

ICAO AIR TRANSPORT SYMPOSIUM

18 – 20 APRIL 2012



Ensuring Sustainable Development of Peripheral Regions by Using Air Transport and Tourism Policies: The Case of Greece

Dr Andreas Papatheodorou, FHEA, FTS

Associate Professor, University of the Aegean, Greece

Editor-in-Chief, Journal of Air Transport Studies



Overview of the Presentation

- Air Transport and Tourism
 - interdependence of the two sectors
- Peripherality and Remoteness of Regions
 - disadvantages and advantages of peripherality
- Evolution of Air Traffic in Greece and Emerging Issues
 - air transport liberalisation
 - Public Service Obligations (PSO)
 - new tourism products
- Policymaking, Conclusions and the Way Forward



The Air Transport Sector

- Air transport is a prominent sector of today's service economy. It comprises the aviation industry (airlines, airports and ancillary services) and the civil aerospace sector (aircraft manufacturing and maintenance).
- Despite the period of turbulence which started in 2000 with the September 11th incidents and continued with the wars in Afghanistan and Iraq, the SARS syndrome and more recently the hike in oil prices, commercial airlines carried about 2.44 billion passengers in 2010 and generated revenues of 552 billion USD globally.
- The aviation industry employed about 8.36 million people globally in 2010; when indirect and induced effects are also taken into consideration, air transport is believed to generate about 56.6 million jobs worldwide.



Air Transport and Tourism

- In addition to its well-established linkages with local, regional and national economies, air transport is explicitly related to tourism.
- Every industry with a 'tourism ratio' (i.e. tourism related receipts of a specific sector expressed as a percentage of its total turnover) exceeding 15% may be regarded as part of the tourism sector; in this context, air transport is a tourism industry par excellence with a ratio often over 90%.
- About 51% of international tourists travel by air today compared to 35% in 1980, while the direct employment effect of air transport on tourism is estimated at 14.4 million jobs; when multiplier effects are considered, the total effect rises to 34.5 million.
- In fact, the demand for air transport is mainly derived by demand for tourism; both sectors are strongly cyclical and are highly sensitive to changes in the economic, social and political environment.



Reasons behind Peripherality

- Physical Geography
 - remoteness and accessibility problems
 - lack of resources and attractions
 - natural disasters
- Human Geography
 - politics, conflicts and lack of hinterland
 - historical accidents
 - agglomeration shadows and inner peripheries
- Peripherality may be defined at different spatial levels



Disadvantages of Peripherality

- Small market size, lack of scale and scope economies: competition cannot work effectively
- Expensive to reach in terms of both money and time – problems with transport monopolies
- Lack of organised holiday packages with the possible exception of niche tour operators commanding a high premium for their services
- Basic and limited accommodation facilities – ex ante and ex post tourist choice



Advantages of Peripherality

- Appealing to allocentric tourists
- No congestion or pollution problems
- Real estate opportunities and reasonable pricing
- Limited bureaucracy and flexibility of administration



How to turn Peripherality into an Advantage

- Focus on appropriate air transport and tourism policies
- Is the liberalisation of the air transport market sufficient?
- Can the introduction of PSO solve any remaining issues?
- What about the introduction of combined tourism products?



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Strategies and Tools for Sustainable Air Transport

Greece and Air Transport Liberalisation

- Back in the 1990s a number of companies entered the market such as SEEA, Apollo, Cretan, Venus and Axon
- Eventually, the market has consolidated around two major groups since the early 2000s
 - *Olympic Airlines (which incorporated Olympic Aviation and Macedonian Airlines) – privatised in 2008-09, currently owned by MIG Group*
 - *Aegean Airlines (which incorporated Air Greece and Cronus) - privately owned - joined Star Alliance in June 2010*
 - *The two airlines filed for a merger approval in February 2010, but this was eventually rejected by the European Commission in January 2011*
- Athens Airways, a new airline that emerged as a rival at a national level in 2008 had ambitious plans to play an important role in the Greek aviation market; nonetheless, it ceased operations in 2010
- Small companies exist in niche pax markets (e.g. Sky Express) , air taxi and cargo segments (e.g. Aeroland)
- Fragmented geographical area and heavily concentrated traffic are the key characteristics of the Greek aviation market



Greece and Air Transport Liberalisation

- Four major periods identified
- Up to 1981: Protectionism at all levels
- 1981 – 1991: Gradual internationalization of Greek airports
- 1991 - 1998: Liberalization of charter flights (based on Law 276/1991) and abolition of domestic monopoly of Olympic Airways in 1996 following the Presidential Decree 359
- 1998 – to date: Full liberalization of air transport services



The Profile of Greek Airports

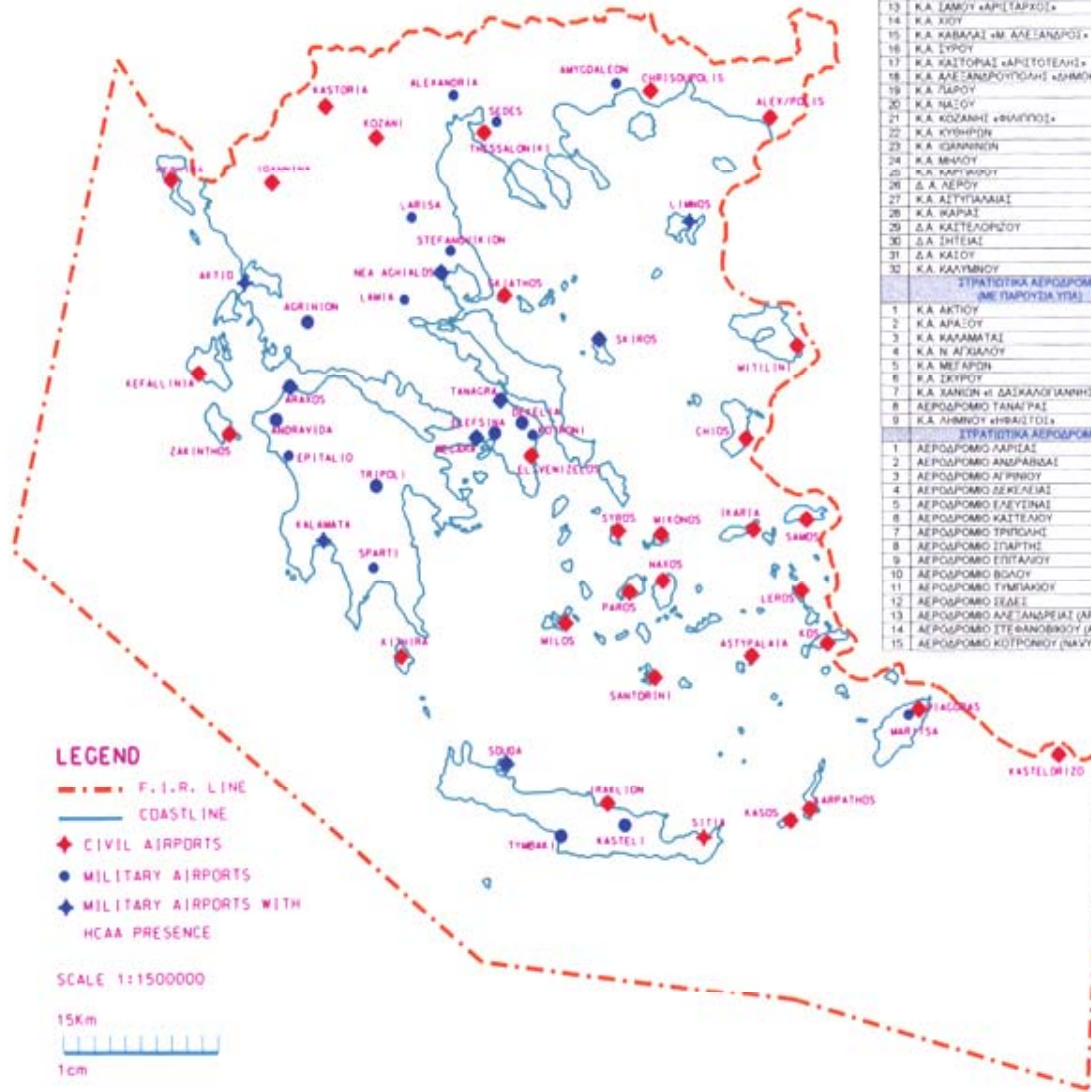
- 39 airports operate currently in Greece (+7 closed)
 - 11 on the mainland και 28 on the islands
 - 34 state-owned, 4 municipal και 1 JV
 - 15 international, 13 hybrid και 11 for domestic flights only
- Traffic activity in Greek airports (2010)
 - about 428,800 air traffic movements (50.4% domestic flights)
 - pax traffic: about 38.3 m in total - 12.5 m domestic and 25.8 m international (13.9 m charter – 53.8% of int. traffic)
- Size ranking based on EU criteria (2009)
 - 1 “A” class (>10 m pax) with 40.71% of total traffic
 - 1 “B” class (5<.<10 m pax) with 12.74% of total traffic
 - 5 “C” class (1<.<5 m pax) with 34.26% of total traffic
 - 32 “D” class (< 1 m pax) with 12.29% of total traffic
 - high degree of concentration and asymmetry



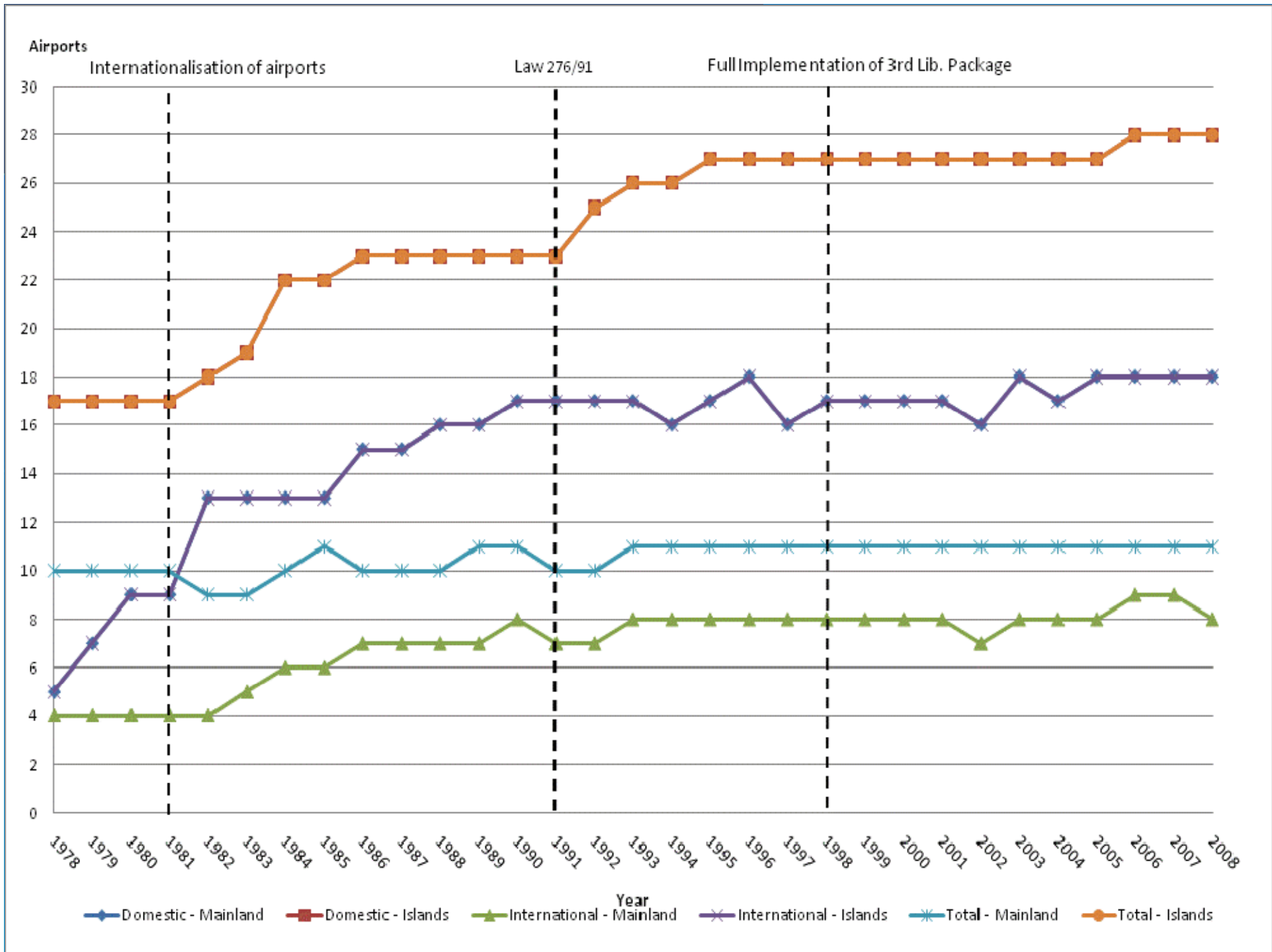
orange: state international and JV
green: state hybrid and domestic
purple: municipal

source: HCAA

HELLENIC AIRPORTS



ΕΛΛΗΝΙΚΑ ΑΕΡΟΠΟΡΕΙΑ		
ΤΟΠΟΓΡΑΦΙΚΑ ΑΕΡΟΠΟΡΕΙΑ	ΣΥΜΒΟΛΙΣΜΟΣ	ICAO
1 Δ.Α. ΑΘΗΝΩΝ «ΕΛ. ΒΕΝΙΖΕΛΟΣ»	AAA	LGAV
2 Κ.Α. ΔΕΛΦΙΝΩΝ «ΑΜΑΚΕΛΩΝΑΣ»	YKDM	LGTI
3 Κ.Α. ΗΡΑΚΛΕΙΟΥ «Ν. ΚΑΖΑΝΤΖΑΚΗΣ»	KAKK	LGRP
4 Κ.Α. ΡΟΔΟΥ «ΔΙΑΦΟΡΑΣ»	KARS	LGRP
5 Κ.Α. ΚΕΦΥΠΑΙ «Ι. ΚΑΠΟΔΙΣΤΡΙΑΣ»	KAKK	LGRK
6 Κ.Α. ΖΑΚΥΝΘΟΥ «ΙΩΑΝΝΙΝΩΝ»	KAZAS	LGZA
7 Κ.Α. ΜΥΚΟΝΟΥ	KAMK	LGMK
8 Κ.Α. ΚΕΦΑΛΟΝΙΑΣ	KAKS	LGRF
9 Κ.Α. ΚΩ «ΕΥΦΡΟΝΙΔΗΣ»	KAKO	LGRD
10 Κ.Α. ΣΑΝΤΟΡΙΝΗΣ	KASJ	LGSB
11 Κ.Α. ΚΩΝΙΝΟΥ	KAKK	LGSK
12 Κ.Α. ΜΥΤΙΛΗΝΗΣ «ΕΛΥΘΗΣ»	KAMTE	LGMT
13 Κ.Α. ΛΑΜΟΥ «ΑΠ. ΤΑΡΚΟΤΣΙ»	KASMA	LGSM
14 Κ.Α. ΧΙΟΥ	KAKI	LGRH
15 Κ.Α. ΚΑΡΠΑΖΙ «Μ. ΑΝΕΣΤΑΣΙΟΣ»	KAKBA	LGRV
16 Κ.Α. ΣΥΡΟΥ	KASJ	LGSO
17 Κ.Α. ΔΕΛΦΙΝΩΝ «ΑΝΕΤΟΤΕΛΗΣ»	KAKTA	LGSF
18 Κ.Α. ΑΛΕΞΑΝΔΡΟΥΠΟΛΗΣ «ΘΗΜΟΚΡΙΤΟΣ»	KAAAS	LGAJ
19 Κ.Α. ΛΑΡΟΥ	KALFA	LQFA
20 Κ.Α. ΝΑΞΟΥ	KAKS	LQNA
21 Κ.Α. ΚΟΖΑΝΗΣ «ΦΛΑΜΠΟΣ»	KAKZP	LQKZ
22 Κ.Α. ΚΥΘΗΡΩΝ	KAKO	LQKC
23 Κ.Α. ΚΑΡΡΑΝΙΝΩΝ	KAKD	LQDO
24 Κ.Α. ΜΗΔΟΥ	KAKM	LQMB
25 Κ.Α. ΚΑΡΥΣΣΟΥ	KAKY	LQSP
26 Δ.Α. ΑΕΡΟΣ	DAAE	LQLE
27 Κ.Α. ΑΣΤΥΝΑΝΙΑΣ	KAFV	LQFL
28 Κ.Α. ΚΑΡΠΑΖΙ	KAKP	LQKR
29 Δ.Α. ΚΑΣΤΕΛΟΡΥΘΟΥ	DAZO	LQKJ
30 Δ.Α. ΣΗΦΙΑΣ	DAST	LQST
31 Δ.Α. ΚΑΙΟΥ	DAKA	LQKS
32 Κ.Α. ΚΑΛΥΜΝΟΥ	KAKM	LQKM
ΣΤΡΑΤΙΩΤΙΚΑ ΑΕΡΟΠΟΡΕΙΑ (ΜΕ ΠΑΡΟΥΣΙΑ ΥΠΛ)		
ΤΟΠΟΓΡΑΦΙΚΑ ΑΕΡΟΠΟΡΕΙΑ	ΣΥΜΒΟΛΙΣΜΟΣ	ICAO
1 Κ.Α. ΑΚΤΙΟΥ	KAKK	LGPZ
2 Κ.Α. ΑΡΑΓΟΥ	KAAZ	LGRX
3 Κ.Α. ΚΑΡΑΜΟΥ	KAKO	LGRS
4 Κ.Α. Ν. ΑΓΙΑΣΟΥ	KAKA	LGRB
5 Κ.Α. ΜΕΓΑΡΩΝ	MEAT	LQMG
6 Κ.Α. ΔΕΥΤΕΡΟΥ	KAZJ	LQSY
7 Κ.Α. ΧΑΝΙΩΝ «Ι. ΔΑΣΚΑΛΟΓΙΑΝΝΗΣ»	KAKN	LQSA
8 ΑΕΡΟΠΟΡΕΙΟ ΤΑΝΑΓΡΑΣ	MEAT	LQTG
9 Κ.Α. ΑΗΜΝΟΥ «ΗΡΑΚΛΕΙΔΗΣ»	KAAAH	LGLM
ΣΤΡΑΤΙΩΤΙΚΑ ΑΕΡΟΠΟΡΕΙΑ		
ΑΕΡΟΠΟΡΕΙΟ	ΣΥΜΒΟΛΙΣΜΟΣ	ICAO
1 ΑΕΡΟΠΟΡΕΙΟ ΚΑΡΠΑΖΙ		LGRK
2 ΑΕΡΟΠΟΡΕΙΟ ΑΝΔΡΑΒΕΙΑΣ		LQAD
3 ΑΕΡΟΠΟΡΕΙΟ ΑΓΡΙΝΙΟΥ		LQAG
4 ΑΕΡΟΠΟΡΕΙΟ ΔΕΚΕΛΕΙΑΣ		LQDT
5 ΑΕΡΟΠΟΡΕΙΟ ΕΛΕΥΘΕΡΙΑΣ		LQEL
6 ΑΕΡΟΠΟΡΕΙΟ ΚΑΤΤΕΛΑΟΥ		LQTL
7 ΑΕΡΟΠΟΡΕΙΟ ΤΡΙΠΟΛΗΣ		LQTP
8 ΑΕΡΟΠΟΡΕΙΟ ΤΙΡΑΝΤΗΣ		LQSP
9 ΑΕΡΟΠΟΡΕΙΟ ΕΣΤΡΑΤΟΥ		LQSP
10 ΑΕΡΟΠΟΡΕΙΟ ΒΙΔΑΟΥ		LQVO
11 ΑΕΡΟΠΟΡΕΙΟ ΤΥΜΠΑΚΟΥ		LQTM
12 ΑΕΡΟΠΟΡΕΙΟ ΣΕΛΕΣ		LQSD
13 ΑΕΡΟΠΟΡΕΙΟ ΑΝΕΤΑΝΑΡΕΙΑΣ (ARMY)		LQAX
14 ΑΕΡΟΠΟΡΕΙΟ ΣΤΕΦΑΝΟΒΡΥΧΙΟΥ (ARMY)		LQSV
15 ΑΕΡΟΠΟΡΕΙΟ ΚΟΤΩΝΟΥ (NAVY)		LQKN





Measuring Concentration

- Estimation of the Gini coefficient for the mainland regions, the islands and the country as a total for the period 1978-2008
- Three distinct groups: negative trend but relative stability since the early 1990s – in any case, no dramatic change
 - domestic islands - minimum reached in 1995, moderate increase from then onwards
 - international and total island traffic
 - all the rest

Gini Value

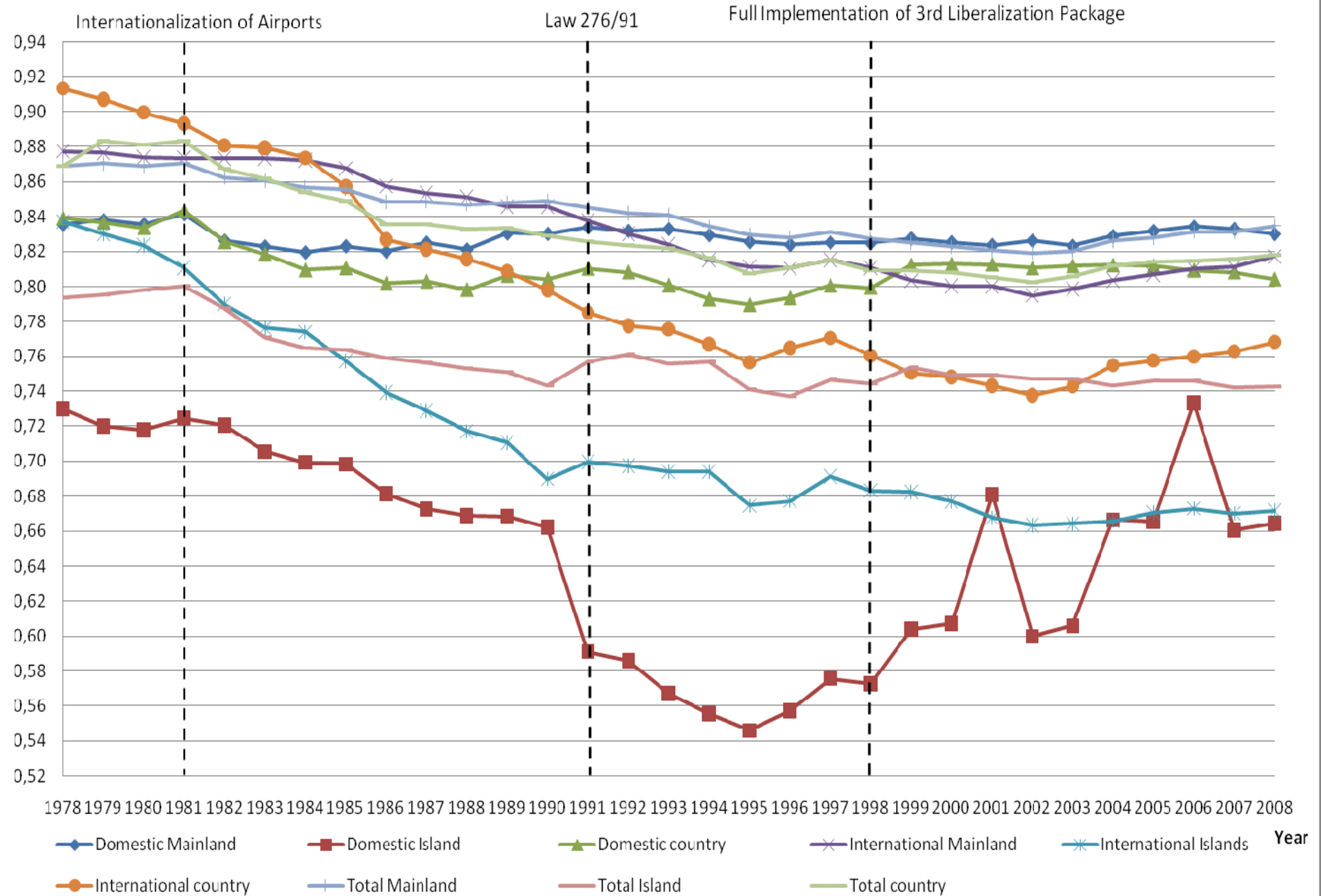
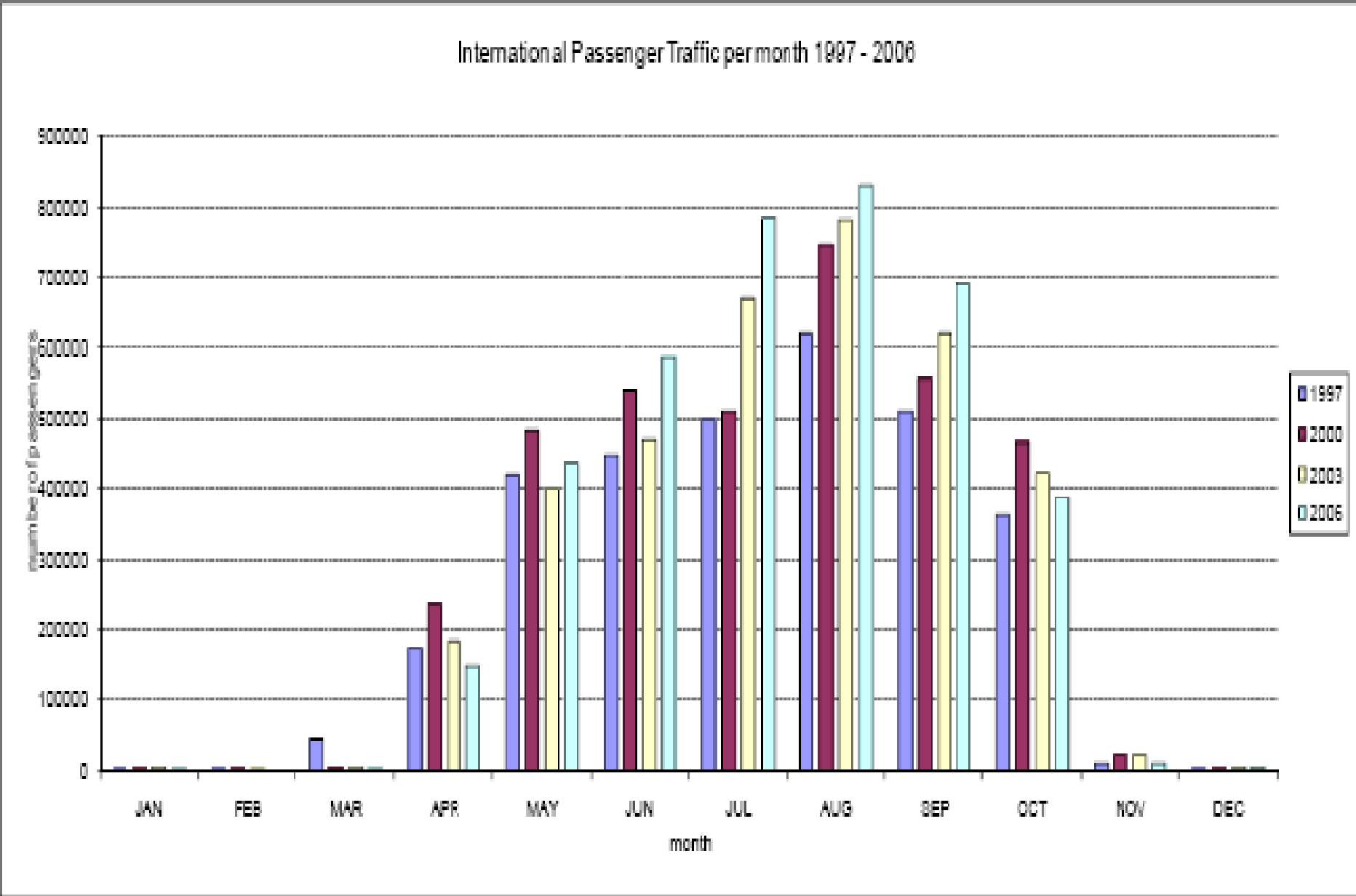
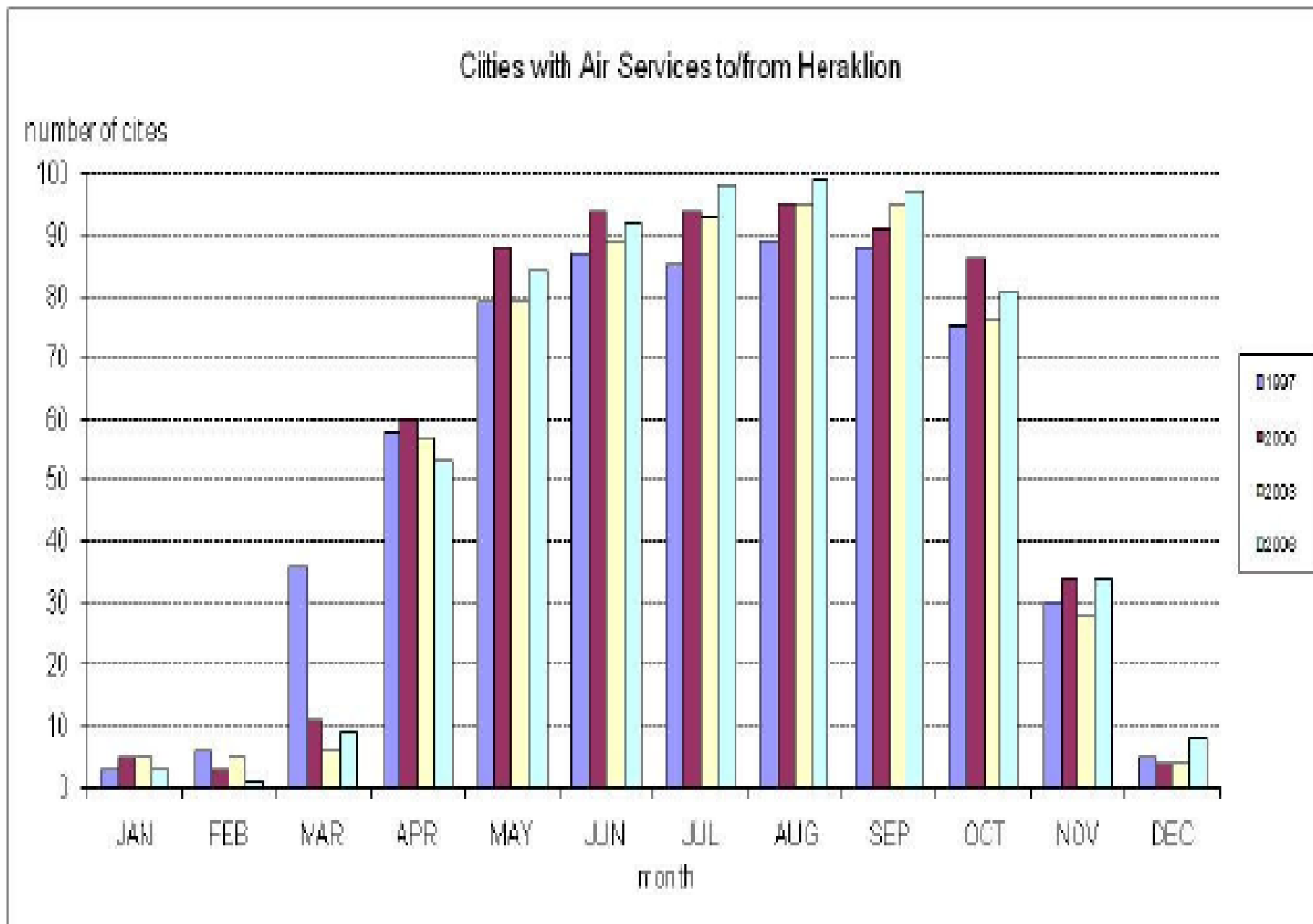


Figure 22 – Evolution of International Air Passenger Traffic to/from Heraklion



Source: Papatheodorou and Arvanitis (2008)

Figure 19 – Number of Cities with International Air Passenger Services to/from Heraklion



Source: Papatheodorou and Arvanitis (2008)



Exploiting the Treasure

- Although the improvement of airport infrastructure on the islands is beneficial to their accessibility, policy priority should be given to the mainland: out of 29 NUTS3 areas with no traffic, 26 are on the mainland!
- The 'Ryanair effect' should also emerge on the mainland:
 - urban facilities are better developed and operate throughout the year (inbound traffic and possibly domestic)
 - existence of a critical mass (in GDP and POP terms) for outbound traffic
 - proximity to western and eastern European states
 - weather conditions are less stochastic
 - in addition to the airports of Thessaloniki and Volos, Ioannina, Araxos and Alexandroupoli are also very good candidates
- Appropriate Consultation of Stakeholders to avoid zero-sum games and environmental degradation
- The forthcoming privatization or establishment of PPP in Greek airports is expected to play a major role in their development



PSO in Greece – April 2012

- Greece currently operates a scheme of 27 PSO routes
 - 14 connect Athens to a number of islands in the Aegean and the Ionian sea
 - 1 connects Athens to Kozani and Kastoria, two cities in Western Macedonia
 - 4 connect Thessaloniki (the second largest city in Greece) to islands in the Aegean and the Ionian sea
 - 1 connects Thessaloniki with Kalamata, i.e. a city in Southwest Peloponnese
 - 5 provide inter-island services in the Aegean and the Ionian sea
 - 1 links Alexandroupoli with Sitia, i.e. a city in eastern Crete
 - 1 links Aktio (on the mainland, close to the island of Lefkas) with Sitia.



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Strategies and Tools for Sustainable Air Transport

Characteristics of Small Regional Airports

- Many island airports are extremely short and narrow (runway length between 700m-1500m and width 25m-40m)
- Limited opening hours: some airports are open only four to six hours a day six days a week
- They are built on cliff tops due to lack of flat field areas so most of them have a high elevation that deteriorates aircraft performance
- In addition they are in close proximity to mountainous terrain making them very vulnerable to gusty strong winds prevailing in the islands especially during summer period.



source: Fragoudaki et al. (2005)



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Strategies and Tools for
Sustainable Air Transport

Kalymnos – New Airport



source: Fragoudaki et al. (2005)



Evaluation of PSO in Greece

- In the past: Hidden protectionism or competitive advantage of Olympic Airlines? Currently: 4 operators (Olympic, Aegean, Sky Express and Astra Airlines) share the 27 routes
- In the past: Abuse of Y-class bookings. But still: Only limited use of revenue management techniques
- Purely operational mentality – lack of integrated marketing and tourism promotion
- Stepping beyond national mentality: what about the introduction of transnational PSO? Joint ICAO – UNWTO study regarding the Essential Services Tourism Development Route (ESTDR) scheme





Development of New Tourism Products

- Islands: more emphasis on fly-cruise activities
 - W-shape medium scale cruises in the Eastern Aegean Sea using islands as homeports
- Inland Areas: development of cultural paths
 - wine routes, religious routes, etc.



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Policymaking and Conclusions

- Regulatory Policies
 - prices and other dimensions of competition
 - regional interventionism and confrontation of environmental degradation
- Competition Policies
 - development of portfolio strategies and restructuring
 - active involvement in information technology
- Co-operation Policies
 - avoidance of beggar-thy-neighbour strategies → codes of conduct
 - stable business environment and efficient policymakers
- Sustaining Development in Peripheral Regions requires Active Policymaking!



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Strategies and Tools for
Sustainable Air Transport

Thank You for your Attention!

Dr Andreas Papatheodorou

E-mail: a.papatheodorou@aegean.gr

Personal Web Site: www.trioptron.org