Volume 18 Number 2 2017/pp.126-141www.usask.ca/esteyjournal

The Estey

Journal of International Law and Trade Policy

Application of the Theory of Contracts to Open Skies Agreements in Air Transport

Ruwantissa Abeyratne[1]
Senior Associate, Aviation Strategies International

The spat between the three United States carriers – American, Delta and United Airlines on the one hand and the carriers of the United Arab Emirates on the other — where the former accused the latter of unfair practices buffered by state aid and allegedly practiced under an open skies agreement between the United States and UAE - brought to bear a global inquiry on whether an open skies agreement which gave unlimited rights on market access could result in the erosion of the " equality of opportunity" to compete embodied in the Chicago Convention. The U.S. carriers alleged that the UAE carriers received zero-interest loans from the UAE government with no arrangements for repayment; grants of land which could be regarded as subsidies; development of massive airports, built and paid for by the state, and very cheap rent facilities and landing charges; low labour rates because the home state bans unions; and low personal and corporate tax rates to promote the growth of business.[2] The UAE carriers countered that they had not received subsidies and were not operating into and out of the United States with undercut pricing and therefore were within their rights under the agreement. The 2016 award of the Nobel Prize in economics to two economists for their Theory of Contracts highlights the significance of the theory in its application to open skies agreements, which this article analyses in some detail.

Keywords: Chicago Convention; competition; equality of opportunity; open skies; Pareto optimal contract; Theory of Contracts

1. Introduction

In October 2016, the Nobel Committee decided to award the Sveriges Riksbank Prize in Economic Sciences for 2016 to Oliver Hart of Harvard University and Bengt Holmström of Massachusetts Institute of Technology for their contributions to contract theory, through which the two prize winners gave insight into real-life contracts and institutions, as well as potential pitfalls in contract design. Their Theory of Contracts addresses conflict of interest between the parties through a comprehensive framework for analysing many diverse issues in contractual design. The genesis of their contributions in this area lies in a paper presented in 1985 by Hart and Holmström titled "*The Theory of Contracts*" at the World Congress of the Economic Society, Cambridge, Massachusetts, the revised version of which was published in August 1986.[3] In the paper, the authors subsume the main feature of the Theory of Contracts as follows:

> The design of a Pareto optimal contract[4] proceeds by maximizing one Party's expected utility subject to the other Party (or parties) receiving a minimum (reservation) expected utility level. Which Party's utility level is taken as a constraint does not matter usually, because most analyses are partial equilibrium. When there is perfect competition ex ante, this reservation utility can be interpreted as that Party's date zero opportunity cost determined in the date zero market for contracts. When ex ante competition is imperfect, the parties will presumably bargain over the ex ante surplus from the relationship and so the reservation expected utility levels become endogenous.[5]

The authors addressed the above principle with regard to the question of economic credibility of a contract in three scenarios: judicial; qualitative and aggregate features of a contract; and the penalties for breach of contract as related to indirect costs that would affect equilibrium conduct by the parties. With regard to the judicial approach – allowing the courts to decide on the merits and demerits of a contract based on penalties – determinations of the judiciary were not always found to be consistent, as a judicial approach would not take into account how costly or costless the implementation of a contract or portion thereof would be. In other words, the economic throwback of a contract that would be grounded on the equitable nature of a contract would not enter a process of adjudication. With regard to the second option – the primacy of qualitative and aggregate features of the contract – the authors argue that this option is practical for the equilibrium of the contract to be maintained, rather than the first option, which was entirely predicated on the terms of the contract. The third approach – which is preferred over the other two approaches mentioned – is based on a combination of the two approaches and is predicated upon reputational concerns.

The Pareto optimal contract and the three options discussed above fit in well in an analysis of the Theory of Contracts as it applies to the open skies agreements entered into by states today. Simply put, an open skies agreement is a bilateral or multilateral reciprocal agreement between states which allows untrammelled and unrestricted air transport to and from the parties to such a contract. It could even be a one-sided permission, where a state would open its skies to any national carrier without necessarily seeking reciprocity. The open skies practice would bring to bear the need to consider the combination of judicial penalties and costliness of the operation of air services in two situations: where there is a breach of contract that necessitates adjudication and penalties; and where one party to the contract reduces costs of an operation with anti-competitive practices.

Open skies agreements are entered into by states with a view to circumventing an obstacle to air transport services contained in Article 6 of the Convention on International Civil Aviation (Chicago Convention),[6] which provides that no scheduled international air service may be operated over or into the territory of a contracting state, except with the special permission or other authorization of that state, and in accordance with the terms of such permission or authorization. Opening skies, with a view to obviating governmental interference restricting air transport operations, is a common practice in the commercial air transport world today (the United States has signed more than a hundred open skies agreements), and it mostly serves as a progressive measure towards ensuring liberalization of air transport. At the heart of the issue would be whether an open skies agreement can be carved out in conformity with the basic theory of contracts to be consistent with the Pareto optimal contract.

One of the key drivers of the Theory of Contracts is equilibrium of the contract, which, in air transport terms, is the equality of opportunity to compete with one another.[7] Equilibrium of the contract in the Theory of Contracts does not always mean that both parties should have an absolutely equal share in results. However, if there is an imbalance and an imperfect competition process, the parties can bargain over the ex ante surplus from the relationship, and so the reservation expected utility levels become endogenous based on the resources growing from within. The first consideration in this equation in the context of open skies is the nature and current state of competition.

2. Competition in Air Transport

The strongest thrust of globalization in the business world is its ability to generate competition within and between nations to offer the best goods and services at the lowest prices. The quality of services and pricing in China as an off-shore base have encouraged other nations, such as Indonesia, Malaysia, Thailand, Ireland, Vietnam,

Brazil and Mexico to vigorously compete as viable off-shore bases. Commercially, if this view applies to the industrial world in general, there is no reason why it should not apply to air transport. Niall Ferguson, professor of business administration at Harvard University, draws the interesting parallel to Marco Polo's visit to China in the 1270s when he was impressed by the volume of traffic in the Yangzi. Polo observed that the quantity of merchandise carried up and down made the Yangzi looked like a sea rather than a river. In comparison to this, Ferguson argues that the Thames in the early 15th century was the backwater. Ferguson goes on to suggest that one of the reasons for the success of European states from the 16th century onwards was their opening out to commerce and competition.[8]

China seemingly underwent, in the 1980s through the 1990s, a similar experience to that of Europe, with a radical change in the advancement of competition that was spontaneous and speedily executed. The change came in transferring agricultural property from communes to households. Jeffrey Sachs, an internationally renowned economic advisor to many countries, says this of his experience with China:

> There was nothing gradual about this change. Around seven hundred million individuals in farm households were suddenly farming on plots assigned to the household rather than to the commune. This new household responsibility gave massive incentives to individual farmers to work harder, apply inputs with more care, and to obtain higher yields.[9]

At the Chicago Conference in 1944 leading up to the Chicago Convention several states – seemingly in line with an approach reminiscent of the transformation of China – proposed a multilateral authority that would establish global principles for commercial air transport, where air transport could be open to everyone, foreigners and locals alike. There was opposition to this proposal by states that recognized that they held a position of power and negotiatory advantage in the dispensation of air traffic rights. Historian David MacKenzie records that the Canadian representative to the Chicago Convention, Herbert Symington, on his return to Canada from Chicago wrote to Sir Arthur Street, the permanent under-secretary in the Air Ministry saying that he (Symington) was "apprehensive that the international authority was not going to amount to anything much unless we can get a regulatory convention fairly soon."[10]

There was considerable support for this concept in Chicago. The United Kingdom contended:

> While recognizing national interests we want to encourage enterprise and efficiency which are indeed themselves a national as well as an international interest. And we want therefore to encourage the efficient and to stimulate the less efficient ... only by common action on some such lines as indicated can we reduce and gradually eliminate subsidies, thereby putting civil

> aviation on an economic footing and incidentally very considerably relieving the tax payer. Unrestricted competition is their most fruitful soil.[11]

The United Kingdom seems to have adopted a balanced approach that supported the establishment of air services to serve the needs of the travelling public, while not unduly affecting the rights of states to have a fair share of traffic for themselves.

India, while believing that it was essential for air services to develop rationally, with a certain degree of freedom of the air being the inherent right of every state, went on to say:

> We believe that the grant of commercial rights – that is to say, the right to carry traffic to and from another country – is best negotiated and agreed to on a universal reciprocal basis, rather than by bilateral agreements. We think that only such an arrangement will secure to all countries the reciprocal rights which their interests require. But the grant of any such freedoms and rights must, in our opinion, necessarily be associated with the constitution of an authority which will regulate the use of such freedoms. It will be the function of such authority ... to ensure that the interests of the people, both of the most powerful and of the smaller countries, are secured.[12]

India's position therefore has been to recommend a liberal approach of universal reciprocity within the parameters of control by an authority which could ensure that the smaller nations were protected from being swamped by larger states.

It is important to note that the economic significance of the Chicago Convention lies entirely in its main theme – of meeting the needs of the peoples of the world for economical air transport, whilst preventing waste through unfair competition and providing for a fair opportunity for all states concerned to operate air services. In order to accomplish this goal, the Convention, through the International Civil Aviation Organization (ICAO), has to consider all aspects of economic implications that the operation of international air services by commercial air transport enterprises of the world, particularly those of the member states of ICAO, pose.

In August 1945, at the first meeting of the opening session of the Interim Council of the Provisional International Civil Aviation Organization (PICAO), the Hon. C.D. Howe, Minister of Reconstruction, Canada, said:

> We (Canada) believe that there must be greater freedom for development of international air transport and that this freedom may best be obtained within a framework which provides equality of opportunity and rewards for efficiency.[13]

Dr. Edward Warner, representative of the United States of America (later the first president of the ICAO Council) said at the same meeting:

> Our first purpose will be to smooth the paths for civil flying wherever we are able. We shall seek to make it physically easier, safer, more reliable,

> more pleasant; but I believe it will be agreed also that we should maintain the constant goal that civil aviation should contribute to international harmony. The civil use of aircraft must so develop as to bring the peoples closer together, letting nation speak more understandingly unto nation.[14]

Dr. Warner had notably stressed the purpose of civil aviation to be the promotion of international harmony and dialogue between nations. He had also made it clear that the seminal task of civil aviation is to bring the people of the world together through understanding and interaction. It is clear that, at this stage at least, civil aviation was recognised more as a social necessity rather than a mere economic factor. In addition, through the statements of Minister Howe and Dr. Warner, one can glean the attitude of the international community towards aviation at that time:

> a) that civil aviation was based on equality of opportunity and
> b) that it was a social need rather than a fiscal tool.

The above notwithstanding, the American approach at the Conference to market access, particularly in terms of air traffic rights, is embodied in the statement of Adolf Berle, the Assistant Secretary at that time in the State Department, when he said:

> I feel that aviation will have a greater influence on American foreign interests and American foreign policy than any other non-political consideration …. [It] may well be determinative in certain territorial matters which have to do with American defence, as well as with transportation matters affecting American commerce, in a degree comparable to that which sea power has had on our interests and policy.[15]

This certainly goes above and beyond using air transport to meet a social need on the basis of equality of opportunity.

The First Interim Assembly of PICAO was held in May 1946. This session set the scene for identifying issues that had culminated in the provisions of the Chicago Convention. In the period that followed the First Interim Assembly session, PICAO commissioned a group of experts called Commission 3 to draft a multilateral agreement on commercial rights for aircraft, which culminated in a Draft Multilateral Agreement on Commercial Rights. The draft agreement contained three basic elements:

> 1) a grant of the right to operate commercially to a reasonable number of traffic centres serving as conveniently as is practicable each state's international traffic;
>
> 2) a basic regulatory provision dealing with the amount of capacity to be provided, with subsidiary provisions designed to prevent abuses; and
>
> 3) a provision for the settlement of differences between contracting states through arbitral tribunals with power to render binding decisions.[16]

a. Theory of Contract Law

The problem with contract law is that it is neither descriptive nor normative in that it neither explains what it is in terms of its norms nor does it explain what contract law should be. When this ambivalent and dubious characteristic is translated into the intentions of the forefathers of the Chicago Convention – to connect the world and ensure fair and equal opportunity in competition – the law can only determine the legitimacy of actions of parties to the contract and cannot determine or facilitate the interests of the parties in terms of maximising gains. Therefore, in the instance of an open skies agreement that merely speaks to liberalization of air transport and certain caveats, the theory of contract law is relegated to the background. On the other hand, Hart and Holmström's Theory of Contracts would provide for maximising the gains of parties and is amply suited to drive the liberalization process through an open skies agreement. There are a number of weaknesses in contract law. First, when it comes to competition in air transport the law cannot adequately address the adverse consequences of an airline's activity if it goes bankrupt, as the original intent of an open skies policy would be joint gain between the parties. Second, contract law is parochial in that it would only address the terms of a contract and not externalities that emerge from the implementation of a contract, for example, environmental damage; this limitation is contrary to principles of justice and equity. Finally, the law would not take into account efficiency of implementation of an open skies agreement.

b. Theories of Competition

There are three areas of theory that are applicable to competition in air transport that would go towards helping carriers compete with each other. Jordan Ellenberg, a professor of mathematics at the University of Wisconsin-Madison, in his book *How Not to Be Wrong*[17] explains how one can go wrong if one does not follow mathematical logic in the reasoning and decision making process. The book is about the proper use of probability and statistics and how to reject counterintuitive precepts of mathematical thinking. This approach would apply almost to any discipline or practice, from running a business to politics.

The three areas of theory that seemingly lend themselves to the logic behind success in business are as follow. One is *probability theory*. *Encyclopaedia Britannica* identifies probability theory as "a branch of mathematics concerned with the analysis of random phenomena. The outcome of a random event cannot be determined before it occurs, but

it may be any one of several possible outcomes. The actual outcome is considered to be determined by chance."[18]

The second area of theory is *game theory*, which draws on the discipline of applied mathematics and could be applied to politics and economics. *Investopedia* defines game theory as "the process of modeling the strategic interaction between two or more players in a situation containing set rules and outcomes."[19] Game theory – a quantum theory that deals with anticipatory intelligence – is about maximising returns based on the strategic decisions to be made by "contestants" in economics, trade or politics. When applied to air transport, game theory would help analyze interactions of carriers and the strategies they deploy, thus enabling airlines competing with each other to study these interactions and strategies. The outcome is a formal modelling approach to economic situations in which decision makers interact with other decision makers.

The third area of theory is called *disruptive innovation*, a business concept where an innovation helps create a new market and value network that disrupts the existing market. The theory of disruptive innovation was first coined by Harvard professor Clayton M. Christensen in his research on the disk-drive industry and later popularized by his book *The Innovator's Dilemma*, published in 1997. Examples of disruptive innovation abound in the commercial world. For instance, Wikipedia disrupted the market established and occupied for more than 200 years by (among others) *Encyclopaedia Britannica*. The *iPhone* disrupted the market of the desktop computer and the laptop computer. A good example in the air transport industry is the low-cost carriers that appealed to a new tourist market, replacing legacy carriers in certain segments and routes by introducing a new product that was more cost effective and efficient.

As for game theory, the carriers that consider themselves displaced could well apply their anticipatory intelligence against their opponents. The opposition could also do likewise in anticipating and countering the strategies of its opponents. However, most importantly, disruptive innovation could play its part with a new tool that introduces an "economic market" with a new value network and cluster that could disrupt a repetitive economic environment that does not meet the public's needs for connectivity.

c. Defragmentation of Air Transport

The fragmentation and "divide and rule" in air transport economics must go, even if it means political and military sacrifices on the part of the United States and the rest of the Atlantic states. This would mean relaxation of national interests and foreign ownership and control restrictions on airlines, as well as ensuring the best interests of the consumer of air transport. Aviation should be truly globally shared with other

partners, particularly at a regional level, getting together with the so-called world powers and devising a universally applicable market economy for air transport. As one commentator aptly puts it:

> The liberalization of markets, the construction of a globalized economy and the spread of prosperity are defining legacies of the era of Western primacy. The fundamentals of this order are firmly in place, anchored by institutions like the World Bank and the World Trade Organization. But the maintenance of this order faces significant challenges. Due to the West's political and economic troubles, the Atlantic democracies may no longer be up to minding the store. The United States already seems to have lost its traditional enthusiasm for being the engine behind the global liberalization of trade.[20]

Someone must take over minding the store, and no state has structured and developed air transport as a vertically integrated public utility that is privatized and open to market forces. China is going to be the biggest economy in the world in the years to come. Just as an example, when this equation is applied to aviation one sees a phenomenal trend in China. More than two thirds of the world's new airports are being constructed in China and it is expected that Chinese airlines will triple in fleet size over the next decade, generating phenomenal sales for the world's major aircraft manufacturers – particularly Boeing and Airbus. Better still, China aims to have its own aircraft manufacturers by that time. Of China's five-year plan – expiring in 2017 – one commentator, who has researched China's aviation dreams thoroughly, has said:

> The twelfth five-year plan, the one that included aerospace as a strategic industry, wouldn't officially begin until later in the year (2011) but at the start of 2011 the steps toward China's ambitious future in the skies kept coming …. [T]hey paralleled the leaps the country had previously made in electronics, automobiles and many other fields, and the operative principle did seem to be "everything is about to take off" all at once.[21]

In 1950, the western world had 20 percent of the global population. Now it has only 10 percent. If China were to be divided into countries along the lines of the European Union in terms of population spread, it would have 99 countries. However, China has to be vigilant and guard against a possible collapse in the future of the "growth targets" in its massive growth impetus, which sees what some call "phantom cities and towns" being developed; it has to make sure its managed growth can accommodate this initiative.

The key decisions to be made over the next 20 years are going to be made in the East and not in the West. The rest is going to be stronger than the West in the years to come. There will be a shift in thinking on many issues, including the economic future of air transport – one of the most powerful drivers of the world economy. It will be only

a matter of time before market economies of the East dominate the world and global consensus on applicable principles on competition is put in place. The time has come.

d. Application of the Theory of Contracts to Competition under Open Skies

The concept of open skies in air transport brings to bear an implicit contract of free competition between the parties – in other words a free-for-all – which would ineluctably bring in the Pareto optimal contract model where, when the model is tied in with the Preamble to the Chicago Convention, the parties have to be able to operate air services between their territories with equality of opportunity to compete and therefore maintain equilibrium of the profits derived from the contract. The slightest change of these circumstances would bring in indigenous factors such as state aid and subsidies as well as other natural and imposed factors of competitive advantage to one party over the other.

Competition among air carriers that is based on an open skies agreement is not usually enforced and adjudicated by courts and is therefore reliant upon good faith, practice or custom, and reputation. This makes matters more nuanced than in instances where an adjudicatory body could pronounce upon breach of contract for non-observance of a fundamental term by a contracting party. This is where the Theory of Contracts, apart from starting from formal obligations, adds on a design of formal and informal agreements that impel those with conflicting interests to adopt mutually beneficial measures. In other words, the Theory of Contracts provides a workable base for parties to compromise effectively, with mutually agreed upon motivations and incentives.

One could argue that the Theory of Contracts would stretch the “equality of opportunity” to compete that is contained in the Chicago Convention by adding a new dimension of mutual cooperation to fill in the gaps caused by asymmetry through a flexing of endogenous resources that might benefit one party to the detriment of another. In other words, an open skies agreement – or any other agreement for that matter – cannot be expected to be comprehensive in all aspects and to cover all exigencies of commercial significance. Therefore, when there is a disturbance of equilibrium in the implementation of an open skies agreement, it should be redesigned by the parties to offer each other mutual benefits through compromises. In the least it should be interpreted to achieve symmetry through concessions and mutually beneficial interpretations of the agreement.

3. Anatomy of an Open Skies Agreement

a. Key Provisions

A typical open skies agreement is signed by and between the aeronautical authorities of the parties concerned – whether bilateral or multilateral – and each party confers on the other party's airlines: the right to fly across its territory without landing; the right to make stops in its territory for non-traffic purposes; the right to operate international air transportation services between points on specified routes; and any other rights stipulated in the agreement. Parties may operate flights in either or both directions and combine different flight numbers within one aircraft operation. The important provisions, which make the open skies agreement deviate from the typical bilateral (or multilateral) air services agreement that imposes restrictions on the uplift and discharge of passengers, freight and mail from a grantor state, are that the former grants the airline of the other party the right to serve behind, intermediate, and beyond points and points in the territories of the parties in any combination and in any order (e.g., under the United States/United Arab Emirate open skies agreement Emirates can carry passengers from India through to Dubai and London and into New York with full rights); omit stops at any point or points; transfer traffic from any of its aircraft to any of its other aircraft at any point; serve points behind any point in its territory with or without change of aircraft or flight number and hold out and advertise such services to the public as through services; make stopovers at any points whether within or outside the territory of either party; carry transit traffic through the other party's territory; and combine traffic on the same aircraft regardless of where such traffic originates without any geographic or directional constraints or imposed requirements. Usually an open skies agreement ineluctably requires that such operations pass through the home base of the airline. In other words, a carrier cannot exercise the seventh freedom,[22] traffic.

An open skies agreement usually prohibits *cabotage* traffic.[23] However, on any city pair or segments of the routes, as stipulated in the agreement, any airline of a party may usually operate international air transportation services without any limitation as to change, at any point on the route, in type or number of aircraft operated, provided that (with the exception of all-cargo services), in the outbound direction, the transportation beyond such point is a continuation of the transportation from the homeland of the airline and, in the inbound direction, the transportation to the homeland of the airline is a continuation of the transportation from beyond such point.

A typical open skies agreement would also have a provision to the effect that the airlines of each party will have the right to establish offices in the territory of the other

party for the promotion and sale of air transportation and be entitled, in accordance with the laws and regulations of the other party relating to entry, residence and employment, to bring in and maintain in the territory of the other party managerial, sales, technical, operational and other specialist staff required for the provision of air transportation.

Each airline would also have the right to perform its own ground-handling in the territory of the other party ("self-handling") or, at the airline's option, select among competing agents for such services in whole or in part. The rights would be subject only to physical constraints resulting from considerations of airport safety. Where such considerations preclude self-handling, ground services would be available on an equal basis to all airlines; charges would be based on the costs of services provided; and such services would be comparable to the kind and quality of services as if self-handling were possible.

Another provision often found in open skies agreements is that an airline of a party may engage in the sale of air transportation in the territory of the other party directly and, at the airline's discretion, through its agents, except as may be specifically provided by the charter regulations of the country in which the charter originates. Each airline would have the right to sell such transportation, and any person would be free to purchase such transportation, in the currency of that territory or in freely convertible currencies. The airlines of each party would be permitted to pay for local expenses, including purchases of fuel, in the territory of the other party in local currency. At their discretion, the airlines of each party may pay for such expenses in the territory of the other party in freely convertible currencies according to local currency regulation.

In operating or holding out the authorized services under the agreement, any airline of one party may enter into cooperative marketing arrangements such as blocked-space, code-sharing or leasing arrangements with an airline or airlines of either party, or with an airline or airlines of a third country, provided that all participants in such arrangements hold the appropriate authority and meet the requirements normally applied to such arrangements.

b. *Meaning and Purpose of Open Skies*

An open skies agreement is calculated to increase competition among carriers through increased efficiency and cost reduction, thereby bringing down market prices with the ultimate objective of giving the customer increased availability of air transport services at reasonable prices and value for money.[24] In many instances such agreements increase the number of airlines in a given route or market operating in liberalized market conditions. Under open skies agreements, airlines have more flexibility to restructure their fleets and schedules and engage in code-share agreements with other carriers to

optimise revenues and operations. A corollary would be the increase in the number of routes and number of flights between points, and increasing connectivity. Liberalization under open skies brings in cost reduction and effective gains for carriers. One commentator has categorically stated that the trend towards a very liberal open skies international regime is unstoppable,[25] which implicitly gives the industry the assurance that the problem will solve itself in the years to come. Others have vigorously advocated that, as a panacea to the problem of rigid regulation, market access in air transport should be in the domain of a liberalized international regime. While the former view cannot be disputed, the latter approach brings to bear the compelling need to address the issue squarely, both in terms of whether the desirable approach would be to bring the industry from the current bilateral structure of air services negotiations into a more generalized regime and, if so, what the modalities of such an exercise might entail. As to the former, it is largely a matter of political will. The latter would need some discussion on the legalities involved.

Although admittedly some states are giving effect to the liberalization of air transport by entering into open skies agreements with each other (nationally and regionally), it must be noted that reciprocal open skies policies are only cosmetically liberal, as they are almost always carefully crafted, with every consideration being given to protecting one's interests while at the same time taking care not to jeopardize such interests through open, untrammelled competition. One way to approach this issue might be, again with the political will of states, to revise Article 6 of the Chicago Convention from its negative position to a positive one, where the provision could permit airlines of states to freely operate air services into the territories of each other, subject to the requirement that states whose airlines are seeking to operate services should convince the state which agrees to such operation that such services would benefit all concerned, including the consumer, while at the same time giving the latter the right to refuse if they are not convinced. This would not only preserve the bilateral element as a last resort, but would also encourage competition and, above all, bring some universality to the concept of liberalization, which is much vaunted but rarely put in practice.

4. Conclusion

As already stated, an open skies agreement usually does not represent a complete agreement and therefore may result in asymmetry of gains for one party or another. Often when a dispute under an open skies agreement arises, the solution sought is political, and therefore various other factors of economic relevance come into focus, leaving an aggrieved party no recourse for ensuring fair and equal opportunity to

compete.[26] The law offers only *stricto sensu* application of the contractual terms, which does not help in ensuring the objectives of the Pareto optimal agreement.[27] The Theory of Contracts brings in the psychological and sociological factors of a contract that could provide an equitable base and an alignment of conflicting interests for open and untrammelled competition under an open skies agreement. A classic example offered by the Theory of Contracts is the principal-agent relationship, where the principal has no control over the agent's commercial management of a contract, which could adversely affect the other party to the contract. Here, analogically, the government is the principal and the airline would be the agent. This can be directly applied to the open skies situation, where the government of a state signs an open skies agreement with another government but the agreement is implemented by the airlines, which have a position analogous to that of an agent. The principle propounded by the Theory of Contracts in this case is called *paying for performance*, where an airline unduly benefitting from a legal but asymmetrical practice could be held accountable to the government. Enforcement of an open skies agreement is the responsibility of a state party, which has to monitor investments relating thereto and the effects of such agreement on all parties to the agreement.[28]

The air transport industry is large – accounting for almost 1 percent of the GDP of the United States and Europe[29] – and also capital intensive and complex. In most developed states, control over fares, capacity and market access, which were originally under the purview of states, have been given over to their national carriers, which devolves upon those states increasing responsibility to ensure that their carriers do not unfairly affect their competitors. The ICAO Model Bilateral Air Services Agreement (BASA) recommends that the parties should inform each other about their competition laws, policies and practices or changes thereto, and any particular objectives thereof, that could affect the operation of air transport services, while identifying the authorities responsible for their implementation. BASA also recommends that the parties to the agreement should, to the extent permitted under their own laws and regulations, assist each other's airlines by providing guidance as to the compatibility of any proposed airline practice with their competition laws, policies and practices. A sociological approach to the open skies concept, as contained in the Theory of Contracts, could address any imperfections of implementation of an open skies agreement, allowing the parties to bargain over the ex ante surplus from the relationship so that the expected utility levels could be resolved through endogenous factors.

Endnotes

[1] The author is former Senior Legal Officer and Senior Air Transport Officer at the International Civil Aviation Organization.
[2] See, generally, Hannah E. Cline, Hijacking Open Skies: The Line between Tough Competition and Unfair Advantage in the International Aviation Market, 81 *J.Air L. & Com.* 529 (2016).
[3] Oliver Hart and Bengt Holmström, *The Theory of Contracts*, https://dspace.mit.edu/bitstream/handle/1721.1/64265/theoryofcontract00hart.pdf%3Bjsessionid%3DD2F89D14123801EBB5A616B328AB8CFC?sequence%3D1. See also Oliver Hart and Bengt Holmström, *Contract Theory*, Kungl. Vetenskaps Akademien, Royal Academy of Sciences; Stockholm, 10 October 2016.
[4] A contract where resources are allocated with optimal efficiency, ensuring that a reallocation of such resources cannot be done where one party's situation is improved and another party's situation is made worse.
[5] *The Theory of Contracts*, supra, note 3, at 5.
[6] Convention on International Civil Aviation signed at Chicago on 7 December 1944. See ICAO doc. 7300/9 Ninth Edition; 2006.
[7] The Preamble to the Chicago Convention states, *inter alia*, that the governments that signed the convention 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.
[8] It was Adam Smith who said, "A country which neglects or distrusts foreign commerce, and which admits the vessels of foreign nations into one or two of its ports only, cannot transact the same quality of business which it might do with different laws and institutions." Adam Smith, *The Wealth of Nations* (1776), cited in Niall Ferguson, *Civilization – The West and the Rest*. New York: Penguin Press, 2011, at 19.
[9] Jeffrey D. Sachs, *The End of Poverty, Economic Possibilities of Our Time*. New York: Penguin Press, 2005, at 160.
[10] David MacKenzie, *Canada and International Civil Aviation 1932-1948*. Toronto: University of Toronto Press, 1989, at 226.
[11] See *Proceedings of the International Civil Aviation Conference*, Chicago, Illinois, November 1 – December 7, 1944. Washington: United States Government Printing Office, 1948, at 65.
[12] *Id*. 76.
[13] *PICAO Documents*, Montreal, 1945, Volume 1, Doc 1, at 3.
[14] *Id*. Doc 2, at 2.
[15] David Mackenzie, *ICAO – A History of the International Civil Aviation Organization*. Toronto: University of Toronto Press, 2010, at 3.
[16] *Views of Commission*, No 3, Doc 4023, A-1 - P/3, 1/4/47. See also *C-WP/369*, 22/6/49 for a detailed discussion on the commission's work on the agreement.
[17] Jordan Ellenberg, *How Not to Be Wrong: The Power of Mathematical Thinking*. New York: Penguin Press, 2014.
[18] http://www.britannica.com/EBchecked/topic/477530/probability-theory
[19] http://www.investopedia.com/terms/g/gametheory.asp

[20] Charles A. Kupchan, *No One's World – The West, the Rising Rest and the Coming Global Turn*. New York: Oxford University Press, 2012, at 198.
[21] James Fallows, *China Airborne*. New York: Pantheon Books, 2012 at 32.
[22] The right or privilege, in respect of scheduled international air services, granted by one state to another state, of transporting traffic between the territory of the granting state and any third state with no requirement to include on such operation any point in the territory of the recipient state, *i.e.*, the service need not connect to or be an extension of any service to/from the home state of the carrier.
[23] Traffic between two points in the territory of the granting state on a service which originates or terminates in the home country of the foreign carrier.
[24] "A study released in May by the Brookings Institution found U.S. travelers already save an average of $4 billion per year because of Open Skies agreements – including those that have allowed the Middle East carriers to offer so many new flights to the U.S. The researchers estimated travelers could save an additional $4 billion annually if the U.S. reaches new deals with more countries, including those with a 'significant amount of U.S. international passenger traffic.' One such destination? China, where treaties still limit the number of flights between the nations." See Brian Sumers, The $4 Billion Dollar Reason Why Airlines Are Debating "Open Skies". *Condé Nast Traveler*, http://www.cntraveler.com/stories/2015-08-04/the-dollar4-billion-dollar-reason-why-airlines-are-debating-open-skies
[25] Rigas Doganis, *The Airline Business in the 21st Century*. London: Routeledge, 2001 at 11.
[26] Ruwantissa Abeyratne, *Competition and Investment in Air Transport*. Heidelberg: Springer, 2016, 191-206.
[27] Supra, note 2.
[28] Alan Schwartz and Robert E. Scott, Contracts Theory and the Limits of Contract Law. Yale Law School Legal scholarship Repository, 4-25-2003, http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1011&context=lepp_papers at 19.
[29] Ken Button, *The Impact of Globalization on International Air Transport Activity: Past Trends and Future Perspectives*. OECD, 2008, 1-40 at 8.