply chain, allowing suppliers to identify parts nearing the end of their life so that shipments can be prepared before MROs find themselves lacking.

Challenges:

- In regards to implementing IoT in aerospace, we believe there are three key challenges, the first one being safety. The Internet is a dangerous place so security, namely cyber-security, should be a prime concern when adopting IoT.
- Another key challenge is safety. It's relatively easy to implement new technology or automate workflows. However, errors in hardware and software technology may pose a safety issue. As an example, think of what can go wrong if an IoT solution makes errors in the fuel uplift calculations or fuel ordering process, he says.
- The third challenge revolves around the conservative nature of the aviation industry, a trait which poses a risk to the adoption of IoT. The third challenge is conservatism. The aviation industry tends to be conservative. This may be a challenge when implementing IoT solutions in the aviation industry, Arjan de Jong explains.
- The risks of disjointed IoT initiatives can also extend to regulatory compliance issues, lapses in physical safety, cyber-security risks and decreased capabilities of handling large complex sets of data.
- When adopting IoT in the aviation industry as a whole, executives should be aware that there are no "turn-key" IoT solutions. It's safer and more practical to implement IoT solutions gradually and over time. Take small steps and consider the future potential of each step in the process. A lot of smaller steps may be necessary to achieve the end goal, and often the organisation needs to change as well. This may even require cultural changes.

Procedural aspects for its implementation:

- Ideation and strategy - The business strategy should be determining your targets and areas of improvement, but use ideation workshops and ecosystem contacts to figure out how to address these areas, going beyond the norm and truly innovating.
- Pilot and roadmap - the idea is to "learn fast" and iterate as you go along, overplaying is often the death of innovation.

- Capture, store, and process - for IoT initiatives to be successful, one needs a way to get ahold of the right data, process it and store it - using edge computing and cloud technology - and finally, you'll need to be able to analyze it.
- Scale and deploy - once you have proof of concept, pay mind to privacy rules, security and global capabilities, all critical factors determining scalability.
- Operate - measure performance and overall contribution to business metrics. Now improve, repeat and measure again.

In the case of the aftermarket, here, IoT also holds a tremendous amount of potential. The number of e-enabled aircraft is rising radically and the new sensors embedded into aircraft equipment, parts and systems have increased distributors' ability to collect valuable data.

Block-chain Technology

Potential applications:

- Block chain's secure, immutable and decentralized features can help aerospace companies reduce maintenance costs, increase aircraft availability, and minimize errors in tracking aircraft parts;
- Block chain is well-suited to improve the performance of one of the world's most complex, globally interconnected and security-dependent supply chains. This elegant and paradigm-shifting technology has the potential to deliver profound benefits for the hundreds of suppliers typically involved in the manufacturing of a single aircraft. In the long term, using block chain to connect the many loose ends in the supply chain could prove revolutionary. The technology offers a way to track and provide consistent aircraft configuration data across the supply chain.
- Parts traceability is just one of many potential applications within aviation that align well with the capabilities of the block chain technology. Block chain holds the key to transforming maintenance logs and parts traceability. It can help ensure that parts produced are legitimate and live up to the necessary airworthiness requirements, and can ultimately offer a virtually immutable record of every part on an aircraft, as well as every time it's been handled and by whom. At the same time, this would mean that airlines would be able to sell and purchase parts with the confidence that the documentation is accurate and compliant with all maintenance regulations.
- Block chain in the aviation industry can be used to simplify and automate loyalty program transactions and bookkeeping. This is especially relevant today, as more and more airlines partner with credit card issuers, rental car companies, hotels and so forth. By creating a common digital currency - called tokens, in the block chain - travelers can get instant value on the spot. Airline executives, on the other hand, get a much clearer understanding of the revenue flows from reward programs.
- Block chain could be a game-changer in this area by introducing so-called smart contracts. These contracts would use block chain to automate the supply chain transactions, potentially removing the need to process invoices and payments, as the block chain would operate on a standardized, commonly-agreed micropayment basis. Smart contracts could, too, be used to standardize and automate leasing contracts of entire aircraft, another popular trend in the aviation industry.
- Block chain technology offers a new, elegant and secure way for the industry to track and trace myriad components while deterring counterfeiting and improving maintenance capabilities. Used in combination with technologies like digital twins and

digital threads, block chain could ultimately be a game-changing innovation for this sector.

Lufthansa, Air New Zealand and British Airways are already working with various block chain startups on some ambitious projects, while Air France, last year, announced that the company is looking toward block chain technology to improve its maintenance activities.

Predictive Analytics: Today, most MROs use a form of predicative analytics to identify possible outcomes of a given situation. This helps professionals determine the best course of action. For instance, instead of simply replacing a part every three months, MROs can better pinpoint when that part will actually reach its lifespan and then determine if a repair or replacement is best. However, with the vast amount of data now being collected through IoT, MROs may soon be able to take these methods a step further and into the realm of prescriptive maintenance.

Prescriptive Maintenance: Prescriptive maintenance is an analytical method that not only determines all possible avenues, but also chooses the best course of action based on the desired outcome. Basically, these models can “think” for themselves. In aviation, this method removes the guesswork for professionals, saving time in an industry reliant on speed.

Robotics: Automation in the aviation industry is gaining momentum due to rapid advancements in the fields of robotics. Robots in the terminal are becoming a more common site and among some of the most recent examples are Fraport’s new self-driving guide robot, called YAPE, for luggage transportation; “Airstar” robot at Incheon Airport; Munich Airport’s Josie Pepper; and British Airways’ partnership with startup company BotsAndUs to test AI-powered autonomous robots at Heathrow Terminal 5 to further enhance punctuality for passengers.

As well as robots in the terminal, automated vehicles on the airfield and baggage-related robots are also gaining traction. A prominent example is Vanderlande’s end-to-end baggage logistics solution FLEET, deployed at Rotterdam The Hague Airport, and trialled at Hong Kong International Airport to further improve the efficiency of the baggage handling process, enhance ergonomic working conditions for ground staff and future-proof the airports’ baggage handling operations, so we will likely hear more about this technology in the months to come.

Autonomous vehicles and drones have also been tested in the past couple of years. For instance, Delta Air Lines is currently in partnership with technology-focussed college Georgia Tech and smart city living laboratory Curiosity Lab to identify ways autonomous vehicles can benefit customers and employees. Researchers from all three partners will have access to Curiosity Lab’s 1.5-mile autonomous vehicle test track and smart city living laboratory in Peachtree Corners in Atlanta. As autonomous vehicle research advances across the world, Delta sees potential applications for autonomous cars, trucks or buses at airports and beyond. For example, autonomous vehicles could help customers make tight connections across an airport, deliver delayed baggage to customers or transport aircraft parts to airports. Fraport also recently completed a trial of a hybrid aerial vehicle at Frankfurt Airport Terminal 2. The company joined forces with startup Hybrid-Airplane Technologies GmbH to carry out test flights assessing whether the aerial vehicle could be used to perform status checks in the terminals.

Drone delivery is also becoming increasingly popular and recently Edmonton International Airport (EIA) entered a new strategic partnership with Drone Delivery Canada (DDC) that will see the airport become a hub for drone cargo deliveries in Western and Northern Canada. This is expected to be the world's first regularly scheduled drone delivery service from an airport. Meanwhile, the technology is already gaining traction in the hospitality business with Yotel, for instance, experimenting with the use of drones to deliver food and drink orders to guests at its hotel in Amsterdam, so it is likely that this trend will soon be replicated in the airport terminal.

Another interesting concept to keep an eye out for is avatars. Japanese airline ANA is currently developing new platforms for telepresence to “impact the lives of all 7 billion people on Earth and to connect people, connect things, and connect ideas and dreams,” shared Kevin Kajitani, Co-director of ANA's Avatar division. One of the team's goals is to set up an experiment that could let sports fans experience the 2020 Tokyo Olympics through telepresence robots sitting in the seats.

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Augmented Reality (AR): Augmented reality, not to be confused with virtual reality that exists only in a virtual world, is the use of technology to superimpose virtual elements in the real world. In recent years, the aircraft industry has faced a shortage of training personnel for MRO activities. This shortage is due to many factors, including the rapid expansion of airlines in the Middle East and Asia-Pacific, a lack of training structures in many of these countries, limited spots for necessary trainings and obstacles to achieving full certification quickly due to necessary hours and the limits of a highly regulated industry. With the introduction of augmented reality, MROs would be able to train anywhere in the world without the need to wait for open training spots, pushing them more quickly into availability for the completion of required hours and, ultimately, as certified industry professionals.

Additive Manufacturing (AM): 3D printing, also known as additive manufacturing, is making its way into the large-scale manufacturing process. Last year, Boeing teamed up with Oak Ridge National Laboratory to 3D print the largest single piece ever made using this technology—a 777x wing trim tool. The tool was printed in just 30 hours, something that

usually takes three months with traditional manufacturing methods. In addition, Airbus and Rolls Royce have revealed plans to begin 3D printing parts for the Trent XWB-97 engine used in the A350-1000. Continued integration of this technology could turn the shipment of aircraft parts into an electronic exchange of 3D printing blueprints.

E-Commerce: Within the aerospace supply chain, e-commerce offers tremendous advantages to aircraft parts distributors, including improvements to inventory management, ease of customer ordering and a host of extra customer benefits. The use of e-commerce also allows suppliers to track part usage and to identify customers in need of reordering.

Lean Manufacturing: Finally, while less of a technology and more of a philosophy, the principles of lean manufacturing have played a huge role in revolutionizing the efficiency of all areas of the aviation industry. In 2002, Boeing began implementing lean principles at its 737 Wichita, Kan. manufacturing plants, with big payoffs. The original equipment manufacturer (OEM) ultimately converted its manufacturing line to a moving one and saw an immediate 9% reduction in costs. During the 2008 recession, FedEx Express implemented simple changes thanks to lean principles at its aircraft maintenance facility that reduced trips spent on parts retrieval by employees from over 100 a day to only 25 and that roughly halved the time taken for those retrievals from nearly 2 hours a day per employee to under an hour. Today, this facility encourages employee input to process improvements and receives roughly 1,000 suggestions each year, many of which it has used toward efficiency improvements.

Impediments of ICT in Aviation: Since the 9/11 terrorist attacks stricter and stricter security measures have been introduced at airports all over the world. From restrictions on the number of bags that may be taken on board the airplane, to the ban on fluids being carried through airport security, the new security measures can be annoying and inconvenient. It could be argued that some of the new airport security measures are not only annoying but also come close to infringing on an individual's rights and freedoms. Further, if rights are being infringed, it may raise the question of whether protecting the safety of a country and its people supersede an individual's human rights. The debate on security versus individual freedom rages on in relation to many new rules and laws. In March 2010 a UK parliamentary committee called for a review of all laws introduced since September 2001. A large part of the population chooses to use airports on a regular basis and for some people air travel is almost unavoidable. Most people agree that heightened security at airports can only be beneficial. However, it may not always be compatible with our human rights.

The latest innovation in airport security is the full body scanner. These were first introduced at UK airports, Heathrow and Manchester, in early 2010. People passing through security may be randomly chosen to go through the body scanners or passengers deemed to be behaving suspiciously could be selected for scanning. Refusal to be scanned means that a passenger will not be allowed to board their flight. An individual selected to go through the body scanner stands in a special booth in which they are bombarded with electromagnetic rays. This generates a 3-D image of the individual. The scanners produce a virtual "naked" image, allowing security staff to identify any weapons or dangerous objects secreted under clothing. A code of conduct has been implemented for the use of scanners to protect the privacy of the travelers asked to go through them. This includes the requirements that the body scanner image is destroyed immediately and that the security officer monitoring the images must not be able to see the person being scanned.

Even before the body scanners were introduced, numerous concerns about their use and their impact on an individual's rights had been voiced. In addition to fears that the body scanners contravene privacy laws, some have suggested that the scanners could breach child pornography laws - by producing naked images of children. Within weeks of the scanners being introduced at UK airports, the UK Equality and Human Rights Commission said that they may be unlawful – breaching both the right to privacy and equality laws. The Commission recognizes that the right to life is of paramount importance and that security measures are vital in that respect. However, it raised concerns about the criteria used to select people to go through the body scanners and the safeguards put into place to regulate their use, and to protect the rights and dignity of passengers.

Passenger Profiling: Passenger profiling remains an extremely controversial security technique for monitoring passengers. Passenger profiling means picking out travelers for extra security checks because of characteristics, such as their race or religion, which make them statistically more likely to pose a threat. Officially passenger profiling is not, generally, used today. Proponents of passenger profiling argue that, by concentrating on individuals who are more likely to pose a threat, security will be faster and more efficient – to the benefit of the innocent passenger. Those who are opposed to passenger profiling say that it is hugely discriminatory – that it breaches the rights of the vast, innocent, majority of those from the religious or ethnic groups most likely to be targeted. It has also been reasoned that, if passenger profiling is introduced, terrorists will simply change their methods to avoid being caught by it.

An individual's right to privacy has to sit alongside a country's right – and duty – to protect its borders and its citizens. These two rights may sometimes be in direct opposition to each other. Some people believe that an individual's rights will always take second place to the security and safety of the majority. The question is to what extent can protecting the security of a nation justify compromising the rights of the individual? In the current global climate this debate is likely to continue for the foreseeable future.

Therefore respective national governments must establish the following:

- A compelling need to search
- That the search will serve the need
- That the decision to search a particular person is not left to the sole discretion of a field officer

Overall, the intrusion into the public's privacy must not be unreasonable; this is determined by weighing the intrusiveness of the search against the government's interests. The Equal Protection Clause provides that the government shall not "make or enforce any law which shall deny to any person equal protection of the Laws. Additionally, courts have determined that state action based on "alienage," or someone's status as a non-citizen, will also receive strict scrutiny.

Cyber Security Risks: The Emerging Legal Issues Aviation security is mainly classified into two; (i) Airport Security which includes customers, airport property, air traffic controller, cargo and airport operating systems; (ii) Airline Security which includes; passenger, crew, cargo, aircraft, flight management systems, and airline operating systems. The aviation security is important in a manner that the global economic value of aviation industry is estimated to more than 2.2 trillion dollars. However, the said industry is not free from global threats like from hackers and terrorists. The present day innovative advanced information and communication technology has misled the aviation industry a new growing type of threat

from cyber space. As the industry relies more on information and communication technology (ICT), it is prone for security breach from hackers and terrorists.

The aviation sector is not immune to the cyber security risks that have been critical issues for all other industries. It isn't just navigation systems that have been subject to cyber-attacks. An attack on the internet in 2006 forced the US Federal Aviation Administration (FAA) to shut down some of its air traffic control systems in Alaska. In July 2013, an attack led to the shutdown of the passport control systems at the departure terminals at Istanbul airport, causing many flights to be delayed. Finally, an attack that possibly involved malicious hacking and phishing targeted 75 airports in the USA in 2013.

Like any other industry, it is possible to consider two types of cyber security breaches i.e. (i) opportunistic – here the goal is to exploit mistakes made by internal users like employees using the IT systems with the purpose of causing inconvenience and nuisance to any entity involved in the aviation ecosystem; and (ii) calculated and pre meditated i.e. it concerns any malicious attacks to disrupt operations or threaten lives. This category is critical as terrorists are fully aware of the potential of technologies and cyber-attacks

Today, the ITC has removed the gap between the people (hackers and terrorists) and the devices by which security threat in aviation sector has emerged. One of the major explanations for this new type of threat in this sector is the greater use of computer-based systems: sophisticated air navigation systems, on-board aircraft control and communication systems, airport ground systems including flight information and security screening, day-to-day management systems etc. In the same time, cyber threats have been developed regardless of the industries but in relation with technologies: computer viruses, malicious attacks, etc.

Cyber Crimes-Airports: “Airport security” refers to the techniques and methods used in protecting passengers, staff and aircraft which use the airports from accidental/malicious harm, crime and other threats. Airport threats could be cyber-attack, sabotage, improvised explosives devices (IED), border security, traffic of unauthorized materials and other security threats. However, “airport security” can be breached through cyber-attacks in the following ways-

GPS Spoofing and Jamming: Spoofing is an attempt to deceive a GPS receiver by broadcasting counterfeit GPS signals, structured to resemble a set of normal GPS signals, or by rebroadcasting genuine signals captured elsewhere or at a different time. Jamming is applied to knock out the navigation system entirely. Jammers can disrupt civil aviation systems and emergency service communications.

Air Traffic Control (ATC) Hacking: Hackers could gain access to communication between aircraft and ATC centers and send false information to mislead pilots or overwhelm controllers with fake aircraft signals.

Security Threat to Airport Operating Systems: Airport infrastructure supports many different operations that are critical for the efficiency and effectiveness of the air transport system making cyber-security system implementation essential to protect and control those operations. There have been incidents when cyber criminals, hackers have found opportunity to attack airport systems.

Security Threat to Airport Security System: Several potential targets for cyber-attacks within the realm of internal airport operations like; access control and perimeter intrusion systems, radar systems, ground radar, network-enabled baggage systems, supervisory control and data acquisition (SCADA). Airports typically rely on SCADA-type industrial control systems for utilities, baggage systems, and business processes such as facility management. Due to their limited or lack of internet access, SCADA-type systems may appear to be more secure, but they too are vulnerable to cyber threats.

Cyber Crimes-Airlines: “Airline Security” refers to the techniques and methods used in protecting passengers, staff and aircrafts which use the airports from accidental/malicious harm, crime and other threats. Airline security threats could be by Hijacking, Cargo security, Aircraft Communications Addressing and Report System (ACARS) hacking, sabotage, cyber-attack, etc. However, “airline security” can be breached through cyber-attacks due to the following factors:

ACARS Hacking: ACARS hacking happens when hackers take over air traffic control transmissions and give pilots bogus orders. They could create a bogus flight plan update, create bogus weather, create fake message from plane to ground.

Security threat On-board the Aircraft: Security threat on-board aircraft by cyber criminals is a new concern today. With modern days handheld smart digital devices being allowed on-board aircraft, Wi-Fi being made available to passengers, cyber security has become talk of the moment.

Flight Management System Hacking (FMSH): FMSH too have been a target of cyber-attack. This, and attack on other airline systems have risen recently. An incident as recent as June 21, 2015 when LOT Polish Airlines was forced to cancel 10 flights scheduled to depart from Warsaw’s Chopin airport after hackers attacked its ground computer systems. The attack left the company unable to create flight plans for outbound flights, grounding around 1400 passengers.

Remote Hijacking: It is an app that manipulates the Aircraft ACARS, which can give access to the plane’s flight management system (FMS). One can communicate with ACARS through hacking the airline’s systems or using a special radio.

Distributed-denial-of-Service (DDoS): DDoS attacks have grown in popularity to carry out a range of malware injection activities. Within such attacks, hackers utilize botnets of compromised networks to flood air traffic control and other critical systems with traffic, which results in a crash of the platform. Attackers may also ask for a ransom amount from the authorities to prevent disruption of flight management and control systems.

Through Public Interfaces-Smart Phones: Through a Samsung Galaxy and a specially crafted app called Plane Sploit an airplane’s computer can be hacked remotely. Another example could be a new theory with Malaysia Airlines flight MH370 vanishing that a framework of malicious codes, triggered by a mobile phone, would have been able to override the aircraft’s security software.

Mobile Applications: Most of the airline companies now provide Mobile application for airline services. This could be an opportunity for hackers for a cyber-attack.

Through Public Interfaces – Websites: Another public interface that could be vulnerable to cyber-attack is websites of airline companies. In a very recent incident (March 2015) it was reported British Airways' air- miles accounts, the coding site GitHub and the work chat service Slack have all been hit in the latest wave of cyber-attacks.

Electronic Data Exchange Issues: The paper checks and balances that exist within the clerical world are not possible with EDI. While rare, the possibility that data will be intercepted and stolen or altered in transit does exist. Messages also may be deliberately or mistakenly duplicated. This can result in overcharges, wasted resources, and damaged relations between trading partners.

GDS/CRS Hacking: There have been incidents in past where hackers have gained access to airlines computer reservation systems. In one of the past incidents, O' BRIEN from Boston, US, without authorization, accessed the computer reservation system at a travel agency by entering through the company's website, and intentionally sending commands cancelling ticketed airline reservations for approximately 60 passengers, thereby causing damage and a loss in excess of \$96,000 to the travel agency. The unauthorized intrusion resulted in approximately 60 passengers being stranded at airports during the Christmas holiday season.

Hacking via on-board Wi-Fi systems: The US Government Accountability Office (GAO) report said that modern aircraft that have the ability to access the internet through on-board Wi-Fi systems face the very real threat of being hacked. "A virus or malware planted in websites visited by passengers could provide an opportunity for a malicious attacker to access the IP-connected on-board information system through their infected machines," according to the report.

Biometrics: Biometrics technology has been receiving special mentions in our trends reports for the past few years now, and while it is truly gaining traction, we believe that the full potential of the technology is yet to be uncovered. 2019 was a landmark year for its development in air travel with many successfully implementations, from British Airways' biometric rollout at Heathrow, Orlando, Los Angeles and John F. Kennedy international airports to Kempegowda International Airport's Digi Yatra Programme, and Delta Air Lines' first biometric terminal in the United States at Atlanta Hartsfield-Jackson International Airport, to name just a few.

This year, at FTE Global, 1-2 September, 2020, FTE will once again host a dedicated biometrics summit where we will hear case studies and lessons learned from first-movers that have been through implementations. This year, we expect that more airlines will adopt facial recognition mobile apps to make the check-in process easier for passengers. In more recent news, for instance, we saw Iberia trialling facial recognition app at Madrid Airport to enable customers to identify themselves at both general and fast-track security control and at the boarding gates with their biometric profile, eliminating the need to show travel documents. However, while the implementation of biometrics is gathering pace, there has been a number of challenges, and even misconceptions, around standardisation, privacy issues, integration, security, legacy infrastructure and establishing trust between all parties. To move forward, we're yet to see the industry taking a united approach in tackling these issues.

EVTOL & Autonomous Travel: In 2019, a number of initiatives to accelerate the development of commercial air taxi services took place. Urban air mobility pioneer Volocopter successfully completed its first manned flight over Singapore in October, while

industry leaders such as Boeing, Bell, Embraer, Safran, Uber, Fraport, Groupe ADP and more, also unveiled plans for urban air mobility solutions.

FTE is hosting its own FTE Air MobilityX show this year, co-located with FTE APEX Asia EXPO in Singapore, 10-11 November 2020. Flying cars are also becoming a reality with Uber Air trialling its flying taxi services around the world. Melbourne will be the first city outside of the US to host trials of Uber Air and the company says that test flights will begin next year, with commercial operations to start in 2023.

Such initiatives prove that the future has arrived, and a new kind of disruptors are reinventing the air transport industry. The question is will airports and airlines adapt to these new transportation modes, so that a new travel ecosystem is created to fully benefit the passenger. To start a discussion on this topic, this year FTE is hosting its own FTE Air MobilityX show, co-located with FTE APEX Asia EXPO, 10-11 November 2020, to help air transport stakeholders adapt to these changes and integrate with these new modes of transport for the good of the industry, and its customers. Find out more about the event [here](#).

Cooperation with startups: The acceleration of technology, described in the previous paragraphs, has prompted airlines and airports to seek partnerships with younger, more agile companies to help reimagine the travel experience. Major industry players have already turned to the startup community as a source of inspiration in the past few years, so we're expecting this trend to continue in 2020. To bridge the gap between the air transport industry and the startup ecosystem, FTE launched the world's first air transport innovation network, which has received great feedback from our startup and corporate members. For instance, Gatwick Airport – an FTE Innovation & Startup Hub Corporate Partner – and Zurich-based startup Assaia are now working together, 12 months after their first face-to-face meeting at an FTE Startup Hub Live event. In 2020, we expect that even more airlines and airports will seek partnerships with the startup scene as part of their efforts to improve customer experiences and enhance overall business efficiency.

Entities in Curbing Cyber Crimes

International Civil Aviation Organization (ICAO): The Chicago Convention 1944 (also known as the Convention on International Civil Aviation), established the ICAO, a specialized agency of the United Nations charged with coordinating and regulating international air travel. The civil aviation at global level is governed by the Convention 1944 along with various international conventions starting from the Warsaw Convention 1944 till the Cape Town Convention, 2001 which were ratified by member States. Annex 17 to the Convention on International Civil Aviation speaks of the “security” i.e. safeguarding international civil aviation against acts of unlawful interference but unfortunately the threat posed by cyber-security was left unaddressed until recent times. Recently, the Universal Security Audit Programme commenced the auditing of access controls and related security lapses in ICT systems. This was the first step forward in identifying the potential risks in cyber security.

International Air Transport Association (IATA): IATA has also provided guidelines for cargo security and cyber-security. For cyber-security IATA has put in place a three pronged strategy to address the cyber-security threat:

- to understand, define and assess the threats and risk of cyber-attack;

- advocacy for appropriate regulation;
- Mechanisms for increased cooperation throughout the industry and between Government agencies.

Computer Emergency Response Teams (CERT): CERT is expert group that handle computer security incidents. It focuses on security breach and denial-of-service incidents, providing alerts and awareness campaign and engages in research aimed at improving security systems. The goal of Air CERT is to provide a capability to discern trends and patterns of intruder activity spanning multiple administrative domains.

New Technologies-Legal Challenges:

Aviation industry provides the safest and the fastest transport system in the globe. Airports are increasingly data driven and rely upon accurate and timely information for efficient operations. However, increased reliance on data and increased integration also increases the risk of malicious cyber-attack that disrupts airport operations. In preserving the efficiency, security and resilience, the stakeholders should seriously consider the cyber threats.

To strengthen the cyber- security, propositions made by experts and agencies globally must be adhered. Some of the challenges pertaining to cyber-security are; introduction of strong systematic tests against cyber-threats; critical systems should be tested by external and independent companies that have a real expertise in cyber security; provide high security for critical communication systems; setting up a real cyber-security culture in the critical entities of this sector; assessment and awareness of vulnerabilities; deep understanding of the threats and the risks involved are to be sorted out at a war footing; implement stronger internal policies and plans within the sector; setting up of legal framework by governments in terms of cyber-security; and finally the ICAO, ACI and the IATA must take stringent steps in resolving the cyber breach in aviation sector.

In the present days of globalization, where every State is competing towards economic development through the tools of civil aviation, yet global aviation industry remains a target for adversaries seeking to make a statement or cause substantial loss to person and property. Like many emerging threats, cyber-attacks still loom in the periphery, and are seen more as a stylized fiction than an actual possibility. The development of a stringent cyber-security framework is the need of the hour. The only way to tackle this new and emerging threat is to find a global solution. Every State has to come forward in tracing and tracking the cyber criminals at the root level instead at the fruit level i.e. after occurrence.

Cybercrime should not become a “new cold war” nor should result in complete social chaos. If these cyber-security threats are not curbed, one has to rethink over the retaining of airports in opting one among the Conventional Airports or E-Airports or the Intelligent Airports.

Regulation, Insurance and Public Policy: The European Union has created a resolution called the European Civil Law Rules in Robotics, which is the first step on the road to the regulation of AI in the EU. While the resolution is not binding, it raises intriguing policy questions that lawyers everywhere must consider.

For example, for accidents caused by AI applications or AVTs, should the liability regime be (a) “no-fault”; (b) negligence based; or (c) proportionate to the level of instructions provided by humans and the degree of autonomy given to the machine or application? Should the use

of these technologies be complemented by a mandatory insurance scheme or a national or world-wide victim compensation fund? Should “smart streaming” (a standardized method of sharing data among transport infrastructure) be mandated or permitted to be a factor in setting insurance rates? There is going to be an extraordinary challenge proving causation in a fault-based system. Machine learning systems can quickly become removed from direct programming. In that situation, it will be an interesting challenge to attribute fault.

The EU resolution also delves into a broad number of ethical and public policy considerations such as:

- (1) Protecting humans against “manipulation” by robots;
- (2) Ensuring equal access to these technologies;
- (3) “Avoiding the dissolution of social ties”; and
- (4) Protecting human liberty and privacy.

These important policy issues are, however, well beyond the scope of this article, which is focused on the emerging legal issues in this area, rather than public policy questions that will be debated for years.

The Legal Risks: There are many obvious legal issues that will apply to every industry, not just to aviation. Among these are:

Labor issues: People are going to be displaced (and displeased). This is going to cause problems under every existing union labor agreement. Don’t forget, however, that new technologies almost always create new jobs and careers.

Privacy and “predictive analytics” issues: Facial recognition and other AI technologies will make it possible to track anyone moving through public spaces, and a data stream of those movements that could be used, just like cell phone records, for a wide variety of good and bad reasons. Additionally, the huge data sets necessary to train algorithms require collecting information from millions of consumers. This collection and aggregation of information already allows machines to analyze and predict what movies we watch, and they may soon be able to predict individuals’ movements, romantic preferences, and financial decisions.

Intellectual property theft: Developing and training AI algorithms is expensive, difficult work, and companies investing in these applications must be vigilant against both insiders and competitors who might wish to steal or otherwise reverse engineer proprietary AI systems.

Intellectual property ownership: Your AI might create intellectual property. Who owns it (the answer is not obvious if you bought the AI from a third party and there is no work for hire agreement or patent assignment in place)?

Liability Risks: No matter how good this technology becomes it will never be infallible. Accidents will happen. Moreover, even perfect technology will not be able to avoid certain accidents, such as a person darting out into the road from behind a barrier; a tree falling on a moving car; or a meteorite striking an airplane. No matter how large the “big data” set of experience becomes, there will always be a new failure mode that no one has seen or could have reasonably considered. AI may also be forced to make impossible ethical choices, such as (in the event of an equipment failure) whether to crash land the plane in a remote area or attempt to land it on a highway where the landing will cause certain deaths on the ground, but

fewer total deaths than if the plane crashed. Such cases will be a boon for the plaintiffs' bar, but the bane of the defendants.

Until the law (and public understanding) catches up with this technology, and creates either strict liability regimes or victim compensation funds, lawyers need to plan for and advise clients as to how to mitigate these risks. The obvious answer is insurance, even though insurance companies will not have the data to price coverage accurately. A serious enough accident could have existential consequences for a company (and its insurance carriers) and impact the assets of company directors and officers. Lawyers – especially transactional lawyers – suddenly have to answer some very hard questions with uncertain answers.

Managing Legal and Liability Risk: Although the liability risks pose challenges, there are steps that can be taken to manage those risks. Specifically:

Insurance coverage: As noted above, insurance is an obvious—if somewhat novel—first step. Brokers, underwriters and others in the insurance market are wrestling with these issues. Having a frank discussion with your broker or underwriter now regarding emerging technologies and coverage seems particularly prudent given the rapid pace of change in the aviation industry.

Understanding the threat landscape: Talking to engineers and technologists can be challenging for lawyers, but as products grow increasingly complex, it is imperative that attorneys develop a detailed understanding of concepts like AI, machine learning, big-data, and autonomous vehicle technologies. In addition, consider the full spectrum of risks—operations are an obvious starting point, but IP, privacy, information security, international law, and HR related risks should not be ignored.

Get involved early: Counsel should either get involved or be brought in early in the design and development of planned AI or automation projects. Such early involvement not only helps ensure a deeper level of understanding of the technology to be deployed, but it also provides an opportunity for early detection of legal risks that may be difficult to detect once a product is launched (such as built in bias in a machine learning algorithm). Additionally, an early assessment of legal risks can help management measure the true risks and costs of launching a new product, platform, or system.

Follow and attempt to influence the regulatory action: Federal and state regulators are watching this space closely, and monitoring those regulators makes tremendous sense. Influencing the direction of the law is equally important. If you are active with an industry body, getting involved in lobbying efforts could also prove very beneficial.

Regulatory Challenges: Safety Remains Key: A change in the way equipment is designed or functions presents challenges for the regulators. Civil aviation authorities will need to be satisfied that a system reliant on increased automation or AI achieves the appropriate level of safety. Historically, certification processes have relied on a highly analytical approach to all elements of the system, how it functions under all operating conditions and the consequences of any given failure. This approach is then backed up by an analysis of performance in service and a detailed examination of instances in which equipment does not perform as expected.

It is yet to be seen how regulators may adapt their approach to these new technologies but if the ‘logic’ by which the AI solution functions is unclear, the regulator may be reluctant to permit use in safety critical applications. Will this limit the development of very highly automated systems, including those that make decisions on their own? For safety critical ones, quite possibly: manufacturers will need to convince regulators that these systems are as safe, if not safer, than if the role were still being carried out by a human.

The principles regarding claims by anyone who suffers injury or loss from a defective product are also well established. Since the mid-1990s, EU product liability law has made a ‘producer’ strictly liable for injury suffered as a result of placing a defective product on the market and a product is defective if it does not provide the safety which the public is entitled to expect. That product might be a food processor or a commercial airliner; if it is not sufficiently safe while in use, and injury or damage to goods results, the producer is liable. The producer may be the manufacturer, someone who has branded the product as its own, or an importer into the EU.

Similar principles apply in the US and in many other countries. It is important to recognize that – again – product liability arises regardless of fault. A manufacturer may exercise great care in designing or selecting equipment, but if the equipment fails in service in a way that is dangerous, there may be a product liability exposure. The risk is usually channeled through the ‘highest’ player in the supply chain. So, if a control module employing AI technology malfunctions such that the entire module is not sufficiently safe, both the AI system supplier and the integrator – say an aircraft manufacturer – would face a product liability exposure.

In this situation nothing precludes an operator or manufacturer that is facing a product liability claim from seeking recourse against another supplier who is at fault or in breach of contractual obligations. New technologies do not change contractual relationships in that way and those avenues of recourse remain open. The difficulty, however, may be in determining that the AI system provided was at ‘fault’. An unexpected result – even when an accident is fatal – may not be the wrong result; much will depend on what data the AI solution was trained with and the parameters within which it has been trained. This is where these new technologies will start testing legal boundaries.

Indian Aviation Upsurge

Indian Aviation Taxiing Towards the Digital Runway: The Indian aviation industry is on the cusp of witnessing a significant upsurge in the quantum of traffic. The growing Indian economy when coupled with the diffusion of air operations through Regional Connectivity Scheme (RCS) would result in substantial increase in the demand for air transport services. Intelligent and well thought out ICT deployment would have to be ensured in order to cater to the growth in traffic, ensure sustainability and meet customer expectations. ICT is but the only enabler to bridge the infrastructure gap at underserved/ unserved airports across the country along with providing a seamless travel experience to the customer travelling through large hubs.

Regulatory authorities, airlines and airports in India are well aware of the transformation capabilities of ICT in the industry. Even though technology investments by airlines and airports have started flowing, they are still taxiing towards the digital runway. India has defined massive digital transformation initiatives such as ‘Digital India’ with one of its key facets being ‘Universal access to mobile connectivity’ and ‘Public internet access

programme.’ The smart phone enabled urban, sub-urban and even rural population of India who have aspirations are an encouraging target segment for the aviation sector.

Passenger Self Service: Among the many priorities of Indian air carriers and airports, the foremost priority is the efficient handling of large passenger volumes. To ensure operational efficiency in such a scenario, mobility solutions that enable passenger self-service to reduce dependency on airport/airlines staff and reduce queues are critical. Most airports and air carriers have developed plans for implementation of major passenger self-service programs in the near term. Technology service providers have invested significantly in the development of self-service technologies to assist airlines and airports achieve improved customer experience and higher operational efficiency. The global market size for self-service kiosks catering to travel industry is approximately USD two billion and is expected to grow further, with its promise of cutting down check-in times, while aiding airlines to reduce labour costs, as airports and airlines around the world implement more of such solutions

India does not currently have a separate data protection law. The Information Technology Act 2000 and the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules 2011 lay down the procedures to ensure the safety and security of sensitive personal information. Persons collecting personal information should publish a privacy policy stating the purpose for which such information is collected and have reasonable security practices to maintain the confidentiality of the information.

Security and immigration procedures in India have evolved at a deliberate pace and continue to be seen as slow and inconvenient, detracting from the overall passenger experience. However, it should be noted that the relevant authorities are starting to re-visit screening and control processes with the aim of enhancing the seamless travel experience. The Bureau of Civil Aviation Security (BCAS), the principal aviation security body in India, is in the process of developing a protocol to accept boarding passes on mobile devices. Passengers have recently been permitted to gain entry to airport terminals by showing e-tickets on their mobile phones and the acceptance of mobile boarding passes will be the next step towards facilitation of seamless travel. However, an overwhelming majority of Indian passengers would like to see a reduction in queues for entering the terminal, check-in, security, immigration and customs.

There is an opportunity for the Bureau of Immigration to design their protocols around this registry to provide added security. It is therefore in the industry’s interest to partner with the border and security management authorities towards investment in Proof of Concepts (POC’s) and put forth recommendations for adopting ICT based border and security management technologies.

Cyber Security: With increase of ICT initiatives and significant amounts of sensitive data getting published on public domains, cyber threats have become a hot topic for Chief Information Officers (CIO) in recent years. The investment trend in cyber security is slated to grow across all Indian air carriers. Another area of importance for Indian carriers is the establishment of security around mobile devices. According to SITA India 360 IT Trend Report, only 25 percent of Indian air carriers have implemented cyber security protocols for mobile devices in comparison to 40 percent of the airlines globally. Similarly, it is imperative for Indian airports to invest in enhancing their existing cyber security defence mechanisms to cope with ever evolving and constant threats. SITA India 360 IT Trend Report highlights that

60 percent of Indian airports are prepared to deal with common cyber security threats. At the same time, 14 percent of the airports are prepared to deal with higher level threats, which put Indian airports in line with global benchmarks.

Border Management through Biometrics: Border management in India has traditionally been a highly restricted area of airport operations due to its orientation towards maintenance of security protocols. According to the SITA Passenger IT Trends survey 2015, 78 percent of the passengers are generally dissatisfied about their travel experience with the second biggest area of dissatisfaction, after baggage, as security and border control procedure at airports. Border control authorities must be equipped with appropriate tools, so that they can anticipate and focus on the identification of suspicious behaviors for further investigation. Currently, biometric identification enables identity management and the use of multi-biometric identification combined with intelligent real-time data analytics provides an extremely high level of accuracy.

Automated Border Control: Automated border control relies on a number of prerequisites including the use of e- passports and biometric verification, combined with a risk assessment of the traveler. For taking the automation route, the two main options to consider are e-gates and kiosks. Border control gates and kiosks remove the need for a border agent to manually check the travel documents and identity of every traveler. Border agents can then focus their attention on potential high-risk travelers, improving security yet enhancing efficiency for the benefit of passengers. However, it is not just about the choice of technology, but, softer factors such as queue management, signage and passenger education has a major impact on passenger experience as well. Efficient management of these factors is critical to the successful deployment of automated border control.

Indian Aviation and Use of Technologies: As the Indian aviation sector stands at the cusp of aggressive growth and technology disruption, how the various segments of the aviation sector respond to this challenge would be interesting to predict and observe. The right approach to re-thinking aviation in the digital paradigm is to design new business and process models rather than simply automation/digitization of the various process areas (customer facing and internal operations) for ease of traversing customer journeys/ increasing efficiencies and cost optimization.

The key to success for airports and airlines would be to create a carefully crafted digital strategy and roadmap that defines the path for the next three to five years. The transformation journey has to be then kept alive by reviewing and refreshing it at shorter intervals that may be as low as six months. A review of this nature and timeframe is essential because of:

- a. The radical shifts being seen on the technology capability side has shrunk the lifecycle of solutions and increased new introductions exponentially
- b. Fast changing consumer behavior patterns and preferences may need relook at the initiatives
- c. Implementation models and associated investment/ operating models may need to be revised with new alternatives available.

The way forward for both Airports and Airlines needs to be clearly pivoted around the smart passenger and attempt to meet and exceed the expectations of a smart passenger. With the outlook on demand looking robust for the next five years and beyond and India's economic and demographic parameters all supporting the outlook, business volumes are set to increase

and Airports and Airlines need to smartly deploy cutting edge Digital Solutions such as IoT, Big data, Analytics, Artificial Intelligence and Robotics and Mobility Solutions to straddle three key objectives:

- i. Deliver personalized/ tailored experiences as much as and whenever possible to elevate each Moment of Truth (MOTs) opportunities
- ii. Increase operational efficiency and ease of travel for its passengers
- iii. Enhance revenue generation for sustainable growth of the industry.

While there are many opportunities for AI and machine learning technologies within aerospace, the technology is still very much in its infancy. This can be explained in part by the stringent safety requirements that are vital for such a highly-regulated industry like aerospace. Each new technology introduced to aviation must go through extensive and costly validation/certification processes. And because of the complexity of AI systems, they may not always be able to be certified through traditional FAA processes. This reveals the need to develop new, more efficient verification processes that can help reach AI its full potential in the aerospace industry.

Another challenge is data management. Being the fuel of any AI software, data drives the intelligence of computer algorithms. However, data privacy concerns exist alongside the need to properly manage data of airline customers. It is challenging yet crucial for companies to find ways to implement privacy and cyber security practices in the development of AI systems. However, as applications for AI in the aerospace industry continue to expand, more airlines are eager to adopt solutions powered by artificial intelligence and machine learning. While AI requires significant investment and still faces some barriers to wider adoption, this innovative technology has enormous potential to optimize manufacturing processes, tackle malfunctions and improve performance.

We are going to witness a huge change in the world of aviation through AI technology. Though AI is still at a nascent stage, we have already seen a number of changes in the aviation industry. Applications like crew management, flight management, ticketing, and maintenance and passenger identification are all centered around improving customer experience. Advances in AI like auto- pilot features are reshaping the future of the airline industry.

Workforce and skills: Although we are moving towards the future of advanced planes and automated flights, it is not possible to successfully realize the vision without bridging the existing skill gap in the present workforce. From pilots, employees, and engineers to air-traffic controllers and safety inspectors, everyone needs to upskill their capabilities in order to stay relevant and competent in the upcoming digital future of aviation. There will be a lot of legal and moral changes involved to oversee the transition from manual to automation. With the prevalence of automation, some jobs in the sector will be taken over but new positions for the manual resources will be created as well.

In-flight connectivity: The world is increasingly getting interconnected and connectivity is becoming a business necessity. The airline passengers will expect even in-flight connectivity in the coming days, getting rid of the need to disconnect phones in the air. After the free Wi-Fi services across airports, now airlines are also starting to offer the provision inside the flight. Recently, Delta airlines took the initiative to provide Wi-Fi in all its domestic and international flights to let passengers experience an entertaining flight journey.

Conclusion:

Although the technologies are advancing and the industry is stepping forward to adopt them in the most optimal way, everything can fall flat without effective implementation. In order to ensure a successful adoption and implementation, extensive and meticulous testing is critical. As Delta Airlines' Director of Onboard Product, Ekrem Dimbiloglu says about effectuating on-board connectivity, "Testing will be key to getting this highly complex program right – this takes a lot more creativity, investment and planning to bring to life than a simple flip of a switch."

The greater sprawl of technology also brings along newer threats in the scope of cybersecurity and user privacy. To avoid getting attacked by such threats and vulnerabilities, it is essential that the industry players take a proactive approach and integrate a robust testing plan within their plan for future.

Cigniti's Airline TCoE is backed by an experienced staff having deep-domain expertise in managing several advanced airline IT solutions such as new generation Airlines Passenger solutions, Airlines Revenue Accounting, Airlines booking, ecommerce website, and Mobile Apps for different platforms, and more. Testing process and phases vary by development methodologies. Cigniti has a process that can be customized as per the requirements, irrespective of the methodology being used.

MODULE - VI

GLOBALIZATION, COVIDIZATION AND ITS IMPACT ON AVIATION INDUSTRY

MODULE VI: GLOBALIZATION, COVIDIZATION AND ITS IMPACT ON AVIATION INDUSTRY

Introduction: This module is divided into three parts. Part-I will focus on globalization and its impact on global economy and will also highlight its impact on Indian economy. Part-II will focus on de-regulation, globalization and liberalization of aviation industry. It will also highlight the de-regulation in the USA and its impact on US aviation industry. Further it also highlighted the aviation liberalization process in the European Union and other parts of the world including Asia Pacific Region. Part-III will focus on the Covid-19 pandemic impact on various sectors and particularly it will focus on the aviation industry. The pandemic has presented a lot of challenges for the global economy some of which have direct bearing such as disruption in supply chains, challenges in meeting contractual obligations and problems of funding while others are universal in nature like maintaining the safety and health obligations at workplaces, impact of travel restrictions, protecting sensitive information and data etc. It also briefly highlights the Covid-19 pandemic impact on Airlines, Airports, MROs, Force Majeure clause, passenger rights etc.

Part I: Globalization and its Impact on Economy

Concept and Understanding of Globalization: Globalization is the term used to characterize the processes of growing interconnection and interdependence among the different nations of the world. It offers to the increased flow of trade, people, investment, technology, culture, ideas among countries and creates a more integrated and interdependent world. World Bank: Globalization is the growing integration of economies and societies around the world. Globalization is often understood as the dissemination, transmission, and dispersal of goods, persons, images, and ideas across national boundaries. Globalization of markets is one of the most fascinating developments of the 20th century. Its impact on economic transactions, processes, institutions, and players is dramatic and wide ranging. It challenges established norms and behavior and requires different mindsets. Globalization of markets involves the growing interdependency among the economies of the world; multinational nature of sourcing, manufacturing, trading, and investment activities; increasing frequency of cross-border transactions and financing; and heightened intensify of competition among a larger number of players.

When Globalization Started? Globalization has been around since the 15th century when European exploration & colonization created global empires & markets. Globalization started from 15th to 18th Century – age of exploration by European nations – invasions in pursuit of raw-materials/resources for industry development. Globalization from 18th – 20th Century – Industrial Revolution and rapid growth of Manufacturing Industries, Migrations of Labour, Steamships, Telegraph, Railways, MNC Exporting Odyssey, Dutch East India Company, etc. . Globalization in the late 20st Century – Old economic & business order changed.

Phase 1: 1974 -1980s Oil Shock -OPEC sets Oil price NOT oil MNCs. A blow to BIG 3 US Auto Industry and Competitiveness, Rise of Japan and Germany as Globally Competitive Nations. Phase 2: 1980s – 1990s China's World Manufactory & India IT Business Development.

Globalization ERA: Carry-over from the late 20th C into 21st C– New World Economic & Business Order. Phase 1: 2000+ BRIC then Expanded to BRIC+KS (Korea +S Africa). Phase 2: 2010+ G20 Emerging Markets including BRICKS join JUG to share economic/ business

power in a globally competitive trading system – accounts for over 80% of World Trade, FDI, World Output (GDP) and EMCs w China & Japan leading account for 75% world's FOREX reserves. Recent developments including communication, information technology and e-commerce and related issues.

Aspects of Globalization:

Economic Perspective - globalization is perceived as the creation of high-tech jobs in wealthy nations and the lifting from poverty of some three billion people or half the world's population. At the same time, it is also perceived as the loss of jobs in wealthy nations and the exploitation of workers in poor nations.

Cultural Perspective - it is the growth of cross-cultural understanding made possible by the increasing two-way flow of entertainment and news, and the development of human values that transcend those of any one culture. At the same time, it is also the erosion of local traditions and standards and their replacement by foreign ones.

Technological Perspective - globalization is the spread of knowledge and the dramatic leaps in world communications and travel that has resulted in eradication of deadly diseases, saving of endangered species, the reduction of famine and the increase in world productivity to the benefit of all humankind. At the same time, it has also unleashed destructive forces leading to loss of species, spread of disease, environmental degradation, war, and terrorism.

Political Perspective – Creation of global and regional political organisations. League of Nations and United Nations. Regional organisations like European Unions like NAFTA.

Impact of Globalization: On the positive side, it generated by growing international economic, cultural, and political cooperation and solved many global problems. Promotes intense competition among multinational corporations (MNCs) and also makes local companies to be more competitive internationally. This makes governments aware of the global impact of poor environmental policy. It promotes ethical behavior by MNCs in the area of wages, working conditions and pollution abatement, since they are vulnerable to global media coverage of their operations, and fear loss of market share resulting from negative publicity. On the positive side, it generated by growing int. economic, cultural, and political cooperation & solved many global problems.

On the negative side, globalization also has profound implications for states such as the autonomy and policy-making capability of states are being undermined by economic and cultural internationalization. Shift of sovereignty from political to economic. Role of States have Changed from Law-maker to Law-takers. Role of States are changing from regulator to facilitators. Many governments see their role as not to regulate markets but to facilitate their expansion. Globalization and regional interactions are wiping out national borders and weakening national policies. Concept of Law has changed from sovereign to science of social adjustment

Globalization of Markets and Its Impact on Domestic Institutions: Globalization of markets is one of the most fascinating developments of this century. Its impact on economic transactions, processes, institutions, and players is dramatic and wide ranging. It challenges established norms and behavior and requires different mindsets. Yet, it creates opportunities for the well prepared participants who can be proactive and visionary. Globalization of markets involves the growing interdependency among the economies of the world;

multinational nature of sourcing, manufacturing, trading, and investment activities; increasing frequency of cross-border transactions and financing; and heightened intensify of competition among a larger number of players.² This phenomenon has been fueled by advances in communication and transportation technologies, the spread of economic growth and wealth around the world, the loosening of barriers to trade, and the formation of regional economic blocs.³ Development of new technologies and the proliferation of new products also contributes to the globalization of markets.

Globalization of markets is best reflected in the "internationalization" of business transactions. This means that one or more aspects of economic activity carries an international character. One of the parties to the transaction may be a foreign partner; the transaction may involve a foreign currency; financing may involve foreign lenders; technology may originate from a foreign partner; and so on.

It is possible to identify at least five dimensions or facets of the globalization of markets. **First** is the fluid nature of manufacturing and sourcing activities. Today, business activity flows freely to places best equipped to perform it most economically and efficiently. **Second**, competition for customers and markets has intensified significantly as a result of globalization. Whereas only a handful of multinational companies dominated international trade a couple of decades ago, today companies from all parts of the world are participating in worldwide business. **Third**, the types of international business transactions have proliferated. In the past, much of international business activity was in the form of export-import and foreign direct investment. Today, transactions are varied and more complex: contract manufacturing, franchise operations, countertrade, turnkey construction, technology transfers, international strategic alliances, and more. **Fourth**, technology spreads freely and rapidly between markets and players. Technological leadership does not provide a monopolistic advantage for very long. Companies must capitalize on their discoveries quickly, before others match them. **Fifth**, borrowing-financing activity has become worldwide as well. Businesses finance their growth and expansion through international capital markets. As such, they are able to take advantage of varying interest rates and currency markets by tapping a wide variety of funding sources.

The implications of the increasingly global nature of market transactions are many. In a fundamental sense, it makes the distinction between domestic and international redundant and superficial. It threatens those players that confine themselves to a narrow set of opportunities and it rewards those that can envision and operate in a larger space. Those enterprises that learn to operate in a more complex, uncertain environment are more likely to succeed.

As transactions gain international character, they have a drastic impact on firm performance and industry structure. On one hand, global linkages may shorten product life cycles, create intense price pressures, displace manufacturing, outdate technology or design, or simply cause sales and profitability declines. On the other hand, global exchange may lead to new growth opportunities, new sources of know-how and production inputs, new product ideas, or partnerships which cause synergy and new sources of competitive advantage. Entire industries, if caught unprepared, can be lost to competitors due to the realities of global competition.

Globalization raises many practical issues and concerns for the individual business enterprise. What sorts of guidelines and input should guide product design? How desirable are knowledge-sharing agreements? Joint development of technology and know-how? What

are ideal features of international business partners? How should management monitor competitive activity? How can competitive advantages be created and sustained? What degree of attachment is optimal to alternative sourcing and production locations around the world? Management has to grapple with these and many other similar questions on an ongoing basis. In addition to implying a different nature of economic transactions and a diverse set of players, globalization of markets causes the individual firm to understand and operate within a more complex political, legal-regulatory, and cultural framework.

Fundamental shifts in International Business:

A. From Nation State to Individual Enterprise. As global economic linkages intensify, the focus of attention among researchers and public policy makers has shifted from trade relationships among nations to activities of the individual enterprise. Such a shift in orientation requires greater attention from the legal professionals of the structure, strategy, and operations of the individual firm. Globalization challenges the legal professional to contribute to the global competitiveness of the individual enterprise through a better understanding of the business strategy-performance relationship. It also calls for greater input on the part of legal professionals in formulating strategic directions for the enterprise.

B. From Nation-Based Advantages to Firm-Based Competencies and Assets .In today's global competition, critical sources of competitive advantage are often firm specific.' These include such factors as the quality of management and leadership, ability to innovate and commercialize new products, ability to pinpoint and respond to emerging opportunities, and ability to organize monetary and human resources. Also, it has become more difficult for public policy makers to formulate industrial or trade policies which impact all industries similarly. The same policy measure may have a differential impact on companies from different industries. These new realities of competition imply that legal professionals must develop a comprehensive understanding of firm assets and competencies. These include "soft" factors such as information management, technology, and intellectual property. The legal profession will be under growing pressure to value, promote, and protect intangible assets such as customer franchise, know-how, creativity, and corporate culture.

C. From Anchored Operations to Flexible Operations. A great advantage of multinational operations is the flexibility the firm gains in terms of sourcing and manufacturing. In the extreme case of the "stateless" organization, there is no "home market" to pledge allegiance. The firm is free to market, produce, and source wherever it wishes, responding to low-cost, low-tax, and favorable infrastructure environments. Such flexibility allows it to better respond to opportunities and variations among national markets. This mode of international operations confounds the issue of territory and jurisdiction for international trade lawyers. It implies that they will need new definitions of legal jurisdiction. It also challenges them to design organizational and legal entities that are optimal under a broadened set of environmental variables.

D. From Transactions to Relationships. The focus of management attention is rapidly moving away from an emphasis on transactions to relationships among firms. Management has discovered that consummating transactions is a relatively simple task which can be mastered the interface between international business partners (e.g., buyer-seller, manufacturer-distributor, franchisor-franchisee, licensor-licensee) should be carefully nurtured and maintained. Legal agreements and contracts are not sufficient in maintaining harmonious and fruitful relationships among business partners. If they would like to remain

central to international business operations, legal professionals will need to be sensitive to relationship building. Loose arrangements among companies, such as international strategic alliances, will be another challenge. Even then, legal professionals will need to be involved in the monitoring of these partnerships to ensure smooth relationships. In the case of international strategic alliances, legal arrangements among the partners are likely to be project based.

E. From Competition to Cooperation. While free markets always implied competition among firms, today there are good reasons for companies to collaborate. 5 Motivations to cooperate include the high risks and high costs associated with international business ventures. By pooling resources, companies can create synergistic alliances for research and development, design, manufacturing, or marketing. 6 Joint efforts are sometimes urged by host governments. Successful international companies thrive on the basis of networks of collaborators. Relationships established with foreign agents/distributors, licensees/franchisees, support service providers, and the like, add strength to international operations. In the age of collaboration, the legal profession needs to shift its attention to the formation and maintenance of partnerships. It needs to assume a proactive role in defining the parameters of successful collaboration. How should these ventures be structured? How should disclosure of proprietary knowledge be protected? What should be done by the partners to prevent conflicts and divorce?

F. From Market Diversity to Market Homogenization. Market homogenization opens up new opportunities for firms in terms of product standardization, economies of scale in manufacturing, and simultaneous market entry. For the legal profession, it implies a more favorable environment for harmonization of product standards, advertising regulations, and legal processes. This is one area where legal professionals can be proactive, promoting greater harmonization of trade and contract laws. Indeed, diverse and complex legal environments are a major deterrent to international business. As trade and investment activities become more important in a country, government tends to proliferate the regulations. These relate to import laws, local content requirements, product approval procedures, labeling regulations, price controls, and a multitude of other issues. With integration of markets, the opportunity arises to simplify and rationalize the regulatory environment in an attempt to reduce the cost of doing business across national boundaries.

G. From Multilateral to Bilateral Trade Relationships. A key macro-level trend of the past two decades has been the establishment of bilateral arrangements in trade. Countries have resorted to two party negotiations in order to resolve trade interests. Bilateral relationships may, in fact, enhance the chances of resolution in international trade conflicts. They may also enable trade lawyers to be more effective in resolving conflicts.

Impact of Globalization on Domestic Institutions: No industry has escaped the impact of globalization. Some have been hit hard, for example; automobiles, chemicals, electronics, steel, textiles, and tires. Others, such as food and beverages, paper, pharmaceuticals, and industrial machinery and equipment, have fared better. An ongoing restructuring was put in motion as a result of the globalization of markets. Downsizing, consolidation, and reconfiguration are common terms used to describe the current state of affairs in all industries. The new realities of the global marketplace have prompted business organizations to be constantly in search of enhanced productivity and new sources of competitive advantage. Such efforts to critically examine one's capabilities can be classified into several thrusts

Key Challenge for the Legal Profession: In the age of globalization, perhaps the most important contribution the legal profession can make is to assist managers in the achievement of sustainable competitive advantage. As those who guide a business enterprise search for sources of competitive advantage, their efforts can be facilitated greatly by legal professionals. It is best if legal and management professionals can work as a team in avoiding and resolving conflict. These professionals bring different perspectives to decision-making—suitable decisions can be achieved with joint decision-making. Each business enterprise will need to formulate creative mechanisms to enable a team approach to decision-making.

The role that can be fulfilled by legal professionals is both strategic and integrative. The *strategic contribution* will be guidance in shaping the future courses of action for the enterprise. How should the firm be interacting with its external partners (e.g., suppliers, buyers, competitors, and regulators)? How should it position itself within its industry? How should it choose its target markets? What new sources of competitive advantage should it pursue? How should it configure its global procurement, manufacturing, and marketing operations, and coordinate them? These are the areas where legal professionals could provide input to guide company action.

The *integrative contribution* arises because of the need to blend traditional managerial functions with legal perspectives and expertise. Today's managerial problems are multifaceted, requiring a multiplicity of expertise. The challenge then is to formulate solutions which result from a creative marriage of managerial and legal perspectives. Time will tell whether the new business organization will rise up to these challenges. If legal professionals can successfully assume the strategic and integrative roles in the business organization, they will be considered proactive, progressive players. Most importantly, they will be able to make a substantial positive contribution to the competitiveness of their enterprises.

Key Challenge for Educators: Perhaps the most fundamental lesson from the globalization of markets is that the education and skills of the work force and managers will end up being the dominant competitive weapon. The new breed of managers will be well-rounded individuals who are willing to experiment and not be obsessed by the management process. They need to develop an appreciation for multiple perspectives and tap a diverse set of expertise in resolving business problems. To create this new breed of managers, the higher education system needs to consider the benefits of integrated, interdisciplinary education. Business schools should no longer produce logistics or accounting specialists. Language departments should no longer train just linguists. Schools of international relations should no longer produce comparative government experts. Rather, we need graduates blessed with a broad-based foundation of knowledge and skills in a variety of disciplines.

Legal issues in International Business Operations: Participation in cross-border transactions poses some unique legal concerns for companies. The legal profession will need to pay continued attention to these management issues. These issues are outlined below.

A. Legal Agreements and Conflict Resolution in International Business Transactions

Firms continue to grapple with the issue of how they should formalize relationships with their international partners. How should sales, distributor licensing contracts be structured? How detailed should they be? What are the mechanisms for satisfactory conflict resolution?

B. Intellectual Property Protection

This perennial problem is a concern for most technology-intensive firms. International partners continue to have their own interpretations of the rights and obligations associated with technology transfer. Practical mechanisms for ensuring protection are absent.

C. Standards and Product Liability

Legal systems for product liability exhibit great variations from country to country. However, as far as process standards are concerned, the ISO 90004 guidelines appear to move companies toward more uniform systems. Simplification and harmonization of legal processes will be a high priority for international trade lawyers. Harmonization is needed in the areas of technical, health and safety standards, inspection and approval procedures, labeling and packaging regulations, advertising regulations, and product liability regulations.

D. Organizational Forms for International Operations

Firms also require guidance in setting up foreign operations that are consistent with legal and tax objectives. Multinational operations necessitate production, sourcing, and marketing activities in multiple markets. Coordination of business activities in diverse environments becomes a real task. Legal professionals can be helpful in identifying locations and legal arrangements that would minimize tax and other obligations for the multinational company.

E. Transfer Pricing

Valuation of intra-corporate transfers to achieve tax and- strategic objectives continues to be a problem for most multinational corporations. The prices at which units of the same company sell to each other have a far reaching effect on the company's success because they influence everything from foreign subsidiary performance to executive compensation to tax obligations. Transfer prices continue to be monitored by host governments. Accounting standards which are in conflict with local regulations will be subject to close scrutiny.

F. Gray Market Channels

Distribution of products by unauthorized channels is an ongoing concern for multinationals.²⁶ Wherever significant price variations exist between countries, sometimes exacerbated by exchange rate fluctuations, gray market brokers establish parallel distribution channels. A constant source of friction between authorized and unauthorized distributors, gray marketing activity has always been challenged in the courts-with no consistent ruling.

G. Dumping

Unfair pricing of imports has been a common dilemma for firms that compete with foreign suppliers in the domestic markets. As before, determination of what is a reasonable price is a substantial challenge. The legal profession will continue to be involved in dumping suits initiated by domestic manufacturers. Effectiveness of such appeals will depend upon their ability to generate convincing evidence of deliberate underpricing.

H. International Business Ethics

For many years the U.S. business community has argued that the Foreign Corrupt Practices Act (FCPA) creates a competitive disadvantage in international operations. While different administrations have pursued so called violations with varying vigor, the FCPA is still a concern for U.S. business executives. The principal problem arises from the vagueness of the original legislation. The FCPA failed to define bribery in precise terms and also overlooked the difference between voluntary payments and extortion. Since its enactment in 1977, many aspects of the FCPA require clarification.

I. Environmental Impact

Multinational companies will be under tremendous scrutiny for the potentially damaging impact to their host country environments. Creative strategies are needed in this area in order to avoid such problems. Host countries, environmental, and citizens groups have become extremely vocal in recent years about the harmful impact of business activity on the environment. In Germany, for example, strict regulations have been introduced for recycling. Unlike the United States, the burden of recycling packages, containers, and shipping materials has been placed on the manufacturer and the distributor-not the consumer.

The legal profession must be prepared to advise companies on these and similar challenges. There is a larger role for legal professionals to play than just responding to the problems of business executives. What can be done by the legal profession to proactively prepare U.S. firms to be better global competitors? How can firms be helped in their quest for competitive advantage? What legal-regulatory reforms are necessary? How can legal perspectives be integrated into the decision-making processes of managers? These and similar questions beg immediate attention from international trade law professionals.

Impact and Changes of Globalisation on Indian Economy:

A. Politics and Procedures Governing Business:

1. Industrial Policies: The Government's detractors may be shouting themselves hoarse about the nation being sold to the International Monetary Fund (IMF). But most countries in the work think that the nation's political leaders are to blame for selling the people short for decades. They accuse them of chanting the mantras of self-reliance and Fabian socialism despite knowing that these had failed to develop the country and meet expectations. The fear, as an American businessman points out, should have been over the 'domestic head.' Since its independence in 1947, India has implemented six major industrial policies, the most recent being announced July 24, 1991.

The first five policies were designed to create and continue a self-sufficient and independent economy. India strived to be a socialistic democracy. These policies did recognize the need for foreign capital and enterprise but provided that these should be carefully regulated by the government to ensure that they were in the national interest. It was made clear that industry should be controlled by Indian residents. The Policy Resolution, 1948--the first Industrial Policy--states, for example: "As a rule, the major interest in ownership and effective control should always be in Indian hands; but power will remain to deal with exceptional cases in a manner calculated to serve the national interest. In all cases, however the training of suitable Indian personnel for the purpose of eventually replacing foreign expert will be insisted on." The government was progressively given greater participation in industry. In addition, the policies took measures to promote and support village and small-scale industries and aimed to dispense of regional disparities. With the totality of these goals in mind, the government enacted a mass of rules to govern industry.

While many of these goals have been met, India has also isolated itself from the global market, while its Pacific-rim neighbors have leaped ahead. Consider the fact that although the U.S. is India's largest investor, U.S. investment in India in 1990 amounted to only \$639 million, about one-sixth the amount of U.S. investment in Indonesia or Singapore. This is despite the fact that India has 850 million people, a rich supply of natural resources and cheap

labor, ranging from unskilled to highly skilled. India, the largest democracy in the world, recently accounted for only 0.4 percent of the total work trade.

2. Restrictive Regulations: Indian industries have been highly regulated by government agencies. The establishment of an industry, as well as the expansion or diversification of existing industries required an industrial license. In the 1980's the approval rate was between 40 and 50 percent. The main reason for rejected applications was lack of "adequate capacity. "In addition, companies meeting the definition of "dominate undertaking" under the Monopolies and Restrictive Trade Practice Act, 1969 (MRTP) required government clearance for new undertakings, expansions, mergers, amalgamations, take-overs, and appointment of directors. MRTP clearance was also required before an industrial license could be granted. This often took between two and three years.

The Companies Act also placed restrictions on businesses. Section 370, for example, requires that companies obtain permission of the government to lend above a specified amount to companies under the same management, and section 372 restricts the amount that a company can invest in other companies without government approval. Large industries were limited in the fields in which they could participate. A large portion of industries were reserved for the small-scale sector (those industries under an asset limit prescribed by the government.) Subsidies, tax incentives, and other concessions were given to the small-scale sector. (This aspect of Indian policies has not changed.)

The Foreign Exchange Regulation Act, 1974 (FERA), designed to regulate foreign exchange and securities and the import and export of currency and bullion, was expanded to cover the corporate sector and its dealings in 1973. With the rupee not convertible, permission of the reserve bank was needed for release of foreign exchange.

3. Procedural Problems: Besides having restrictive regulations with respect to foreign investment, India had a reputation for red tape, bureaucratic delays, and bribery. The procedure of setting up a foreign investment or technical agreement was itself enough to scare away potential investors. The required industrial licensee began with an application for a "Letter of Intent." The Letter of Intent was, and is in essence, government approval to begin the approval process. After the government, via the Secretariat of Industrial Approvals (SIA), cleared the application, the applicant applied for "foreign collaboration" approval. If this approval was granted, the foreign entity would receive a "Specimen Letter of Approval of Foreign Collaboration" and a copy of "Standard Conditions Attached to the Approval of Foreign Collaborations, as well as a letter stating any other conditions mandated by the government.

If the foreign applicant accepted these conditions, it would then notify the administrative ministry concerned with the product to be manufactured. The companies could then execute the agreement, which had to comply strictly with the terms approved by the government. Fifteen copies of the signed agreement were then sent to the concerned administrative ministry which scrutinized the agreement to make sure it complied with the terms approved by the government. After certain additional clearances were obtained, the Letter of Intent was changed into an industrial license.

Changes in Policies:

Abolishment of MRTPA Act: Mainly for big projects, only MRTP companies could undertake these-- financially, managerially, etc. But they were not permitted to do that. This is one reason the pace of industry has been slow. D.C. Singhanian, founding partner of Singhanian & Co., a leading law firm in India, specializing in foreign collaborations and arbitration. The Monopolies and Restrictive Trade Practices Act (MRTP) was designed to prevent the concentration of wealth in the hands of a few industries. MRTP companies were required to obtain clearance from the government for establishment of new undertakings, expansions, mergers, amalgamations, and take-overs. In addition, directors of MRTP companies could not be appointed to any other company without prior approval of the government. MRTP companies were non-governmental companies (a) having total asset values of 10 billion rupees or (b) qualifying as "dominant undertaking(s)"--defined as those companies producing, distributing, or supplying, or otherwise controlling 1/4 or more of the goods or services by virtue of their share in a particular products line--with total asset values of 10 million rupees or more. NIP abolished this asset limit, allowing what were once "MRTP companies" to operate according to their own business judgment.

The old MRTP also contained provisions restricting the acquisition and transfer of shares by MRTP companies without governmental approval. This provision was moved to the Companies Act. The provisions allowing the government to take control of undertakings harmful to the public interest or those adopting monopolistic or restrictive trade practices remain intact. These changes are expected to create greater competition among businesses, although smaller businesses fear this may adversely affect them. The emphasis of the new MRTP has shifted to controlling restrictive and unfair trade practices, which was also a part of the old Act. Foreign companies will have to get used to this new focus. The type of promotional offers common in other countries may be a violation of the Act.

Import Licensing: The Indian government controlled imports not only through very high tariffs but also through regulating the release of foreign exchange and import licensing. The first barrier for the importer was getting the license. With an unconvertible rupee, the importer needed to obtain the import license before the Reserve Bank would release foreign currency to purchase the imports. Prior to NIP, when an industry needed imports it had three options: the "Open General License" (unrestricted imports), and "REP License" (granted in relation to the value of the company's exports), or a "Supplementary License" (granted only when India lacked the capability to manufacture the desired import). Another category of licenses, the "Advance License," was available to established exporters. In the months following NIP, the government made changes in each of these categories, making it easier for exporters to import needed materials. With the announcement of the 1992-93 budget, the government abolished many of these remaining restrictions on importing. Both interim measures and recent changes are discussed below.

Phased Manufacturing Programme: Previously, when a company wished to manufacture a new product, it had to comply with the phased Manufacturing Programme (PMP). Under PMP, in order to obtain government permission to manufacture, the company had to detail the essential imports it expected to need in the first five years. The percentage of imports to the total items used in the manufacturing had to be reduced in each of these years. For example, under PMP, a company could perhaps import 33 percent in the first year, 16 percent in the second, 10 percent in the third, and so on. The goal behind this system was to force industries to find or establish domestic alternatives in lieu of imports. The PMP was

abolished soon after NIP was announced. The abolishment of PMP allows new businesses and existing business manufacturing new products more freedom to use imported items.

Automatic Approval for Import of Capital Goods: Part of the approval of a foreign investment proposal involved government clearance of the import of capital goods. An import license for these good could not be obtained without this clearance. NIP provided for automatic clearance for imports of capital goods in two cases: (1) where the foreign currency is provided by the newly invested foreign equity and (2) beginning April 1992, where the CIF value of the capital goods is less than 25 percent of the total value of plane and equipment, up to a ceiling of 20 million rupees. To qualify the goods had to be new. Further changes were made in January 1992. Capital goods can now be imported by actual users without a license if the company's foreign equity fully covers the foreign exchange needed for the capital goods. The goods must be new and not second-hand.

Export Processing Zones (EPZs) and Export Oriented Units (EOUs): Export Processing Zones (EPZs) and Export Oriented Units (EOUs) receive additional benefits. Advantages include greater import allowances, reduction in duty rates, [FN160] first priority to infrastructural facilities, and tremendous tax benefits. A unit in a EPZ is required to export at least 75 percent of its production. The same requirement applies to companies that wish to qualify as an EOU.

Deregulation in the Financial Sector: In liberalizing its economy, the government had to consider major changes in the financial services sector. Pressure from outside was also felt, as the World Bank had made deregulation of this sector a condition to further credit to India's financial institutions. Until recently, industry depended on the government for financing. The three major financial institutions which gave long-term loans were 100 percent government-owned; and the options for private financing were limited. The industrial license required to begin production was available only to the extent that the money was available from government financial institutions.

India's financial services sector has been plagued by low profitability; this has been attributed to inefficient management and political vote-seeking, resulting in controlled and uneconomical interest rates and non-payback of loans. Although, even before NIP, there was much talk concerning the privatization of national banks, but the Finance Minister, addressing the Parliament in November 1991, said that this would not be done at any cost. It is expected that India will soon allow more private banks and foreign banks into the banking sector. In the near future, companies will obtain more money from private institutions and security holders. As explained by Dr. K. C. Narang, General Manager for Research and Development at Dalmia Cement (Bharat) Limited, "Previously, the government money was a better opinion. For shareholders you had to offer something in return. But if you could not pay back the government.... We were protected from the risk that is the primary thing in business.

India has taken other steps towards liberalization of its financial services sector. Changes include giving banks greater freedom to decide interest rates and to invest their resources in the manner they judge best, permitting private entities to run mutual funds, raising the limit on letters of credit that authorized dealers can open without referring to the exchange control department of the RBI, and linking leading banks to the Society for Worldwide Interbank Financial Telecommunication.

When told in October 1991 that the U.S. must have patience with India on reform in the area of intellectual property rights (IPR), U.S. Trade Representative Carla Hills replied, "We have been discussing [intellectual property rights] with India for over five years." The main stumbling block in U.S.-Indo trade negotiations has been India's patent laws, particularly intellectual property right. Attempting to attract foreign investment and threatened with "Special 301" sanctions of the U.S. Trade Act of 1974, India--which is not a member of the International Convention for the Protection of Intellectual Property (Paris Convention)--was forced to consider these laws.

In September 1991, proposals for change met a wall of protest in Parliament; members of Parliament belonging to various parties *93 issued a statement demanding that India not bend to U.S. pressure on patent law. India did not bend, and on February 26, 1992, the U.S. ended the nine-month investigation it was conducting. U.S. Trade Representative Carla Hills cited India for lack of adequate patent protection but postponed any sanctions because India had improved protection of intellectual property right in other areas. Criticizing Hill's decision, the Pharmaceutical Manufacturers Association called India a notorious pirate of patented medicines and stated that the market for U.S. pharmaceutical companies in India could be more than \$200 million if stronger patent protection existed.

India, with its liberalizing reforms, is a latecomer in world events. With the reunification of Germany, the fall of communism, the break-up of the Soviet Union, the integration of the European Economic Community, new trade agreements in the western hemisphere, and liberalization in other countries, India must compete with new and larger markets. Further reforms may be needed to attract foreign investment and technology, and free Indian businesses from the obstacles, both statutory and bureaucratic, that stand in the path of entrepreneurship and free trade. For example while the NIP provision allowing 51 percent foreign equity is a giant step for India, other Asian countries allow higher percentages or have no restrictions at all. India will have to convince foreign businesses that the reforms are here to stay, as many businesses still fear that when Prime Minister Rao loses office, the reforms may be suspended.

Will India become a major player in the global market by the year 2000? The consensus seems to be that India will be a much bigger player than it is now, but will need more time, while fighting inflation and other domestic problems, to truly be considered a major player. Domestic industries are just now examining the new opportunities open to them and foreign businesses are slowly coming back. In coming years, India will continue to need the assistance of aid organizations and developed countries. But in the long run, India, with its rich natural resources, large pool of skilled and unskilled labor, and the largest democracy in the world will grow into a strong economy. Exports will dramatically increase. Along the way, however, India will have to battle the problems and perhaps its main obstacle, the strong opposition from within.

Part II: Globalization and Deregulation of International Air Transport:

Since the passing of the De Regulation Act of 1978 in the United States of America, the international air transport is undergoing the most dramatic changes in its history. Globalization, deregulation, liberal bilateral air transport agreements, international alliances, privatization of airlines and airports, and economic constraints are some of the factors challenging established management and business practices. In this process each region plays variations on a common theme. In North America, air travel is the normal way of moving

people, mail and increasingly, freight. In the European Union, we have liberalization, consolidation, concentration and decentralization. Civil aviation in Eastern Europe and the Former Soviet Union is being restructured and needs strengthening –while adjusting to a free market economy. Impressive Aviation expansion is seen in India, China and ASEAN. Latin America shows promise. Everywhere, these regional trends co-exist with an intensification of global ties across the Atlantic, the Pacific and the Eurasian Continent.

The objective of this study is to highlight the changing dimensions of international air transport in Deregulated and Globalized environment. To study on the issues relating to global deregulation and liberalization it made an earnest attempt to highlight developments in various regions of the world. It will began with the regulator process in the air transport at the global level. The process of liberalization, globalization, and deregulation has extended across many spheres of economic activity. However, the focus of this study will be on deregulation in international air transport sector only. The long-standing tradition in air transport had been one of market intervention by government to regulate entry and/or price with the intent, on the one hand, of protecting consumers, third parties and those working in the industry tighter with, on the other hand, the achievement of social objectives such as service to remote communities and the integration of spatially disparate markets. Indeed, in many countries, transport in general, has traditionally been seen as an input into a wider socio-political-economic process embracing regional, social and industrial policies.

The deregulation process in the United States of America started first in air cargo sector in 1977, followed by the passenger deregulation in November 1978, when U.S. Congress passed the Airline Deregulation Act. The aim of the above act was that the market place should determine the airlines business decisions in the future. This fundamental change in policy meant that the U.S. Government's role in the new regulatory environment would be to protect the competitive process, not individual competitors. However, it is important to note that the scope of regulatory reform was limited essentially to commercial matters, such as pricing (which include fares, rates, and charges) market entry, capacity and frequencies, but did not include any relaxation of government controls over such matters as safety, air traffic control, airworthiness, personnel licensing and aircraft maintenance.

As a result of deregulation in the United States, many new airlines entered the market and a substantially lower and wider range of new promotional and special fares were introduced. However, the cut-throat competition faded fast and the focus of competition shifted to the control of airport departure gates and take-off and landing slots. Today, the airline industry in the United States is concentrated in fewer hands than ever before and it can be expected that this trend will continue the future. While many supporters of 1978 legislation expected that it would reduce the concentration of market share among the largest airlines, the opposite has occurred. For instance, in the 1990s we can see five largest U.S. airlines controlled over 80 per cent of total passenger business. Compared with less than 60 percent before deregulation.

Under the influence of deregulation in the United States, other industrialized countries, such as Australia, Canada, European Union (EU) countries and Japan adopted policies to liberalize the aviation industry and to bring about a more competitive environment. The structural changes in the Canadian airline industry bear a great similarity to developments in the US. In a period of de facto deregulation, starting in 1984, the airline industry in Canada moved rapidly toward a high degree of market concentration, before the new National Transportation Act came into effect in 1987. The liberalization in the air transport regulatory structure in the

European Union ranks second to those in the United States and Canada in their significance for the international airline industry. Initially, developments were slow as a more cautious approach was taken considering that most of the major international airlines were owned by their governments. It was only in 1987 that important moves were made toward a common air transport policy.

A major landmark was the decision of the European Court of Justice in the *Nouvelles Frontières* case in April 1986, that air transport agreements are subject to the competition rules of the Treaty of Rome, Signed in 1957 by six European Countries. This meant that airlines may be prosecuted for violation unless exemptions have been granted to them under policies agreed upon by the Council of Ministers. The implications of this judgment put considerable pressure upon the European Community (EC), presently European Union (EU), to develop and agree upon an air transport policy. In December 1987, the Council of Ministers adopted a package of legal instruments put to them by the Commission and thus took the first step toward a general liberalization of the European air transport industry.

In addition, the European Civil Aviation Conference (ECAC), currently comprised of thirty-three European States, developed two International Agreements on intra-European airfares and capacity sharing. The EC and ECAC liberalization measures adopted in 1987 were followed by other regulatory changes, covering further reductions in capacity and tariffs control and additional provisions for freer market process, prior to the completion of a single European market by the end of 1992. The EU third package on air transport regulations became effective on 1 January 1993. There are three different regulations:

Regulation NO. 2407—the licensing regulation, dealing with the requirements for the issue and revocation of operating licenses to air carriers established in the Community. Regulation No. 2408—the access regulation, giving access to intra-Community routes to Community air carriers. Regulation No. 2409 talks about the fares regulations, whose purpose is to abolish government intervention in the determination of fares on intra-Community routes. As a result, all air services within EU countries may be regarded as having a special status under the EU third aviation package a domestic traffic and thus providing EU-based airlines with the opportunity to open new routes, whereas non-EU airline services within EU-countries may be considered Cabotage traffic. This could bring about a new dimension in future negotiations concerning air service agreements.

The most serious impact of deregulation and liberalization of the aviation industry is being felt by airlines in developing countries. This may well lead to the formation of regional airlines from a number of small carriers in order to improve efficiency and productivity, to reduce cost and to maintain market share. Alternatively, airlines could greatly benefit from combined operations and joint projects, such as joint scheduling, sharing of equipment, crews and ground facilities, pooling of aircraft parts and support equipment, and cooperative arrangements for aircraft overhaul and maintenance.

The rapidly changing environment of world air transport makes it essential that governments of developing countries and airline management should be very clear about their objectives and the need for close cooperation and sharing of scarce national resources. Increasingly, governments around the world are viewing privatization of government-owned and controlled companies as an important factor in attaining broad economic and public policy objectives, and airlines are no exception. The Main reasons for this trend are: To act as a catalyst for deregulation and liberalization of important industries; to raise finance through the sale of

state enterprises and to reduce the cash drain on public funds by privatizing government-owned companies; to free government enterprises from political interference and civil service constraints so that they can become economically viable and profitable; and to introduce and encourage competition with a view to optimizing resources.

The Asia/Pacific region offers abundant opportunities as the fastest growing aviation region in the world. The reasons for this optimism includes the strong economic expansion, significant ethnic ties with various countries, increase in leisure time, moves towards air transport liberalization and vigorous efforts to promote tourism to/from the region. The size and economic potential of the region has acted as a catalyst for development of new aircraft types, and manufacturers foresees a big market for future new aircraft. Within this region, India is a long-term potential giant. The size and importance of India's potential market is not matched by the size of its national carriers due to a variety of factors, an important one being the low priority that was attached to Civil Aviation in a resource constrained economy. The basic thrust of India's aviation policy is two-fold: to widen air links through negotiation of new agreements and review of existing ones and to formulate a comprehensive approach to obtain increased opportunities for its national carriers abroad.

Since the beginning of the nineties, the international aviation scene has been going through sweeping changes. With the increasing globalization of economies, liberalization and technological developments in air transport, new trends are emerging on the horizon. Privatization, cross-border acquisitions, market alliances, merger and restructuring of airlines in the wake of liberalization of air transport and deregulation are all leading towards market oriented international aviation environment. Airlines of almost 40 countries are in various stages of privatization.

Deregulation of air transport has also some negative impacts in aviation industry. Deregulation and liberalization have also brought about an increasing lack of adequate airport and airspace capacities which have become major problems for the airline industry in many parts of the world, particularly in Europe, the Far East and North America. To expand and improve airport facilities and services or to build new airports will require very large investments and for this reason governments are also moving towards the privatization of airports. Additional concerns of the world airlines are the rapid and substantial increases in airport charges and landing fees throughout the world which now account for a significant percentage of airline total operating expenses, as well as increased and new taxes imposed on airline services and operations

Globalization and De-regulation in the USA:

The Beginnings of Reforms: The mixture of competition and control that characterized regulation of civil aviation in the United States had interested economists since at least the early 1960s, when professor Richard Caves of Harvard Published a book-length criticism of the system. Other Studies of the effects of regulation had been published from time to time in the late 1960s and early 1970s. In the Spring of 1975, a newly –appointed CAB chairman John Robson proposed an experiment that would permit new and existing airlines to begin or end service on selected routes without prior CAB approval, a dramatic departure from the progressively tighter regulatory policies advocated by his immediate predecessors. More than that, during 1975 and 1976 the CAB relaxed a number of restrictions it had previously imposed on charter carriers, thereby allowing them to operate frequent low-fare service in direct competition with regulated carriers. It also allowed airlines to reinstate limited

discount fares, and awarded new route authority to various applicants who proposed to operate trans-continental service at considerably lower fares than were then in effect. In response to the threat of increased competition from charter carriers and low-fare scheduled airlines, American Airlines applied for and was granted authority to offer discounts of up to 45 per cent from coach fares for travel in the transcontinental markets it served when they were first offered in the spring of 1977, American's 'super saver' fares resulted in traffic increases exceeding 60 per cent on some routes, leading the Board- under the leadership of newly-appointed chairman Alfred Kahn-to enthusiastically endorse other carriers fares.

Airline De-regulation Act 1978: The actions of the Civil Aeronautics Board during the three years 1976 to 1978 and the enactment of the Airline Deregulation Act in 1978 represented a major step toward the deregulation of a once highly regulated industry. Although regulation of the airlines by the CAB had long been criticized as unnecessary and as promoting wasteful and inefficient methods of operation, considerable political debate preceded enactment. During that debate, advocates of deregulations argued that less regulation of the airlines would result in lower fares for consumers and more efficient and profitable operations for the airlines. On the other side, those favoring continued regulation argued, that deregulation would result in serious operating and financial instability for the airlines and would result in serious operating and financial instability for the airlines and would reduce the variety and quality of airline service. Opponents also warned that deregulation would eventually lead to increased industry concentration, which would result in higher fares and less service, particularly on the low-density routes serving small community.

The Initial Effects of US Deregulation: The US airline industry's rapid transformation during last two decades of experience with deregulation has been the product of a number of important forces. These include the apparently substantial operational and marketing advantages associated with large hub and spoke rote systems, continuing growth in the demand for intercity travel, and sharp fluctuations in the costs of important inputs used by air carriers. More recently, difficulties in co-coordinating pricing and investment policies governing the provision of public infrastructure inputs used to produce air transportation service-primarily airport facilities and airspace capacity- appear to have exerted an increasingly important effect on airline service patterns and rare levels.

The following are the initial effects of the US deregulations:

Routes: Existing airlines entered a large number of new markets. Some they stayed in, others were subsequently dropped as they proved to be less profitable than expected. The larger carriers abandoned the smaller destinations-as critics of deregulation had said they would-since these were not seen to be economic.

Route Structures: Airlines rapidly developed major cities where they had a high market penetration into hub points. By integrating schedules to a large proportion of the destinations and to other major cities across the US, a large number of connections can be offered. Delta Airlines and Eastern Airlines had operated Atlanta as a hub point for many years but deregulation saw an upsurge in marketing activities to secure hub domination by almost all the primary carriers.

New Entrants: Deregulation spawned a number of new airlines eager to profit from the lucrative airline business which had been virtually closed to new entrants up to that point. Many were highly innovative with no-frills, and cheap fares, to all first-class luxury services. As the larger carriers abandoned the smaller towns and cities and new entrants emerged to take their place. This meant that the town, which lost its once-a-day Boeing 737 service,

gained, perhaps, a twice-a-day Shorts 360 service instead. With lower operating and overhead costs such a service was generally more appropriate to the route concerned.

Air Fares: The industry was faced with the advent of new airlines with low over-head costs or with non-unionized labour or with new innovations to provide high traffic volumes. The result not surprisingly was that air fares fell. Compared with 1974 the average air fare in real terms in the mid-1980s had fallen by 25 per cent. More recent trends suggest a slightly different position on some routes although it certainly correct that more cheaper fares were made available on main routes after 1978 than were available before de-regulation.

Airlines: It is probably reasonable to say that the experience of deregulation was very uncomfortable one for many of the existing airlines. They were forced to expand rapidly to avoid being left behind by new competitors; they had to learn to respond quickly and effectively to threats to their long-established base markets. They had to lower their costs and increase their productivity to cope with the lower yields arising from the cheaper fares they were forced to offer to match competitors. Some airlines had continued to reflect the operational orientation of the earlier pioneering days and discovered now that their organization had to be much more marketing-oriented. Doing all these things at the same time, and quickly, whilst continuing to operate air services was a tough task.

Airline Profits and Services: With rapidly falling yields and high cost burdens it was inevitable that some airlines experienced poor results. Unfortunately for some of them recession in the late 1970s made it even harder. Perception of changes to service standards is often largely subjective. Certainly most of the US domestic carriers have been accused of lowering their standards to reduce costs since deregulation. This is probably true but what is certain is that the large seat factors. This means fuller flights which is likely to lead to slightly less service per passenger.

Airport Congestion: Last but not least the effects of deregulation are the airport congestion. Increased traffic means more flights and fuller flights. This in turn means more aircraft movements at busy airports and more passengers to be processed through the terminals. Since it takes a long time to get approval and then to build new airports, runways and terminals-plus it may involve large-scale investment with long pay-back periods- airlines and airports took measures that would enable them to cope at existing airports and terminals. The inevitable congestion, particularly at peak times, forms a significant effect of deregulation.

Deregulations of Aviation Industry: Problems and Prospects: Viewed from the perspective of slightly more than two decades of experience, the US experience with deregulation of its domestic air transportation system appears on balance to have been quite successful. Although critics of the policy have seized upon the industry's rapid consolidation during the mid-1980s as evidence of an impending failure of deregulation, the number of airlines now offering service over comprehensive, nationwide route networks is at least equal to the number doing so prior to deregulation. More important, these carriers now compete with one another in more markets than ever before, offering service that is more comprehensive as well as generally more frequent.

Further, the US industry's post-deregulation record of productivity improvement has nearly matched that enabled by the remarkable succession of technological innovations that occurred during the regulated era, resulting in significantly lower fares than would prevail today under continuing regulation. And despite claims to the contrary, the industry's safety

record has improved at least as rapidly as under regulation during the process of its adaptation to more competitive environment unleashed by deregulation.

Nevertheless, there remain several important concerns regarding the prospects for the policy's continued success. Perhaps most important, airline's development of large hub-and-spoke route networks, in conjunction with marketing devices such as frequent-flyer programmes, may already have created important barriers to entry by new competitors into both the airline industry itself and individual cities or city-pair markets. In addition, while airline-owned computer reservation systems provide important benefits to travel agents and airlines, they appear to impede competition among airlines in various ways.

Finally, difficulties faced by potential competitors in gaining access to airport facilities on terms comparable to those enjoyed by incumbent airlines may place them at a critical disadvantage or preclude their entry entirely. Since the continued success of deregulation in maintaining lower fares and sustaining high-quality airline service depends critically on maintaining vigorous competition among airlines, the seriousness of these apparent impediments is of vital concern. At the same time, however, the potential effectiveness of available measures in mitigating these barriers, as well as any sacrifice in benefits likely to result from restricting the practices that create them, warrants careful consideration in designing remedial actions. After more than two decades of deregulation, several survival characteristics appear essential for survival of airlines. Some of them are briefly discussed here.

Hub-and-spoke route networks: The large hub-and spoke route networks that have come to dominate the pattern of US domestic airline service during the deregulated era confer both costs and marketing advantages upon airlines that operate them. Such networks allow airlines to realize economies in operating both aircraft and airport facilities, while attracting higher passenger volumes with frequent service in a larger number of markets.

Frequent Flyer Programs: The widespread Service permitted by multiple hubs allows airlines to enjoy economies of density, and better market their product to the most lucrative customer, the business traveler. For example, United Airlines serves all 50 states, not because each is profitable, but because it can offer to fill all the geographic needs of business travelers.

Computer Reservations Systems: Eighty per cent of flights are booked through travel agents and 95 per cent of agents use one of the airline-owned computer reservations systems. This system has created a sophisticated and expedient means of exchanging pricing proposals, and have facilities implicit price fixing. They also produce extraordinary profits for their owner, far beyond the rents which could be exacted in a fully competitive market.

Sophisticated Yield Management: Airlines have learned that watching passenger demand carefully, they shrewdly manipulate the number of seats for which restricted discounts are offered on an hourly basis, and fill seats with passengers paying the maximum price. Consumer groups complain that by offering cut-rate fares of only a relatively small number of seats, airlines are engaging in bait-and-watch advertising. The bewildering array of fares has also increased transaction costs for consumers.

Fuel Efficient Fleet of Standardized Aircraft: The economic anemia created by the destructive competition unleashed by deregulation left airlines with inadequate resources to

buy new planes, causing the US fleet to degenerate into the oldest in the developed world. Thirty-one percent of the U.S fleet now exceeds the economic design goals originally set by the manufacturers. Merged airlines have been forced to deal with the problems of consolidating huge fleets of aircraft of inconsistent types and of several manufacturers, which increased the costs of maintenance and require multiple inventories of spare parts.

Low Debt: The operating losses engendered by deregulation created enormous debt. Despite reduced wages, airline operating expenses increased 94 per cent during deregulation's first six years. During deregulation's first decade, the industry suffered a 74 per cent decline in its profit margin to a mere 6 per cent—until now, the worst financial period in the industry's history. The industry became an economic basket case, prompting the rash of mergers in the mid-1980s and bankruptcies, which continue to the present.

Low Wages/Flexible Work Rules: Some airlines have broken unions and thereby reduced costs. Continental and TWA are prime examples. Although Continental has debt it out of bankruptcy. Labor acrimony, perhaps enhanced by the tactics of its former chairman, Frank Lorenzo, cost it dearly in the 1980s. Airline industry is a service industry. Happy employees can give passengers a lovely trip, and lure them back for another, and another. Angry, embittered employees can do the opposite. For example, the tremendous acrimony between TWA's workers and owner Carl Icahn has resulted in that airline repeatedly being ranked among the worst among the major airlines in terms of consumer complaints.

Superior Service: Airline service has degenerated universally under deregulation, so consumers have been taught not to expect much. Consumer polls reveal they rate foreign airlines higher than our domestic ones. It is no wonder. When US Air consumed Piedmont, its loyal customers were most consumed with whether USAir would continue Piedmont's practice of giving passengers the full can of Coke, rather than just a cup. That one example reflects how far consumer expectations have fallen. To pose an analogy, before deregulation, we enjoyed chicken fried steak. Now we are relegated to a diet of ground horsemeat. Consumers save billions of dollars eating horsemeat, but it just does not taste the same.

International Routes: The global air transport market is growing and international markets are quite lucrative. Although traffic is temporarily down on the North Atlantic, airlines which serve the North Pacific market enjoy the most attractive yields. Both Northwest and United earn a disproportionate share of their total income from international markets. Between 1987 and 1989, the Northwest earned between 68 per cent and 91 per cent of its total operating profit from international markets, while United earned between 24 per cent and 34 per cent. Many industry analysts predict international markets will grow faster than domestic markets during this decade.

Deregulation gave away the public system to private monopolists. It replaced the US Civil Aeronautics Board, which protected the Public interest, with the chief executive officers of a handful of airlines, who treat the public system as their private Monopoly board, buying and selling properties while charging the public exorbitant rents. They are allowed to turn a profit by selling assets owned by the nation—landing slots and international routes. Deregulation transformed the air transport system from a public utility into segmented and shared regional and city-pair monopolies, and a national oligopoly. It is viewed by some writers that, before deregulation, the US transportation system was universally acclaimed to be the world's finest. But since then the deterioration in the transportation infrastructure, public and private, would embarrass the Third World nation. In short, the objectives sought by the US from deregulation

appear to be both reasonable and desirable. They were, more choice for consumers, improved standards of service, lower air fares, more flights and increased efficiency of the air transport system- airlines, airports and ATC.

National Liberalization Policies- In addition to the progress of liberalization at the bilateral, regional and multilateral levels, there has been a shift of regulatory approach taken at the national level, from detailed regulation of airline operations to relying more on market forces. Liberalization policies and measures adopted by States vary widely in terms of their coverage and application. Recent examples include:

- a. air service negotiations – for example, the Government of Canada announced a new international air policy called “Blue Sky” in 2006, envisaging a change from the previous gradual reduction of restrictions of bilateral air services agreements to negotiations of “open skies” agreements;
- b. market access for foreign airlines – so-called “open skies” policies were adopted on a unilateral basis by Bahrain, Cambodia, Chile, China, Ecuador, Guatemala, Honduras, India, Kuwait, Lebanon, Morocco, Pakistan, Philippines, Sri Lanka, Tunisia, and the United Arab Emirates, some of them are applied only to specific airports and/or for limited durations. In 2007, Japan liberalized foreign airlines’ access to 23 regional airports to strengthen the country’s gateway position;
- c. airline pricing – for example, the United Kingdom Civil Aviation Authority discontinued in 2006 its remaining airfare regulation from all routes other than the routes to the United States on a unilateral basis;
- d. Designation of airlines – Bangladesh, India, Kuwait, and Nigeria each allowed privately-owned airlines to operate in certain international markets; and
- e. Domestic air transport – further progress of liberalization of the domestic markets was reported in Brazil, China, India, Japan, Indonesia, Mozambique, Saudi Arabia and Thailand.

Competition policies- As liberalization spreads, the question of how to maintain and promote fair competition in air transport is increasingly becoming an issue. One indication is a marked rise in the adoption of competition laws by States. About 90 States now have competition laws of some sort with a number of bilateral antitrust enforcement cooperation agreements particularly between developed countries. The use of competition laws for the air transport sector has occurred not only with more frequency but also has encompassed a variety of issues, ranging from abuse of dominant position such as capacity dumping and predatory pricing, collusive behaviors including price-fixing, inter-airline coordination and alliances (see paragraph 3.6), consolidation through mergers and acquisitions (see paragraph 3.8), vertical business relationships in product distribution (see paragraph 3.21), to State aid (see paragraph 3.18 for start-up aid). One of the fundamental problems here is how to distinguish between unfair and normal competitive behaviors, and reliance has been placed on analyses and development of

Consumer protection policies- Protection of consumer interests covers many elements, including air passenger rights and the contractual relationship between airlines and their users. There may exist some instances where competition does not necessarily guarantee a minimum level of service levels that customers can expect, mainly because of the lack of information available to them and their weak negotiating position. Certain elements might not even be a matter of competition between airlines. Concerns about the limits of competitive response have induced a number of States to ask the industry to develop voluntary commitments (non-legally binding self-regulation) and/or to take some direct regulatory

measures that address consumer interest issues such as denied boarding compensation, flight cancellations and access for incapacitated passengers.

With respect to regulatory measures, although most States apply general consumer protection laws/rules, if any, to airlines' commercial practices, aviation-specific rules/regulations were introduced in some States and regional groups. For example, the United States DOT has adopted rules, inter alia, on misleading price advertising, airline over sales, baggage liability limit, a report on consumer-related statistics, and passengers with disabilities, and has been in the rule-making process for long delays since 2007. China, Colombia and Thailand also have specific rules on certain aspects of air passenger rights. At the regional level, EU strengthened air passenger rights by adopting a regulation establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights, which became effective in 2005. EU also adopted, in 2006, a regulation concerning the rights of disabled persons and persons with reduced mobility when travelling by air. LACAC adopted a recommendation, in 2000, on a consumer protection code for airlines, while COMESA has been developing policy guidelines on consumer protection.

Privatization- Privatization of the government owned airlines has been one of the major transformations in the air transport. The motive for privatization has been highly diverse, which ranges from economic consideration , to try and improve the operating efficiency as well as competitiveness , to a more pragmatic desire which will try to reduce heavy financial burden for the government to finance the capital investments in a new equipment, the privatization of government-owned airlines has accompanied a more commercially oriented outlook within a liberalized competitive environment.

Airline business models- In recent years, successful low-cost carriers (LCCs) have been challenging the full service network model of traditional major airlines as well as the holiday package business of charter airlines. The common features of the business model of LCCs are, with some variations: point-to-point network focusing on short-haul routes, high frequencies, simple low fare structures, high-density single class with no seat assignment, simple in-flight services, staffing flexibility and minimal overheads, and intensive use of electronic commerce (e-commerce) for marketing and distribution. To sustain low-cost structures, these airlines usually operate a single aircraft type with higher daily aircraft utilization. They also use less-congested secondary airports to ensure short turn-rounds and high punctuality and to save airport related costs. It is the low operating costs that enable LCCs to allocate a large portion of their seats to low fares.

Liberalisation, Privatization and Globalisation and Indian Civil Aviation:

Introduction: Civil aviation development is fundamental to the economic development of any country. The phenomenal growth of aviation sector is directly incidental to the LPG policies (Liberalisation, Privatisation and Globalisation). Credit also goes to the *Open Skies Policy*, amidst criticism, which significantly facilitated international air transport of both cargo, and passengers. Path breaking initiatives in infrastructure and governmental policies favouring investments have been responsible for the spectacular revisiting of the bureaucracy's approach towards the aviation sector. The new forays in industry include *inter alia*, privatisation of airlines, privatisation of airports, setting up of private public partnerships, improving regional and domestic connectivity, setting up of low cost carriers, generating of non-aeronautical revenues, regulation of the airports and airside investment,

tourist promotional schemes etc. However, set backs are inevitable in every system and their assuaging can certainly improve the efficiency of the sector manifold.

Recent Developments in Indian Civil Aviation Sector: A Brief Overview: “*In the early fifties, most of the operating airlines were merged into Indian Airlines or Air India and this monopoly under the Air Corporations Act continued till about the 1990s*”¹²⁹. The winds of change started blowing after introducing liberalisation policies in the country during Rajiv Gandhi Government in 1991. The increased external participation through Foreign Direct Investment, thereby generating demand for excellent standards prompted the concerned authorities to make up their mind in favour of private airlines and airports. The economic improvement obtained by the European and other developed Asian countries, through improvements in the aviation sector inspired the Indian policies.

In India, the *Open Skies Policy* was experimented first with cargo services and chartered flights for domestic and foreign carriers. After introducing the policy in 1991, the growth of Indian aviation industry has never been the same. In relation to the *Open Skies Policy*, nowadays India is negotiating new bilateral agreements and reviewing existing ones that would provide it with economic leverage. There are over 104 bilateral agreements concerning air travel to which India has been a party.¹³⁰ However, there is a lot of scepticism regarding the maintenance of 5/20 rule which mandates that Indian air carriers cannot fly abroad without five years of domestic service in India and the need to have a fleet having twenty aircrafts.¹³¹ The further discussions on the *Open Skies Policy* are also sufficiently marred by these regulations.¹³² The promotion of aviation sector has significantly escalated tourism and employment prospects also.

Along with this, the national framework concerning aviation policies also underwent considerable changes. In the Civil Aviation Wing, Air Corporations (Transfer of Undertakings and Repeal) Act, 1994 replaced the repealed Air Corporations Act, 1953. The Act had its own significance as it ended the 40 years long state monopoly, which paved way for the operation of large number of private airlines in the Indian domestic industry. Further, in 1994, enactment of Airports Authority of India (AAI) Act resulted in merging of the International Airport Authority of India and National Airports Authority (NAA) envisaging the integrated development of airports, and ensuring safety standards. AAI has been duteous towards the management and regulation of entire Indian airspace and air traffic services over the Indian and adjoining airspaces since 1994.

The Civil Aviation industry has brought in a new era of expansion, driven by factors such as low-cost carriers (LCCs), modern airports, Foreign Direct Investment (FDI) in domestic airlines, advanced information technology (IT) interventions and growing emphasis on regional connectivity. The strategic plan of the Ministry of Civil Aviation indicates that \$100 spent on air transport produce benefits worth \$325 for the economy and 100 additional jobs in air transport result in 610 new economy wide jobs.¹³³ A strong civil aviation sector is

¹²⁹Aseem Rastogi, *Indian Aviation Sector: 20 years of the Open Skies Policy*, TRANSITION OF THOUGHTS, (February 28, 2010) <https://transitionofthoughts.com/2010/02/28/indian-aviation-sector-20-years-of-the-open-skies-policy/>.

¹³⁰MINISTRY OF CIVIL AVIATION, *Strategic Plan 2010 - 2015*, <http://civilaviation.gov.in/sites/default/files/mocaplan.pdf>.2.

¹³¹Sindhu Bhattacharya, *Easing Norms: Will India Extend Open Skies Policy Beyond SAARC Nations?*, (July 23, 2015) <http://www.firstpost.com/business/easing-norms-will-india-extend-open-skies-policy-beyond-saarc-nations-2359022.html>.

¹³²*Ibid.*

¹³³MINISTRY OF CIVIL AVIATION, *Strategic Plan 2010 - 2015*, available at <http://civilaviation.gov.in/sites/default/files/mocaplan.pdf>.2.

fundamental for the development of tourism also. In the time period of 2005-2015, India has emerged as the 9th largest civil aviation market in the world.¹³⁴ There has been a tremendous growth in air traffic throughout India, specifically in 2009-10, where it grew to 123.75 million from 40 million, during 2000-01.¹³⁵ The changes witnessed by the Indian civil aviation sector during the aforesaid time period can be qualified by the term public private partnership, airport infrastructure, passenger handling capacity, airport models, regulatory authorities etc.

The mission of the Civil Aviation Policy 2016 of India is to provide safe, secure, affordable and sustainable air travel with access to various parts of India and the world. It aims to fulfill its objectives to ensure safe, secure and sustainable aviation industry through use of technology and effective monitoring; to enhance regional connectivity through fiscal support and infrastructure development, and ease of doing business through deregulation, simplified procedures and e-governance and to promote the entire aviation sector chain: cargo, MRO (maintenance, repair and operations), general aviation, aerospace manufacturing and skill development.

Economic regulation of any sector is key to its planned progression. The case of the civil aviation sector is no different. This makes the position of the Airports Economic Regulatory Authority (AERA) in India unique and contestable. AERA which governs the economic facets of the civil aviation sector was constituted by the relevant act in 2008. The Act deliberates upon the regulation of tariff and other charges for aeronautical services rendered at airports, monitoring performance standards of airports and establishment of an appellate tribunal to adjudicate disputes and to dispose of appeals, to matters connected therewith or incidental thereto. AERA was established in May 2009 and its regulatory functions were notified with effect from September 1, 2009. It has brought in an open and transparent process, involving extensive stakeholder consultation, to establish its regulatory philosophy and approach. It also works towards evolving of detailed procedures and systems for determination of tariff and monitoring of performance standards regarding the same. AERA also proposes to use the interests of passengers and cargo facility users as the touchstone for discharge of its regulatory functions.

To cater to the rising air traffic, the Government of India has been working towards increasing the number of airports. As of March 2019, India has 103 operational airports. India has envisaged increasing the number of operational airports to 190-200 by FY40. Private Investments in this regard is encouraged by the Government which include privatisation of some major Airports. According to data released by the Department for Promotion of Industry and Internal Trade (DPIIT), FDI inflows in India's air transport sector (including air freight) reached US\$ 1,904.37 million between April 2000 and June 2019. The government has 100 per cent FDI under automatic route in scheduled air transport service, regional air transport service and domestic scheduled passenger airline. However, FDI over 49 per cent would require government approval.

- Some top investments and initiatives taken by the government and Companies include
 - In June 2018, India has signed an open sky agreement with Australia allowing airlines on either side to offer unlimited seats to six Indian metro cities and various Australian cities.

¹³⁴*Ibid.*

¹³⁵*Economic Regulation of Airports in India 2* (International Civil Aviation Organization, Working Paper No. A37-WP/171, EC/10, 8/9/10) http://www.icao.int/meetings/amc/assembly37/working%20papers%20by%20number/wp171_en.pdf.

- France-based Safran Group as of December 2019, is planning an investment of US\$ 150 million in a new aircraft engine maintenance, repair and overhaul (MRO) unit in India to cater to its airline customers.
- In November 2019, the Competition Commission of India (CCI) approved the acquisition of shareholdings in Mumbai International Airport Limited (MIAL) by Adani Properties Private Limited (APPL).
- The AAI plans to develop Guwahati as an inter-regional hub and Agartala, Imphal and Dibrugarh as intra-regional hubs.
- Indian aircraft Manufacture, Repair and Overhaul (MRO) service providers are exempted completely from customs and countervailing duties

Further, the rising demand in the sector has pushed the number of airplanes operating in the sector. As of July 2018, there were nearly 620 aircraft being operated by scheduled airline operators in India. The number of airplanes is expected to grow to 1,100 planes by 2027. This demand and operations has increased the issues relating to various contracts, customer services, liabilities, fair-pricing and other competition law related issues.

Part III: Covid-19 Pandemic and its Impact on Aviation Industry

Introduction: At present, we are facing an unprecedented global health crisis as a result of which the world economy has been derailed. The covid-19 affects all segments of population. The impact of covid-19 on the business and market sectors is also noticeable. It has now become necessary to address the risk issues that the corporates are faced with. The pandemic has presented a lot of challenges for the global economy some of which have direct bearing such as disruption in supply chains, challenges in meeting contractual obligations and problems of funding while others are universal in nature like maintaining the safety and health obligations at workplaces, impact of travel restrictions, protecting sensitive information and data etc. Covidization and its impact on civil aviation will address the issues such as airport revenue, cancellation of flights, operation of airports and the airlines, government notifications and the invocation of the 'Force Majeure' clause in contracts etc.

The economic impact of the pandemic is severe all over the world but the effect has been felt differently in the developed and the developing countries. As data suggests, there has been a reduction of international passengers ranging from 44% to 80% in 2020 as compared to 2019 (International Civil Aviation Organization). In order to deal with the situation, more stringent measures had to be taken by the governments across the globe. Most of the airlines and airports had had to suspend their operation due to the travel restrictions and nation-wide lockdown. As reported by Crisil, India could face the revenue loss of INR 24,000-25,000 crores. It was also estimated that the aviation industry would be contributing to 70% of the losses or INR 17000 crores followed by the airport retailers with INR 1700-1800 crores. The adverse effect on the aviation industry due to this pandemic has been dealt with in this newsletter.

There has been a surge of cancellations due to the lockdown which had also affected the business of the airlines. Various Government notifications have been released asking to shut off the operations and as a result many of the flights have been cancelled. Recently, a three judge bench of the Supreme Court issued a notice to the Ministry Civil Aviation regarding refund of the full amount of tickets which were booked during the lockdown and got cancelled. CAPA India estimates that there could be 200-250 surplus aircraft for the next 6-12 months. As a result of complete suspension of travel, recovery is likely to be slow. The spread of COVID-19 has already resulted in an increase in companies experiencing financial

distress as they try to mitigate the financial impact of maintenance and supply chain issues coupled with lower customer demand.

It is still uncertain as to how long the situation will persist. In such a scenario, we may have to accept Covid- 19 as the new normal and have to live with it. Aviation industry needs to quickly accept that the standard operating procedures (SOPs), protocols, frameworks, business models and the whole eco-system around the aviation activity will be different. IATA is expecting the aviation industry job losses to the tune of 29 lacs people in India alone. Globally too the aviation sector is looking to suffer losses amounting to \$252 billion or 44% below 2019's figure. In short, the aviation industry is expected to face a major setback due to the covid-19 pandemic. At a time like this, we need to stand together and prepare ourselves to face this.

Airlines have developed standards and best practices as was prescribed by the International Health Regulations (IHR) to manage effectively and efficiently in times of public health emergencies. Governments need to fine tune the prescribed practices in order to combat this situation. The government of India has shown immense fortitude and announced specific relief measures to address the aviation industry. Similarly, the Singapore government is allocating SGD 112 million to provide financial relief to airlines and the aviation sector struggling to maintain connectivity. All in all, the industry is facing the gravest crisis and would see a lot of setbacks due to this. Hence, we need to fasten our seatbelts and prepare to go on a journey where the Covid-19 has forced new normal.

Economic Impact of Covid- 19 on the Globe: Economics of a pandemic predict there is no industry more severely affected than aviation. Our concern is now shifting more and more to the long term economic impact that the pandemic will cause. The world is officially in a global recession as declared by the International Monetary Fund recently. However, the impact is likely to be felt differently among the developed and developing countries. Lockdowns, while being effective at slowing the spread of the virus, are economically harmful. In a crisis, perfection is the enemy of the good. We have seen governments rushing to close borders and lockdown cities, while also creating financial lifeboats to help citizens and corporations weather the storm. While many of these measures are good and necessary, the haste with which they've been established has left many vulnerable people outside the safety nets.

In rich countries, governments have the capacity to support the economy for months. In developing countries, this is not the case. In India, the government acted with great speed to lockdown the country. But in so doing, it seemed to forget the millions of migrant and casual laborers that make-up a large percentage of the workforce. Many found themselves not only jobless, but also homeless – more or less overnight. With nowhere else to go, and little functioning public transport, many embarked on journeys by foot, for hundreds of kilometers to their home villages, in some cases carrying the virus with them. And many of the world's poor live in overcrowded conditions with little access to facilities to carry out the mandated regular hand washing.

There are similar cases throughout the developing world. South Africa and Brazil, among many other countries, have implemented lockdowns of varying severity, meaning many migrant and casual workers are out of jobs, but with limited or no savings to fall back on. This puts casual workers in an invidious position, either starve, or try to continue working in some capacity and risk either contracting the virus, the wrath of the authorities, or both. And

the governments of emerging economies are not strong enough to support their populations or corporations during lengthy shutdowns. And worse, capital is fleeing to safe havens, which means the US dollar, almost exclusively. The US Federal Reserve is easing access to the dollar for some countries, but this is likely to result in scant comfort.

The US, while rich, is a highly stratified society with a large underclass working in low paying jobs, effectively on a casual basis; most American employment contracts have few protections against immediate dismissal. And even those with decent contracts tend not to have access to statutory sick pay. As a result, jobless claims have skyrocketed – 16 million new claims in the past three weeks. And those were the ones able to negotiate flaky jobless claims websites that continually crashed under the weight of numbers, or visit overcrowded unemployment offices, running the risk of contracting the infection while doing so. Rich countries have, nevertheless, created massive cash lifeboats to support companies unable to continue operating at capacity, or, in some cases, at all. Some countries, like the UK for example, are also creating support packages for the self-employed – such as builders, plumbers and electricians. These packages mean that as the countries come out of lockdown they can rapidly resume economic activity at something close to previous levels. The calculus is that a rapid resumption of economic activity will start fiscal flows to start paying-down the massive debts that governments are establishing.

Impact of Government Notifications on the Aviation Industry: The impact of Covid-19 is severe for both the domestic and international businesses alike across the world. The Government of India has taken note of this and released various notifications. The Ministry of Finance has released a notification on February 19, 2020. It has been clarified that Force Majeure under Manual of Procurement of Goods 2017 would be applicable in this pandemic situation because of the disruption of supply chains. They also clarified that this should be considered as a natural calamity.

The outbreak of the pandemic Covid-19 has impacted the Aviation Sector adversely which was already suffering from huge losses. The Aviation Sector in India has been amongst the biggest loss-making sectors in the country, with Airlines barely managing to break-even. With existing low-availability of credit to maintain day to day operations, the lockdown will have destructive effect on the sector. The government had made an appeal to the airlines to protect the interests of the employees. Despite that, airlines had to cut salaries and terminate contractual staff to remain afloat. Many carriers have put many of its employees on reduced salaries or sabbatical without pay which indicates the losses that the sector is bound to suffer in the days to come. The situation is same with the other stakeholders in the aviation industry.

The Central Government has issued an ordinance namely Taxation and Other Laws (Relaxation of Certain Provisions) Ordinance, 2020 on 31st March, 2020 wherein an amendment has been brought to the CGST Act which introduced a new section 168A which lays down the power of government for extension of time limit in force majeure cases. The ordinance includes epidemic so as to deal with the situation of COVID-19. The ordinance was brought in with an aim to release the burden of the companies so as to prevent their collapse in these extraordinary times, which will help the Aviation sector in future which has already been experiencing a severely tumultuous period in the recent times.

The spread of COVID-19 has already resulted in an increase in companies experiencing financial distress as they try to mitigate the impact of supply chain issues coupled with lower customer demand. COVID-19 has significantly affected certain industries, such as civil

aviation, ports & airports, hospitality, tours & travels, and retail to name a few. The disruption in supply chain has also impacted the manufacturing industry, unavailability of raw material and a drop in demand. If the current situation continues or worsens, some cases of insolvency may as well be filed. Government of India has made certain relaxations in this respect as part of the relief package.

Recently, a three judge bench of the Supreme Court issued a notice to the Ministry Civil Aviation that the full amount of tickets has to be refunded which were booked during the lockdown. Justice Sanjay Kishan Kaul said that the non-refund of the tickets booked during lockdown was arbitrary. The petition was moved by NGO Pravasi Legal Cell that airlines which are operating both international and domestic flights are contravening the ministry order which was issued on April 16 directing all the airline operators to refund full amount collected for the tickets booked during the first phase of lockdown. Advocate Jose Abraham argued that the failure to refund the amount for the tickets booked during lockdown following the cancellation of the tickets is a violation of Civil Aviation Requirement, 2008 issued by the Director General of Civil Aviation (DGCA). The plea of the petitioner was that it was the duty of the airlines to initiate a refund without any passenger requesting the refund in case of a cancellation of flight. Instead of initiating a full refund the airlines are providing a credit shell valid up to 1 year.

COVID-19 and its Impact on Airports Revenue: Airport revenue is head-on linked to the traffic levels. In 2019, it is reported that the global airport revenue grew by 6.2 per cent which is around US \$172.2 billion, comprised of 55.8 per cent aeronautical revenue, 39.9 per cent non-aeronautical and 4.3 per cent non-operating. Airport revenue can be broadly classified as Aeronautical revenue and non- aeronautical revenue. The revenue generated through airline terminal space rentals, airline landing fees, usage fee for terminals, gates, services and passenger counts et cetera is accounted in Aeronautical revenue while the income generated through fuel supply for aircrafts, catering (restaurants, cafeterias, vending machines, et cetera), airport shops affiliated with the local tax and duty-free regime, banks and currency exchange facilities, on-board food catering and supply services, parking, advertising at the airports, petrol/automobile service stations, so on falls under non-aeronautical revenue. These airport revenues depend on many factors like size, passenger flow, airline route, types of planes serviced, global economy, local regulations et cetera. So majority airport revenue is depended on the air traffic and passenger flow.

With the pandemic Coronavirus (Covid-19), Aviation industry is considered to be one of the sector which faced most ramifications. To fight the virus, most of the countries had imposed partial or complete travel restrictions and closed the borders. These restrictions had led to the severe downfall in the air travel domestically and internationally in most of the countries. Most of the airlines and airports have shut their operations. Passenger transport is completely restricted but the cargo transport is partially in function. It is estimated by the Center for Asia Pacific Aviation (CAPA) that the first Quarter loss for Airports in Asia Pacific in range of \$5.6 billion, and full year loss at \$23.9 billion. The first quarter loss for airports in India is around \$1.5 billion.

This led to an estimate of 1.5 billion passenger traffic loss in only Asia-Pacific region. Airport Council International (ACI) analyses that there had been about 80 per cent decrease in the traffic flow during January, 2020 to March, 2020 in Asia-Pacific region. The remaining or existing 20 per cent of the traffic is due to the air cargo while, Experts from the Industry assesses that global air cargo is down by 35 percent, which implies that 20 per cent of the traffic leads to minimal or non-existent non-aeronautical revenue. For the air cargo, certain

parts of the airport and airside infrastructure has to be open and functional, which means the overall cost base for the operations remains almost same as the airport costs are fixed. This implies lot of loss to the airports as the utility of the opened infrastructure is not fully utilised. To mitigate these losses, Airports are trying to decrease its expenditure by postponing capital investments and resorting to various cost-containment measures.

However, just like the Airlines, Airports are dependent on the government for support till they are stabilised. For this support, various regulatory authorities have to be approached and various regulations have to be brought forth by the authorities. So, concerned organizations are negotiating with the governments for the aid and finances. Private owned airport owners are also negotiating with the governments for the concessions and finances. However, some of the non-aeronautical sectors like car rentals and parkings places are at major losses as the major negotiations with the governments are concerned with the direct investments but the ancillary/ dependent industries are neglected and aid is not provided.

Impact of Covid-19 on Employees of Aviation Industry: The Corona Virus is creating significant health, social, and economic challenges worldwide. The entire world including India has been badly affected due to the Virus. With an intention to combat and control the spread of the virus, the Government at both the Central and State-level has taken various precautionary measures. Among various steps the nation has been put on lockdown since March 25th, 2020 and the flight services shall remain grounded till further order. The grounding of flight services has stopped the flow of revenue for the airlines, airports and which has directly affected the future of employees which not only include the pilots and air hostess but also the ground staff.

The aviation industry is drying out of cash because of the lockdown which will eventually push the companies on the brink of insolvency. Further, another added pressure on the pockets of the airlines is when the tickets are already booked by the passengers and they are asked to reimburse the amount. It is not only the airlines which are affected, because of the lockdown even airports are badly affected. The airports generate their revenue from various services offered by them at the airport this would include the duty-free goods, car parking, various other incentives which have now come to zero but the airports have a fixed cost & other liabilities. As no incomes are generated from the airports and neither from the airplanes the same has created much of a pressure for the players in the airlines industry to keep the business going.

In order to meet the expenses, the companies in the airline business and in the airports have started opting for various solutions. Some of the airlines have opted for indefinite sabbatical without pay and some have sent their employees on leave without pay. With the revenues coming to zero, the employees are facing deep anxiety as now they are under the fear of facing a job loss, pay cuts and income freeze. Few airlines have already opted for a pay cut of employees which ranges from 10% to 50%. Further, there are airlines who have already terminated employees who were working on a contract basis. Though the government has issued various Circulars, Notification, Guidelines, and Orders to manage and control the situation of the pandemic in India keeping in light the relationship of employer and employee along with their financial position of the employees, which are as follows:

The Ministry of Labour & Employment issued an advisory dated 20th March 2020 to the employers for not terminating the employees particularly casual/contractual. The advisory further stated that the employers shall not opt for reducing the wages of the employee in the

current scenario as it would further, deepen the crisis and will weaken the financial condition of the employee. Though the same is an advisory and therefore it does not have a binding effect. On 24th of March the Hon'ble Prime Minister of India announced a nation wide lockdown of 21 days with effect from 00:00 hours on March 25, 2020, pursuant to the directions issued under Section 6(2)(i) of National Disaster Management Act, 2005 & issued subsequent guidelines under Section 10(2)(l) of the Disaster Management Act, 2005. The Ministry of Home Affairs issued an order dated 29th March 2020 by exercising its power under Section 10(2)(l) of the National Disaster Management Act, 2005 whereby it directed the employers to make the payment of wages on due date without any deduction, for the period their establishments are under closure during the lockdown.

Further, Under the Indian legal system, the employees are categorized into two classes (i) Workmen, (ii) Non-workmen (executives), and on the basis of their category in which they fall into a set of regulations that are applicable. Workmen - If an employee falls under the category of workmen the relationship between the employer and the workmen will be governed by the Industrial Disputes Act, 1947 which makes an obligation on employers to give a 21 days prior notice if in case the employer intends to bring any detrimental change in terms of the employment of the employee listed in the fourth schedule.

The Fourth Schedule of the Industrial Dispute Act deals with (i) wages; (ii) social security contributions; (iii) compensatory and other allowances; (iv) hours of work, rest and shift working; (v) leave and holidays; (vi) withdrawal of customary concessions or privilege; and (vii) introduction of new rules of discipline or altering existing rules. Non-Workmen (executive) - For an employee falling under the category of Non-workmen his relationship with the employer will be covered in accordance with the terms of the contract which was executed between the parties. Therefore, if an employer intends to reduce the headcount of the staff, he has the full power to do it under the Industrial Dispute Act (hereinafter referred to as "Act") or in line with the Contract between the employer and the employee.

Post Covid-19 Crisis in Aviation Sector: Aviation sector, predominantly airlines face an unprecedented crisis in the wake of Coronavirus pandemic. The international Air transport Association estimates that the global aviation industry will lose \$252 billion in 2020. Some analysis show that the overall drop in global GDP is 6% due to this pandemic and several restrictions imposed by the governments will flatten the curve. Several governments had provided bail-outs for Industry to sustain the crisis. To quote some, United States federal government had issued initially, \$50-billion bail-out fund, of which, certain part goes to the airline workers, while other parts loan to the airlines. This federal bail-out fund has been revised on April 14th, 2020, in which \$25 billion was given for payroll support, and another \$25 billion loans for passenger airlines and \$10 billion for cargo airlines and aviation contractors. United Kingdom had initially did not announce any industry-wise bail-out, however, the government had given Easyjet a 600 million pounds loan. But the government had not given such liberty to the Flybe, a smaller secondary airline and as consequence, it collapsed.

This is not the situation in the Europe and UK. The worst affected Europe is facing much more crisis. Italy had re-nationalised Alitalia, forming a new-state owned entity with investment of US\$650 million. French government had indicated to bail-out Air France/KLM with \$6.5 billion bail-out package. Some airlines had applied for loans to gain stability and few got through it while some airlines are rejected loans. Australia's Qantas and Singapore Airlines had successfully secured \$660 million and \$13 billion loan respectively, while

Virgin Australia was denied a \$880 million loan, which subsequently plunged into voluntary administration.

It is not the first time the aviation industry is dependent on the bail-outs by the governments. Previously, a V-shaped crisis was observed due to 9/11 attacks. The governments had responded and provided bail-outs and moral support then. Now the crisis observed are U-shaped. This is however, will be confirmed when the airlines resume the routine and the aircrafts leave the parking spaces. When the air transportation is resumed, the likelihood of routineness which was practiced till December, 2019 - January, 2020 may not be seen. This is due to various reasons.

The foremost is the chances of domestic and minor airlines to survive the pandemic. As stated earlier, the governments had provided incentives and bail-outs and are also entering into bilateral and multilateral agreements to save major airlines. The extent of the success of these negotiations is questionable. Though some negotiations achieve success, the likely chances for domestic and debt-ridden airlines are contentious. So the mergers and some acquisitions are likely on seen. There are also some airlines which are partially or completely nationalised and for some the negotiations are under process.

That being one, the bail-outs and aids provided by the government are by loans and some by sale of equity. This indicates the change of owners or major stakeholders/shareholders. The loan is assured by the shares of airlines and certain conditions on the distribution of equity amounts in coming years. These circumstances may lead to the organizational restructuring. The repayment of loans adds additional burden to the airlines, as the passenger movement Post-Covid is uncertain. The economic recession, fall of consumer confidence, et cetera are some of the factors which need to be addressed for the revival of the Industry.

After the restrictions are lifted, the security measures taken by the concerned governments are strict and compliance by the airports and airlines is difficult to achieve. To gain the confidence of the passengers, the airlines may opt for the single aisle aircrafts and to optimise the decrease in travel, the airlines may decrease its fleet. Some surveys indicated that the dependence on the small and medium size aircrafts will be more than the large aircrafts. Airports have all new challenges ahead. With the screening and safety, security measures which are required to control and stop new cases of virus, airports have to adapt to the screening technologies, have to have thermal scanners and other biometric and advanced disinfection technologies for all the passengers, crew and employees. Other likely issue for aviation industry will be the Visa regulations, which countries may implement post-covid-19. Countries may impose strict bans or restrictions on the travels from the most affected areas. USA and Europe are most effected countries and travel to and from these countries are more and they form one of the busiest air routes. Now that the impact in these countries is more, future travel from and to these places may be affected.

On the overall analysis of scenario, and predictions by various experts, the major task for the airlines is the massive optimization of their fleets, clearing the loans, adhering to the compliances by various governments, brings back the confidence in passengers to travel, et cetera. Another concern for the airlines is the fares which are regulated by the concerned authorities in various countries. If the existing airline, after the whole crisis, wants to make good the losses by rise in prices, the regulatory authorities and the consumer protection programmes of the governments play a deterrent role.

Covid - 19 and the New Normal in Aviation: Management by disruption has been adopted by many companies in the past to make a paradigm shift in adapting to the new technologies or new business models or to suit the new environment resulting from acquisitions, mergers, etc. Unlike such a change management, the spread of COVID-19 virus across the globe is a disruption unprecedented. Almost the entire world population is either under lock down or trying to cope with the virus spread. Aviation industry, being a global activity in nature, has been greatly impacted by this disruption. There will be references like pre and post COVID period. The impact and damage assessment will be unrealistic till the virus spread is largely contained. However, we can never expect normalcy to be restored in aviation and there will be new normals evolving with new bench marks. Disruption caused by COVID-19 spread across the globe is likely to result in the following challenges and opportunities.

Challenges: Latest IATA survey reveals that 86% of the passengers surveyed in 11 countries would wait for up to 2 months after lockdown to resume air travel while 40% would like to travel only after 6 months. The lack of passenger confidence and fear psychosis may result in fewer travellers. There is going to be a seismic shift in the revenue models for airports and airlines. Many private operators may find it economically unviable to operate airports and airport management may shift to public domain as in pre-liberalisation times.

Aviation industry needs to quickly accept that the standard operating procedures (SOPs), protocols, frameworks, business models and the whole eco-system around the aviation activity will be different. Some airlines have announced closure and many more are expected to follow suit. Numerous leasing companies will be battered. Many aircraft, especially the wide bodied ones, will remain grounded as the cost of maintenance will be too high with lesser revenues. MRO services have to re-align to cater for the likely increase in smaller aircraft. Many jobs across verticals will be lost. IATA is expecting the aviation industry job loss to the tune of 29 lacs in India alone. Large scale multi-skilling and re-skilling will be needed to create lean workforce. Many crew members will lose currency of ratings due to aircraft being on ground for long requiring regulators to give the required waivers. Air Crew may even lose their licenses due to medical issues and non-renewal of medical status.

Social distancing will become part of life, longer waiting, longer turn-around times, baggage restrictions etc. Hands free technologies and machine readable documentation will be put to use. Security processes, technologies and SOPs will undergo changes. Baggage handling will be different. The concept of lounge will undergo a sea change. Many concessionaires will lose economic viability and wind-up. Luxury brands may vanish from the terminals. Catering and food outlets may find fewer customers. Business travel will reduce drastically as executives will make do with video conferencing and work from being the norm. Public transportation will see less foot fall and private transportation may increase. Expenditure on hygiene and sanitation by airport management will increase. Thermal scanners will be in operation. Last minute cancellations at security gate level will increase due to enhanced checks. Use of private transportation will increase the consumption in petroleum products. Thus, the aviation fuel may cost more. The government and airport management will look for higher taxation on passengers to off-set the revenue loss from other avenues and cater for subsidies. The cost of air travel will go up.

Opportunities: Demand for business aviation aircraft will go-up. Executive jets will be in demand. Charter flights will be preferred for group travel. Cargo flights from hitherto unconnected tier-3 cities/ towns will be more. Agri-aviation and Cargo hubs will generate

traffic. Mergers, acquisitions and consolidations will happen. There may be a huge scope for aviation training especially the multi-skilling. Low cost carriers may rule the skies.

The world will never be the same for aviation and almost every rule book related to aviation activity will need to be reviewed to align with the new eco-system that will evolve. There can never be a normal that existed before 1st January, 2020 in the world aviation. Many established names may vanish and the new ones will arrive in due course. All stakeholders, be it the travellers, operators, aviation shippers, supply chain managers, employees, investors, regulators et al will have to accept a slow process to rise from the abruptness in closure of aviation operations. Let's tighten our seat belts for a long haul in recovery from the current situation while hoping that virus spread is contained soon.

Best Practices: Airport and airline managements are ordinarily required to provide training to handle potential outbreak situations, additional precautions and recommended practices in post COVID 19 times include - Contactless security processes, Strengthening the medical facilities at the airports, Medical screening, both at the gate and on the aircraft, who appear to be symptomatic for COVID-19, and conduct an appropriate medical inquiry, Cabin baggage restrictions, Make sure the air ventilation in the cabin is compliant with aviation standards and functioning properly, Flight crew to make regular safety announcements, reminding passengers who experience flu-like symptoms to seek immediate medical attention, Facilitate frequent pilot communication with crew members, air traffic control, and any other necessary personnel or authorities in the event of an outbreak, Upon discovery of an infected passenger, provide notice to appropriate authorities, arrange for disinfecting procedures for the aircraft, and assistance to that passenger and others who may have been exposed, Standard operating procedure for contact tracing for passengers who may have been exposed to COVID-19 during a flight.

Bailout Essentials: The global outcomes of the crisis, then, are firmly anchored in national responses. The airline industry is cyclical: it is used to peaks and valleys. Bailouts have repeatedly been vital for airlines, so many countries have some sort of precedent to go by. In any bailout, the key question is whether this is a solvency or liquidity crisis. Solvency means that the airline will be very unlikely to ever remain financially viable. Liquidity means that the airline has a high risk of running out of cash flow but should be solvent soon, if supported. Assessing this is sometimes complex. Cash is king. “Streamlining” – a fancy word for cost cutting – can help. Unencumbered assets such as aeroplanes can be sold, or used as collateral for loans. But many planes are often leased, so this may be problematic.

Existing contracts must be reviewed. Breach of covenants, which are legally binding promises to do (or to refrain from doing) things in a certain way, may need to be waived. For instance, lease agreements for the planes often require flights to carry on, and business as usual is suspended at present. Other agreements require flights to maintain landing spaces in airports – leading to the “ghost planes” many were appalled by earlier on in the crisis, and that still continue.

Certain financial tests may not be met, such as how much debt there is compared to earnings. These can alarm creditors. And this can lead to deterioration in bond credit ratings, reflecting increased financial distress. Other triggers may also arise. Defaulting on one financial contract usually requires informing other creditors. This can trigger defaults on other agreements, creating a domino effect. So renegotiating operating and financial contracts is crucial. Airlines may have to pick and choose who to pay first. Unions must be kept happy, and other stakeholders must focus on recovery. All this means that state bailouts, help and

other guarantees are crucial for the industry to survive. In the US, for example, net operating losses are carried forward and used to shield revenues and offset these from tax for when things return to normal.

If liquidity is the problem, the real issue is time: how long will it take for the airline to get back on its feet and resume flying more normally? If solvency is the problem, the company cannot survive the demand collapse it is facing. The COVID-19 pandemic is such a fraught time for airlines because of the difficulty in predicting when the crisis will end. This can complicate determining whether it is a more temporary liquidity crisis or a deeper solvency concern. Airline norms suggest that 25% of revenues should be kept in case of any emergency, but this has tended not to happen recently. Corporate earnings have generally not been held for a rainy day, and now that rainy day has arrived. This creates a classic moral hazard problem: many airlines seem to act as if they are too important to fail, because in the end, they believe they will be bailed out. And regulation does not otherwise hold any excesses in check.

Compounding this, some US airlines have recently been accumulating cheap debt, due to low interest rates and lots of credit availability. The five big US carriers, instead of paying off debt, have been spending 96% of available cash on stock buybacks. Many question whether airlines should be bailed out in these circumstances. Limits on paying dividends, buyback of stock, and other terms would logically apply here, as in the earlier US bailout measures announced in March. While the US case may provide a helpful initial focus, the UK approach is likely to be highly influential, perhaps more so given the reduced resource level – and greater level of climate awareness – there. As Darren pointed out earlier, one model does not fit all but this may offer a useful comparative framework for other approaches that favour national champions or nationalisations.

The UK is reportedly considering partial nationalisation, such as in the case of British Airways. British Airways has furloughed 35,000 employees, with many pay packets supported by the government – for now. British Airways appears better placed to cherry pick key routes, assets and companies as it ranks in the top group for liquidity. If Virgin Atlantic were to collapse, its size means it may fit in the too important to fail category. It appears that bailout talks are ongoing but Richard Branson's life as an offshore UK resident, and Delta's ownership of a 49% stake, present potential political clouds. Questions about whether it should get state aid given current crisis conditions also arise. This is generally forbidden, although the EU has temporarily indicated a COVID-19 relaxation of the rules. No environmental strings have apparently been attached, as former EU officials and others have suggested should be the case. Overall, the survival of the global industry therefore depends on bailouts, not only to keep airlines afloat but also for the wider travel and leisure ecosystem.

Implication of the Force Majeure Clause in the Aviation Industry during the Covid-19 Endemic: The World Health Organization (WHO) and the Ministry of health and Family Welfare on 19th February, 2020, had declared that the disruption of the supply chains due to spread of coronavirus in China or any other country should be considered as a case of natural calamity and “force majeure clause” may be invoked, wherever considered appropriate, following the due procedure. Now, let's see what Force Majeure is and why it is important to understand the significance of the Force Majeure clause in the current scenario.

Definition of the term: 'Force Majeure' - The origin of the term is traced back to the French meaning 'greater force which is defined in the Collin's dictionary as “force majeure” as “irresistible force or compulsion such as will excuse a party from performing his or her part of a contract”.

The Cambridge Dictionary also defines the term as “an unexpected event such as a war, crime, or an earthquake which prevents someone from doing something that is written in a legal agreement”. The question that arises in this regard is whether the event of Covid-19 pandemic can be considered as a Force Majeure event for all the agreements and whether it can be invoked by the parties claiming that the contract has been impossible to perform? Will it be considered as the default of the parties or a breach of contract?. Now to be called as a Force Majeure event, there are a few conditions which need to be fulfilled in order for an event to be considered as a force majeure event such as- The occurrence of an unexpected event, Neither of the parties had any control over such an unexpected event, Such an event was not foreseen by the parties, The unexpected event has rendered the performance of the contract impossible, The parties have taken all the necessary measures to perform the contract or mitigate the damage.

Legal position of the doctrine of Force Majeure: Although, this principle is not stipulated in the Contract Act, 1872, it is important to notice that the principle is embodied in Sections 32 and 56 of the Act. The Supreme Court in *Dhanrajmal Gobindram vs Shamji Kalidas & Co.* stated that force majeure is a term of wide import and that precedents have established that “strikes, breakdown of machinery, which though normally not included in '*vis major*' are included in force majeure”. Such clause is provided in contracts in order to protect the interests of the parties from consequences of an unexpected event on which the parties have no control. The specific language of the Force Majeure Clause in the contract will determine whether the outbreak of Covid-19 can be considered as a Force Majeure event. In circumstances where there is no express mention of terms 'epidemic' or 'pandemic' the event will be regarded as an Act of God. But any interpretation will have to be carefully considered.

An important question that arises out of this is how has the performance been affected or obstructed or delayed by the outbreak? As it is already mentioned that an event to be considered as a Force Majeure event, the performance has to be rendered impossible as a result of such event and also the parties to the contract have taken all necessary measures to perform the contract or at least mitigate the damage. When faced with such crucial questions, the courts have attempted to clarify that just because the performance of the contract becomes more expensive or economically unviable to perform, the Force Majeure clause cannot be invoked. Now, what happens to the contracts which do not have a Force Majeure clause? Normally majority of the contracts have an FM clause. However, the contracts that do not possess such clause can take their resource to section 56 of the Indian Contract Act that lays down the Doctrine of frustration.

In the landmark case *Energy Watchdog vs. Central Electricity Regulatory Commission*, The Supreme Court had held the doctrine of frustration has to be interpreted within narrow limits and shall not be attracted as long as the fundamental basis of the contract remains unaffected. In cases where the contract provides for an FM clause, it would be given primacy over the doctrine of frustration. The Court also made it clear that where the performance of the contract is otherwise possible, the mere fact that there is an increase of price would not absolve the parties from performing the contract on the ground of impossibility to perform the contract.

Although this is clear that in the light of the present scenario, the FM clause will be put to test, but the language and the text of the contract and the FM clause stipulated in the contract will play a pivotal role in determining whether the performance of the contract is impossible or not. The onus of proof will fall on the non-performing parties to prove that the efforts have been made to mitigate or avoid delay or hindrances and occurrence of such event was not anticipated in the time of entering into the contract. Therefore in such situations, informing the other party about any delay or hindrances will play a crucial role.

Implications of Force Majeure on the Aviation Industry: Now, let's see how this affects the airlines industry. One of the major industries suffering from this pandemic is the airline industry. It is already suffering from low availability of credit to maintain their day to day operation and has been plagued by rampant corruption. The Federation of Indian Chambers of Commerce and Industry (FICCI) has suggested that the government should declare that force majeure applies to all civil aviation contracts to save the domestic civil aviation industry from the COVID-19 induced crisis.

In order to stop the virus from spreading, the passenger airlines, domestic and international both have been suspended for an indefinite period. In such an extraordinary situation the airlines are seeking invocation of force majeure by the government to defer the payment of taxes, oil charges, aviation turbine fuel and salary to workers. Most of the airlines capital reserves would be wiped out if the situation persists for more than three months. FICCI also recommended that in order to cut down the cost of fuel, the Oil Marketing Companies may be directed to extend unsecured interest-free credit terms to the aviation sector as the aviation turbine fuel is one of the three major costs for domestic airlines.

Force Majeure in Select Airline Operator Agreement: Airline Operator Agreement is a civil aviation agreement which is generally entered into between the Airline Company and the Airports Authority of India wherein, the airline company gets contract to fly its airplanes as per the schemes launched by the Central Government and also the airline get to use the airports of India. The agreement consists of the relationship between the parties, the amount payable on transactions and so on. The agreement lays down certain conditions where the Selected Airline Operator shall be permitted to suspend the performance of its obligations in an event of Force Majeure where the performance of its' obligations become impossible. For invoking the clause in the agreement, certain conditions need to be fulfilled. They are - the performance of an obligation gets affected adversely; Situation is beyond the reasonable control of the Selected Airline Operator; The Selected Airline Operator could not have foreseen the event or could not have prevented the event from happening; The Selected Airlines Operator had taken all necessary measures and exercised skill and care of that of a prudent man; It is not a direct consequence of the negligence or misconduct of the Selected Airline Operator or its inability to perform its obligations.

Circumstances which involve force majeure events - If the selected Airline Operator declare any airport as unusable for flight operations; In events of War, invasion, armed conflict or invasion of a foreign enemy; Revolution, riot, insurrection or other civil commotion, act of terrorism or sabotage; Nuclear explosion, radioactive or chemical contamination or ionizing radiation; Strikes, working to rule, go-slows and/or lockouts which are in each case widespread, nationwide or political but excluding strikes by the employees or personnel of the Selected Airline Operator; Any effect of the natural elements, including epidemic or

plague, lighting, fire, earthquake, heavy rains, tidal wave, flood, storm, cyclone, typhoon or tornado; Explosion.

The abovementioned conditions can attract the clause of Force Majeure in a contract. After reading the circumstances, it becomes clear that in case of an endemic the clause can be invoked in order to save the aviation industry. The dilemma that the Government faced was whether this outbreak can be considered as Force Majeure or not. But on February 19, 2020, the Government of India had declared the outbreak as a natural calamity and said that the invocation of FM clause is possible in present condition.

Impact on the Airline Industry:

Rental payments, force majeure and rent holidays: An immediate consequence of an airline's inability to operate and/or the substantial drop in demand is that some airlines have seen a huge fall in their revenues at a time when advance tickets sales are usually strong. This has been a problem, even for some large and well-established carriers. Airlines have reacted in different ways. Some have approached their lessors and financiers for rent or loan payment holidays or waivers in order to preserve cash. Some airlines are looking to enter into loans, or sell assets quickly in order to raise cash, for instance by the sale and leaseback of aircraft. Some have laid off staff or put them on unpaid leave. A number of airlines have appealed for government support.

Wet leases: Only a few months ago there was a severe shortage of aircraft, especially narrow bodies, largely as a result of the issues concerning the Boeing MAX aircraft, with the consequence that airlines were keen to supplement their fleets with wet leased aircraft. Now, the restrictions on flying mean that there is a surplus of capacity and wet lessees are looking for ways of releasing themselves from commitments to wet lease aircraft over what had been expected to be the busy summer period.

Airport slots: There have been reports across Europe of some airlines flying virtually empty aircraft (so called "ghost flights") to maintain their entitlement to airport slots, as a result of the EU Slot Regulation (EEC 95/93) requiring airlines to operate 80 percent of allocated slots, or face losing their right to slots in future seasons. This so called "use it or lose it" rule has been severely criticized by airlines for this very reason, since it limits the flexibility of airlines when faced with demand reductions. The European Commission has relaxed slot rules during previous periods of financial stress for airlines, for instance after 9/11, during SARS and the Iraq war in 2003, and amid the financial crisis in 2009, and indeed earlier in the COVID-19 crisis in relation to flights to and from China.

Airlines are scrambling to innovate in the face of the crisis. A sector that has remained busy is the transport of cargo, including medical and other supplies around the world, and some commercial airlines have repurposed the holds of their passenger planes for cargo transportation. Unsurprisingly, many airlines have sought to cut costs by grounding fleets, furloughing staff and cancelling new aircraft orders. Several airlines throughout the world collapsed in the months following the Covid-19 outbreak, with UK regional airline Flybe being one such example that entered into administration on 05 March.

Impact of Covid-19 on Airlines due to cancellation of flights and litigation: According to the International Air Transport Association (IATA), at the beginning of 2020 the airline industry was maintaining a long-term annual growth rate of 5.5%. In the current situation,

where governments are drastically reducing travel and airlines are cancelling flights and grounding their fleets, revenue from passengers is reduced to almost zero. This will result in a loss of operating cash flow over the next few months to the tune of tens of millions of Dollars/Euros, in addition to the cost of ticket refunds. Some airline operators around the world have already requested state support due to the sudden plunge in passenger traffic.

The next consequence in the chain of events is that many airlines will not be able to maintain their aircraft leases, directly affecting aircraft leasing companies, which currently account for more than a third of all operational aircraft. Similarly, operators who have orders for aircraft currently in progress will be quick to negotiate with manufacturers to arrange a cancellation or, at best, an indefinite delay in delivery.

In the airport sector, we are already seeing empty terminals. Most international flights scheduled for the next few days anywhere in the world are devoted to the repatriation of residents who have been caught off guard by the health crisis while far from home. Domestic flights have been reduced to a bare minimum due to the restrictions on movement imposed in dozens of countries. For airports, this means not only minimising their activity in the immediate term, but also closing their commercial areas, halting the activity of airport service companies and reducing their operating income practically to zero. The most visible impact is on the airlines as the domestic as well as international air traffic has come to a standstill in most of the countries. Airlines are more fragile than the airport operators at the moment since a considerable percentage of airlines were struggling to survive even before the COVID-19 crisis started showing its impact. So if rescuing these airlines was a tough task before, now it seems next to impossible.

Airlines face different challenges in different parts of the world. While the majority of these are looking to reduce the number of flights in certain sectors, one major challenge discussed was the restrictions due to antitrust laws. These laws restrict the airlines from communicating with each other before cancelling flights intelligently. This may impact certain travel sectors more adversely than others. There was a consensus that even on declaration of force majeure, operators and retailers will face challenges, as their claims will be extremely difficult to prove, and offsetting declining cash flow should be priority for both airlines and airport operators.

COVID-19 and its Impact on Airlines: Airlines around the world are confronting the challenge of a sharp decline in demand, complicated by almost total uncertainty about when the virus will be under control and travel can return to normal. The collapse in demand has forced major airlines worldwide to announce severe cost-cutting measures, request government assistance, and, in the case of certain airlines, ground fleets. Many airlines are seeing more cancellations than bookings. Unless the virus is effectively contained within the next couple of months, we expect the depressed demand environment and reduced global revenue passenger kilometers (RPKs) — a widely accepted metric of air travel demand to persist well into 2021. Moving forward, aviation and the rest of the economy will need to be agile. When, making network and capacity decisions, airlines must stand ready to pivot quickly, especially given the industries increasingly strained financial position. They should consider the probability of different recovery scenarios and understand the financial implications and risks behind each move they make.

On March 23, The International Air Transport Association (IATA) increased its global estimate on lost passenger airline revenue from the latest strain of coronavirus to \$252 billion

for 2020. That was up from an estimated \$113 billion on March 5 and \$29 billion two weeks before that. The new number would put revenue in 2020, 44 percent lower than 2019. Airlines around the world will need as much as \$200 billion in government assistance to survive, IATA now predicts. As airlines weigh financial options to bridge the demand shock, most find themselves with only enough cash on hand to make it through two months. Many have negotiated lines of credits to help them move forward. These are unprecedented times for the industry. Air transportation systems are critical for the vitality of economies, and how governments and airlines collectively manage both the crisis and recovery will set the future course of the industry for the foreseeable future.

Given the global nature of the COVID-19 pandemic that threatens to throw many economies into recession — including the world's biggest, the US — it could take passenger air travel demand anywhere from several months to two years to recover to 2019 levels. This depends on multiple factors including the speed of virus containment, restoration of confidence in air travel, and a return to normal economic and social activity. To cope with the impact of COVID-19, airlines have adopted a pragmatic strategy of reducing capacity in line with falling travel demand to certain geographies that are affected. Global capacity was down 19.4 percent in March and is expected to fall close to 60 percent in April, according to the OAG, a provider of digital flight data and analytics.

Despite record order books, the financial uncertainties caused by COVID-19 are expected to compel airlines to defer or cancel new aircraft deliveries. In the months after 9/11, new aircraft orders decreased, cancellations increased, and the pace of commercial deliveries dropped throughout 2002 and 2003. As a result of COVID-19, we expect a more significant and immediate reduction, with operators deferring or even cancelling deliveries where possible until at least the third quarter of 2020 and possibly longer. This will include some of 737 MAX aircraft delayed by the 2019 grounding of the jet by regulatory agencies.

Passengers' rights to refunds: On the consumer side, the worldwide travel restrictions have brought into consideration claims under Regulation (EC) 261/2004 or 'EC 261', more commonly known as the Flight Compensation Regulation. In ordinary circumstances, EC 261 would entitle consumers to up to €600 in the event of a flight delay or last-minute cancellation.

As flight dates approach and airlines cancel or reschedule flights to later dates, the question follows as to whether Covid-19 constitutes "extraordinary circumstances" so as to engage the regulation. A communication from the European Commission on 18 March has clarified that Covid-19 does engage the provision, and states that Article 5 of EC 261 obliges the operating air carrier to offer the passengers the choice of:

1. Reimbursement (refund), or
2. Rerouting at the earliest opportunity, or
3. Rerouting at a later date at the passenger's convenience.

In circumstances where the carrier cancels the journey and offers only a voucher instead of the choice between reimbursement and rerouting, this offer cannot affect the passenger's right to opt for reimbursement instead.

The issue of compensation for the cancellation of flights was also considered in the US, after the US Department of Transportation issued an enforcement notice on 3 April 2020 warning

airlines that they are required to refund passengers for flights that are cancelled or significantly delayed as a result of the Covid-19 outbreak. Democrat senators criticised the airlines for “obfuscating” passengers’ rights to refunds by offering travel vouchers as the default option and requiring passengers to undertake convoluted steps to request refunds instead.

In addition, the US Department of Transportation reminded airlines of their “long-standing obligation to provide a prompt refund to a ticketed passenger when the carrier cancels the passenger’s flight or makes a significant change in the flight schedule and the passenger chooses not to accept the alternative offered by the carrier”. Despite this, just two weeks later Delta Air Lines became the latest airline to be sued over their Covid-19 refund policy. Delta Air Lines currently faces a proposed class action in Georgia’s federal court. The claim states that Delta is not offering full refunds, but only re-bookings or travel vouchers.

How the crisis has affected the litigation process: The litigation process that facilitates personal injury or fatal accident compensation claims has also been affected. Over the past month, the way litigation is conducted has drastically changed, becoming a predominately online function. The courts and law firms alike have effectively closed their premises throughout the UK. This has led to the rapid uptake of technology that allows individuals to work from home, and to continue court functions so that access to justice can prevail. The judiciary has published guidance on how the court will tackle the issues presented by Covid-19.

While telephone hearings were not unheard of before Covid-19, the use of video technology such as Zoom or BT MeetMe demonstrates a commitment by the judiciary to continue as many hearings as possible. The way a hearing will take place will be decided by the judge or magistrate prior to the hearing, and they will only allow the hearing to take place by video or phone if they are satisfied it is in the interests of justice for those involved. Stewarts led the way in one of the UK’s first High Court virtual trials. On 19 March 2020, a judge ruled that the trial in the case of ***National Bank of Kazakhstan & Another v The Bank of New York Mellon & Ors*** should be allowed to continue. This was one of the first rulings on the continuation of a civil trial despite Covid-19 and an important indication that the use of technology should allow court business to continue as normal.

There are some events, such as trials that require a jury, which cannot be conducted remotely and the Lord Chief Justice has confirmed they will not continue until appropriate precautions have been put in place. In a final acknowledgment of compliance with the online process, documents must now be signed electronically, and the court has made it clear that unsigned documents will not be accepted under any circumstances. This poses issues for individuals who do not have access to the requisite technology to do this, and these are being dealt with on a case-by-case basis.

Aviation litigation faces the same challenges posed by the restrictions to the litigation process. Whilst there has been a reduction in the volume of commercial and private flights, the Covid-19 situation has highlighted the importance of being responsive to change and the need to adapt the way we work. It is undeniable that the world that comes out of lockdown will be different to the one that we started with and Stewarts’ successful transition to the work from home model has demonstrated a readiness to address those changes.

Indian Scenario: Post Covid, megatrends such as the dramatic rise in remote working, government or organisation-imposed limitations/restrictions on air travel, greater reliance on locally-oriented supply chains as well as avoiding non-essential travels will impact the recovery demand in the aviation industry and may lead to major overhaul in the management and operation of the airline industry.

In order to fly safely through this turbulent time, it is of utmost importance that the airline companies launch a crisis management team or as its being coined by some in the industry – “Plan Ahead Team”. This Plan Ahead Team will be responsible for collecting forward looking intelligence and provide a Post Covid-19 flight plan to guide and accelerate decision making. Following are some of the of the challenges/considerations which airline companies in India may consider while formulating their Post Covid-19 flight plan:

a. Third party contractor agreements/Hedging arrangement for jet fuel prices:

Determination of the optimal size and dimensions of their networks and fleet will hold the key to the survival of airline companies. These companies may have to revamp their strategies vis-à-vis the air travel restrictions imposed by the governments to identify routes that are most likely to recover basis demand, regulatory and market structure scenarios. The determination of routes that are most likely to recover will determine which fleet/route to re-commission. For the routes that could not be re-commissioned or are partially commissioned post Covid-19 and withdrawal of lockdown orders, the airline companies may have to renegotiate/re-assess the legal risk that may arise pursuant to their contracts with third party contractors engaged for *inter alia* refueling; catering; runway/taxiway construction and repair; aircraft maintenance and overhaul; crew training; and flight dispatch.

Further, airline companies must also consider revisiting/re-negotiating their existing contracts for hedging the jet fuel prices. Most of the airline are locked into contracts for hedging the jet fuel prices. There has been a steep drop in the prices of jet fuel as an upshot of the current crisis. Accordingly, the airline companies will have to pay their higher hedged amount for jet fuel, creating hedging losses. In this context, the existing provisions of these contracts become relevant to determine the leverage of discussions from a legal rights perspective.

b. Financing Arrangements: Given that the airline companies have suspended all their business, it would imperative to ascertain if defaults would get triggered under the various financing agreements entered by the airline companies. Where an event of default is only triggered upon a ‘voluntary’ suspension of business, it may be argued that such temporary cessation of business due to the virus outbreak is a direct consequence of the government regulations and therefore outside the scope of such provision.

Further, it would be relevant to check if an event of default is qualified by a requirement that a suspension of business has a “*material adverse effect*” on the borrower’s ability to perform its contractual obligations. If there is a significant impact on the borrower’s ability to pay, this will likely satisfy the test of ‘*material adverse effect*. Additionally, it is expected that post-Covid-19 and lifting of the lockdown orders, for reasons including financial and operational difficulties, the airline companies may not be able to commence operations in all the sectors or may not be in a position to re-commission their entire fleet. Given the aforesaid, it would be relevant for airline companies to review the event of default provision relating to ‘cessation of businesses in their financing agreements. Cessation of Business would typically include events where a company ‘threatens’ to suspend or cease to carry on its business and therefore, one may argue that such temporary closures post Covid-19 and/or

lifting of lockdown orders, would constitute a ‘cessation’ of business. It would be prudent for airline companies to review their facility agreements when contemplating Covid-19 related measures and consider the impact of such measures may have on their financing arrangements. These tests can be carried out during the period of lockdown, such that the provisions can be re-considered by the parties.

c. Aircraft Lease Agreements: The airline companies may have to revisit/review their aircraft lease agreements. The airline companies may consider approaching the lessors for seeking concessions in relation to the lease obligations including ‘rental holiday’ on account of liquidity crunch consequent to fall in ticket receipts post Covid-19. While the lessors may be entitled to decline requests for concessions on lease obligations, the commercial reality may well be that lessors will have to assess whether supporting an airline in some way may improve their financial health in the aftermath of the crisis or whether such benevolence will only delay the end of a business that was struggling in any case. It may be worthwhile to consider that the relief package/concessions which an airline company may seek from the lessors may include *inter alia* a standstill for an agreed period with an agreed repayment schedule to recapture the unpaid rents, forbearance on event of default at a cost.

d. Governmental Support: Globally, the market structure for airline industry is set to witness a major revamp. This change will be significantly influenced by government responses to the crisis and types and levels of support extended to the airline industry. For instance, several European countries have announced support for airline employees as a panacea to the airline companies for drastically reducing their employee costs. The United States is offering a rescue package for all carriers that comprises a mix of payroll grants and loans. Similar support has been extended or is likely to be extended (to the employees directly or to airline companies) in the Middle East and some Asian countries. In the absence of specific announcements/ relief measures, the airline companies in India may consider approaching the Ministry of Civil Aviation and/or the GoI for relaxation/waiver in relation to various fees/licenses including airport charges, AAI and Private Airport Operators’ space rentals and infrastructure charges which are to be paid by them. This waiver may specifically be sought in relation to air spaces/sectors, which the airline companies suspect will not be re-commissioned or sectors where the travel demand likely to rebound slowly.

e. Resolution/Restructuring: Globally there are several airline companies which have filed for bankruptcy. Per CAPA-Centre of Aviation, most world airlines would be bankrupt by the end of May. In this context, the Ministry of Finance (“MoF”) has on March 24, 2020, indicated that if Covid-19 crisis continues beyond April 30, 2020, it may consider suspending Section 7, 9 and 10 of the Insolvency and Bankruptcy Code, 2016 for a period of six months to stop companies from being forced into insolvency proceedings in such force majeure causes of default under the commercial agreements (e.g. financing agreements, lease agreements). Additionally, RBI has issued several circulars dealing with the measures to alleviate the Covid -19 impact on corporate India. With this background, the airline companies may consider engaging in dialogues with their creditors/lenders for preparing and implementing a resolution/revival plans which may involve sale or purchase of minority equity stakes, merger and other consolidation opportunities for resolving the financial crisis and liquidity crunch.

f. Import Duties and Trade barriers: Government of India is considering putting in place several trade restrictions/embargo on the import of goods from China. The airline companies in India import spare parts including generator control units for their inventory from China.

The prices of these spare parts may be increased due to the embargo/trade restrictions imposed by the Government of India.

Will the aviation industry recover? This is not the first time that the aviation industry has faced hardships and challenges. Historically, pandemics such as for example SARS has shown to have a V-shaped impact on our industry. Although it does not serve as a guarantee for similar development in the future, the aviation industry has historically recovered rapidly from outbreaks and pandemics.

Pandemics and outbreaks are not the only challenges aviation has been faced with. The industry has also been challenged by oil crisis, acts of terrorism and war. The resilience and adaptability has enabled the aviation industry to recover and continue to grow despite these events. It can be argued that the COVID-19 situation is unprecedented in scale, and thus the recovery might look different or take longer than it has in the past. Predicting the outcome of this situation is a futile attempt at this point in time, but it is reassuring that signs of recovery are emerging from the regions which has dealt with the situation the longest.

Airports are two-sided businesses, engaging in a commercial relationship with both airlines and passengers. They receive their revenues from two primary sources: aeronautical activities and non-aeronautical activities. Both revenue streams are vital to support the sustainable development of airports. They are used to recover the large capital costs incurred by airports—and these are significant as the airport industry is highly asset-intensive—as well as operating expenses and especially personnel expenses.

The impact of COVID-19 is challenging airports on both of those revenue channels. The shortfall in the number of passengers and the cancellation of flights leads to reduced revenues from airport charges (landing charge and parking charges paid by airlines for instance, and passenger service charges and security charges paid by passengers). While aeronautical revenues are being challenged, the cost base for airport charges remains unchanged as airports can neither close nor relocate their terminals during the outbreak. Non-aeronautical sources of revenue usually provide diversification of airport income streams, but they also serve as an additional cushion during economic downturns. With the COVID-19 impacting, to a large extent, Chinese passengers, it creates a wider-effect for airports worldwide as passenger traffic from Eastern Asia tends to generate comparatively high revenue for retail concessions and other non-aeronautical services.

ACI forecasted that, prior to the COVID-19 outbreak, global airport revenues for the first quarter of 2020 would reach close to \$39 billion (all figures in US Dollars). Based on traffic trends under COVID-19 and constant unit revenues, ACI now estimates a loss of revenues of at least \$4.2 billion. This is approximately equal to the total annual revenues of two major European or Asian hubs combined.

Conclusion:

As Covid -19 continues to spread across the globe, the challenges triggered by it are numerous and unprecedented. In order to successfully navigate through this challenging and uncertain environment, a thoroughly crafted and a comprehensive flight plan will be pivotal. The dramatic reduction in passenger numbers represents a threat to the solvency of the airline companies. The airline companies may consider restructuring their business and debt. However, it would imperative that any such restructurings (business or debt) will have to be agreed and implemented relatively quickly, in order to avoid collapses. It may be worthwhile to note that in stressed situations like Covid-19, being on the fastest trajectory may matter more than having a great plan that may quickly become outdated. Therefore, after the pandemic is contained, GoI may have to provide a relief package for the aviation industry to support economic recovery and prevent collapse of the aviation industry.

The Indian tourism and hospitality industry are severely affected by the outbreak of COVID-19. Once COVID-19 crisis is contained, the GoI may *inter alia* consider developing an appropriate messaging/advertising campaign (similar to '*Incredible India*' tourism campaign) so as to provide necessary impetus to the recovery of the aviation industry post COVID-19.