

The 5th International Aviation Management Conference 2024



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Segment versus OD traffic: The development of passenger flows between Europe and the UAE and potentials for new direct flights

Introduction & Research Question

- Strong air transport development on flight segments to, from and via UAE
- From a European perspective, DXB and AUH still mainly regarded as transfer points, despite becoming increasingly important destinations - and points of origin
- Little research on the evolution of origin-destination (OD) flows to and from the UAE (“UAE as origin or destination”)
- Research questions:
 1. How have OD and segment (leg) passenger numbers from Europe to the UAE evolved over time and in comparison?
 2. Which European countries lack direct flights to the UAE?
 3. Which are the largest (indirect) airport pairs between Europe and the UAE with no, or only very limited, direct flights?

Emirates A380 Routes, 2023

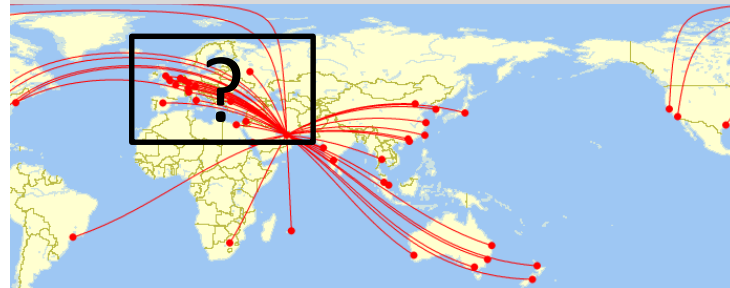


Figure source: <https://knaviation.net/emirates-a380/>; own additions.



Outline

- Introduction & Research Question
- Literature
- Methodology & Data
- Results
 - Development of OD and segment traffic between Europe and UAE
 - Development of UAE traffic at the European country level
 - European countries with and without UAE connections
 - Key OD flows with only limited nonstop or direct UAE connection
- Conclusion & Outlook



Literature

- Business model and success factors of Gulf carriers (e.g., Vespermann, 2008; O'Connell, 2011; Hooper, 2011; Alkaabi, 2014; Logothetis and Miyoshi, 2018)
- Competitive and traffic impacts on EU/US hubs and airlines (e.g., Vespermann, 2008; Grimme, 2011; Dresner et al., 2015)
- System efficiency of the Gulf carriers' hub-and-spoke networks compared to European hub carriers (O'Connell et al., 2018)
- Impact of (additional) traffic rights (e.g., Forsyth, 2014; Squalli, 2014) and analysis of protectionist behavior (De Wit, 2014)
- **Scarce (recent) research on traffic flows to and from the UAE, with a focus on segment versus OD traffic, leaving room for our work.**



Methodology & Data

- Descriptive approach: Comparison of OD and segment passenger numbers between Europe and the UAE
- Data source: Sabre Market Intelligence (MI)
 - Monthly passenger numbers from reservation systems (MIDT – Marketing Information Data Tapes) and other sources
 - Reliable at least for markets not dominated by LCCs with high direct sales, and at aggregated levels
 - Segment (leg) statistics = direct route / flight level
 - OD statistics = traffic between origins and destinations as ticketed, including indirect connections (if any)
- Simple indicator (OD/segment passenger ratio), relating the number of OD passengers to the number of segment passengers
 - <1 : Less OD than segment passengers: Route supply exceeding local demand
 - >1 : Proportion of OD passengers cannot be accommodated on direct flights: Route underserved?



Results

Development of OD and segment traffic between Europe and UAE, 2010-2023

- Overall clearly more segment than OD passengers
- OD/segment ratio up from 33 % in 2016 to 40 % in 2023
- UAE as a destination/stopover has continued to gain in importance
- Overall, UAE still more important as a transfer point than as a destination for traffic from Europe

Evolution of departing segment and OD passengers, Europe-UAE, 2010-2023.

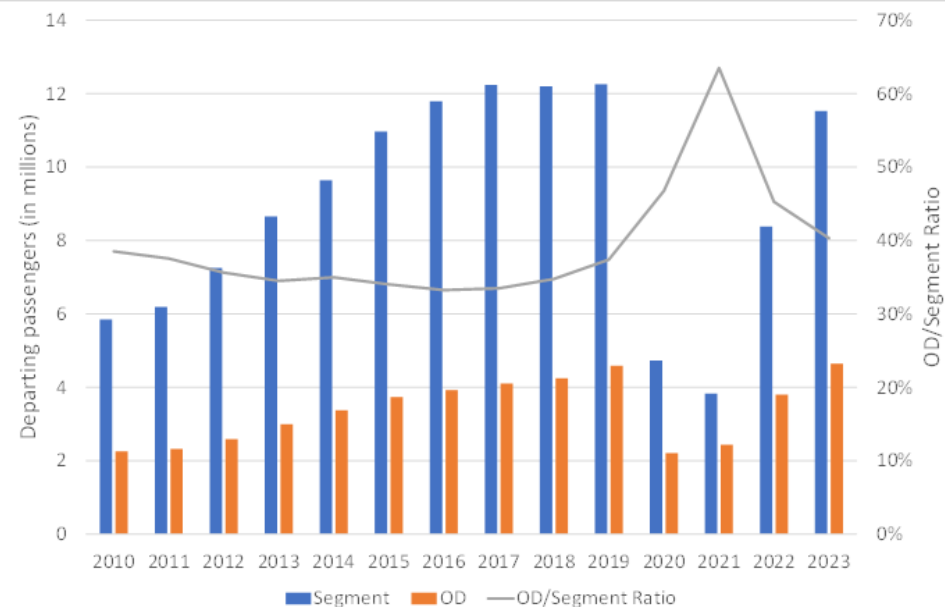


Figure source: Sabre MI, own calculations



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Results

Long-term development of UAE traffic at the European country level – Segment level, 2010-2023

- Larger markets like UK (+47 %), Germany (+ 32 %) and France (+40 %) show only moderate growth
- Stronger growth in most smaller markets and Italy
- Uneven COVID-19 recovery

Departing segment passengers, Europe-UAE, 2010-2023

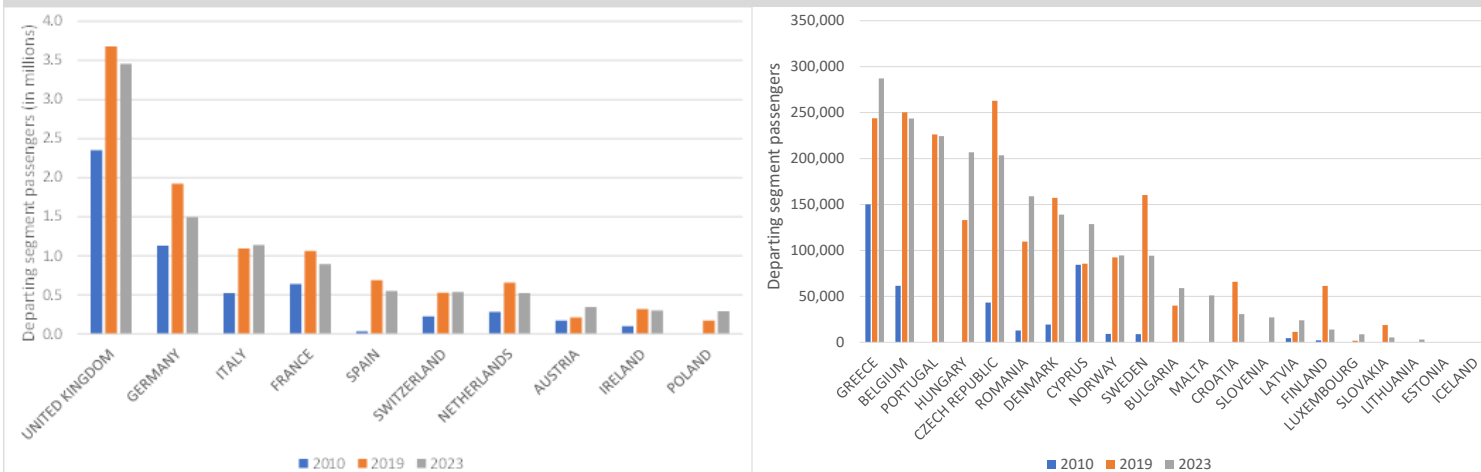


Figure source: Sabre MI, own calculations



Results

Development of UAE traffic at the European country level – OD level, 2010-2023

- UK, Germany and France also relatively weak in terms of OD passenger growth 2010-2023 (<100 %; France only +20 %)
- High OD demand growth from most of the smaller European markets except the Nordics

Departing OD passengers, Europe-UAE, 2010-2023

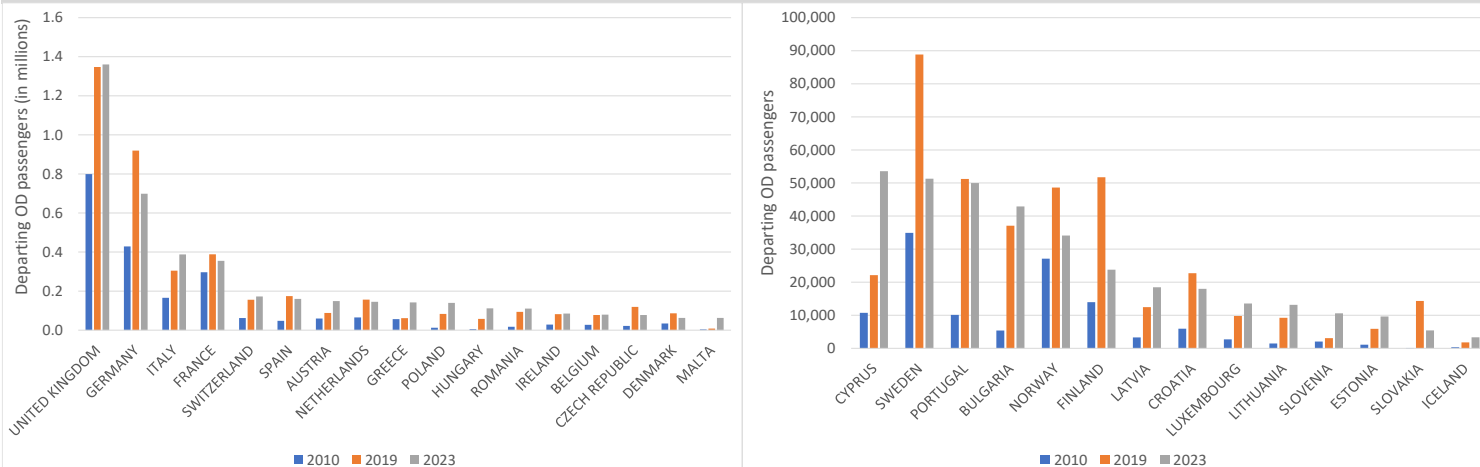


Figure source: Sabre MI, own calculations



Results

European countries with and without key UAE connections, 2023

- Only Estonia and Iceland without any direct flights
- Only Italy directly connected with SHJ
- DWC with significant volumes from Germany only:
 - Only limited traffic rights for UAE carriers to Germany (not more than 4 destinations)
 - Room for UAE-flights by European LCCs and charter operators as these may favor DWC due to lower fees and lower traffic density

Segment demand from European countries to key UAE airports, 2023

Origin	DXB	AUH	DWC	SHJ	Origin	DXB	AUH	DWC	SHJ
Austria	228,748	117,100	0	0	Latvia	23,932	0	0	0
Belgium	181,031	62,496	0	0	Lithuania	3,057	0	0	0
Bulgaria	39,382	19,634	0	0	Luxembourg	3,583	0	5,251	0
Croatia	30,786	0	0	0	Malta	51,075	0	0	0
Cyprus	112,757	15,918	0	0	Netherlands	424,801	96,699	2,057	0
Czech R.	203,464	0	0	0	Norway	94,556	0	0	0
Denmark	126,295	12,693	0	0	Poland	236,071	51,319	1,468	0
Estonia	0	0	0	0	Portugal	203,145	21,301	0	0
Finland	13,887	0	0	0	Romania	117,112	41,714	143	0
France	778,928	116,481	0	0	Slovakia	5,360	0	0	0
Germany	1,205,176	251,864	35,556	0	Slovenia	27,124	0	0	0
Greece	185,139	102,086	0	0	Spain	344,453	202,521	0	0
Hungary	166,363	40,408	0	0	Sweden	94,250	0	0	0
Iceland	0	0	0	0	Switzerland	420,674	115,173	785	0
Ireland	210,962	89,262	0	0	UK	2,912,267	543,037	0	0
Italy	792,360	292,951	7,052	46,165					

Figure source: Sabre MI, own calculations



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Results

Key OD flows with only limited nonstop or direct UAE connection, 2023

- Existing demand well accommodated by segment supply
- Only 15 European airports with OD demand to a UAE airport > 100 pax/week, but lower segment passengers
- MRS / VNO / STR / LUX: Wintertime flights by Transavia / Air Baltic/FlyDubai / Eurowings / Luxair fill gaps partly
- Not any direct services from Malaga, Gothenburg, Tallinn, Edinburgh, Toulouse and others

Airport pairs Europe-UAE, 2023

(OD demand > 100 pax/week and segment demand < 100 pax/week)

Origin City	Origin Country	Destination City	Pax OD	Pax Segment	OD/Segment Ratio
Marseille	France	Dubai	13,262	3,454	3.84
Vilnius	Lithuania	Dubai	11,616	3,057	3.80
Malaga	Spain	Dubai	10,932	0	
Stuttgart	Germany	Dubai	9,062	2,515	3.60
Gothenburg	Sweden	Dubai	8,496	0	
Tallinn	Estonia	Dubai	8,449	0	
Edinburgh	United Kingdom	Dubai	8,242	0	
Luxembourg	Luxembourg	Dubai	7,826	3,583	2.18
Toulouse	France	Dubai	7,201	0	
Porto	Portugal	Dubai	6,978	0	
Aberdeen	United Kingdom	Dubai	6,622	0	
Mulhouse/ Basel	Switzerland	Dubai	6,492	0	
Thessaloniki	Greece	Dubai	5,788	0	
Berlin	Germany	Abu Dhabi	5,705	0	
Hanover	Germany	Dubai	5,696	0	

Figure source: Sabre MI, own calculations



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Conclusion (1)

- UAE becoming an increasingly important destination/stopover and point of origin in addition to hub function.
- OD traffic between Europe and the UAE up by 106 % from 2.3 million passengers in 2010 to 4.7 million in 2023
- Segment traffic growth 97 %, from 5.9 million departing passengers in 2010 to 11.5 million in 2023
- OD/segment ratio up from 38 % in 2010 to 40 % in 2023
- Highest OD and segment demand from UK, Germany and Italy (which has overtaken France)
- COVID-19-related reductions (almost) overcome in most markets; Sweden, Germany and Finland lagging behind



Conclusion (2)

- Only few countries and key cities not yet connected to the UAE, e.g. Estonia and Iceland, and cities like Malaga, Gothenburg, Tallinn, Edinburgh and Toulouse
- European cities with some direct flights, but still significantly higher OD volumes include Marseille, Vilnius or Stuttgart
- Future work could explore additional aspects, such as time-series and causalities (e.g., possible reasons for segment supply below or above certain thresholds; and to what extent high OD/segment ratios may be a good indicator for the future introduction of direct services).
- In terms of content, other potential areas of investigation could include the growth of LCC in the European-UAE markets, or the role of UAE traffic in other parts of Europe, such as the Balkans.



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