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# ***Low-Cost Airlines Bringing the EU closer together***

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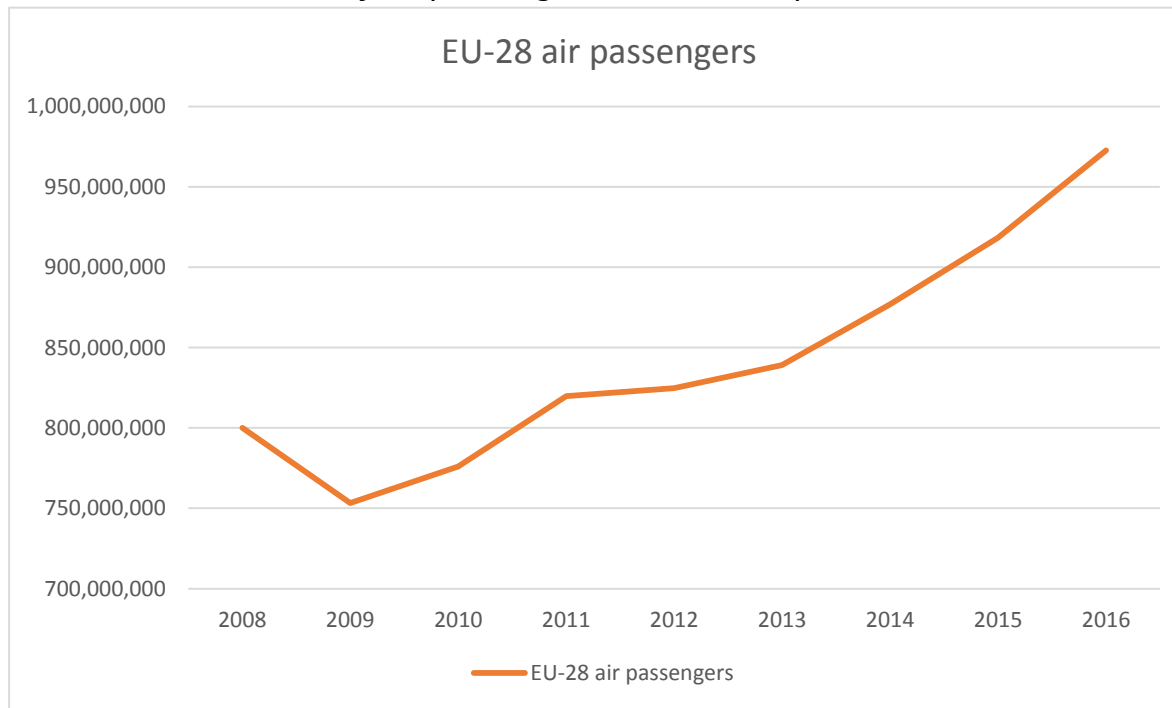
# Introduction

- For a long time, travelling by plane was considered a luxury that was accessible to relatively well-off people
- Liberalisation of the air transport industries has shifted the whole picture, whereby new entrants to the market offered lower air fares by adopting the low-cost model and started capturing large parts of the air travel demand
- Size and growth of aviation industry over the last decades highlight its importance for economic growth, job creation, mobility and connectivity

# Evolution of air passenger travel in Europe

- In 2016, ca. 970m passengers travelled by air from European airports (25% increase over the last 10 years)
  - 17% travelled domestically
  - 47% travelled within Europe

*Evolution of air passenger travel in Europe, 2008-2016*



*Note:* The numbers include arrivals and departures.

*Source:* Eurostat.

# Motivation

- Europe has been facing various challenges despite various positive developments; to name a few:
  - Unemployment
  - Aging workforce
  - Integration (economic, cultural etc.)
  - Labour shortages
  - Smooth functioning of the Single Market
  - A European identity
- RQ: Can LCCs bring the European Union closer together?
  - If so, what are the channels through which this happens?
  - What are the impacts on the European integration?
- Collaboration with Ryanair to conduct the study
  - Provided funding and data for analysis

# Plan of the talk

- Brief overview of regulatory framework
- Mapping and evolution of LCC sector in Europe
- Channels to foster mobility and integration through LCCs
  - Labour mobility
  - Business travels
  - International student mobility
  - Leisure tourism
  - Visiting friends and relatives
  - Local economy and regional development
- Case studies from LCC passengers and emerging travel patterns
- Concluding remarks

## Brief note on the terminology

- We call the incumbents as the legacy carriers
- We use low-cost carriers to describe airlines who have adapted low-cost business models
- We acknowledge that there is no one unique low-cost model as such for airlines, and certain practices of LCCs have been mainstreamed across the industry, which is in dynamic evolution

# The regulatory framework: air services

- **Connectivity within Europe (Single European Aviation Market)**

*Third air transport package (1992), recast and consolidated by Regulation (EC) 1008/2008*

- Levers: no commercial restrictions for EU airlines holding an operating license in serving the entire EU market
- Barriers: ownership and control rules; financial stability

- **Connectivity beyond Europe (External Aviation Policy)**

*Open skies judgment (November 2002)*

- Levers: attributing international traffic rights in a transparent and non-discriminatory manner; horizontal agreements, comprehensive agreements (USA, Canada, Brazil) and Common Aviation Areas (Balkans, Georgia, Israel, Jordan, Moldova and Morocco)
- Barriers: fair and open competition on a global scale; access to growing markets; ownership and control rules to grow in new markets

# The regulatory framework: passenger rights

- **Air passenger protection**

*Regulation (EC) 261/2004, case-law and interpretative guidelines (2016)*

- Levers: legal certainty and level playing field (clear rules on compensation and assistance for passengers)
- Barriers: unfair competition (non-compliance and ineffective enforcement); economic burden on airlines
  - Proposal blocked by the Council

- **Price transparency**

*Regulation (EC) 1008/2008*

- Levers: legal certainty and level playing field (final price including any charge and fee, distinction between airfares and other costs, opt-in for supplements)
- Barriers: unfair competition (non-compliance and ineffective enforcement)



# The regulatory framework: airports

- **Airport charges**

*Directive 2009/12/EC*

- Levers: common principles for setting airport charges; more transparency, no discrimination and potential agreement on investment plans via a system of consultation
- Barriers: no true improvement in airport charging systems; costly process ('red tape'); high charges often not cost-related; discrimination (transfer passenger discount and passenger-related charges); limited quality and efficiency of airport services; differences across Member States.

- **Slots**

*Council Regulation (ECC) No 95/93*

- Levers: slots allocated by a national independent coordinator; 50% of available slots to be distributed among new entrants
- Barriers: barriers to entry and inefficient use of slots linked to current grandfather rights ('use it or lose it'); obstacles for new entrants to consolidate their position; growing capacity constraints
  - Proposal blocked by the Council

# The regulatory framework: other aspects

- **State support for airports and airlines**

*New Guidelines on state aid to airport and airlines (2014)*

- Uniform conditions for all air transport market players
- Airports: operating aid to small airports for a limited timeframe and amount; investment aid to airports only in very specific cases and for a limited amount
- Airlines: start-up aid to airlines in regional airports for a limited timeframe and amount; agreements between airports and airlines are free of aid if profitable for airports (accounting for all types of revenues)

- **Brexit**

- Above 53m air passengers travelling between the UK and the EU
- Hard Brexit could costs up to 210€ billion, with over 3.1m jobs lost (Frontier Economics, 2016)
- Comprehensive (or multiple bilateral agreements) may limit capacity and reduce connectivity; ownership and control rule will impinge on air carriers majority-owned by UK nationals

# Economic principles of the low-cost air sector

- Airlines optimise revenues by offering different segments or booking classes (economy, business, first class etc.)
- Corresponding fares for different segments are calculated based on various factors such as unit costs, willingness to pay of customers etc.
- Before the entry of LCCs, a large part of the market was excluded from air travel since lowest fares were still above the willingness to pay of many individuals (see the economic model by Franke, 2004)
- Price differentials between legacy carriers and LCCs can vary between 30-50% (European Flight Index study)
  - Higher differences in fares when booked in advance
  - Higher differences in fares on international flights

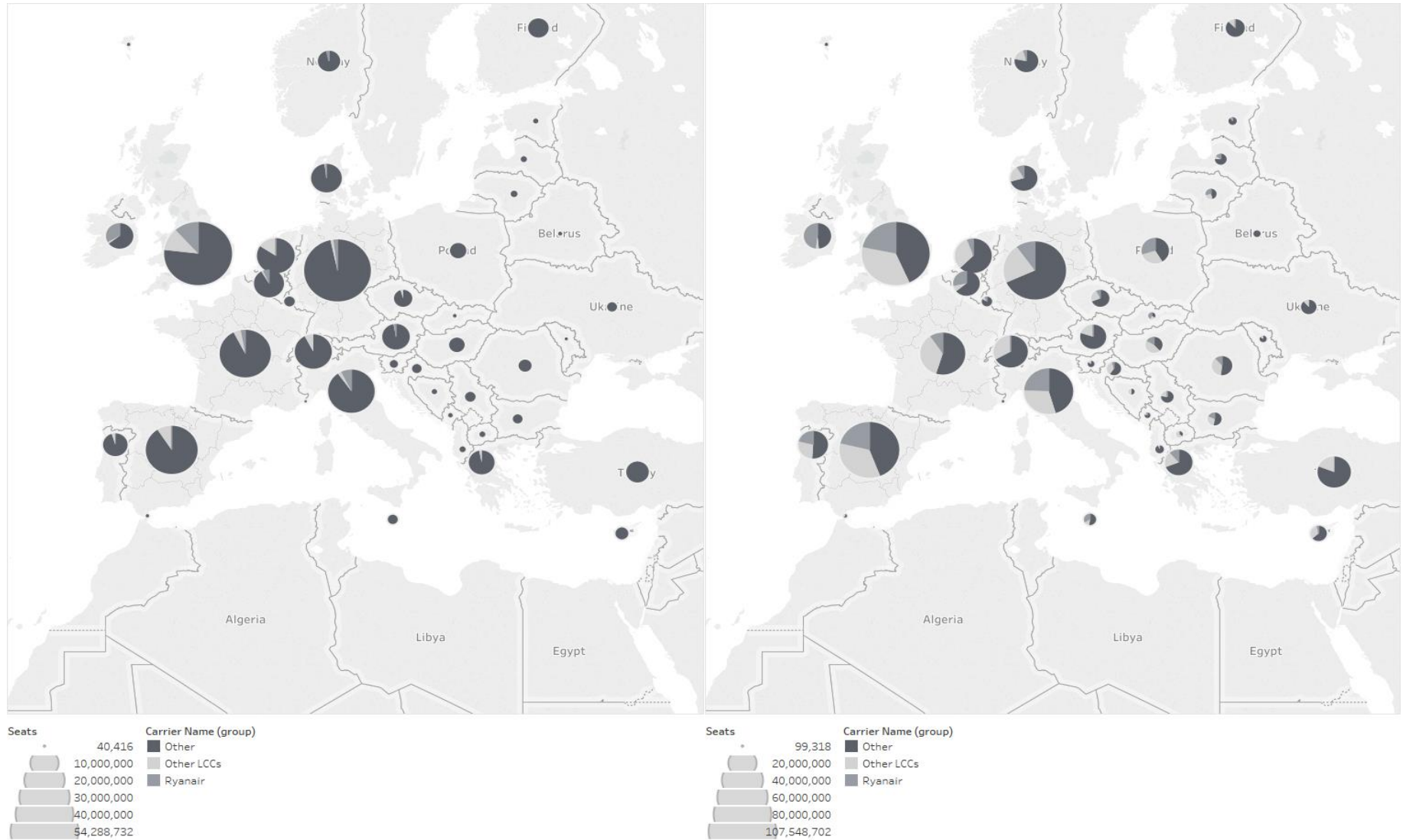
# Economic principles of the low-cost air sector

- Some common characteristics adapted by LCCs (if not all) to have relatively lower air fares:
  - Simple service offering without frills (no free baggage, on-board meals etc.)
  - Short-haul and point-to-point routes (no hub-and-spoke)
  - Using mainly secondary or regional airports with relatively lower charges
  - Higher aircraft utilisation with shorter turnaround times
  - Homogeneity of fleet to minimise maintenance costs and transfer crew easily across similar airplane models
  - More recent and fuel-efficient fleet to reduce fuel costs
  - High density seating with single class to maximise aircraft capacity
  - Direct selling of tickets through online website (no travel agencies)
  - High passenger-per-employee ratios

# Appearance and evolution of LCCs in Europe

- The LCCs entered the market following the liberalisation of the air travel
- Ryanair became the first LCC in Europe (following the South West low-cost model from the US), followed by easyJet. Others joined the group later on (Vueling, Wizz Air, etc.)
- There has been sharp shifts in the market shares of incumbents vs. LCCs
- While the majority of passenger seats (65%) belonged to incumbent carriers in 1992 in contrast to 1.5% share to LCCs, the latter exceeded the market share of the former in the next decades by reaching 48% in 2015.

## International seat capacity by carrier type in Europe (2002 and 2017)

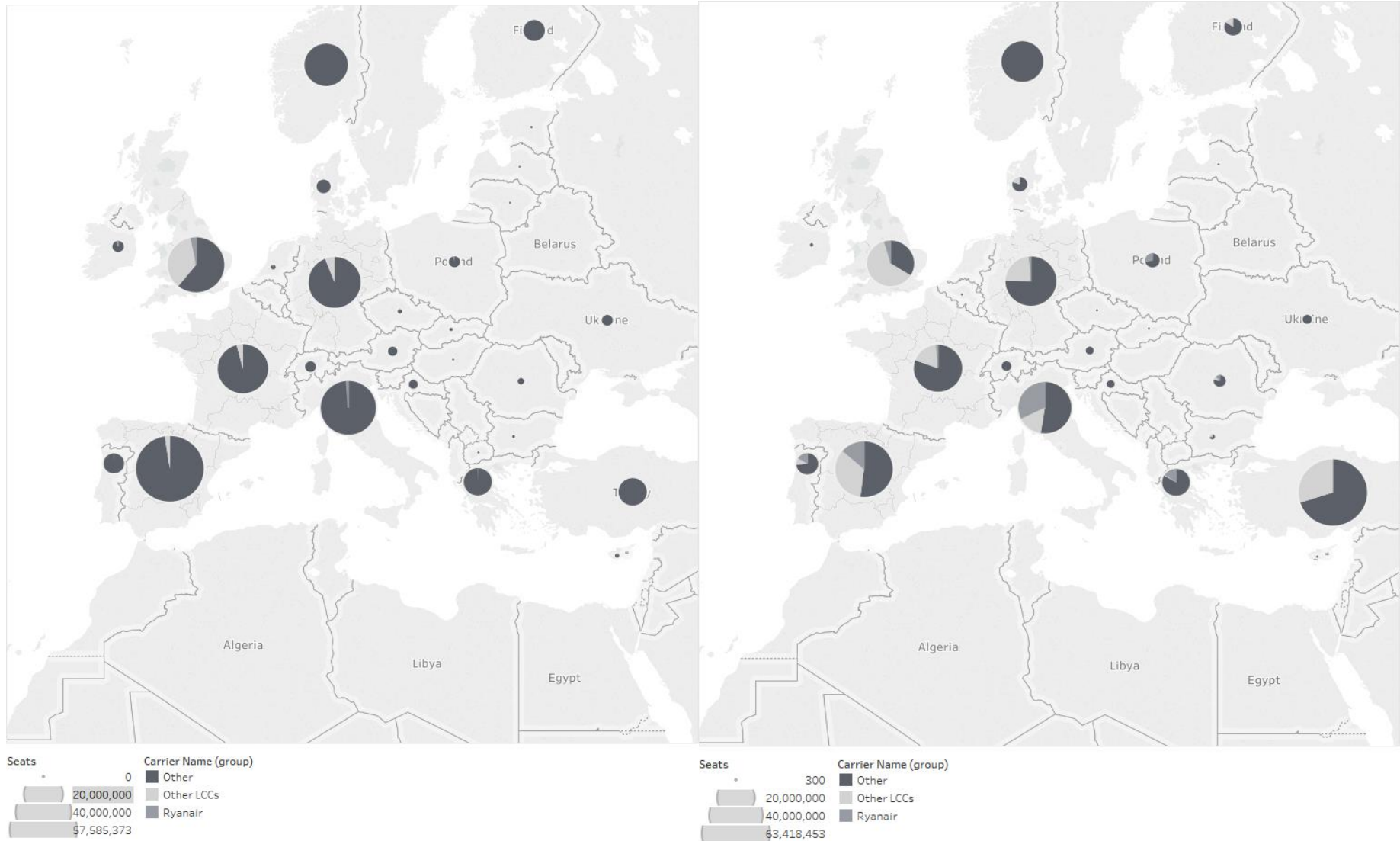


# International seat capacity growth

Capacity growth 2002-2017			Growth coming from LCCs		LCC share		
Country	Seats	%	Seats	% of capacity growth	2002 (%)	2017 (%)	% point increase
UK	53,259,970	98	48,300,710	91	23	57	33
Spain	52,181,790	165	43,904,467	84	9	56	47
Germany	38,864,946	74	27,252,008	70	3	32	28
Italy	30,834,874	121	28,220,064	92	10	55	45
Turkey	20,170,012	336	5,001,263	25	0	19	19
France	16,606,367	54	19,145,867	115	7	45	38
Netherlands	15,231,702	91	9,344,112	61	16	37	22
Poland	14,490,821	460	10,344,525	71	0	59	59
Portugal	13,620,805	193	9,802,672	72	5	49	44
Switzerland	11,487,513	71	7,933,063	69	8	33	26
Greece	9,972,654	127	5,231,977	52	3	31	28
Ireland	8,749,536	99	5,967,638	68	35	52	16
Romania	7,895,606	399	4,778,238	61	0	48	48
Sweden	7,738,477	85	3,450,513	45	5	23	18
Norway	7,418,417	126	2,709,299	37	4	22	18
Austria	6,996,736	78	2,918,852	42	3	20	17
Denmark	6,132,410	55	4,837,215	79	2	29	27
Belgium	6,028,337	57	5,061,651	84	9	36	27
Czech Republic	3,821,667	97	2,228,388	58	5	31	26
Finland	3,472,135	70	1,054,003	30	0	12	12
Grand Total	379,350,992	113	268,555,272	71	10	42	33

Source: Seat capacity data are provided by Ryanair (2017), based on Cap-Stat.

## Domestic seat capacity by carrier type in Europe (2005 and 2017)





# Domestic seat capacity growth

Country	Capacity growth 2002-2017		LCC share		
	Seats	%	2002	2017	% point increase
UK	-4,307,114	-13	35	66	31
Germany	1,798,933	5	3	25	21
Spain	3,166,342	8	0	48	48
Italy	3,175,913	9	0	47	47
France	-4,177,113	-12	1	19	19
Norway	2,369,915	11	0	0	0
Sweden	1,380	0	0	0	0
Netherlands	-411,570	-100	0	-	-
Switzerland	-659,190	-33	0	0	0
Greece	2,978,767	40	0	16	16
Portugal	1,664,094	34	0	26	26
Denmark	482,279	19	0	20	20
Ireland	-1,371,537	-91	0	0	0
Belgium	748	0	0	0	0
Austria	-227,856	-20	0	0	0
Poland	1,459,018	101	0	29	29
Finland	4,302,124	0	0	16	16
Romania	1,415,010	225	0	21	21
Czech Republic	-51,566	-48	0	0	0
Hungary	0	0	0	-	-
<b>Grand Total</b>	<b>13,136,729</b>	<b>6%</b>	<b>6%</b>	<b>32%</b>	<b>26%</b>

Source: Seat capacity data are provided by Ryanair (2017) based on Cap-Stat.

# LCCs from the previous the seat capacity maps

- easyJet
- Easyjet Switzerland
- Eurowings
- Flybe
- Germanwings
- Go
- Jet2
- Norwegian Air International
- Pegasus
- Transavia
- Transavia France
- Volotea
- Vueling
- Wizz Air
- Wizz Air Ukraine
- WOW Air

# Recent passenger traffic numbers by major LCCs

- Passenger traffic by major LCCs in Europe (in millions)

	2016	2017
Ryanair	106.4	120.0
easyJet	75.2	80.8
Vueling	27.8	-
Wizz Air	22.8	28.3

*Source: Authors' own elaboration of data based on information on passenger traffic obtained from respective LCC company websites or other secondary sources (accessed in April 2018).<sup>40</sup>*

# Routes network

The most important air routes in Europe (2015)

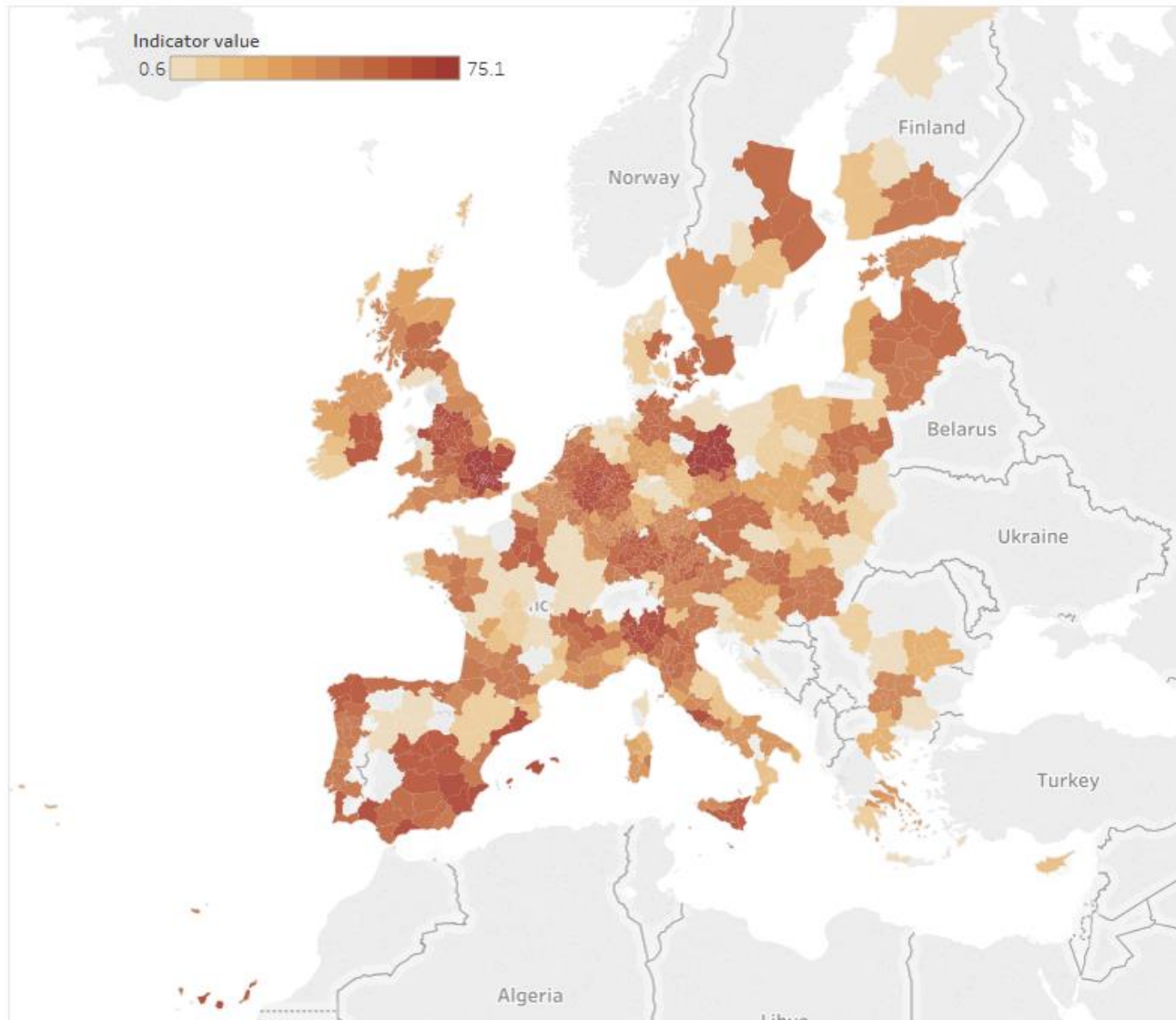


- The most important air routes lie on the north-south axis
- UK has the lead among the busiest international routes
- Presence of LCCs among the busiest routes is greater in UK, France, Germany and Italy

## Air connectivity index (ACI) in Europe

- Connectivity is a key theme in the European Aviation Strategy
- European Commission and Eurocontrol have developed an *Air Connectivity Index (2017)* in Europe to describe the connectivity and identify gaps in air services in different dimensions
- Connectivity index includes several indicators:
  - Reachable population
  - Travel time in hours (incl. ground access)
  - Flight choices
  - Number of carriers

## ACI: Intra-EU Connectivity – Reachable Population (%) (2017, 1<sup>st</sup>



# Alternative modes of transport (1)

- We mainly consider transport modes by train and coach as alternative to LCCs
- Rail:
  - While air transport has gone through a dynamic development with steady growth path since 1990s, the corresponding pattern is not observed in rail transport (measured by km-passenger)
  - The supply (in km-passenger) of high-speed rail (HSR) is increasing, but falls short compared to air travel (Dobruszkes, 2011)
  - New business models are emerging: low-cost rail services (e.g. OUIGO in France)
  - International train connections are mostly concentrated in Western Europe (e.g. Eurostar, Thalys, TGV, Renfe, Transitalia etc.)
  - Main advantage is the city-centre to city-centre connections
  - Travel times are longer, especially between spread out areas
  - While trains (especially HSR) constitute relevant alternative to planes, the fares remain relatively high compared to LCCs

## Alternative modes of transport (2)

- Coach:
  - Highly regulated sector (esp. international connections), but the sector is developing to international market
  - City-centre to city-centre connection is attractive
  - Coach travel is more competitive in terms of price when compared to fares by LCCs
  - However, travel times are longer (depending on the route) and long-distance commuting is not an attractive option for travelers (supported by evidence from qualitative data)



# Labour mobility (1)

- Freedom of movement is one of the main rights of European citizens (Article 45 of TFEU)
- There are many factors influencing the mobility of fundamental factors of production, such as labour (pull vs. push factors)
  - Globalisation and corresponding sectoral developments
  - Technological progress
  - Economic downturn
  - Political developments
- With the expansion of the Single Market, labour mobility is increasing over recent years (ca. 12m mobile workers in the EU in 2016 )
- We consider three types of labour mobility
  1. Cross-border migrants
  2. Cross-border commuters
  3. Domestic commuters
- Availability of lower air fares affects the transaction costs of migration

## Labour mobility (2)

- The movement of labour migrants from NMSs to other MSs created a new demand for air travel
- >0.5m migrants moved to the UK between 2004-2006 from CEE (e.g. Poland, Hungary) and ca. 1.5m individuals from CEE reside in the UK as of 2015 (mainly for work reasons)
- The commencement years of LCC services largely reflect the expansion of the EU to CEE countries (2004 and 2007)

Commencement years of selected LCCs in selected airports in CEE

Airport	Country	Commencement year	
		<i>Ryanair</i>	<i>Wizz Air</i>
Sofia	Bulgaria	2016	2007
Brno – Turany	Czech Republic	2005	-
Prague – Ruzyně	Czech Republic	2007	2010
Budapest Airport	Hungary	2007	2003
Riga	Latvia	2004	2014
Gdansk	Poland	2005	2006
Krakow Balice	Poland	2005	-
Poznan – Lawica	Poland	2005	2008
Katowice International	Poland	2007	2004
Warsaw – Frederic Chopin	Poland	2007	2013

Source: Information in this table is based on network data shared by Ryanair and information retrieved from the internet on Wizz Air.

## Labour mobility (3)

- With cheaper air travel, not only volume of movement increases, but also the patterns of it
  - More temporary and circular forms of mobility emerge (Button & Vega, 2008; Constant et al., 2013)
  - Lower travel costs make frequent travel an attractive option and allows broadening career opportunities
  - For example, LCC passengers highlight the possibility of living and working in different regions/countries thanks to the availability of LCCs
  - Domestic commuting is common in relatively large, spread out or island countries (e.g. Germany, Italy, Spain, Ireland, UK)

Domestic seat capacity by LCCs in the largest European countries

Country	Domestic seat capacity by LCC	Population	Domestic seat capacity by LCC per inhabitant
Spain	21,462,280	46,398,000	0.463
UK	19,894,484	65,397,000	0.304
Italy	18,097,162	59,504,000	0.304
Germany	8,635,767	81,708,000	0.106
France	6,177,722	64,457,000	0.096
Poland	841,878	38,265,000	0.022

Source: Authors' own elaboration based on domestic seat capacity data from Cap-Stat provided by Ryanair (2017) and country population statistics from United Nation Population Division statistics (2015). The domestic seat capacity of Spain also includes Canary Islands.

## Labour mobility (4)

- Challenges ahead:
  - While labour mobility is facilitated by LCCs, which can foster European integration, the labour market integration of the migrant workers at the destination is not always straightforward
  - Looking at labour market outcomes of young mobile workers in major European destinations, we find that these workers end up in occupations for which they are overqualified (Akgüç & Beblavý, 2018)
  - Labour migrants from Eastern Europe were generally dissatisfied with their jobs in the UK (Blanchflower & Lawton, 2009)

## Business travel (1)

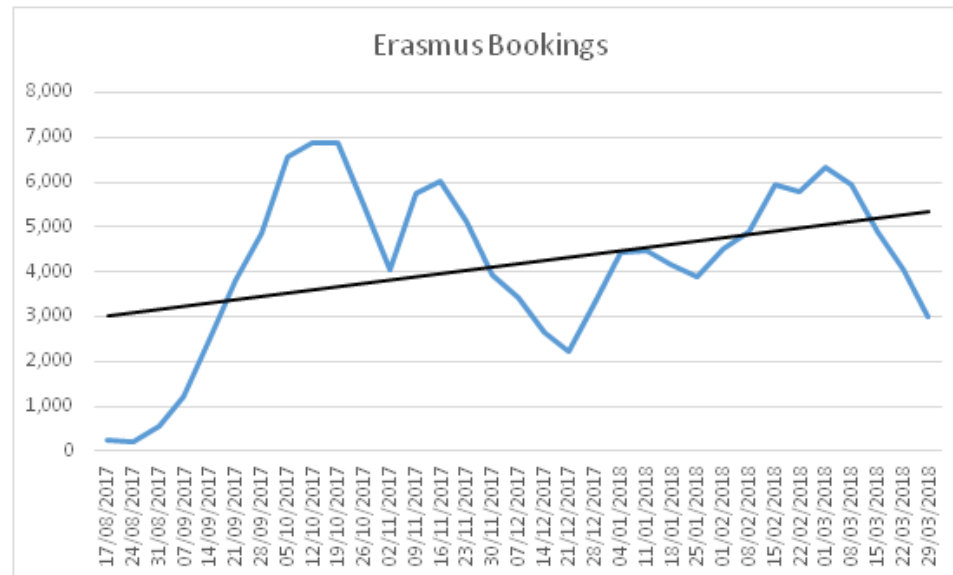
- Despite the progress of recent ICT technologies, business travels and face-to-face meetings are still considered essential for reaching out to customers and developing business relationships
- Improved connectivity (via secondary and regional airports) with other regions and countries through air travel and LCCs, in particular, can enhance an economy's performance by facilitating and fostering business links, foreign direct investment and knowledge spillover (Air Transport Action Group, 2012)
- While the majority of business travel is concentrated in Western Europe, the expansion of the Single Market appears to trigger new business travel patterns from the west to the east
- LCCs also appear to attract SME employees, who are more constrained in terms of travel budget
  - Boost smooth functioning of the Single Market

## Business travel (2)

- E.g. opening of high-ranking international hotels in CEE capitals, where LCCs also operate with significant shares of capacity, could be seen as an indication of increased business links between west and east
- There appears to be an association with business links between regions and the connectivity through LCCs (Williams & Balaz, 2009); for example:
  - Existence of Bratislava-Paris route offered by SkyEurope (2002-2009, LCC) possibly played an important role in persuading Peugeot Citroen to build a car assembly plant in Trnava, Slovakia
  - Existence of LCC connections from Prague was likely a key factor in DHL's decision to build an IT centre in Czech Republic

# International student mobility

- Student mobility is an important part of European integration
- Erasmus program subsidises and supports mobility of university students and promotes a European identity
  - Related to high-skilled migration, student mobility allows an early experience for mobile youth of different education systems, languages and cultures
- Low air fares fosters mobility of student who are usually cash-constrained
- Evidence suggests that LCCs determine travel decisions of students (Dobruszkes, 2013)
- E.g. Ryanair started Erasmus network partnership to foster student travel through discounts (2017)



# Leisure tourism

- Affordable air travel can promote further mobility through leisure tourism, which can take several forms:
  - Vacation
  - Second home ownership / international retirement migration
  - Short-term cultural tours / city breaks
- International tourist arrivals have grown over the last two decades, also corresponding to a period of new entrants to the air travel market

UNWTO regions	2000	2005	2010	2015	2016	2017	Change 2000-2017 (%)
Europe	392.9	452.7	487.5	604.9	619.3	671.1	<b>70.8</b>
Northern Europe	44.8	54.7	56.6	69.8	73.8	77.6	<b>73.2</b>
Western Europe	139.7	141.7	154.4	181.5	181.5	193.4	<b>38.4</b>
Central and Eastern Europe	69.6	95.3	98.5	122.2	126.9	133.3	<b>91.5</b>
Southern & Mediterranean Europe	139.0	161.1	178.1	231.4	237.1	266.8	<b>91.9</b>
<b>EU-28</b>	<b>336.8</b>	<b>367.5</b>	<b>382.8</b>	<b>478.3</b>	<b>500.1</b>	<b>537.8</b>	<b>59.7</b>

*Source:* Tourism data are extracted from (UNWTO, 2018). Regional classifications are based on the UNWTO definitions.

- Operating in niche tourism areas and by connecting remote destinations, LCCs appear to help creation of new tourism centres, supporting territorial cohesion in Europe
- LCCs have positive effects on tourism and subsequent cultural interactions



## Visiting friends and relatives

- This is a mobility channel as a consequence of the initial migration of an individual, which can trigger a post-migration flow
- Post-migration flow visiting friends and family left behind as well as visits by the latter to the migrant at the destination
- Predictable and increasing patterns of such travel types
- There is an intrinsic value of the speed and affordability of air travel to reach friends and family, which allows repeated travels to stay in touch with the left behind
- LCCs might be capturing an important part of the demand thanks to affordability

## Local economy and regional development

- All the discussed channels are intertwined with local economies in contributing to the regional connectivity and development
- There are also direct impacts through employment opportunities in the aviation sector of the region, in addition to the business links and tourism income
- The use of secondary airports by LCCs can contribute to regional development (e.g. Bergamo airport in Italy); however, the impacts might be lower if the region with the airport is not the final destination of the passengers (e.g. Beauvais-Tillé airport in France)
- At the same time, with ease of relocation potentially creating unpredictability for regional airport managements, they need to make sure to attract and retain LCCs in competition with adjacent airports

## Qualitative data: LCC passenger interviews (1)

- Up to now, the study has been based on evidence from academic and policy literature and quantitative (aggregate) descriptive data analysis
- In addition to these, in collaboration with Ryanair, we also collect qualitative data from LCC passenger interviews to dig deep into the quantitative data and better understand travel patterns and their links with the impact channels of LCCs
- After an initial screening survey, 15 interviewees were identified and tele-depth interviews were conducted during February 2018
- The main selection criteria for the sample were based on geographical region and motivation to travel

## Qualitative data: LCC passenger interviews (2)

- Immediate analysis of qualitative data suggests that even the relatively small sample demonstrates the variety of commuting strategies enabled by LCCs
- The availability and affordability of low cost air travel allows people adopt various work-life patterns, split residences or employers in different regions and countries
- Even after migrating for better job opportunities, LCCs seems to enable individuals to retain close links with home and family through repeated travels
- Regular travel for studying abroad is an important type of mobility
- Last but not least, commuting for better quality of life is also observed (international retirement migration in warmer regions)
- Overall findings go hand in hand with the quantitative parts

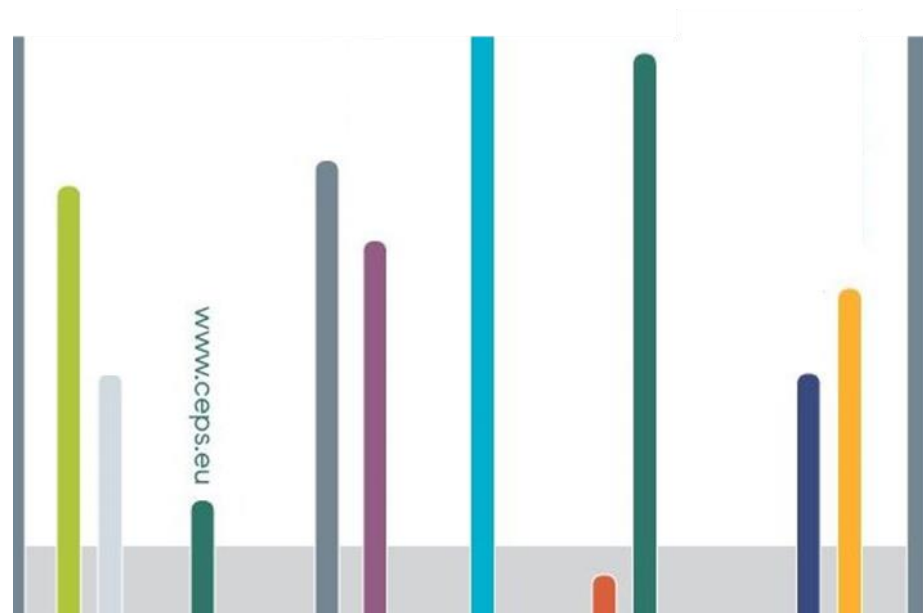
## Qualitative data: LCC passenger interviews (3)

- Participants were also asked about their views on the EU and its policies affecting LCCs
- Interviewees were generally positive in their view to the EU
- Emphasis was given to the principal benefit of the ability to travel, freedom of movement in terms of work
- Several respondents saw LCCs as promoting a unified Europe
- They mostly had no knowledge on the fact that EU legislation was instrumental in spreading the LCC model around Europe

## Concluding remarks

- Allowing economically constrained individuals to travel by air is one of the most important contributions of LCCs to the mobility of people
- Increasing cross-border travel is a reflection of the closeness and connectedness of countries
- Increased flow of people and goods benefits sending and receiving regions and encourages social and economic integration
- Mixed method approach combining desk research and data analysis allows addressing the research questions by identifying interesting channels of impact of LCCs to the connectivity and integration of Europe

Thank you!





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