Session 8 – Recap

Empresa

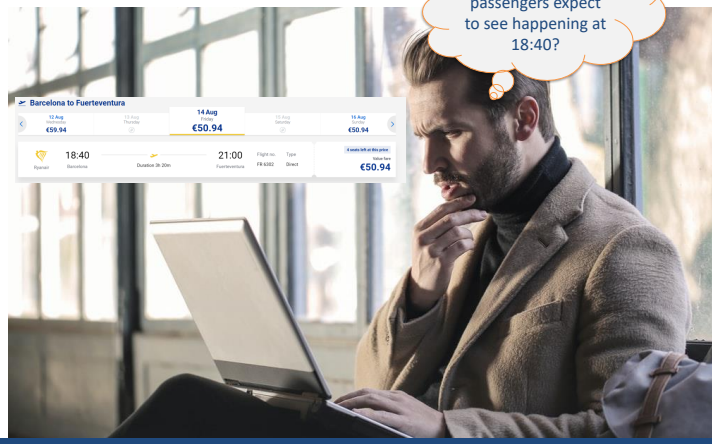
UNIVERSITAT POLITÈCNICA DE CATALUNYA

eetac

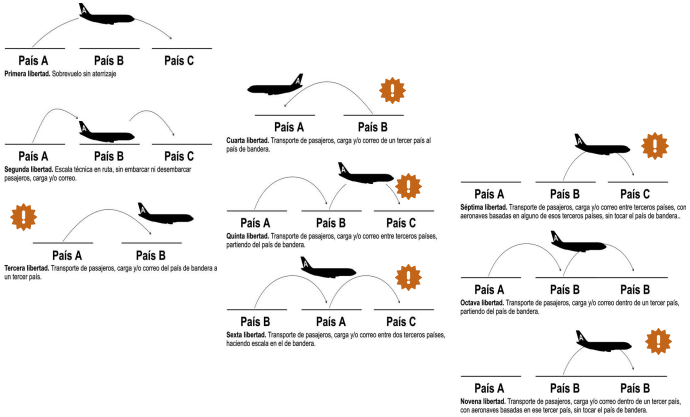
AIR TRANSPORT INDICATORS

1. **Passenger transport**
- Flights
- Seats
- Passengers (pax)
- LF: Load Factor (esp: Factor de ocupación/llenado)
- SL: Stage length (great circle distance)
- ASK: Available Seat Km (esp: AKO, USA: ASM) → seats* dist
- Block time, flight time, taxi time
  - Block time = taxi out + flight time + taxi in

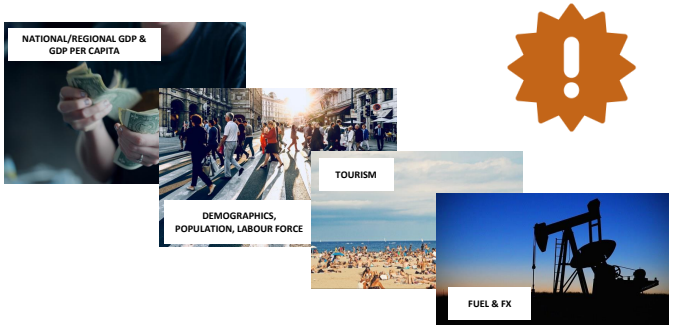
Question!



FREEDOMS OF THE AIR



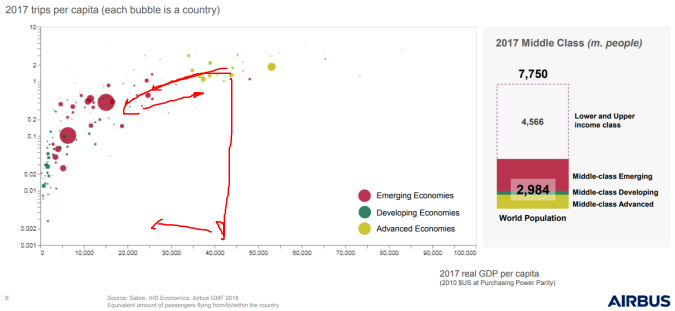
FACTORS PROMOTING AIR TRANSPORT GROWTH



Question!

AIR TRANSPORT vs. GDP per CAPITA

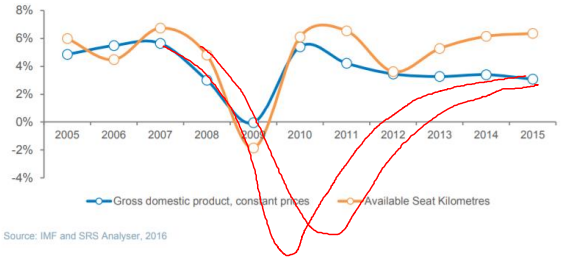
In 2017, 30% of emerging country populations took a flight



AIRBUS

AIR TRANSPORT vs. GDP

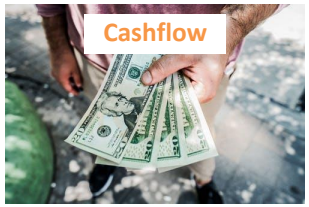
Figure 2 - Relationship of Real GDP and Air Travel



Source: IMF and SRS Analyser, 2016

Question!

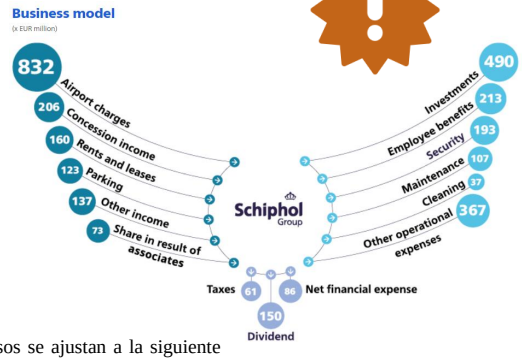
Expense vs. cost



Cash out (salida de caja)

Depreciation
Useful life
Cost

Airport business model



Los ingresos se ajustan a la siguiente estructura:

- Ingresos aeronáuticos
- Ingresos no aeronáuticos

Warning between Investment Cashflow & Depreciation

NPV, IRR

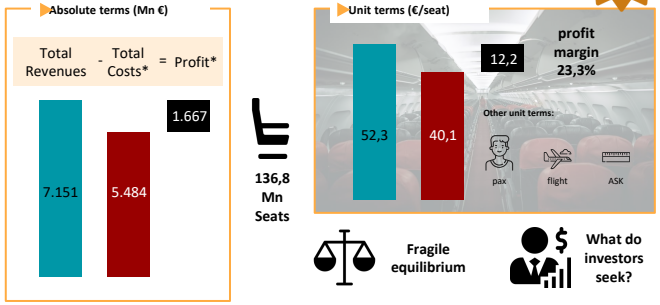
NPV (Net present value) → Esp. VAN (Valor actual neto)

$$NPV = -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + ... + \frac{C_T}{(1+r)^T}$$

$-C_0 = Initial\ Investment$
$C = Cash\ Flow$
$r = Discount\ Rate$
$T = Time$

IRR (Internal rate of return) → esp. (TIR)
r that makes NPV equal to 0

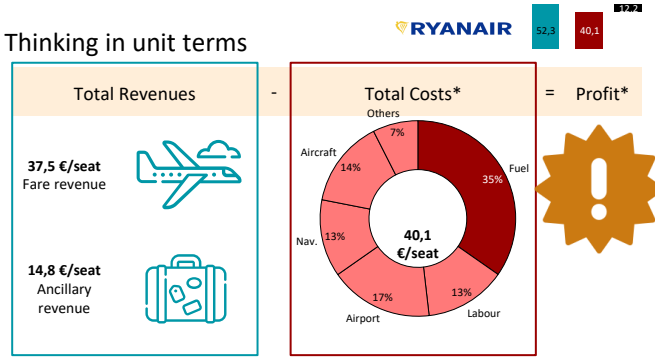
Airline profit equation



Thinking in unit terms

- Why thinking in unit terms?
- Unit revenues
  - Average Fare (Ingreso medio) → ing/pax
  - RASK
  - Revenue/seat
- Unit costs
  - CASK
  - Cost/seat

Thinking in unit terms



Thinking in unit terms

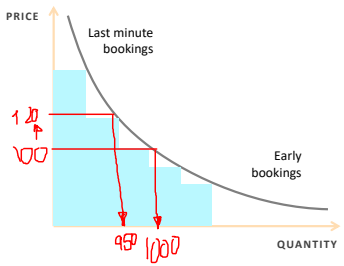
Total Revenues	-	Total Costs*	=	Profit*

Pax · average fare (€/pax) — Seats · cost/seat

Seats · LF

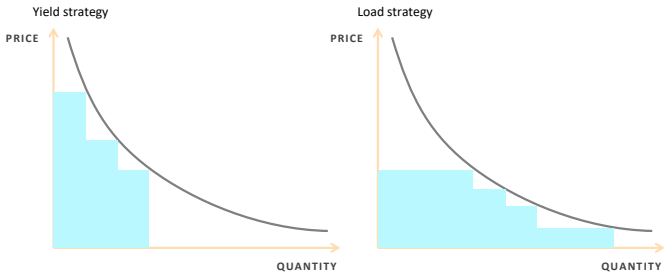
Seats · (LF · av fare	-	cost/seat)	=	Profit*

What Price shall we charge?
Differential pricing



- Willingness to pay
  Creation of different market segments to adapt to different "willingness to pay"
- Prevent diversion
- Estimulate demand

Yield vs. load strategy



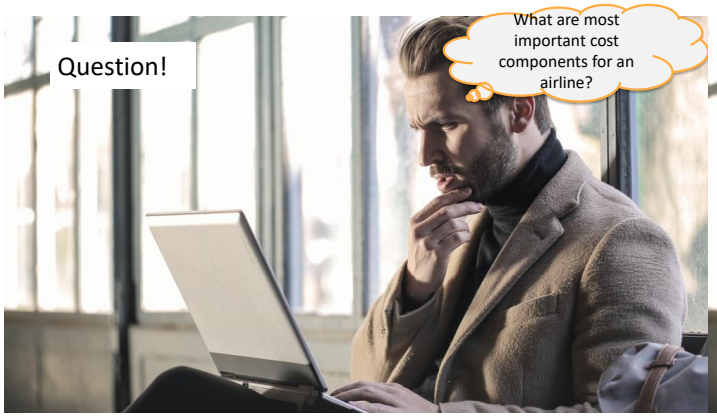
The goal: maximize revenue

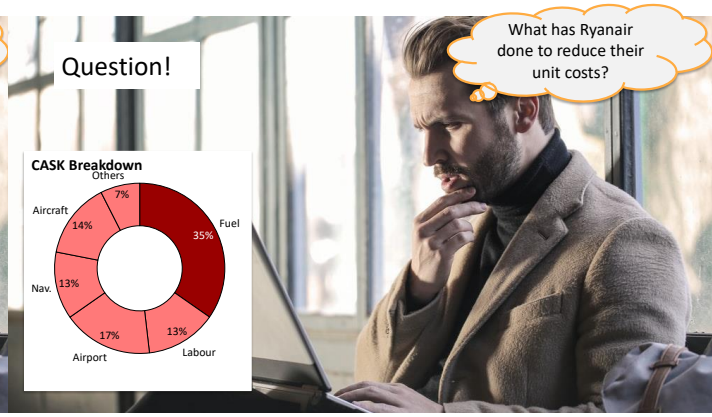
Example: BCN – AMS (1241km) A321 (220 seats)

seats sold per class

Fare (€)	Strategy A	Strategy B	Strategy C
200	22	10	19
170	25	12	21
140	27	14	23
110	40	45	42
85	20	60	36
60	15	40	25
40	10	30	18
Passengers	159	211	184
Load factor	72%	96%	84%
Total revenue (€)	19.830	19.650	20.490
Average fare (€/pax)	125	93	111
RASK (c€)	7,26	7,20	7,50

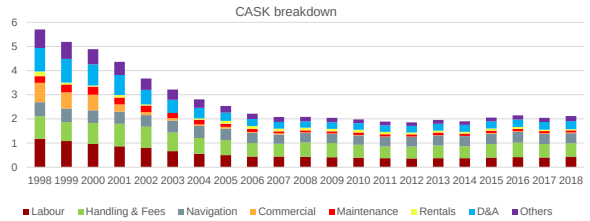
- **Yield management?**
- **Load management?**
- **Revenue management**





Cost evolution

Ryanair CASK breakdown (Fiscal year 1998 - 2018)



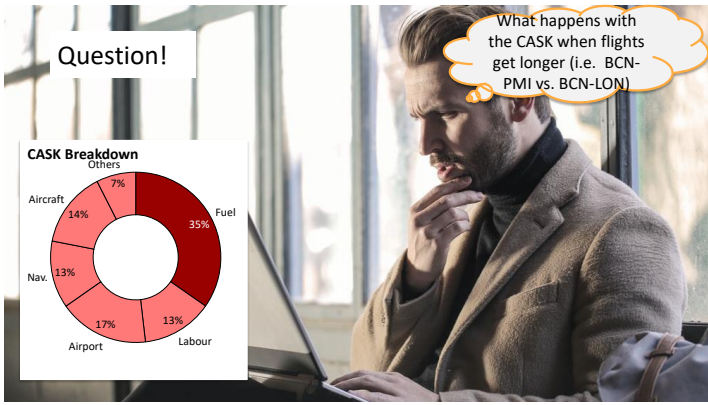
Cost efficiency

Gauge (esp: calibre): #seats per aircraft
- A320 IB 162 seats
- A320 VY 180 or 186 seats

Aircraft utilization:
- Block hours per day

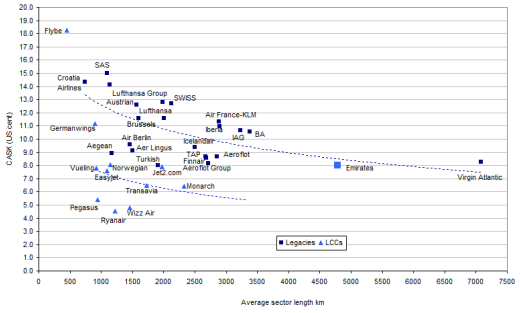
Employee productivity:
- Flight hours per year

Why are these two parameters important? → always think in unit terms



Stage lenght adjustment

https://centreforaviation.com/analysis/airline-leader/cask-analysis-allows-global-airline-unit-cost-benchmarking-and-strategic-mapping-282263



Impact of fuel in profitability

Ryanair cost breakdown & EBIT (Fiscal year 2009 - 2018)