



## **ELEVENTH SESSION OF THE STATISTICS DIVISION**

**Virtual, 4 to 8 April 2022**

### **Agenda Item 5: Report of the on-going analytical projects**

Application of a Contestable Market Approach to the Aviation Competitiveness Index  
(Presented by Brazil)

#### **SUMMARY**

This paper proposes the application of a Contestable Market Approach to the Global Aviation Competitiveness Index, taking into consideration the incorporation of the Services Trade Restrictiveness Index of the Organisation for Economic Cooperation and Development (OECD/STRI) for air transport services. It describes the main pillars for market contestability and the drivers for Total Factor Productivity growth, which is crucial for the Global Competitiveness Index (GCI), described in the World Economic Forum (WEF)'s Global Competitiveness Report (2019).

Action by the Division is presented in paragraph 3.

### **1. INTRODUCTION**

1.1 After careful deliberation at the Aviation Competitiveness Index Working Group meeting (ACWG) held in February 2022, it was agreed that Competitiveness in aviation can be defined as the framework under which a country's economic, aero political, financial, and regulatory structures and policies interact to allow market forces and the competition they produce to maximize market output, economic efficiencies, and productivity.

1.2 In this definition, it further describes completion as "a scenario where different commercial firms are in fair and equal opportune contention to obtain resources (capital, labor, technology) -- that are limited only by individual firm-level variations in assets, strategy, price, product, promotion and place -- and causes them to develop new or more products, services, and technologies which give consumers greater selection and better products. The greater the selection of products and goods and services in a market (and therefore the greater the competition in the product market), the lower the prices are for such products compared to what prices would be if there were no competition."

1.3 This working paper suggests a Contestable Market approach to achieve the optimal behaviour and welfare allocations found in a Competition scenario within an industry characterized as a Natural Oligopoly.

## 2. DISCUSSION

2.1 The perfect competition model serves as the standard for a welfare-maximizing market structure, which stimulates the goal to enhance competitiveness. However, the aviation industry is one with a substantially limited number of firms, which leads to the pursuit of a “perfectly contestable market”, that is characterized by optimal behaviour and applies to industry structures such as monopolies and oligopolies.

2.2 Even a “perfectly contestable” monopoly presents similar welfare attributes as found in perfect competition markets, such as: non-positive economic profits, absence of inefficiency in production in industry equilibrium and prices equals marginal costs.

2.3 In order to achieve “perfectly contestable” characteristics, three main pillars are necessary: freedom of entry, freedom of exit and vulnerability to hit-and-run entry.

2.4 **Freedom of entry** does not relate with entry costs. Actually, it means that the entrant does not suffer from disadvantages in terms of production technique nor perceived product quality relative to the incumbent firms. It means, therefore, that the entrants may evaluate their potential profitability in terms of pre-entry incumbent prices.

2.4.1 Since air transport relies heavily on safety trustworthiness, an entrant may face a perceived information asymmetry regarding its services in face of the incumbent competition in a way that a consumer may be concerned about entrant firms without trusted regulatory certifications.

2.4.2 For example, there are several bilateral agreements with protectionist clauses that stipulate frequency limitation and restrictions to firms constituted with foreign capital. This may limit the airline network and consequently the perceived quality of these foreign entrant firms.

2.4.3 In addition, differences in international standards regarding labor, safety, security, and operational requirements may constitute entry costs, since firms that are subject to the limiting standards may not be able to achieve efficient production costs.

2.5 **Freedom of exit** means that the entry costs may be reverted, discounted the depreciation, in the event that the potential entrant decide to leave the market.

2.5.1 The steep initial operating costs in the air transport market, given the costs of leasing or with the acquisition of aircraft, as well as the substantial recurring costs with aircraft maintenance, fuel, insurance, specific crew training, may constitute barriers to exit. The ease of transactions and reverting a significant amount of these costs in the occasion of a market exit dictates the degree of freedom of exit.

2.5.2 There are costs related to safety and security requirements as well, such as the establishment of an organizational structure and the development of procedures, instructions and demonstrations of qualification to these requirements, which are based on international standards and adapted to the domestic context.

2.6 **Vulnerability to hit-and-run entry** means that even temporary profit opportunities may not be neglected by a potential entrant, which might enter the market, collect its gains and then depart with limited costs if market conditions change.

2.7 In addition to these three pillars intrinsic to Contestable Markets, there is the Total Factor Productivity (TFP) growth, which encompasses all parts of the economic growth that is not explained by the growth in the factors of production (labor and capital) and may predict welfare variations among

different countries, reason why the TFP growth is crucial to the Global Competitiveness Index (GCI) described in the World Economic Forum (WEF)'s Global Competitiveness Report (2019). With the TFP drivers include, for example, increasing equality of opportunities, fostering fair competition and updating tax systems and their composition as well as the architectures of social protection.

2.8 To increase the equality of opportunities, it is necessary to provide equitable access to quality education systems, equal access to quality healthcare, meritocratic processes to access fair and dignified employment, and social safety nets to shelter households from temporary hardship can form the basis for a fairer and more prosperous society.

2.9 A regulatory policy that fosters fair competition is one that discourages coordination and unfair business practices, with effective enforcement of these regulations. It uses approaches that address the harmful effects of market concentration without stifling innovation, and the effects of winner-take-all business models. Implementing tax systems with minimal market distortion effects, integrated with the complexity of international tax architecture, the increasing importance of intangible assets and the digital economy.

2.10 The Services Trade Restrictiveness Index of the Organisation for Economic Cooperation and Development (OECD/STRI) for air transport services covers some of these TFP drivers as well as some pillars of market contestability. The OECD/STRI is organized under five policy categories: restrictions to foreign entry, barriers to competition, regulatory transparency and other discriminatory measures. The OECD/STRI for 2020 covered 37 OECD countries as well as Brazil, China, Costa Rica, India, Kazakhstan, Indonesia, Malaysia, Peru, the Russian Federation, South Africa and Thailand. The OECD/STRI constitutes, therefore, a solid indicator to append into the Aviation Competitiveness Index.

2.10.1 Restrictions to foreign entry are related to the protectionist regulation that limits foreign equity participation in airlines, either in domestic or international traffic. They are also related to the limitation on lease of foreign aircrafts with (wet lease) or without (dry lease) crew. These restrictions are linked to the freedom of entry pillar.

2.10.2 Barriers to competition occur when countries maintain public ownership in aviation or non-competitive slot allocation, despite new entrants. They constitute barriers to market entry and, hence, are linked both to the freedom of entry and the vulnerability to hit-and-run entry pillar.

2.10.3 Regulatory transparency covers the time, cost and number of procedures required for establishing a company, based on a benchmark of the 40 best performing countries. Since the majority of these are Sunken Costs, this category is linked with the freedom of exit pillar.

2.10.4 Other discriminatory measures encompass regulation related to taxes, subsidies and public procurement, such as preferential measures for local suppliers or limit non-discriminatory access to public procurement to free trade agreement or World Trade Organization (WTO) government procurement agreement partners.

### 3. ACTION BY THE DIVISION

3.1 The Division is invited to:

- a) consider applying OECD/STRI methodologic framework to the Aviation Competitiveness Index;

- b) ensure that the Index accounts for the creation and maintenance of a regulatory environment that deals with information asymmetries among incumbents and entrants in the aviation market through efficient and trustworthy certifications;
- c) measure the compliance of each country's civil aviation business environment in relation to international standards, so that companies in the country have equal conditions to compete; and
- d) propose measures that can relate to the “Freedom of Exit” pillar, such as the standardization of tax systems and reduction of transaction costs of investments made in the event of an eventual market exit.

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