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## **BASIC MODELS OF ECONOMIC REGULATION OF AIRPORTS USED IN THE WORLD**

### *Abstract*

*This paper about the charges policy at the specific market of airport services, especially airport charges. At this moment is the necessity to apply economic regulation of airport charges in each EU State at least at one airport. But before we start with regulation process, we need to know basic information about this field.*

### **INTRODUCTION**

At present is very important the idea of economic regulation of airports in Air Transport Market. In 2011, States have the obligation to implement EU Directive 2009/12/EC of European Parliament and Council on airport charges. This Directive shall apply to any airport located in EU and open to commercial traffic whose annual traffic is over five million passenger movements or the airport with the highest passenger movement in each Member State. In the Member State where no airport reaches the minimum size for the application of this Directive, the airport with the highest passenger movements enjoys such a privileged position as a point of entry to that Member State that it is necessary to apply this Directive to that airport in order to guarantee respect for certain basic principles in the relationship between the airport managing body and the airport users, in particular with regard to transparency of charges and non-discrimination among airport users. That is the place where starts the necessity of thinking about the economic regulation of airports and its application in the states systems. Before the States start with this process they need to know some basic information about the economic regulation of airport charges.

### **1. ECONOMIC REGULATION OF AIRPORTS**

Economic regulation is deformed after years, it is a compromise between imperfect competition and imperfect regulation. The balance between the two imperfections is changing and it should re-open the question of economic regulation. The airports use their market power and then their passive economic costs may be less. It is necessary to strike a balance between the economic effects of market power and the potential need for regulatory intervention. [1] The European Commission has taken various steps to increase competition between airports for many years. The airports provide it with: limitations of available slots at major airports and strengthening the position of airports, which were able to survive in a competitive environment.

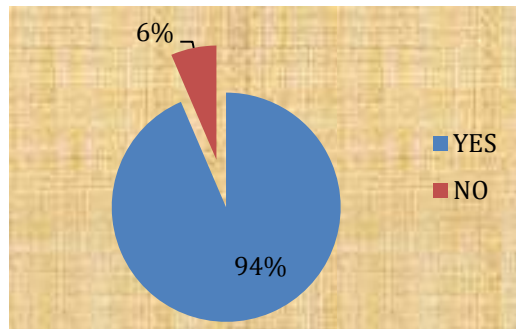
The European Commission seeks to facilitate access to congested airports and ensure the equal treatment for airlines. It is also important finding competitive pressures to reduce prices and improve services to airports offer. [2]

Not all countries and airports agree with the economic regulation of airports and apply it. The table below illustrates the current situation, which is in the market of the world airports. Most States have at least one of its airport the economic regulation of airport charges.

**Tab.1.** The application of economic regulation of airports in the world

State	Application of the economic regulation of airports	
	YES	NO
Australia	✓	
Belgium	✓	
Cyprus		✓
Czech republic	✓	
Denmark	✓	
Estonia	✓	
Finland	✓	
France	✓	
Greece	✓	
Netherlands	✓	
Ireland	✓	
Lithuania	✓	
Latvia	✓	
Luxemburg	✓	
Hungary	✓	
Malta	✓	
Germany	✓	
New Zealand	✓	
Norway	✓	
Poland	✓	
Portugal	✓	
Rustria	✓	
Slovak republic	✓	
Slovenia	✓	
Spain	✓	
Switzerland		✓
Sweden	✓	
Italy	✓	
Great Britain	✓	

Source: [3,4,5,6]

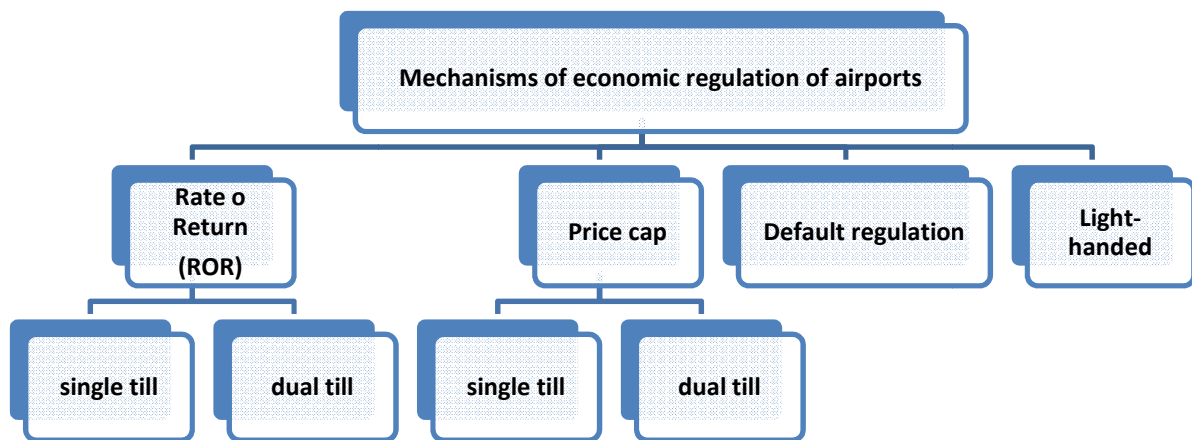


**Fig.1.** The application of economic regulation of airports in the world

## 2. MODELS, MECHANISMS AND SCOPE OF ECONOMIC REGULATION OF AIRPORTS

Models and formulas of approach to the economic regulation of airport charges in the world were created on the principle of basic regulatory mechanisms and ways of their coverage, as well as with respect to specific aspects of socio-economic areas and regions where selected airports are located.

States inserted various alternative indicators into the well-known and applicable regulatory forms that characterize the conditions of the airport. Thus they create their own models that are applied in the economic regulation of airports in their country. They take into account not only the necessity, or redundant economic regulation of airport charges, but also political and socio-economic and geographic factors in the economic regulation of airports should not be overlooked. Based on this formula create a regulatory model that is always sui generis.



**Fig.2.** Schemes of alternative approaches to regulatory mechanisms, and the method and extent of their application for the economic regulation of airports

Source: author

The regulatory model based on the rate of return in the range of dual till is applied to the Schiphol Airport Amsterdam.

The regulatory mechanism RoR without any application of this mechanism yields are at the airport in Estonia Tallinn-Ulemiste, but also in Luxembourg on their single airport.

The regulatory mechanism "light handed" (so-called reserve regulation or soft regulation) is applied at airports in Australia and New Zealand.

## 2.1. Price cap single till

The most commonly used regulatory mechanism is the price cap. This mechanism has two basic modifications depending on the extent of application of economic regulation on airport revenues- single till and dual till.

The best-known representatives of price cap single till model are: Dublin Airport, UK London Heathrow, London Stansted, London Luton, Manchester and French Paris Charles de Gaulle, Paris Orly.

**Tab. 2.** Economic regulation of airport charges - regulatory mechanism price cap single till

Price cap single till		
State	Airport	Cycle (years)
Ireland	Dublin	4
France	Paris Charles de Gaulle	5
	Paris Orly	5
Germany	Düsseldorf	
Sweden	Stockholm	
	Malmö	
Great Britain	London Heathrow	5
	London Stanstead	5
	London Gatwick	5
	Manchester	5

Source: author [3,4,5,6]

## 2.2. Price cap dual till

Representative of the second model price cap dual till are: Copenhagen airport, airports in Germany as Hamburg and Frankfurt. They preferred this model before single till. Originally used this model also the regulated airports in Australia, but later they changed the hard regulation mechanism to the soft and they are the airports with light-handed mechanism.

**Tab. 3.** Economic regulation of airport charges - regulatory mechanism price cap dual till

Price cap dual till		
State	Airport	Cycle (years)
Denmark	Copenhagen	3
Germany	Hamburg	5
	Frankfurt	5
	Hannover	5
Austria	Vienna	n.a.
Malta	Malta International	5

Source: author [3,4,5,6]

## 2.3. Regulatory mechanism with hybrid approach

There are also airports which use price cap mechanism or rate of return, but the scope of application of the regulatory mechanisms not applied single till or dual till, but the so-called hybrid model, where the regulation model take into account 50% of the commercial revenues of airports.

**Tab.4.** Hybrid model in the way the regulatory mechanism

State	Airport	Price cap	RoR
Hungary	Budapest	✓	
	Ferihegy	✓	
Italy	Roma Fiumicino		✓
	Milano		✓

Source: author [3,4,5,6]

## 2.4. ROR single till

The regulatory mechanism rate of return (RoR) is applied in practice within single till and dual till.

Spanish airports Madrid, Barcelona and Palma de Mallorca and German Berlin and Munich airports are regulated RoR single till.

**Tab.5.** Regulatory mechanism based on the rate of return in the range of single till

Rate of return single till	
State	Airport
Germany	Berlin
	Munich
Portugal	Lisboa
	Porto
	Faro
Spain	Madrid
	Barcelona
	Palma de Mallorca
Belgium	Brusel
Norway	Oslo

Source: author [3,4,5,6]

## 3. THE POSITION OF INDEPENDENT REGULATOR

Not only the mechanism for economic regulation of airport charges and the methods and scope of application are important, but also the position and status of the independent regulator-controller. Important are independent consultation with users, stakeholders, independent or dependent regulators and the commission which has in charge the protection of competition at the airports market.

The following table shows the regulators and interest groups among whom was the consultation process in the 2010 during the regulatory process.

**Tab. 4.** States, airports, regulators status and consultation process

State	Airport	Independent Regulator	Dependent Regulator	National Regulator	Independent Consultation with:
Belgium	Brusel		✓	Ministry of Transport	IATA, CAA
Denmark	Copenhagen		✓	Civil Aviation Authority (CAA)	Airlines and their Customers
France	Paris Charles de Gaulle		✓	Government	
	Paris Orly		✓		
Netherland	Amsterdam	✓		Competition Commission	subsequent investigation is possible
	Schiphol	✓			
Ireland	Dublin	✓		Regulation Commission for Civil Aviation	interest groups, Statutory Appeal Committee
Hungary	Budapest		✓	Ministry of Economy and Transport	CAA
	Ferihegy		✓		
Malta	Malta International			Civil Aviation Council and Ministry of Competition	subsequent investigation is possible
Germany	Hamburg		✓	Federal Ministry of Transport	ongoing widespread consultation with users
	Frankfurt		✓		
	Düsseldorf		✓		
	Berlin		✓		
	Munich		✓		
Norway	Oslo		✓	CAA appointed by Ministry of Transport	Ministry of Transport, CAA
Portugal	Lisboa	✓		National Institute of Civil Aviation, Ministry of Public Affairs and Transport	Comission of airport users, airport operator ANA, National Institute for Civil Aviation
	Porto	✓			
	Faro	✓			
Austria	Vienna	✓		CAA	IATA, CAA
Spain	Madrid		✓	Directorate General of Civil Aviation, General Secretariat of Transport, Ministry of Development	Airlines, Parliament, Courts (for verification)
	Barcelona		✓		
	Palma de Mallorca		✓		
Sweden	Malmö			CAA	NO
	Stockholm				
Italy	Milan		✓	CAA	Commision of Users
	Roma Fiumicino		✓		
Great Britain	London Heathrow	✓		CAA	Airlines, Airports, CAA, Competition Commission
	London Gatwick	✓			
	London Stanstad	✓			
	Manchester	✓			

Source: author [6]

## CONCLUSION

Based on the above tables, it is important to recognize the diversity in approaches to economic regulation of airports. These approaches are based on different continents, states, but even within one state too. If it is in one of the selected states applying economic regulation of airport charges does not mean always that all the airports of the state apply the same model or mechanism. Sometimes even not all are regulated on the basis of their status (whether the airport with national, international or intercontinental transport) localization in the state and the number of passengers and goods.

We can refer to such a situation in the UK, where the economic regulation of airport charges start at four airports selected and applied to all the same regulatory model even if formula is not completely identical (difference in X factor).

On the other side, there are states where regulation has begun, but airports do not apply the same regulatory models such as Germany. It is important to remember on such state as Austria, where from all airports is regulated only one- Vienna.

A similar situation can be observed when looking at the regulators, whose mission is always the same, but sometimes do not meet basic most recently proclaimed independent status. Regulators should be independent from that airport operators, as well as users. But how to achieve this situation, if the regulator is state authority and majority owner of the regulated entity (the airport) is a state?

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