



# The role of retail revenue for today's airports

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# Increase of the role of non-aeronautical revenue

Huge transformations in airport industry:

- Airport's mission

***Wikipedia:*** “An airport is a location where aircrafts take off and land”

- Ownership structure
- New players – like LCC



# Increase of the role of non-aeronautical revenue

## *Single-till Versus Dual-till*

- Under the single till principle airport activities (aeronautical and commercial) are taken into consideration to determine the level of airport charges.
- Under the dual till principle, only aeronautical activities are taken into consideration to determine the level of airport charges
- Airport charges derived using the single till approach are therefore likely to be lower than they would under a dual till because of the sharing of profits generated by commercial activities.



# Increase of the role of non-aeronautical revenue

The contemporary environment is highly competitive, an airport is not a monopoly for both airlines and passengers, they can quite easily prefer one airport to another.

*Airports need to be attractive and effective to survive!!!*



# Sources of non-aeronautical revenue:

- Aviation fuel and oil concessions
- Bars and restaurants, catering services
- Retailing (including duty-free shops)
- Car rental and car parking
- Advertising
- Currency exchange
- Real estate
- Recreational activities

We focus on the retail revenue only, as a starting point of the research



# Differences between shopping malls and airport retail

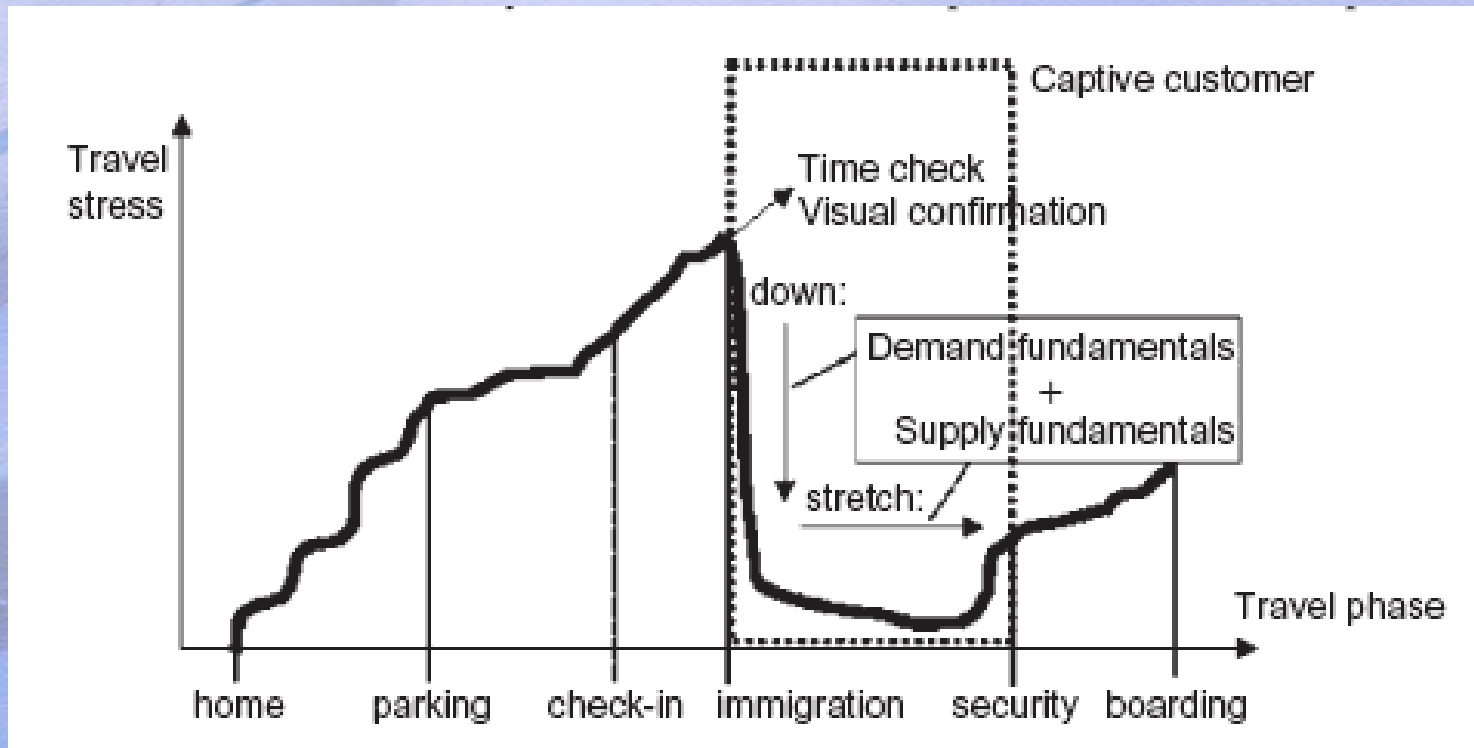


Primary purpose of visiting an airport is not shopping both for passengers, meeters/greeters and employees.



# Differences between shopping malls and airport retail

- Stresses concerning security control



Source: Scholvinck J. (2000)



# Differences between shopping malls and airport retail

- Higher stress levels due to an unfamiliarity with the airport environment
- Airport shoppers on average belong to higher socio-economic group
- Demographic factor: different nationalities with different habits, mentality and as a consequence different spending patterns
- Limited time (significant portion of “last minute” and “on impulse” purchases)
- Limited space (retail should not affect effectiveness of aeronautical activities)



# Key retail revenue drivers

- commercial space (airside/landside)
- dwell time

***Example from BAA research:** estimated incremental airside spendings for each additional 10 mins available time are 0.8 GBP for Domestic and 1,6 GBP for International passengers*

- type of contract
- customer types



# Key retail revenue drivers - Customer Types

- Airside: PAX – most important client group
  - Scheduled/non-scheduled
  - Intra-EU/Extra-EU
  - Business/leisure
  - Full service/Low cost/Charter
  - Transit
- Landside
  - Meeters and greeters
  - Visitors
  - Employees



# Retail space allocation and supply

- The space required for commercial activities increases proportionally with passenger volume, while the concession revenue does not increase by the same proportion, and instead depends on the allocated locations.
- High public facility service levels helps to increase retail revenue by affording an airport to reduce public facility space while increasing commercial space, thus increasing commercial revenue.



# Data overview

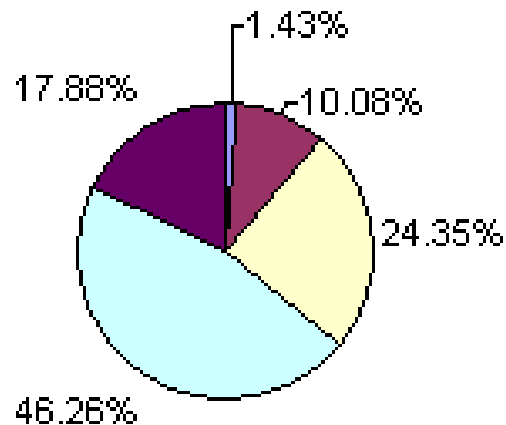
- 13 EU airports (6 of them had more than 3 000 000 passengers in 2003)
- Years 2001 – 2003
- Data specification:
  - Retail and F&B turnover
  - Terminal, retail and F&B space,
  - Arrivals and departures (dividing into Intra and Extra EU) number of passengers
  - For 2003 only: rental charges, number of transit passengers, number of parking places, number of employees.



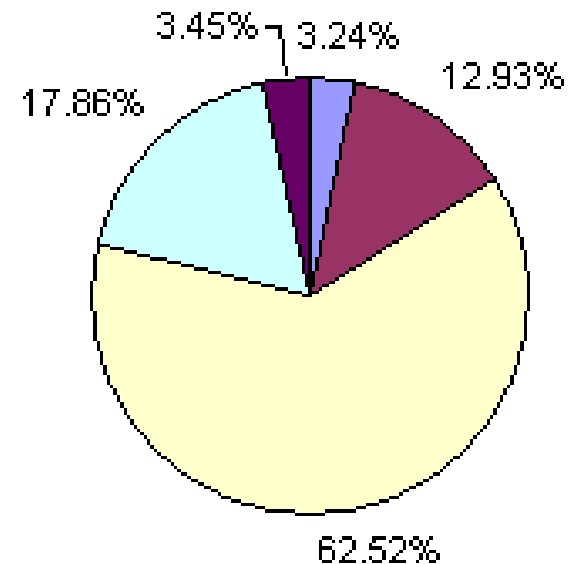
# Descriptive statistics

## Non-aeronautical revenue by source

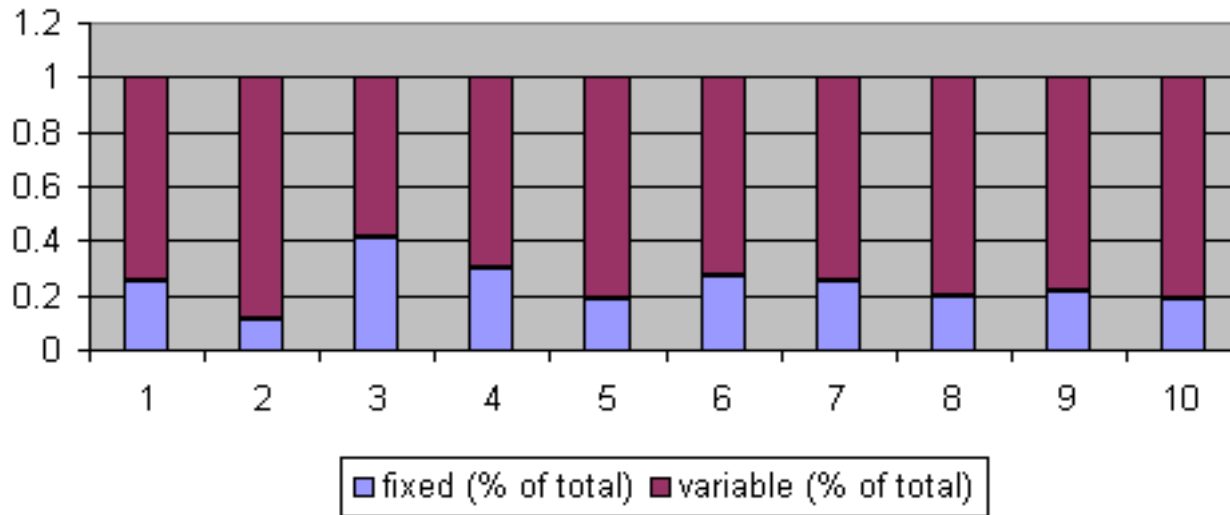
airports ( $\leq 10$  mill.pax)



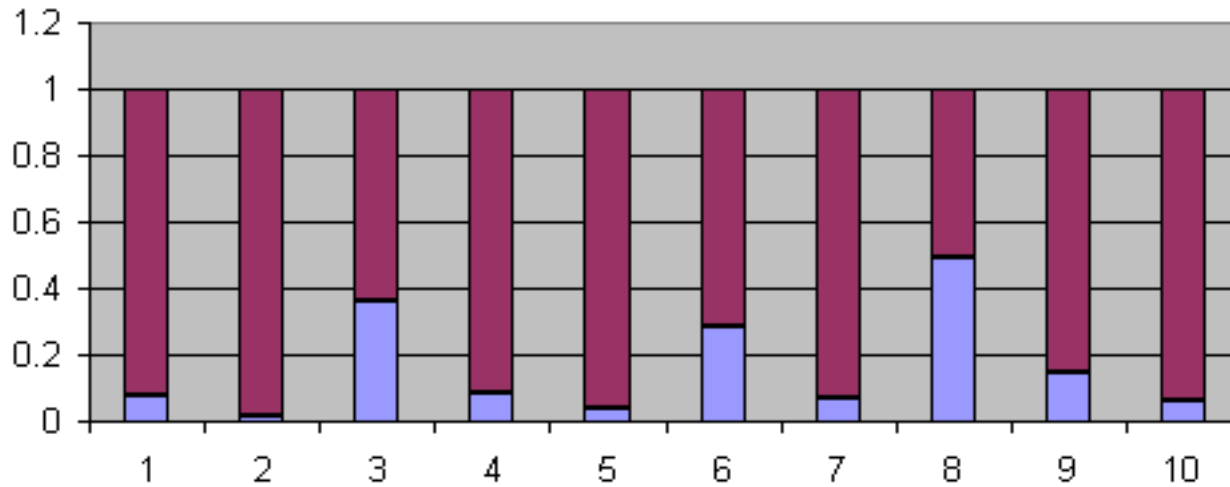
airports ( $> 10$  mill.pax)



### landside



### airside



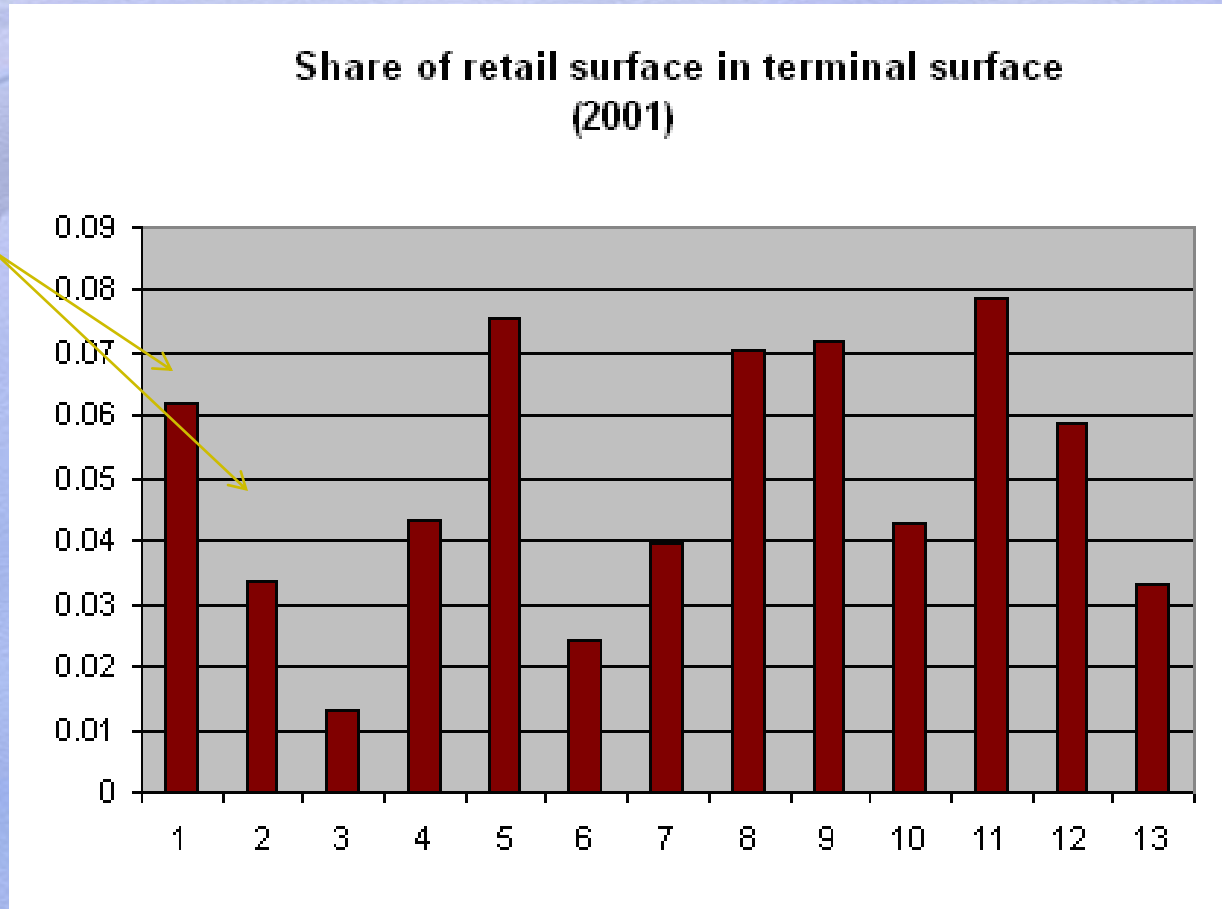
**Descriptive statistics.**

Rental charges from Retail



# Descriptive statistics

Airport 1 and Airport 2 have a similar number of passengers, terminal and retail surface, but the performance of Airport 1 is better.

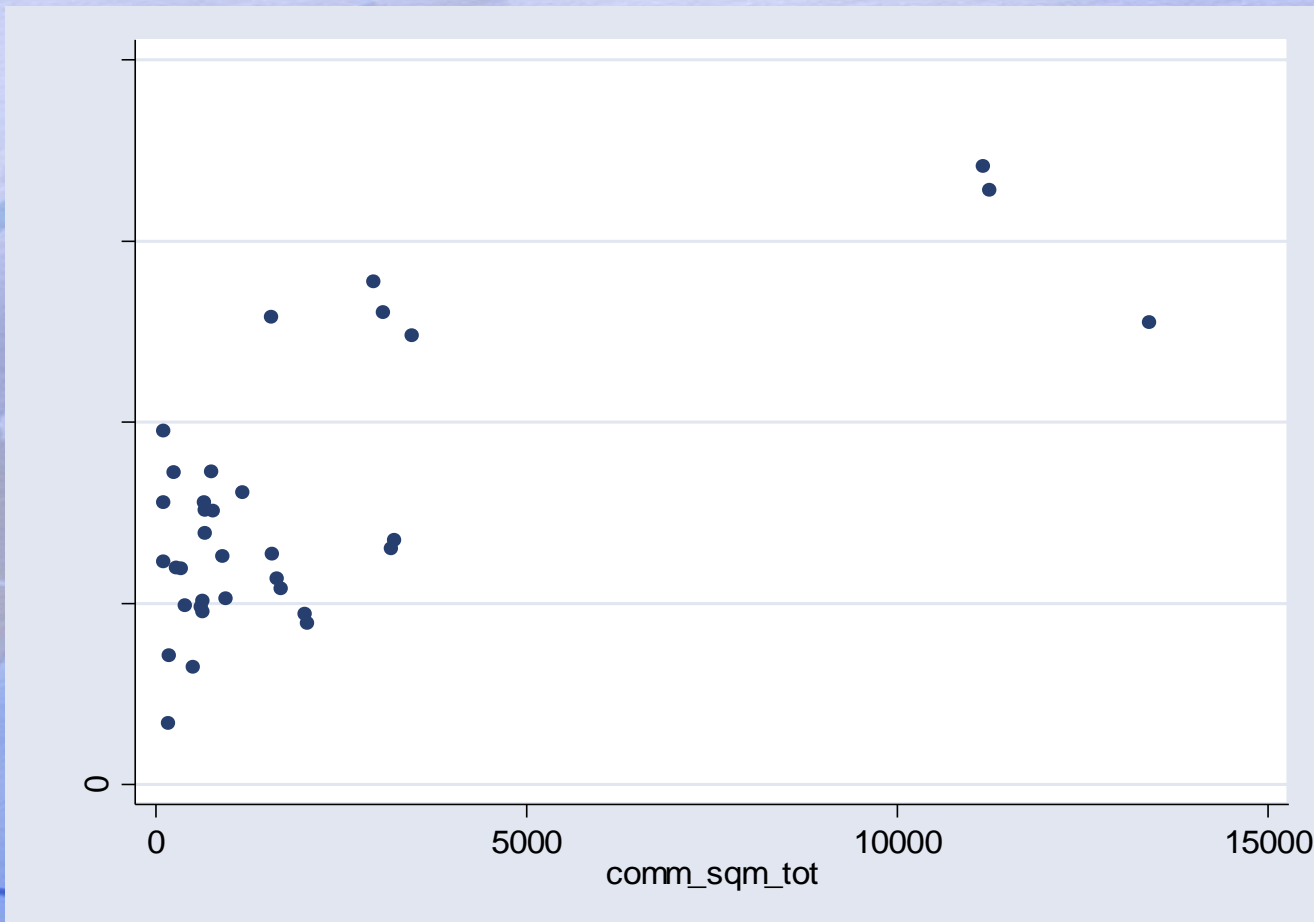


64% of retail space in Airport 1 is behind customs

20% of retail space in Airport 2 is behind customs

# Descriptive statistics

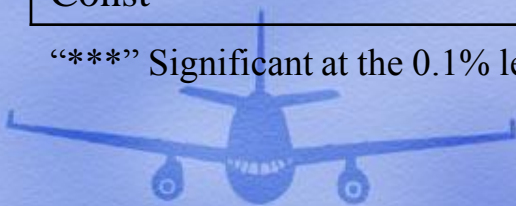
Scatter plot between turnover from retail per square meter and retail surface



# Empirical results

| Table 1. Random-effects GLS regression   |         |            |         |            |
|--|---------|------------|---------|------------|
| Retail revenue per sqm (in 1000 €)   | Model 1 |            | Model 2 |            |
|  | Coef.   | Std. Err.  | Coef.   | Std. Err.  |
| Ln (total number of passengers)  | 12.78   | (2.15)***  | 8.21    | (2.49)***  |
| Ln (retail surface)  | -6.48   | (1.79)***  | -4.89   | (1.77)**   |
| dummy_hub_3 (takes the value 1 if an airport has more than 3 000 000 passengers)   | -2.59   | -2.25      | No      | No         |
| dummy_hub_10 (takes the value 1 if an airport has more than 10 000 000 passengers) | No      | No         | 7.34    | (3.57)*    |
| Const  | -134.83 | (22.65)*** | -78.54  | (27.46)*** |

“\*\*\*” Significant at the 0.1% level. “\*\*” Significant at the 1% level. “\*” Significant at the 5% level.



# Empirical results

**Table 2. Random-effects GLS regression**

| Retail revenue per sqm (in 1000 €) | Model 3 |           | Model 4 |           | Model 5 |           |
|------------------------------------|---------|-----------|---------|-----------|---------|-----------|
|                                    | Coef.   | Std. Err. | Coef.   | Std. Err. | Coef.   | Std. Err. |
| Ln(retail surface area in sqm)     | -19.03  | (9.41)*   | -17.14  | (6.70)**  | -20.27  | (4.38)*** |
| Ln(retail surface area in sqm)^2   | 1.56    | (0.67)*   | 0.83    | (0.50)^   | 0.87    | (0.33)**  |
| Ln(departure passengers Intra-EU)  | No      | No        | 5.64    | (1.24)*** | 3.1     | (1.22)**  |
| Ln(departure passengers Extra-EU)  | No      | No        | 3.4     | (0.89)*** | 1.4     | (0.80)^   |
| Ln(revenue from F&B (in 1000 €))   | No      | No        | No      | No        | 8.09    | (2.19)*** |
| Const                              | 69.84   | (32.52)*  | -31.51  | -30.93    | -20.52  | -20.36    |

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“\*” Significant at the 5% level. “^” Significant at the 10% level.



# Empirical results

**Table 3. Random-effects GLS regression**

| Ln (Retail revenue per sqm (in 1000 €)) | Model 6 (< 10 000 000 passengers) |             | Model 7 (≥ 10 000 000 passengers) |              |
|---|-----------------------------------|-------------|-----------------------------------|--------------|
|   | Coef.                             | Std. Err.   | Coef.                             | Std. Err.    |
| Departure passengers Intra-EU           | 1.10E-07                          | (5.82E-08)* | -1.07E-07                         | (4.79E-08)*  |
| Departure passengers Extra-EU           | 1.30E-07                          | -1.62E-07   | 6.39E-08                          | (2.11E-08)** |
| Const                                   | 2.25                              | (0.13)***   | 4.02                              | (0.37)***    |

“\*\*\*” Significant at the 0.1% level. “\*\*” Significant at the 1% level. “\*” Significant at the 5% level.



# Empirical results

**Table 4. Random-effects GLS regression**

| Retail revenue per sqm<br>(in 1000 €) | Model 8      |            | Model 9      |           | Model 10     |           |
|---------------------------------------|--------------|------------|--------------|-----------|--------------|-----------|
|                                       | Coef.        | Std. Err.  | Coef.        | Std. Err. | Coef.        | Std. Err. |
| Number of employees                   | <b>0.003</b> | (0.0006)** | No           | No        | No           | No        |
| Parking short stay places             | No           | No         | <b>0.001</b> | (0.0003)* | No           | No        |
| Number of check-in facilities         | No           | No         | No           | No        | <b>0.036</b> | (0.010)** |
| Const                                 | 12.71        | (1.07)***  | 12.06        | (1.97)*** | 11.51        | (1.69)*** |

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# Empirical results

**Table 5. Random-effects GLS regression**

| Retail revenue per sqm<br>(in 1000 €)       | Model 11    |                 | Model 12    |                | Model 13    |                  |
|---|-------------|-----------------|-------------|----------------|-------------|------------------|
|   | Coef.       | Std. Err.       | Coef.       | Std. Err.      | Coef.       | Std. Err.        |
| Ln(International direct transit passengers) | <b>3.36</b> | <b>(1.39)**</b> | No          | No             | No          | No               |
| Ln(Domestic direct transit passengers)      | No          | No              | <b>0.21</b> | <b>(0.80)*</b> | No          | No               |
| Ln(Departure passengers without transit)    | No          | No              | No          | No             | <b>5.37</b> | <b>(0.92)***</b> |
| Const                                       | -14.72      | -13.93          | 12.8        | (7.67)^        | -63.28      | (13.41)***       |

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# Conclusions

- It was found out that regional airports and hubs have a different performance, which becomes statistically significant at the 10 000 000 pax level.
- Extra-EU passengers increase retail revenue per square meter in hubs and they have no significant effect in regional airports.
- Concerning the retail surface, it is obvious that once a certain level of retail area is reached the retail revenue per square meter starts to grow, which could be explained by the existence of brand name and national shops which have higher margins and are able to generate a higher turnover per square meter.
- Bars/restaurants also influence the retail revenue and generate externalities. This is similar to the externalities, which are created by anchor stores in shopping malls (Gould et al, 2005).



# Conclusions

- The number of short stay parking places, check-in facilities and the number of employees also contribute to the retail revenue.

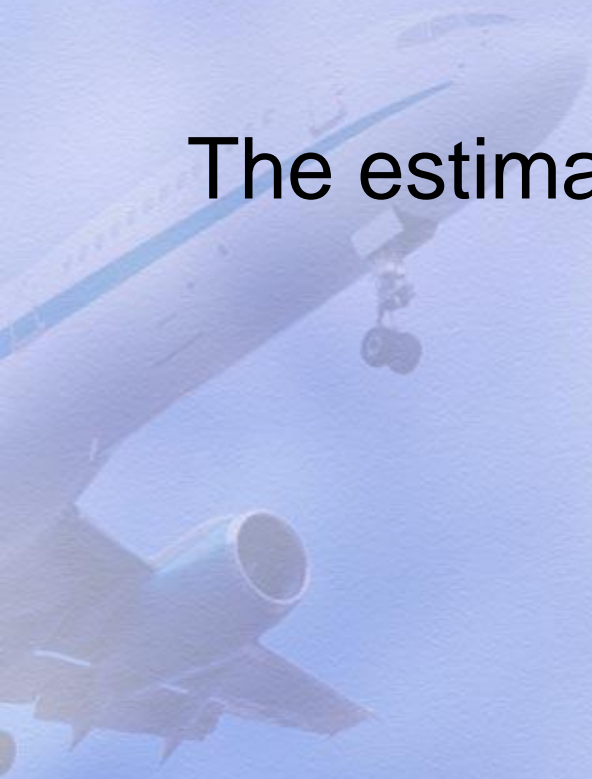
The infrastructure of an airport is extremely important for the retail revenue, because coefficients in front of such variables as retail surface, parking places, check-in facilities is greater than coefficients in front of such regressors as different types of passengers or number employees.

On the other hand an airport's management has more possibilities to improve the infrastructure than the passenger flows. Well developed infrastructure helps passengers faster and easier reach the airport, get through the security control and after that they will have more time and desire for shopping.



# Further Areas to Research

The estimation of the model on US data





**Thank You for Your attention!**

