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**6<sup>th</sup> Annual Aviation Conference**  
**“AVIATION: PRESENT AND FUTURE”**

**Challenges and threats for  
the Greek airports**

# Topics of presentation

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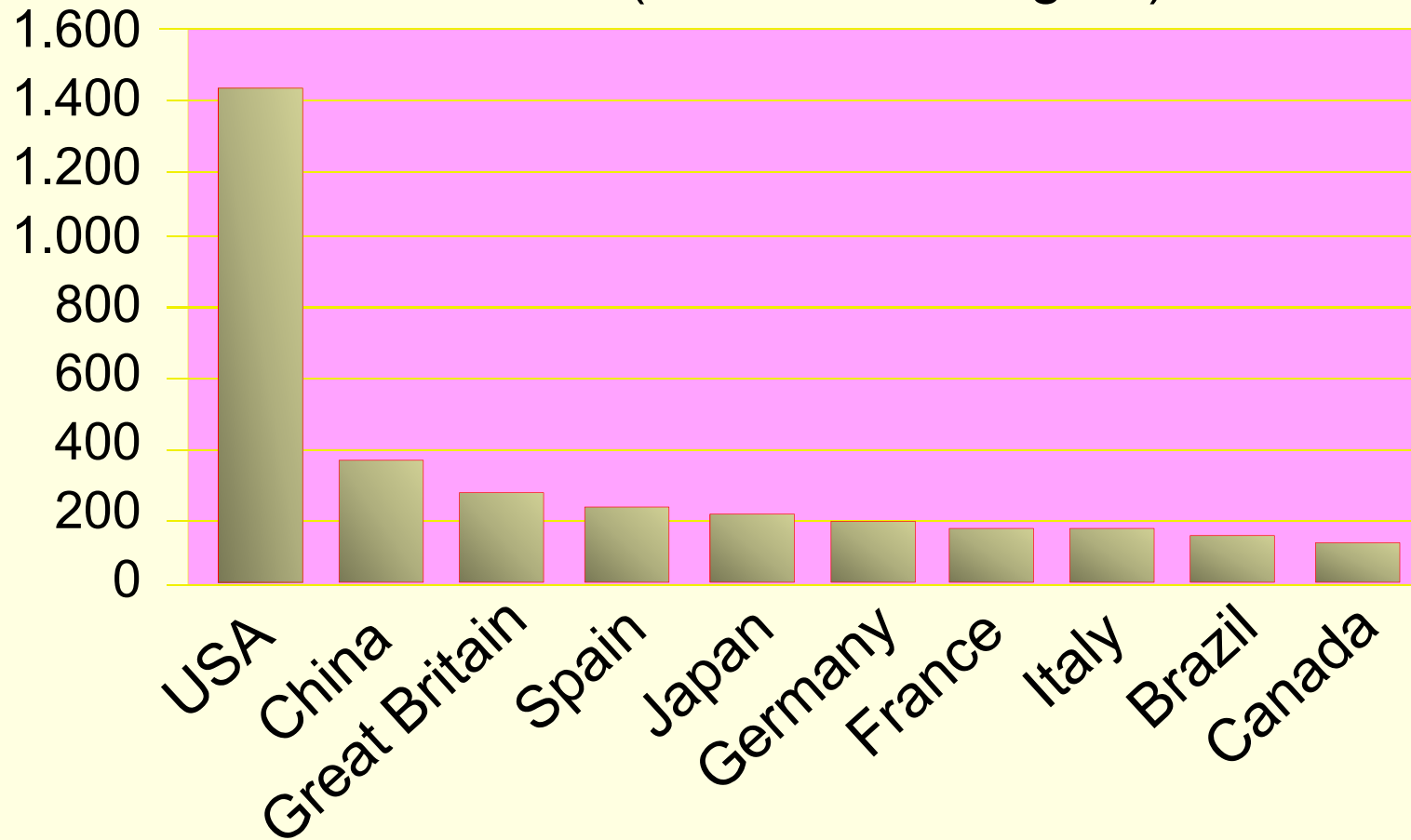
- An overview of the airport privatization in the international context
- The Government intentions
- An overview of the Greek airports
- The possibilities of Greek airports in the international context
- Some concluding remarks

## An overview of the airport privatization in the international context

- The Government intentions
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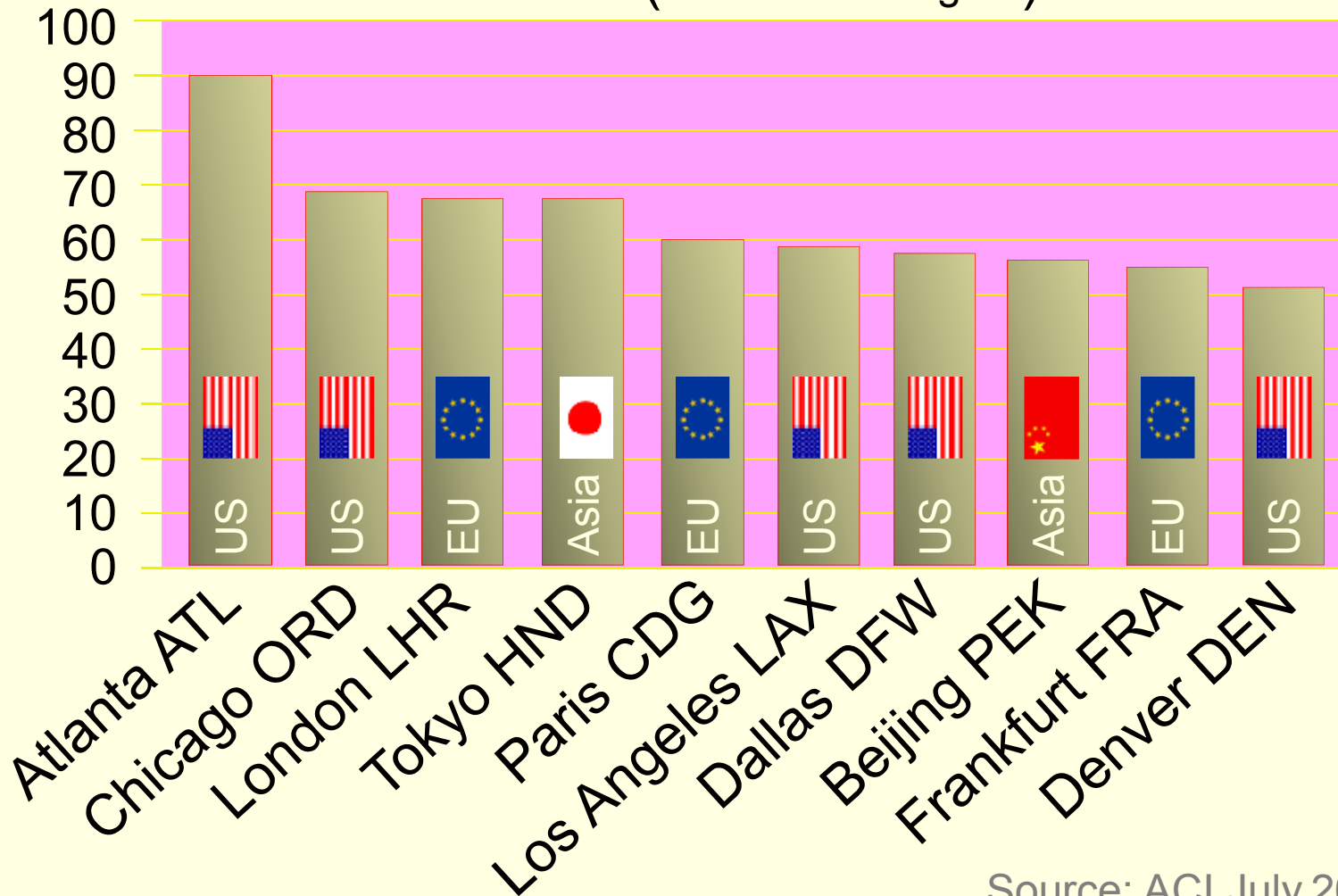
# The largest countries in passengers

2007 (Million Passengers)



# The largest airports in passengers

2008 (Million Passengers)



Source: ACI July.2009

# The largest airports in passengers

**2009** (Changes in 30 major airports)

	Airport	2009 Passengers Ranking		2008-2009 Change
				
	Beijing Capital (Κίνα)	65 εκ.	# 3	5▲ 16,8%
	Soekarno-Hatta (Ινδονησία)	36 εκ.	# 23	↑▲ 13,3%
	Guangzhou Baiyun (Κίνα)	37 εκ.	# 22	↑▲ 10,8%
	Dubai (Ηνωμ. Αραβικά Εμιράτα)	41 εκ.	# 15	5▲ 9,2%
	Suvarnabhumi (Ταϊλάνδη)	40 εκ.	# 16	2▲ 4,9%
	Sydney (Αυστραλία)	33 εκ.	# 28	↑▲ 0,4%
	San Francisco (ΗΠΑ)	37 εκ.	# 20	1▲ 0,2%

# **An overview of the airport privatization in the international context**

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## **Basic conceptual clarifications**

- Privatization includes the change in ownership, land and facilities, namely the transfer from one government agency to a group of investors.
- This definition causes misunderstanding when applied in the case of airports.
- Most major airports privatization does not include the sale of real property.
- The formal privatization include long-term lease.

**Source: Profilidis, 2010**

# An overview of the airport privatization in the international context

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## Basic conceptual clarifications

- Privatization and deregulation are two terms referring to the releasing of an industry from state control, a process known as liberalization.
- **Privatization** is the transfer of state property to private investors, but actually the idea is more complex.
- **Liberation** is the restriction of State control on the business decisions. The term refers to economic liberalization in which companies do not required to get approval, for example to increase/decrease prices or to enter/leave a market.
- The trend to privatization characterizes the airports, while the liberation the airlines.
- However the factors that influencing the behavior of the airlines, have also significant impact to the airports.

Source: Neufville and Odoni, 2009



# An overview of the airport privatization in the international context

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## Privatization of airports

- The airports are losing their local character becoming part of international organizations.
- International companies take the total or partial operation and are giving their own trading stamp operation.
- They develop international “**airport chains**” similar to “hotel chains”.
- As in the hotel business, management is based either on long-term management contracts or in the form of co-ownership.

Source: Neufville and Odoni, 2009

# **An overview of the airport privatization in the international context**

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## **What large firms can do**

Large firms of international airports can reduce costs and increase efficiency, by:

- exploiting economies of scale,
- negotiating discounts for large orders with suppliers
- smart-investing in operating systems, and
- experimenting with new services

# Distribution of control between state and private investor

		RIGHTS TO PROFITS	
		Government	Private group
MANAGEMENT CONTROL	Government	Entirely government control	Distributed control
	Private group	Distributed control	Entirely private control

Source: Neufville and Odoni, 2009

# **An overview of the airport privatization in the international context**

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## **The advantages of airport privatization**

- **Reduction of public finances,**
- **Scope for increased private investment,**
- **Relaxation of state control,**
- **Improving organization and efficiency,**
- **More commercial orientation,** responding to the requirements, expectations of both passengers and airlines

Source: Profilidis, 2010

# An overview of the airport privatization in the international context

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## The disadvantages of airport privatization

- **risk for poor investments** by the private (that will reduce the level of services)
- **Effects on employment** (many state airports have overstaffing)
- Ignoring the **environmental implications**,
- The private operator is tempted to **reduce the available space for passengers** and goods in order to fully exploit it for commercial use, and
- Possibility to acquire **private dominance** over competing airports that put its private interests rather than the interests of the state or region or even the airline industry in general.

Source: Profilidis, 2010

# An overview of the airport privatization in the international context

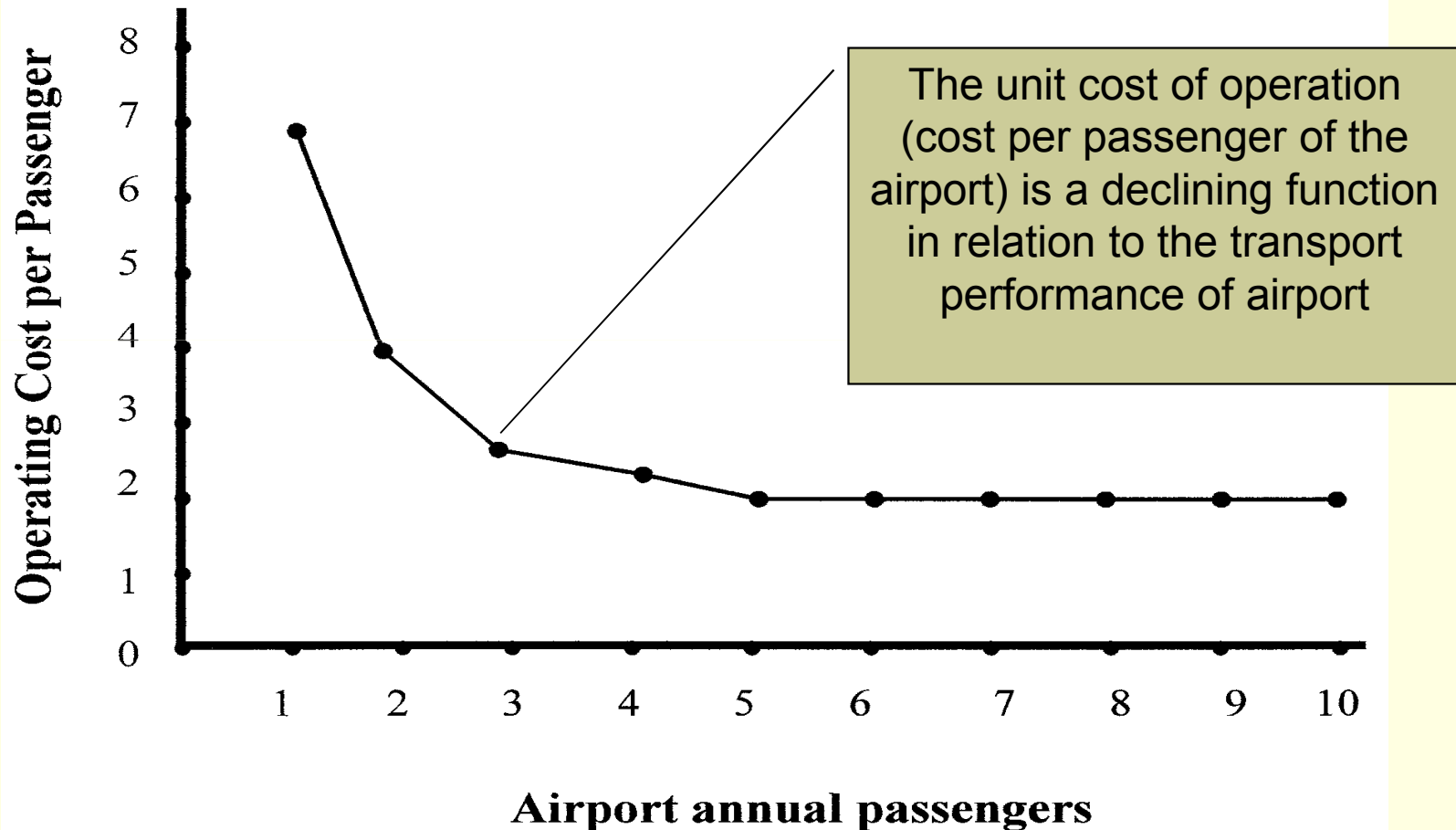
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## A profitable airport

- Airports with traffic volumes **greater than 0.5 million passengers**, have a rate of income / expenditure well above the unit, thus it is an **activity attractive from the private sector**.
- Moreover these airports usually are **monopolistic** and therefore face little or no competition.

Source: Profilidis, 2010

# Operating cost airport in conjunction with traffic volumes



Source: Profilidis, 2010

# An overview of the airport privatization in the international context

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## Operating cost airport in conjunction with traffic volumes

- We see a vertical reduction in unit cost of operation up to an annual throughput of around 3 to 4 million passengers, beyond which it remains constant.
- The reason lies in the fact that certain operating costs of an airport are approximately constant, regardless of the number of passengers.
- Analysis of ICAO gave for the year 1999 the following airport's average unit operating cost, depending on the number of passengers per year:
  - **\$ 15 / passenger** on an annual work **<0.3 million** passengers
  - **9.5 \$ / passenger** on an annual work **from 0.3 to 2.5 million** passengers
  - **8.0 \$ / passenger** on an annual work **from 2.5 to 25 million** passengers

Source: Profilidis, 2010



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## The revenues of the airport

The airport's revenues fall into two categories:

- **Aeronautical revenues**, which are directly relative to the number of aircraft and passengers served. These revenues are inelastic due to air transportation is not primary, but derivative. Therefore, the private operator comparing to that of a governmental one, only limited improvement could expect.
- **Non-aeronautical revenues** (or commercial), which are not directly relative to the number of aircraft and passengers served. These revenues originate to commercial activities carried out mainly within the terminal, and it is the sector where the private operator excels against the governmental.

# An overview of the airport privatization in the international context

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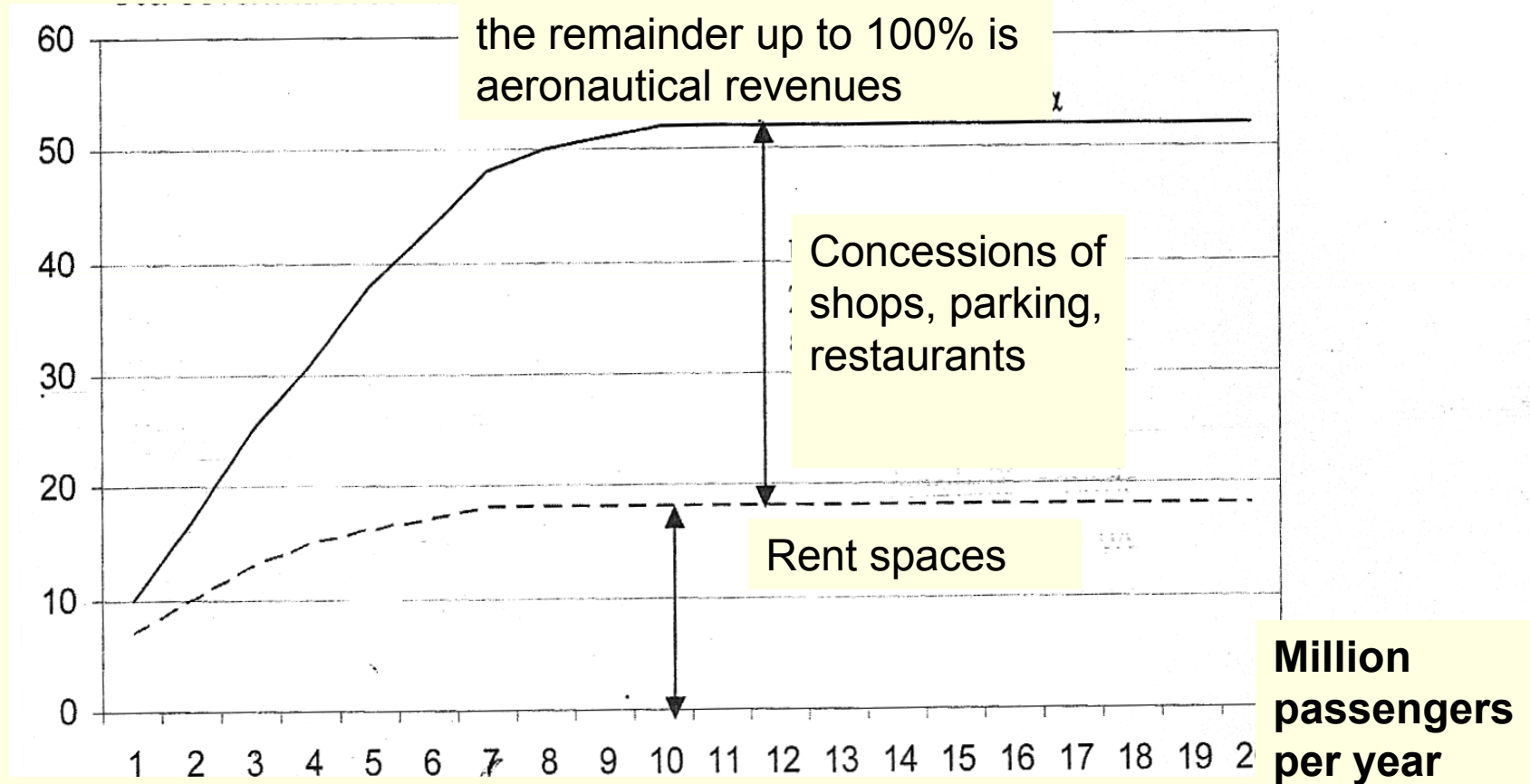
## Commercial revenues

- For airports in Europe, revenues from **commercial** uses (non-aeronautical revenues) **represent 44%** of total revenue, while aeronautical revenues by 56%.
- The corresponding percentage of revenue from **commercial uses for GREEK airports** other than the Athens airport **is just 6.3%.**

Source: Profilidis, 2010

# An overview of the airport privatization in the international context

**% participation of commercial revenues to total revenues of the airport**



# **An overview of the airport privatization in the international context**

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## **Ways of engaging in commercial activity**

- The business operated by the airport itself.
- The airport gives property space to specialized firms that pay concession fees.
- The airport rents property space without any further involvement in the commercial activity carried on.

# An overview of the airport privatization in the international context

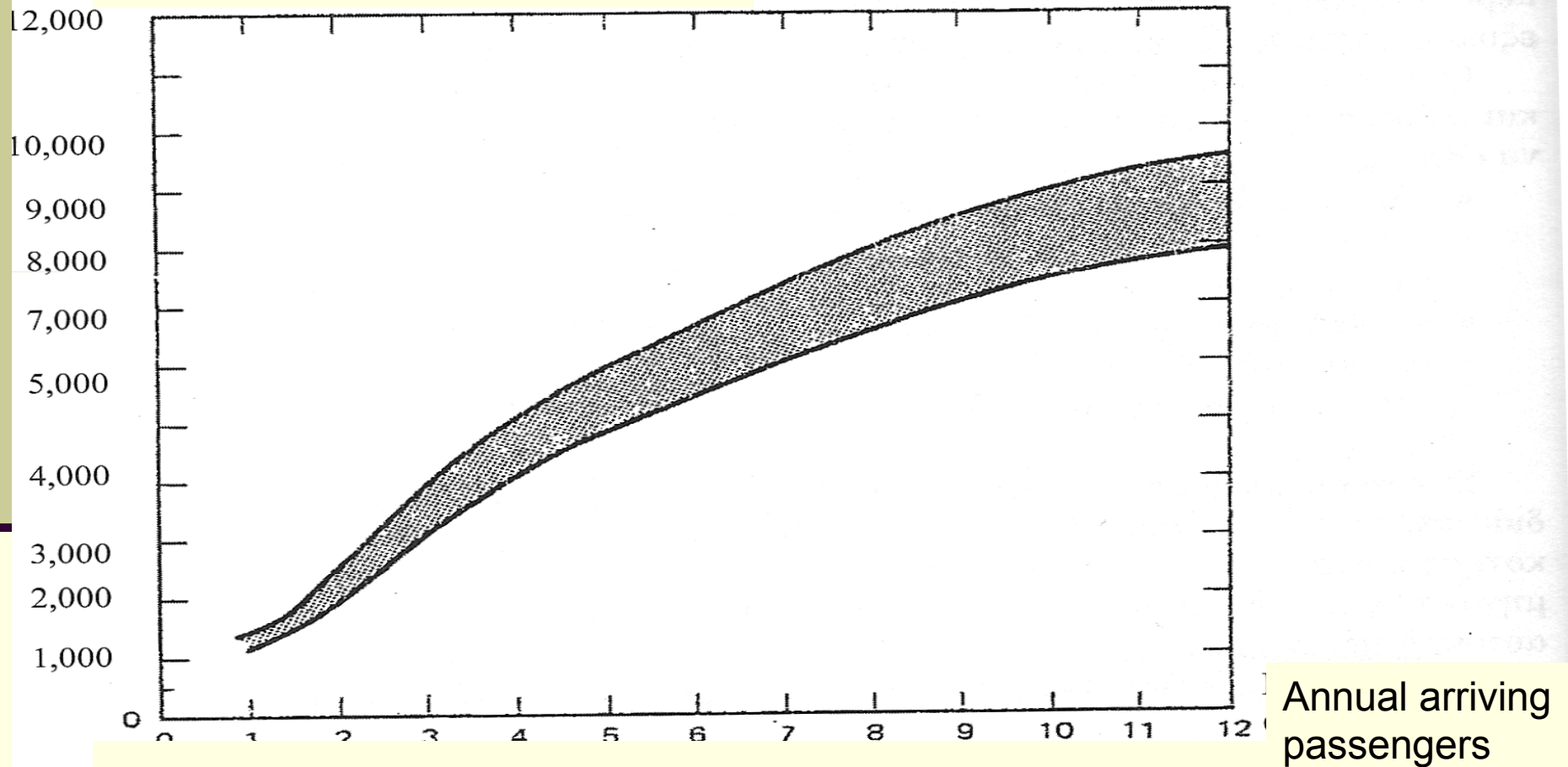
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## Methods to finance airports

- **Low cost loans by international or national development banks.** Issued by airports that are able to cater the total debt through their future own revenues.
- **Loans from commercial banks.** Short and medium term loans (3-10 years) for projects of airports.
- **Bonds proceeds.** The revenue bonds are not supported by taxpayers.
- **Private funding on specific rights to revenues of the airport.** A private BOT (Build, Operate and Transfer) contract to finance all or part of the project against specific rights from future income.

# Correlation plot of commercial space and arriving passengers of an airport

Required surface (m<sup>2</sup>) for commercial premises at an airport



# Topics of presentation

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- An overview of the airport privatization in the international context

## **The Government intentions**

- An overview of the Greek airports
- The possibilities of Greek airports in the international context
- Some concluding remarks

# The Government intentions

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- The government seeks for ways to create investor interest in private sector.
- In this procedure can not participate the Athens Airport and new airport under construction Kastelli.
- The ownership of airports remains in the public sector.
- The private investor will take over the administration, operation, management, expansion, development, maintenance and exploitation.



# The Government intentions

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- The model of concession contracts, provides that the state will assign a long period of certain assets (or rights) over investments to be made by the private sector to exploit these assets.
- The presidency and the majority stake will belong to the public sector, but the management and a minority stake will pass to private sector.
- Standard for the operation of the system will be the Athens International Airport “Eleftherios Venizelos”.

# The Government intentions

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- The government grants the rights of management that will be introduced in the Stock Exchange Market.
- Grouping of airports has been decided and will be based on:
  - The location of airports (eg, Ioannina, Alexandroupolis).
  - Passenger traffic (eg, Chania, Kos, Zakynthos, etc).
- From this concession process of the airports the government expects, the new management scheme:
  - to bring significant revenues,
  - to change the mode of management, and
  - to attract airlines to enlarge the economic results.

# Topics of presentation

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- An overview of the airport privatization in the international context
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## **An overview of the Greek airports**

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# An overview of the Greek airports

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- Greece is due to its geographical diversity (many islands) has 39 civil airports

# An overview of the Greek airports

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- The main feature of Greek airports is the **strong seasonality of demand**, that is concentrated during May to October and especially the four months from June to September.
- Productivity in August is more than twice of the average productivity during the winter months and the 1/5 of the average annual.
- This means that the resources of the airport underemployed at the low and middle season.

Source: Katarellos & Lagoudis, 2011  
Profilidis 2010

# An overview of the Greek airports

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- All airports, except the Athens airport, are purely state and are being operated by the Greek Civil Aviation Authority.
- The CAA does not decide neither in matters pricing policy nor in matters of expenditure, eg. procurement, recruitment, projects etc.
- The CAA operates profitable and unprofitable or loss-making airports. In this sense, we can say that it offers social work and contributes to regional development, but without any compensation from the state.
- Operation of loss-making airports is a social contribution that CAA produces, since under strict criteria of economic efficiency would not work.

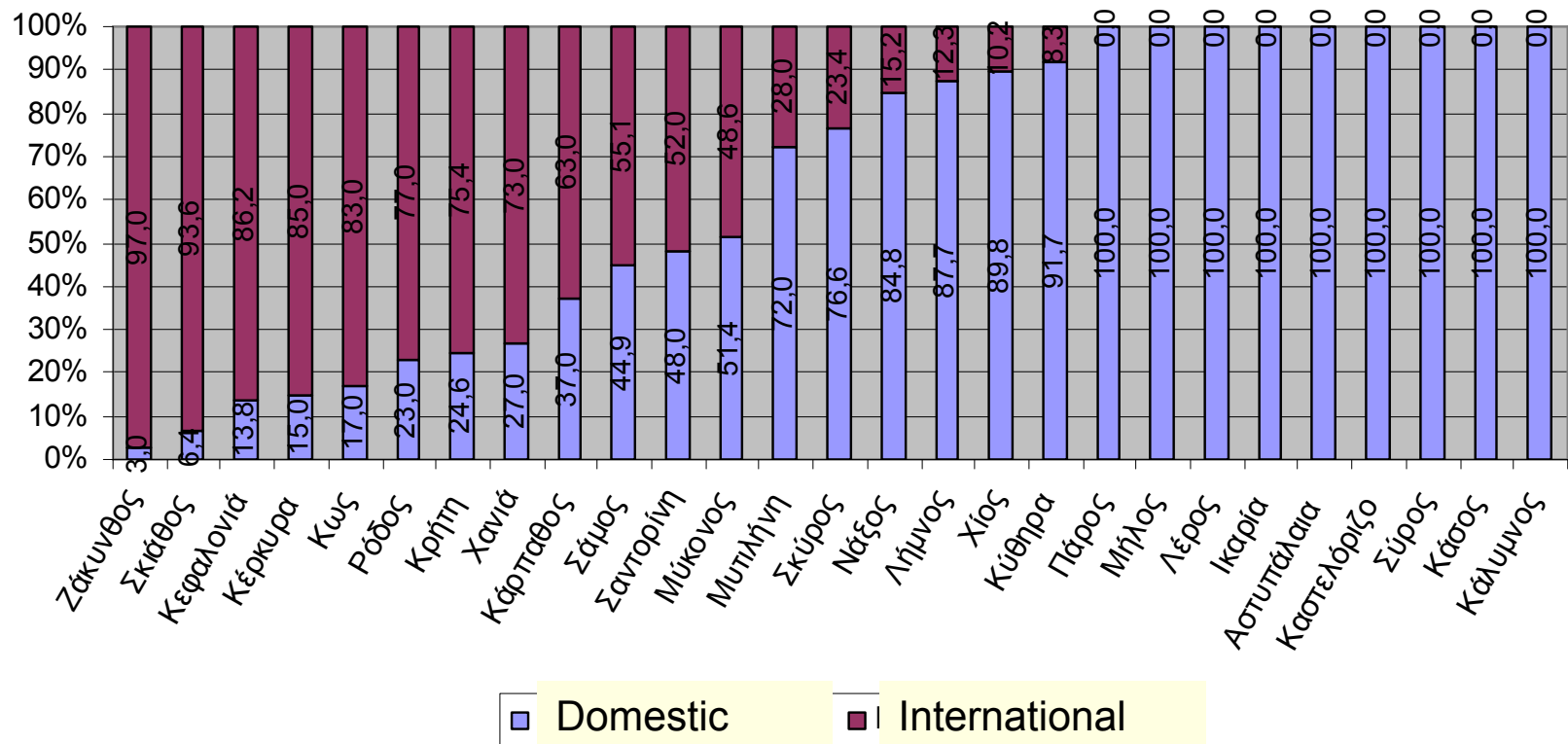
# An overview of the Greek airports

## The largest European airports



# An overview of the Greek airports

Percentage distribution of domestic and international passengers

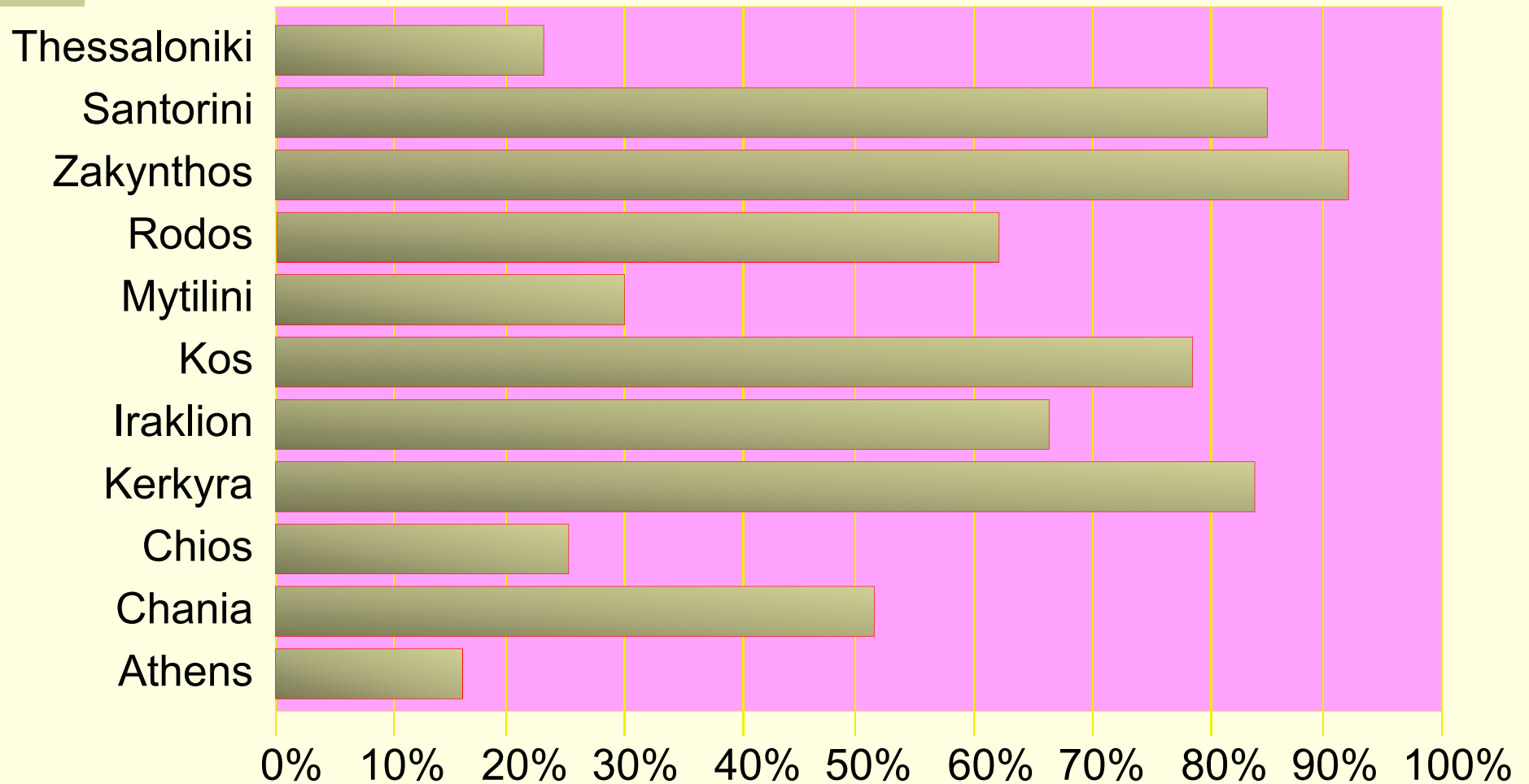


Source: Katarellos, 2009



# An overview of the Greek airports

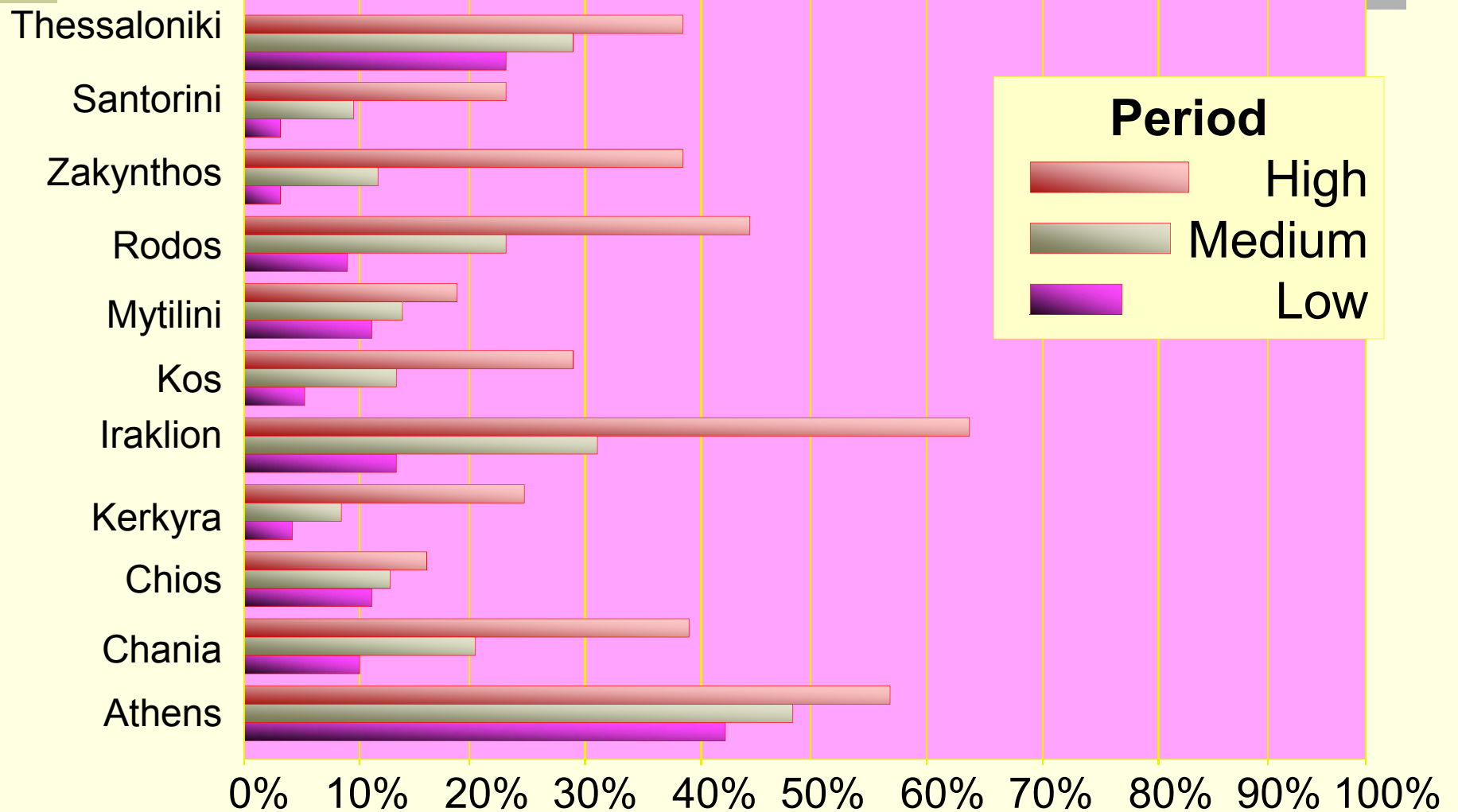
## Seasonality of selected Greek airport (2007)



Source: Katarelos & Lagoudis, 2011

# An overview of the Greek airports

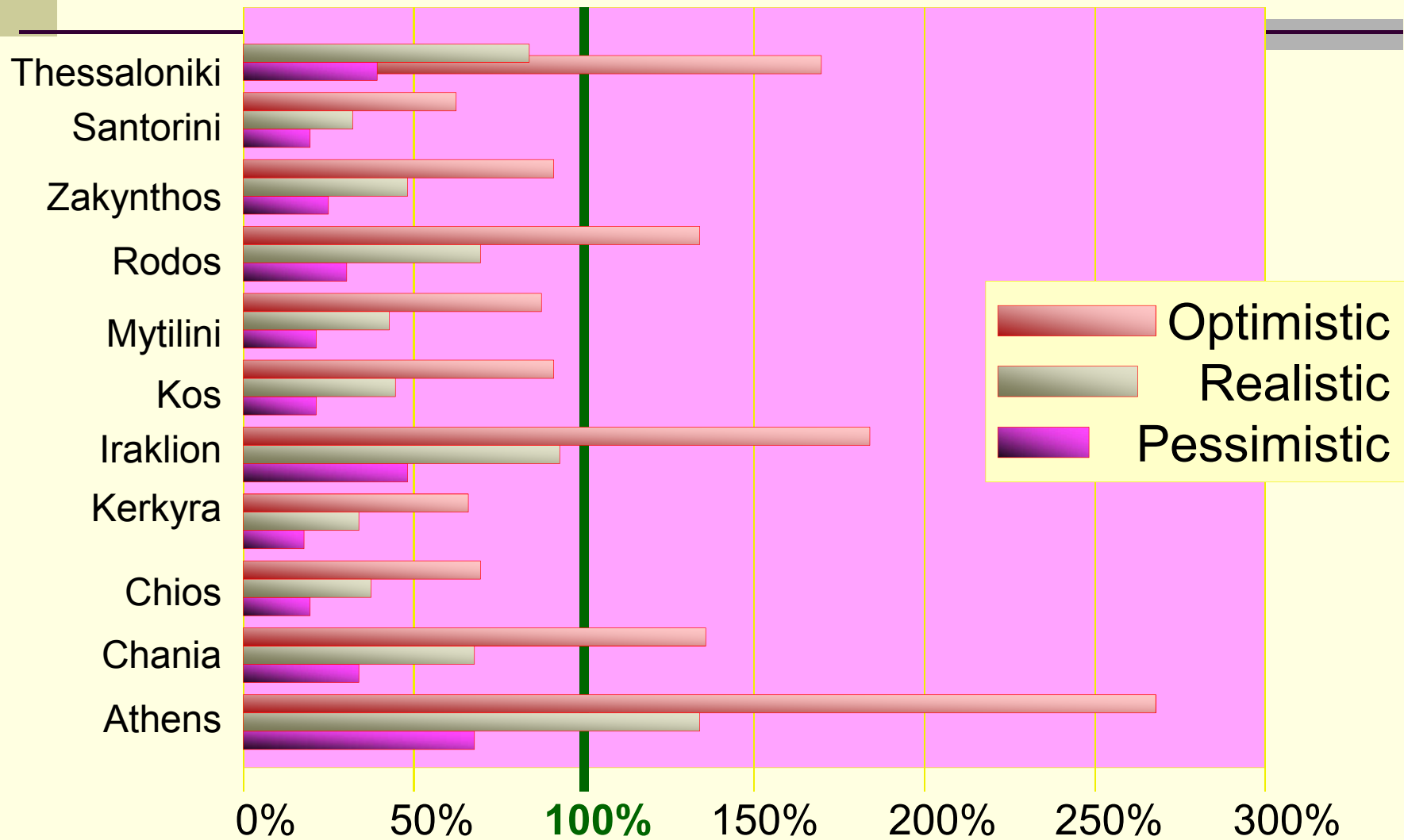
Capacity selected airports, discrimination in three seasons



Source: Katarellos & Lagoudis, 2011

# An overview of the Greek airports

## Capacity scenarios of selected Greek airports in 2030



Source: Katarelos & Lagoudis, 2011

# Topics of presentation

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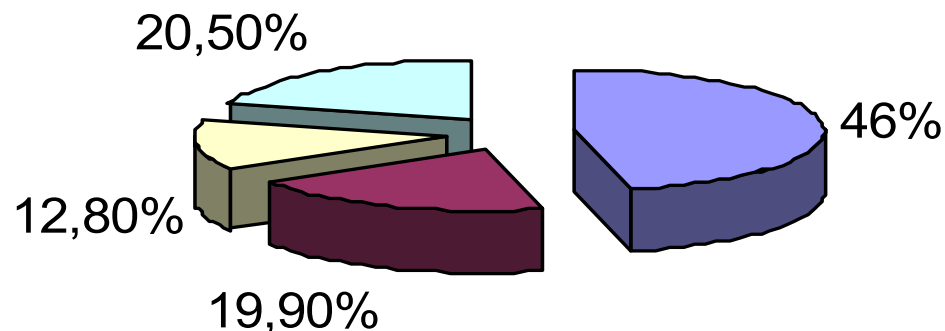
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## **The possibilities of Greek airports in the international context**

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# An overview of the Greek airports

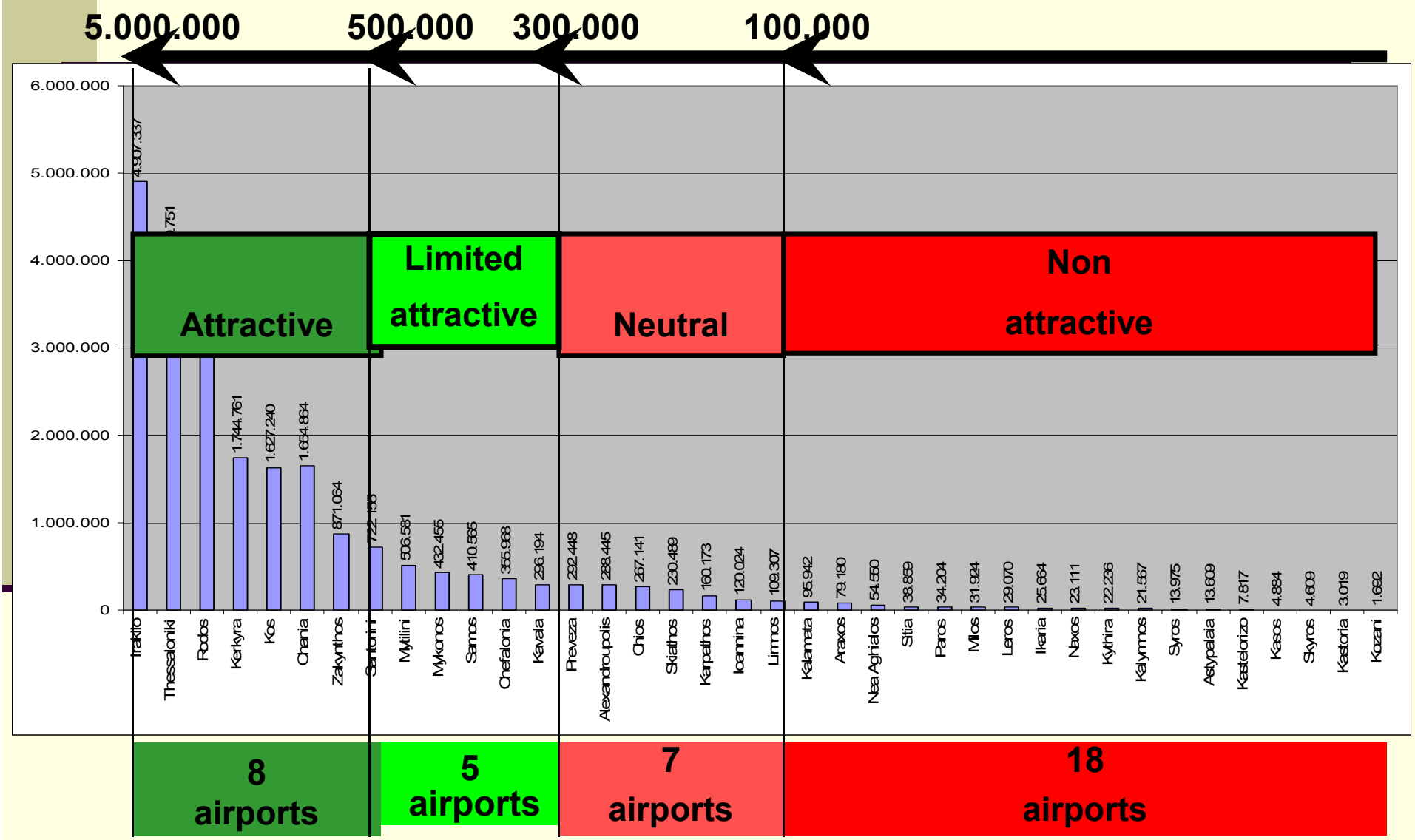
**Classification of GREEK AIRPORTS according passengers transported (2011)**



- 18 airports (< 100.000 passengers)
- 7 airports (Between 100.000 and 300.000 passengers)
- 5 airports (Between 300.000 and 500.000 passengers)
- 8 airports (> 500.000 passengers)

Source: HCAA, 2011

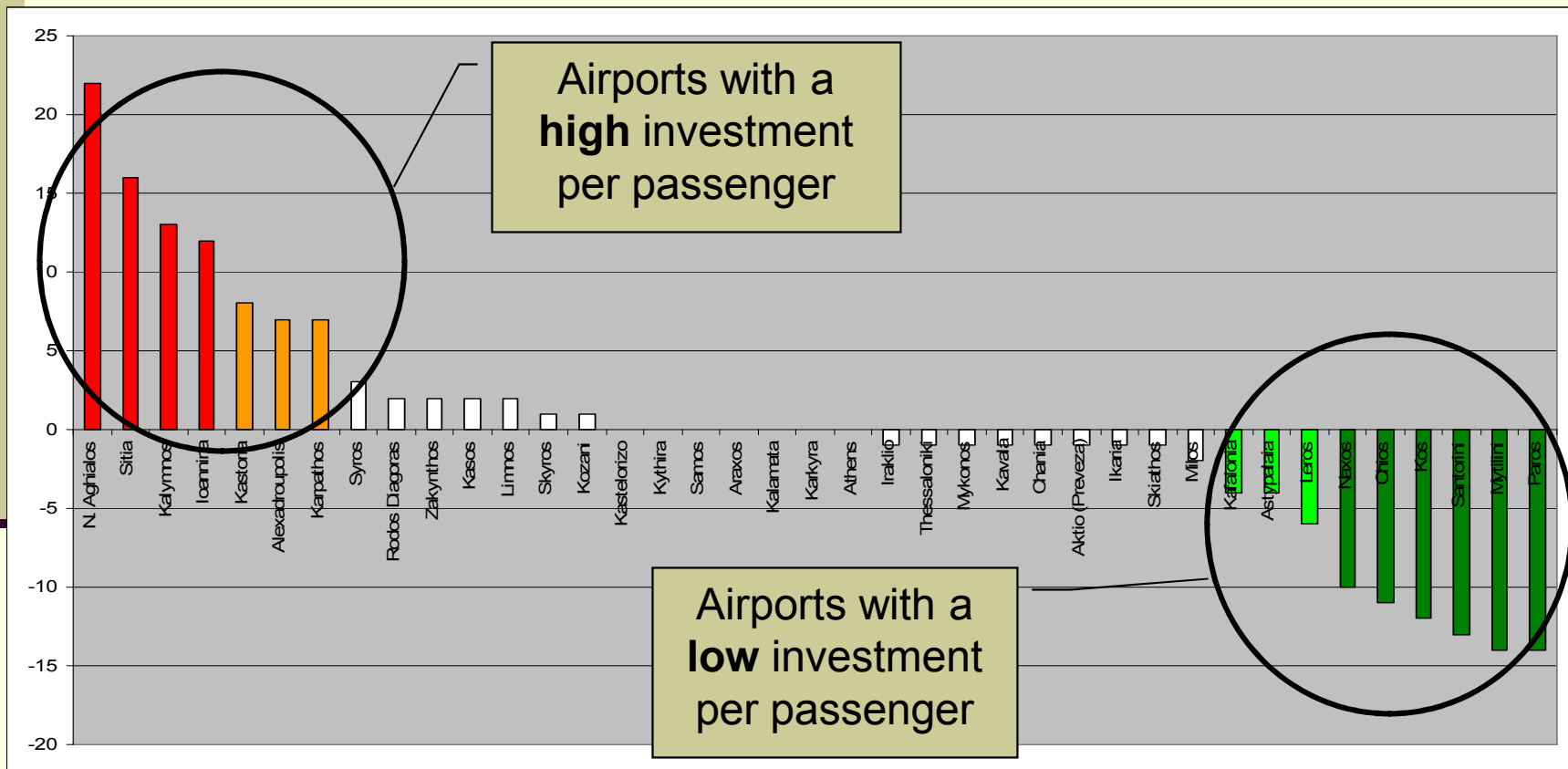
# Total passengers of the 39 Greek airports



Source: Data HCAA, 2011

# An overview of the Greek airports

Rank of Greek airports based on capital invested and passengers carried (Index) (2009)



Source: Katarellos, unpublished

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**Some concluding remarks**



# Some concluding remarks

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- Greece has many airports, whose transportable result, both in absolute numbers and as average, should be considered relatively small.
- Overall Greece manages about 40 million passengers at 40 airports. But excluding Athens, this number is reduced to 24 million, in other words **an average of 600 thousands per airport**, when, for example only the **Paris airport handles 60 million**.
- Most GREEK airports plagued by **strong seasonality**, which affects negatively their attractiveness.
- The majority of GREEK airports have sufficient capacity, which affects positively their attractiveness.

# Some concluding remarks

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- More than 50% of Greek airports seem that can not attract the private sector interest.
- The idea of grouping the airports, perhaps isn't a very well documented proposal that could give the expected results.
- It is obvious that in case that an investor asked to undertake a loss-making airport, he will seek ways to compensate this loss. One of them would be to offer a higher bid for taking up a group of profitable and non-profitable airports against that would have offered only for those airports that objectively considered as profitable.
- An by far unprofitable airport that today is operated by the CAA, it is sure that will continue to be unprofitable and by the private sector, perhaps to a lesser extent.

# Some concluding remarks

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- Greek airports suffer dramatically in their commercial development, thereby losing substantial revenue.
- One question however is whether these airports have the ability to actually be commercially oriented.
- To this end there are many problems, one of them is the possibility of commercial development to very small airports.
- Government may seek also to explore and to exploit the modern methods of the airports' finance.
- The government will also need to avoid as much as can the disadvantages of privatization that have been mentioned.

# Some concluding remarks

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- In conclusion, expression of interest from private investors seem that could be expected only for almost the 10 largest airports of them.
- Under certain circumstances, interest could be expanded for a few more, maybe for 5 - 10.
- At those airports for which no interest will be manifested by private investors, the government could look at these airports to give only the commercial exploitation to specialized companies.

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Thank you very much for your  
attention

Questions?