

# Location Costs in Air Transport

Components – Causes – Impacts

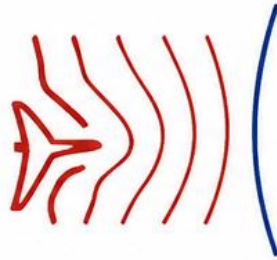
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Prof. Dr. Christoph Brützel (Aviation Consulting)  
Prof. Dr. Friedrich Thießen (TU Chemnitz)



*Prof. Dr. Christoph Brützel*  
Aviation Consulting 

# Location costs in air transport



# BVF

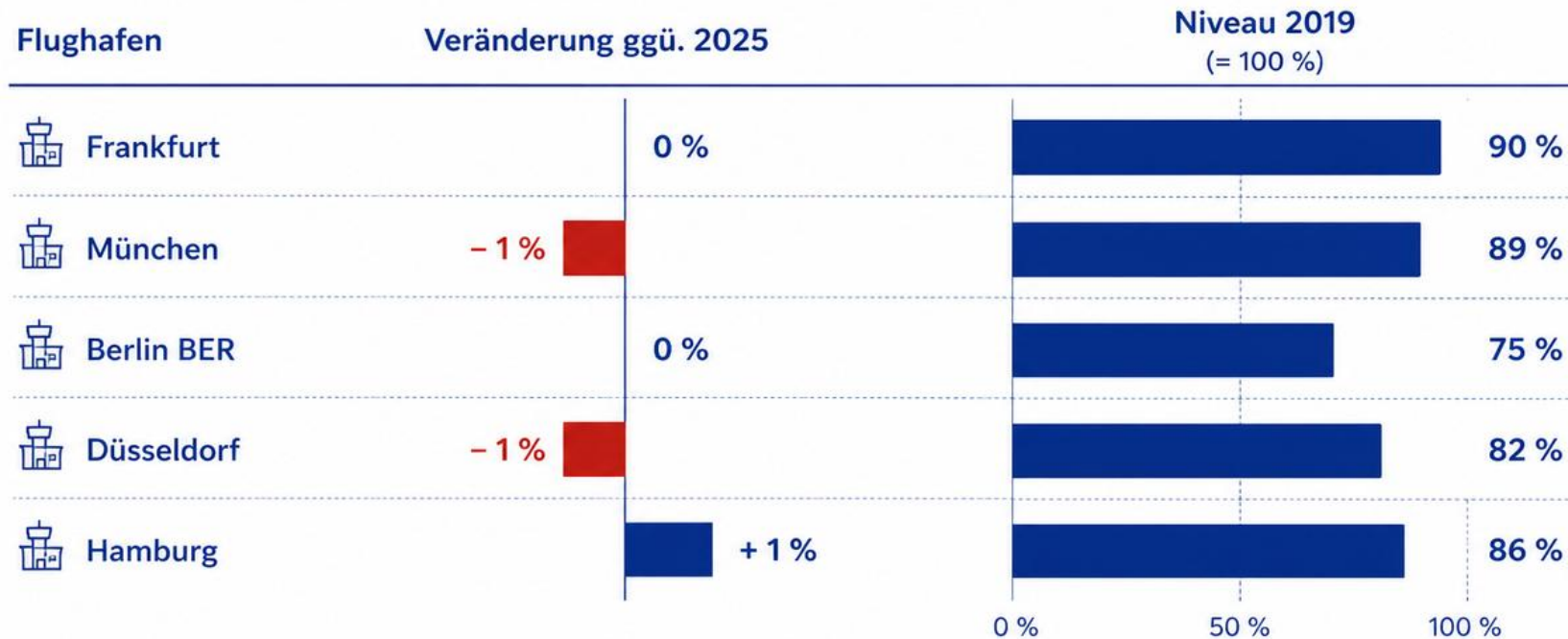
Bundesvereinigung  
gegen Fluglärm e.V.

## Luftverkehrsangebot in Deutschland

### Top 5 Verkehrsflughäfen im Vergleich

Juni – November 2026

Veränderung ggü. Vorjahreszeitraum und  
Erholung ggü. Vergleichszeitraum Juni – November 2019



Quelle: BDL – Vorschau auf das Luftverkehrsangebot  
Juni – November 2026, 17. Juni 2026

[www.fluglaerm.de](http://www.fluglaerm.de)

Für eine lebenswerte Zukunft –  
gegen unnötigen Fluglärm.

Klatt, J.P., Kühling, J. (2010), *Entgeltregulierung der deutschen Flughäfen*, Gutachten im Auftrag des BDF-Aero

BDF-Airmail Januar 2025

## Staatliche Standortkosten auf Rekordhoch

Gemeinsamer Appell: Luftfahrt- und Tourismusverbände, Industrie und Gewerkschaften fordern Entlastung bei Standortkosten und Förderung von Zukunftstechnologien

# Finanzplatz und Flughafen unter Druck

Von Daniel Schleidt

BDF (2015), *Gebühren und Entgelte auf Rekordhoch*, Informationsschrift des Verbandes BDF-Airmail, Berlin.

## OBSERVATOIRE DES COÛTS DE TOUCHÉE

Analyse comparative d'un Airbus A320 exploité par un transporteur à bas-coûts en 2023



REPORT - OCTOBER 2025

# Location costs in aviation

Structure, causes and effects



## Content Overview

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# What are location costs

# Definition location (based) costs

Costs of a flight service that depend on the departure airport and arrival airports as well as on government measures

**Category****Specific Examples****Taxes**

VAT, Kerosene taxes, Air Traffic Tax (Luftverkehrsteuer)

**Airport Fees**

Landing/Take-off fees, Noise/NOx surcharges, Pax-dependent fees

**Infrastructure**

Ground handling, Central infrastructure, Parking positions

**Security**

Passenger & baggage screening, Security charges


**Navigation**

Tower control, En-route navigation services (DFS/Eurocontrol)

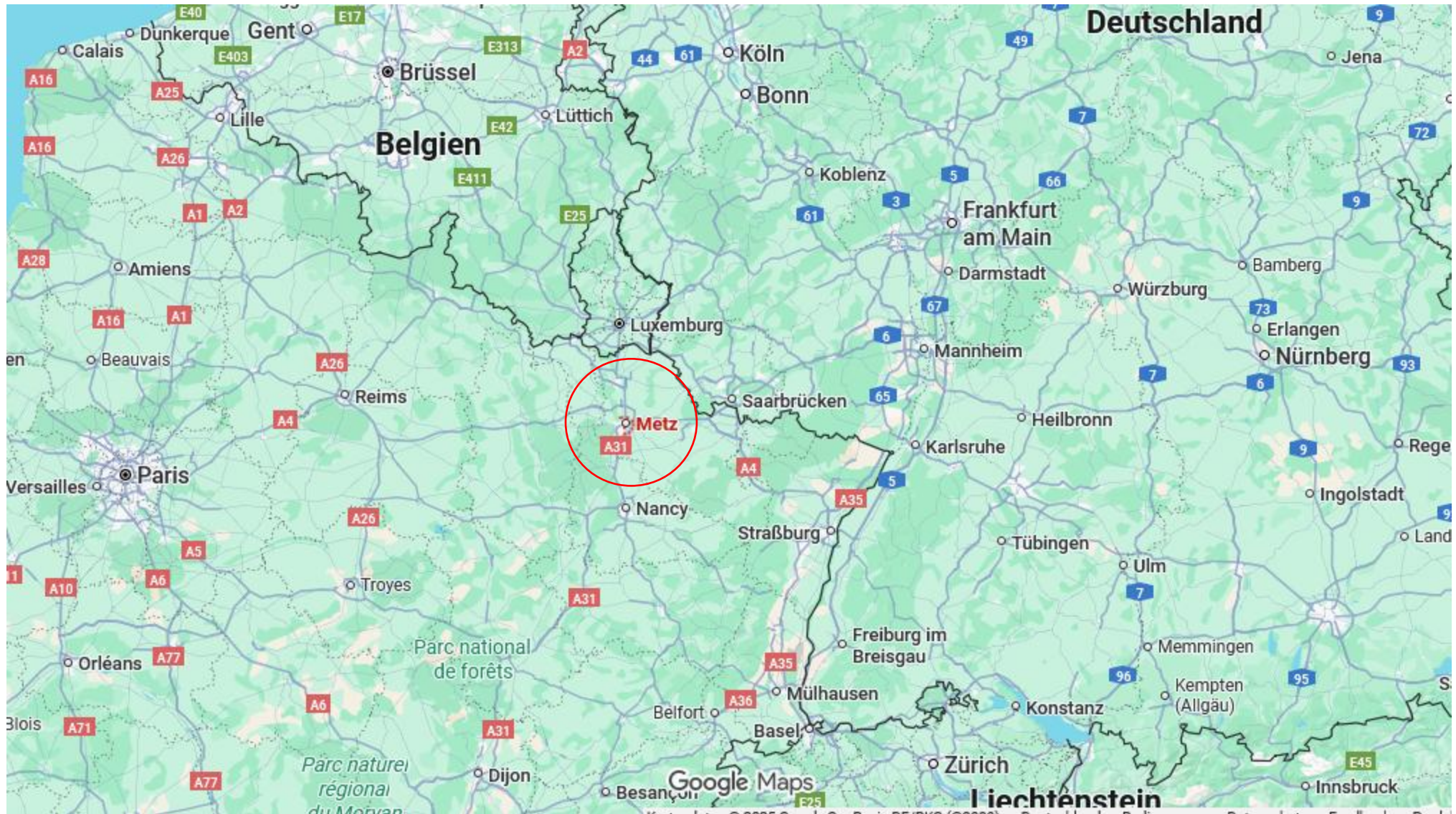
**Environmental**

EU ETS, SAF Blending mandates (ReFuelEU), CORSIA



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Aviation Consulting 

What has been found out?



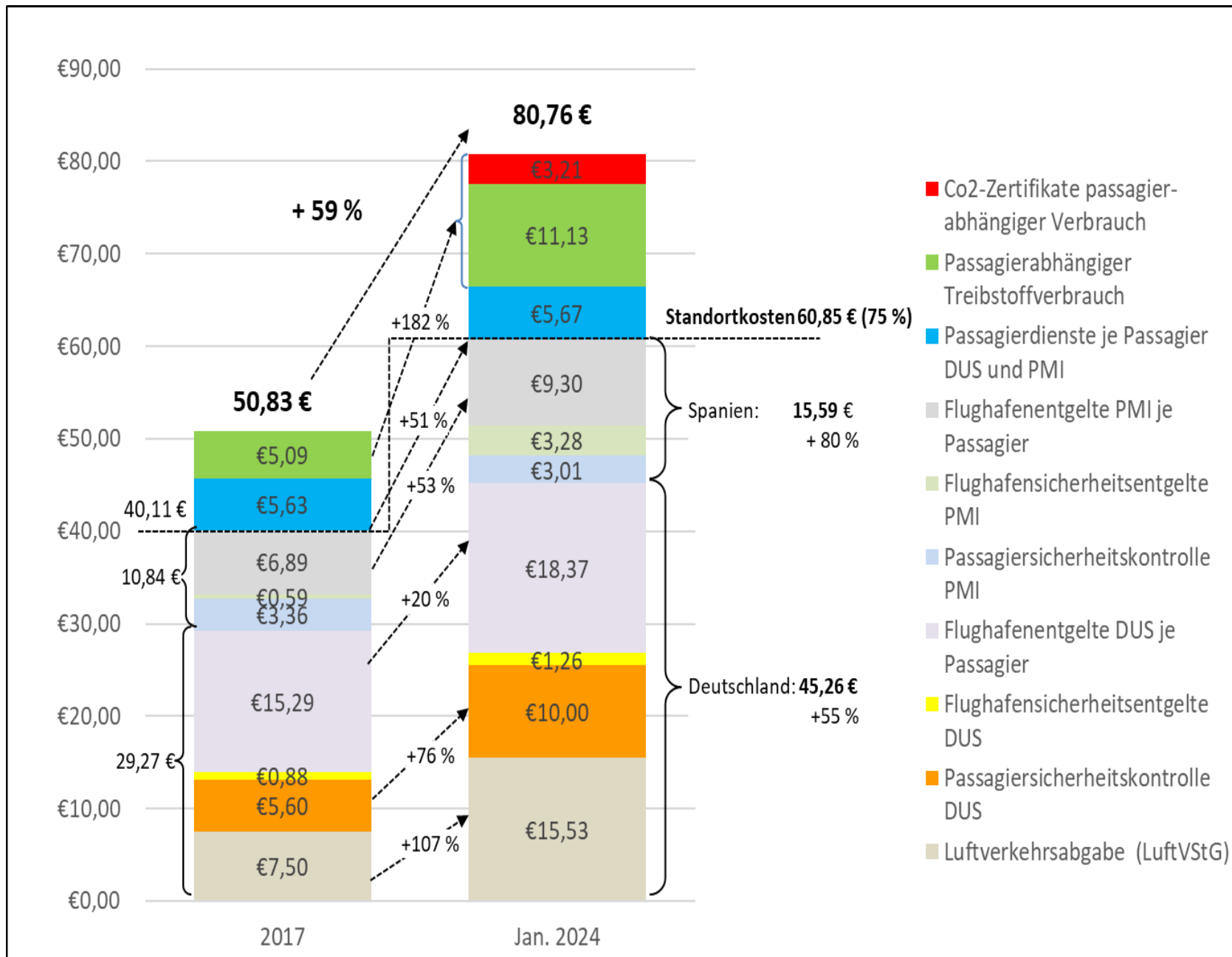
# What has been found out?

Location costs have risen

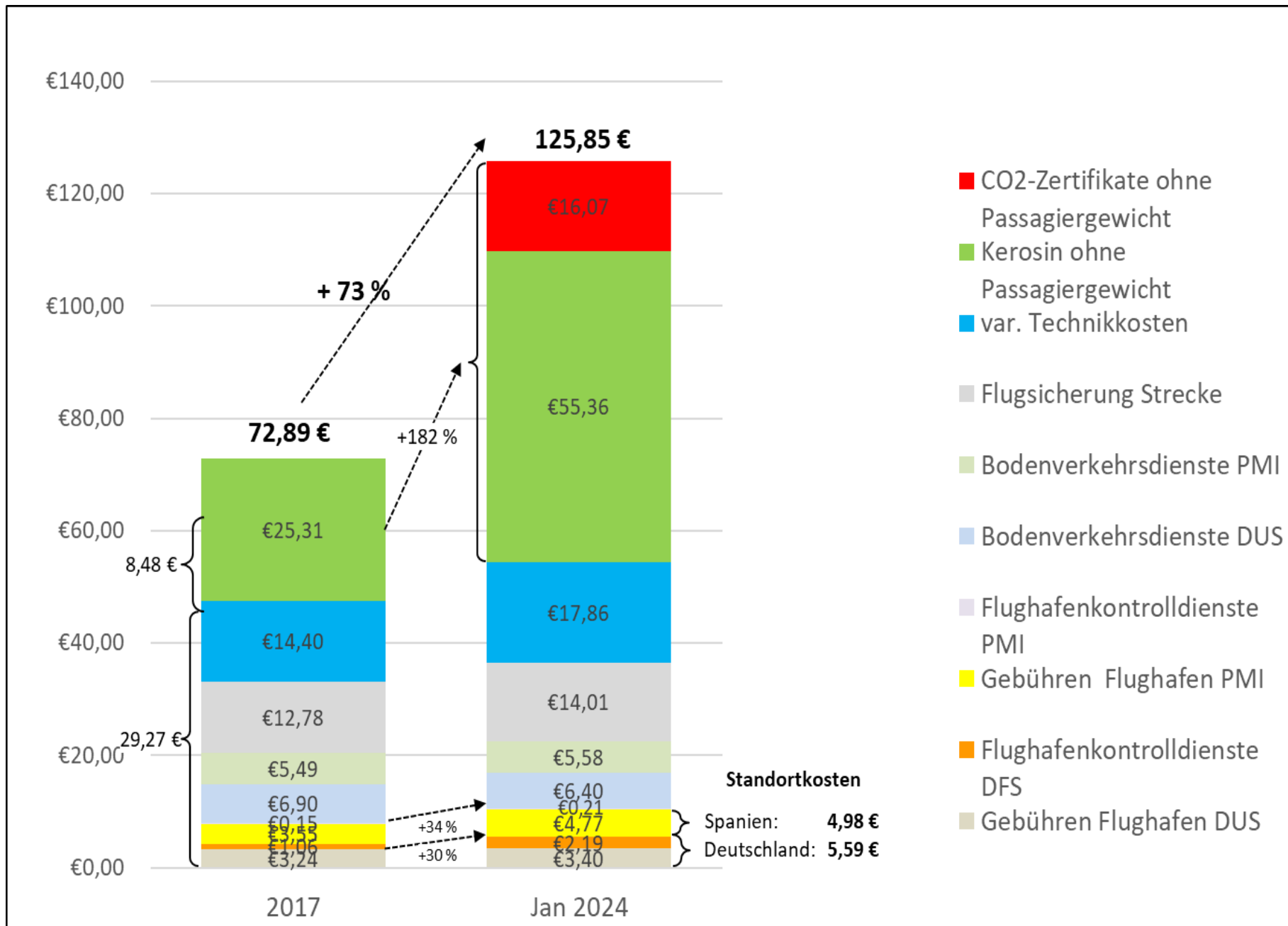
Location costs vary widely from country to country

Location costs vary widely within countries

The relationship between location costs and PAX growth is weak to counterintuitive



Passenger-related costs - Umlauf A320 DUS-PMI-DUS, Brützel



Flight-related costs - Umlauf A320 DUS-PMI-DUS Brützel

# Increase of location based costs

	Evolution 2013-2023
> 50 %	Pays-Bas, Turquie, Hongrie
> 30 %	Allemagne, Portugal, Belgique, Royaume-Uni,
> 20 %	Suisse, Autriche, Tchéquie, Italie, Finlande,
> 10 %	Suède, Grèce, France
> 5 %	Pologne, Chypre, Malte, Danemark,
> 1 %	Norvège
Stabilité	
< - 5 %	Espagne
< - 10 %	Irlande

Increase of location based costs in various countries

*Quelle:* Ministère Chargé des Transports

# Consumer price index (2010 = 100) - Germany, Hungary, Netherlands, Greece

International Financial Statistics database, International Monetary Fund ( IMF )

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Line

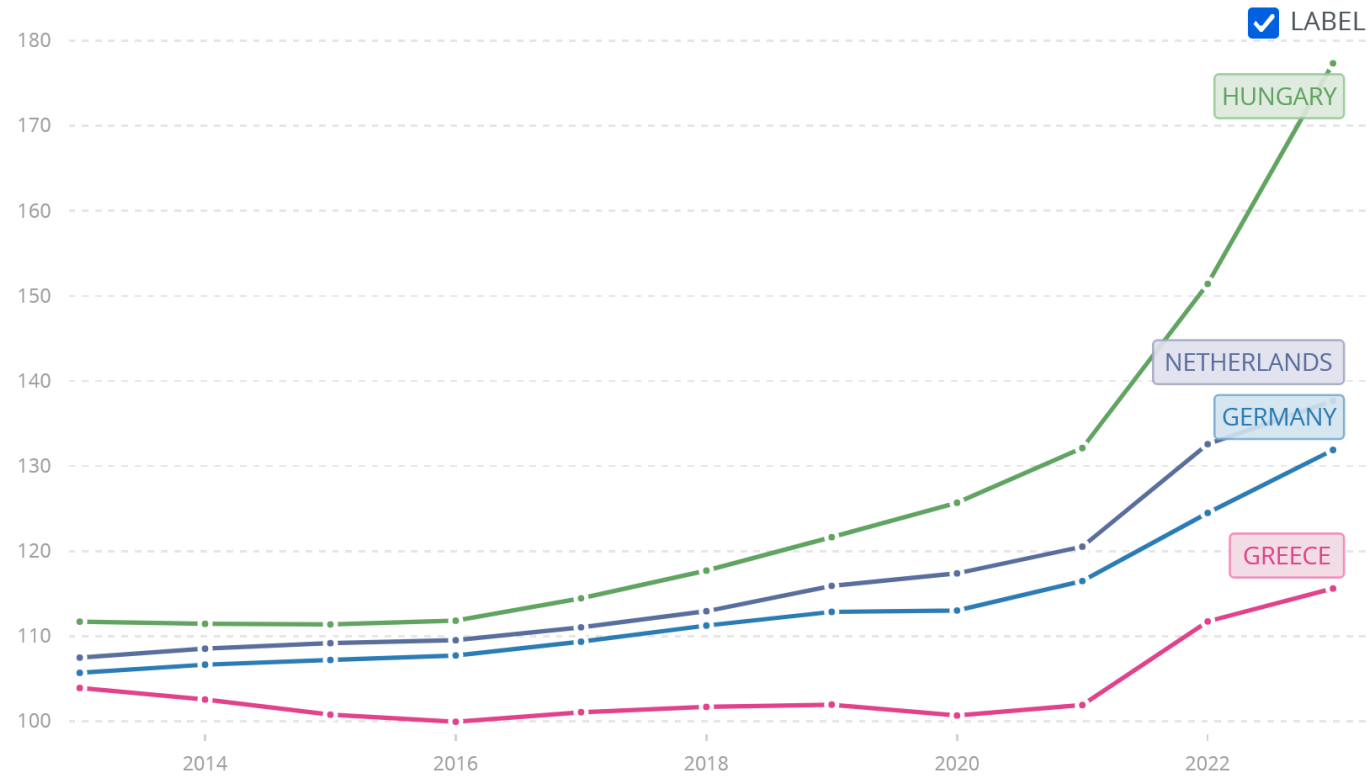
Bar

Map

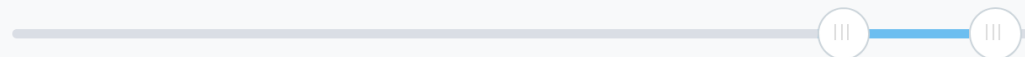
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2013 - 2023



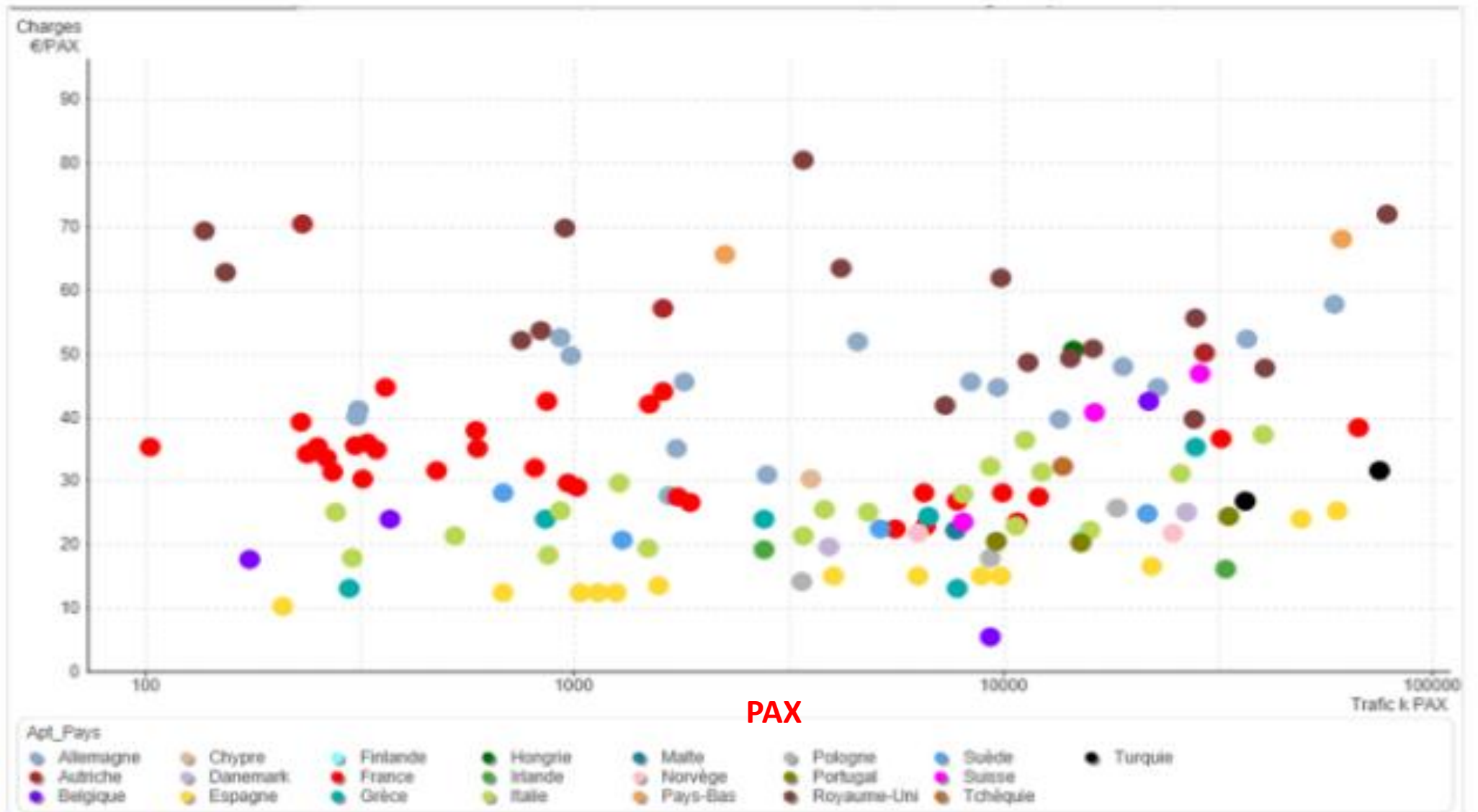
**First finding:**

**Nothing to worry about.**

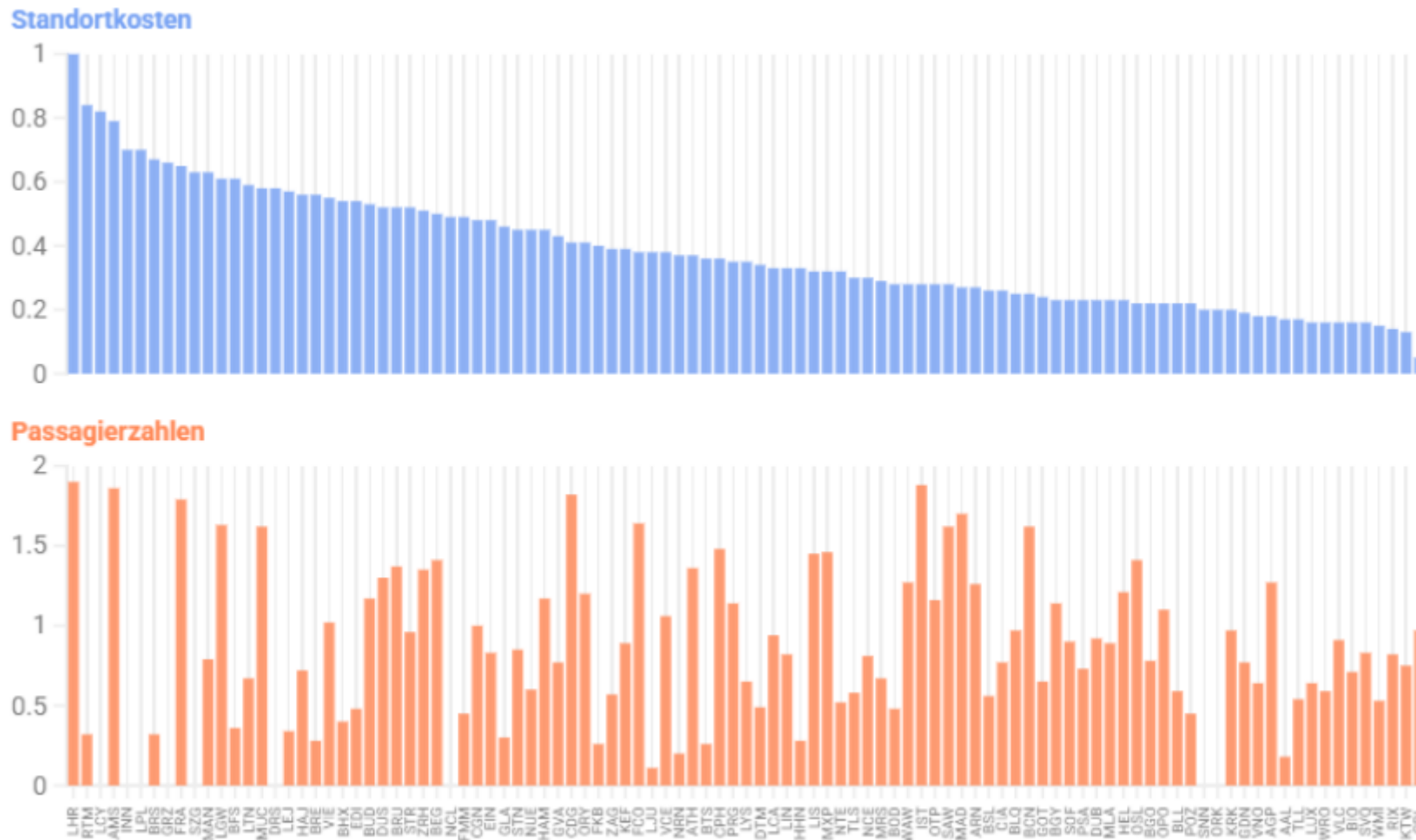
**The rise in costs is highly correlated with inflation.**

# **Location costs and their influence on PAX (amount of passengers)**

10 location cost EUR/PAX 90

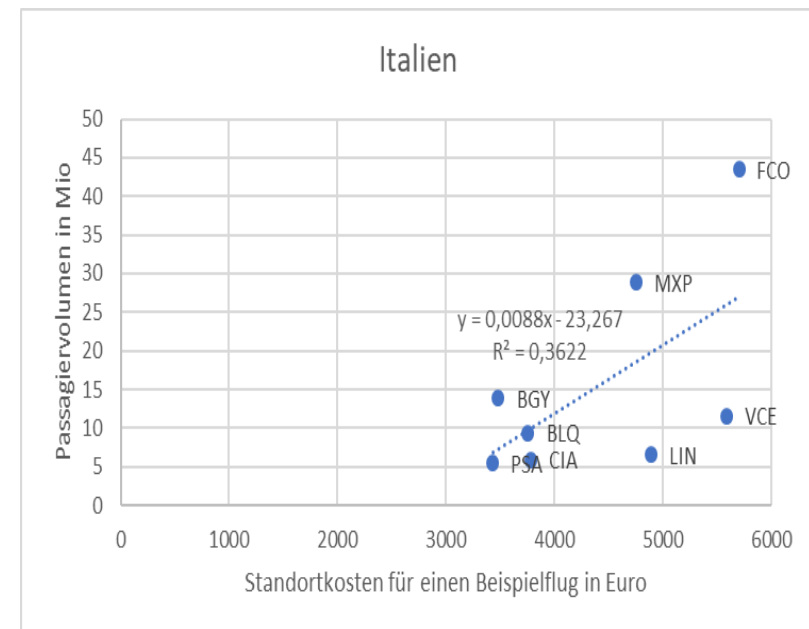
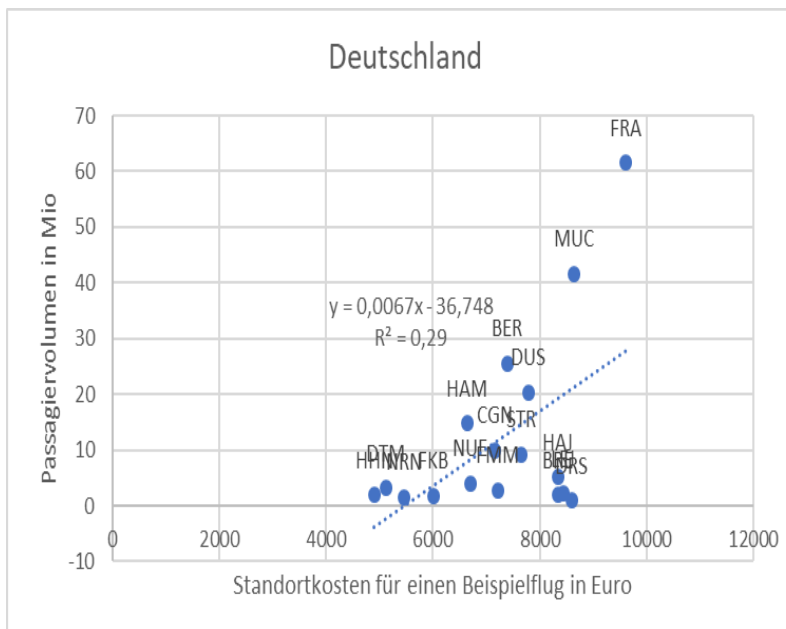
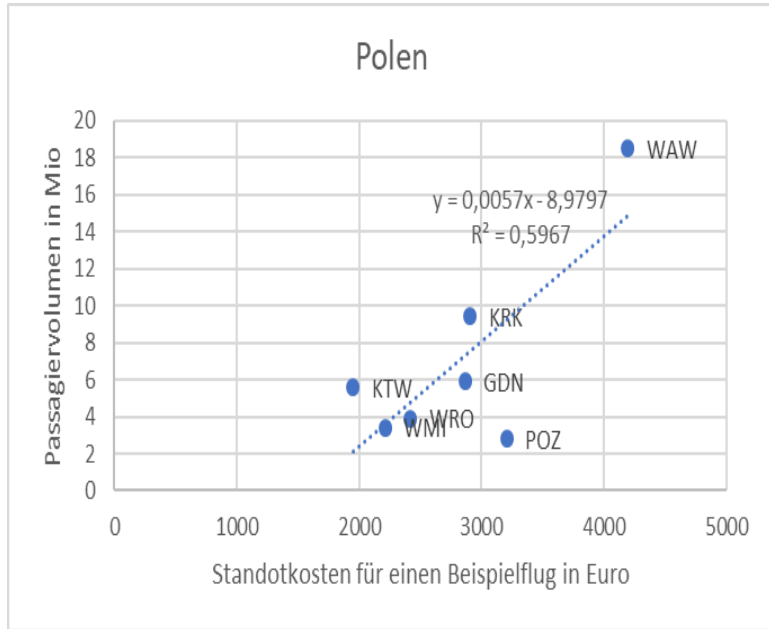
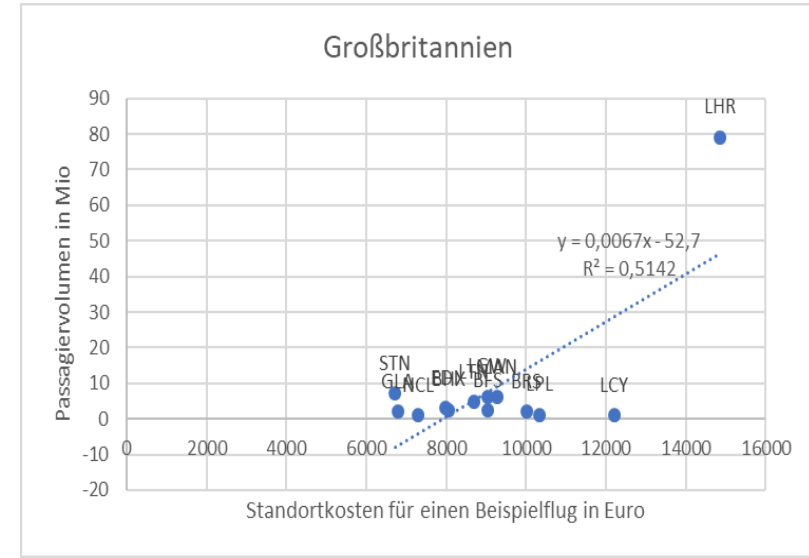
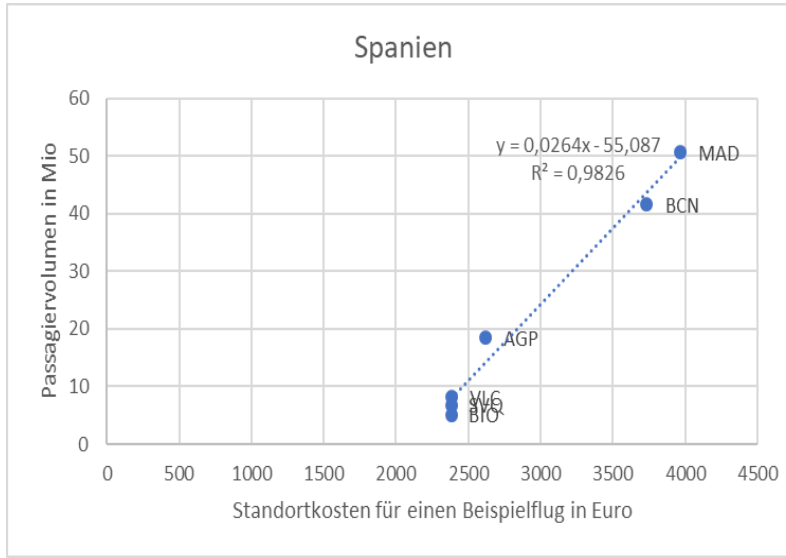
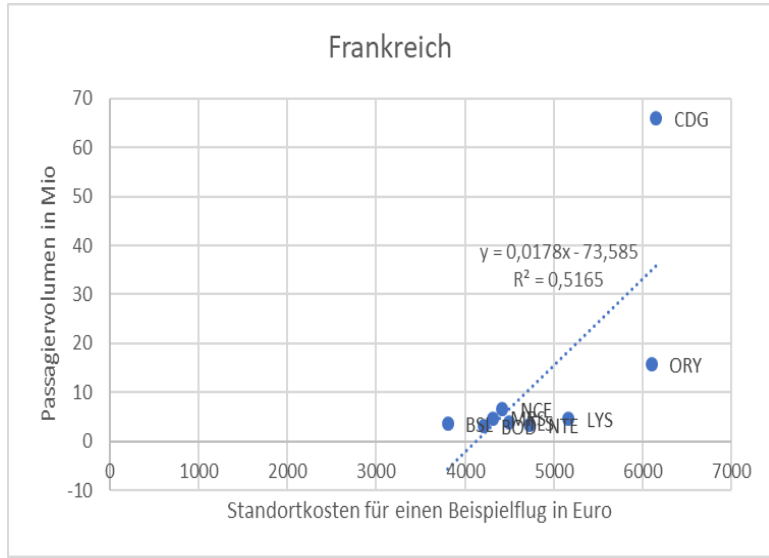


Location cost and passenger volumes 2024 for 137 European airports  
(Source: Ministère Chargé des Transports)



*Erläuterung:* Die Abb. reiht 101 Flughäfen aus der DLR 2025 Studie nach den Standortkosten (blaue Säulen). Teuerster Flughafen Heathrow ist 100% bzw. „1“. Andere Flughäfen mit ihren Standortkosten relativ zu Heathrow. 0,5 bedeuten, dass der jew. Flughafen Standortkosten in der Höhe von 50% derjenigen von Heathrow besitzt. Passagier volumina (rote Balken) werden logarithmiert dargestellt, um die erheblichen Größenunterschiede maßstäblich zu verringern.

PAX in Mio.



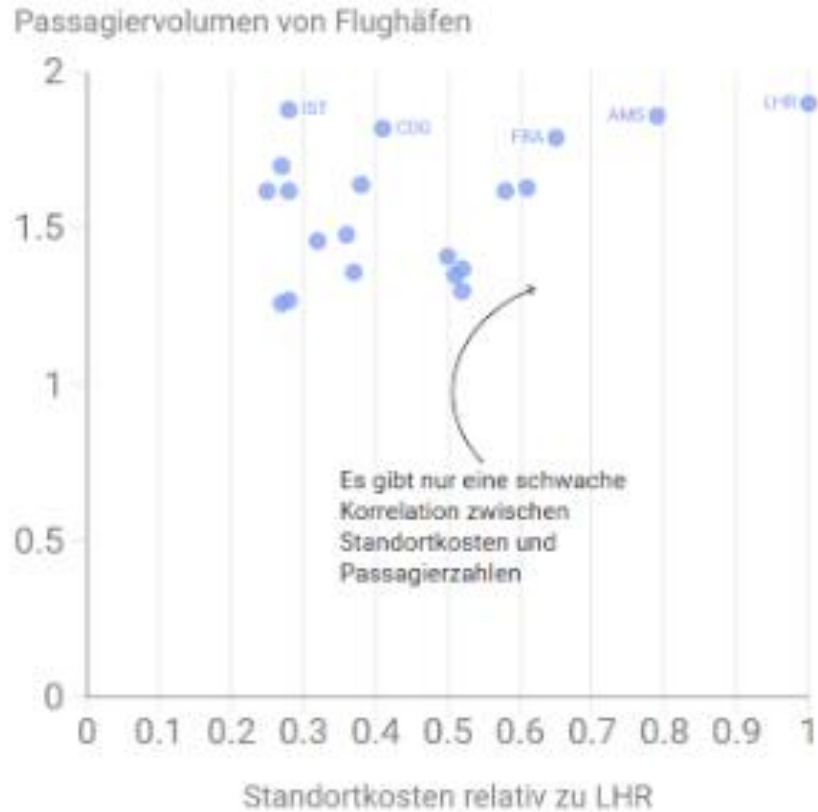
Location cost for sample flighth

# Why is that so?

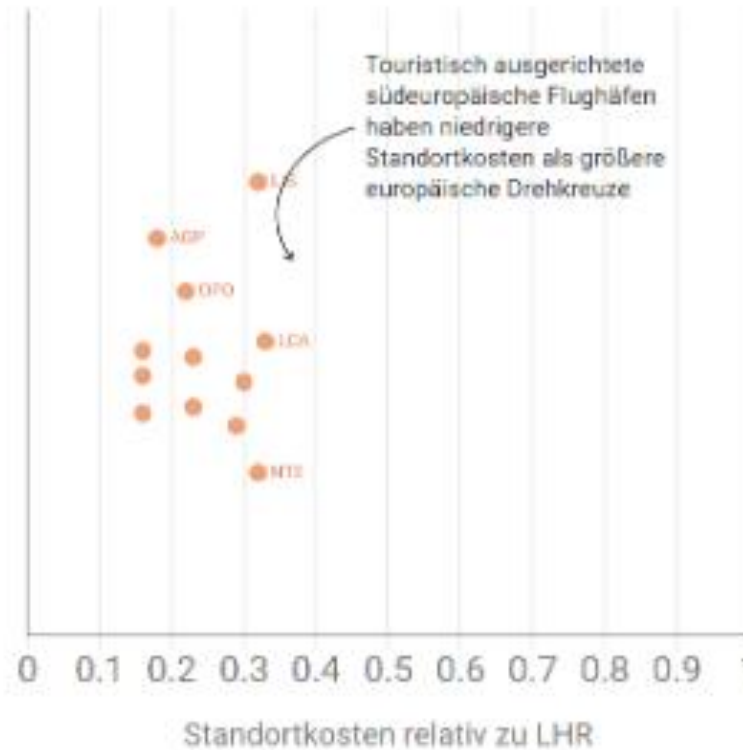
- Route planning of airlines dependent on hub structures, international treaties and own strategy
- Legacy carrier can hardly change their hubs
- Point to point carrier: capacity, catchment areas, market share, company specifics
- Further factors: GDP in country of departure, access to airports , ...
- Expensive airports are successful because ...

# Der Zusammenhang zwischen Passagierzahlen und Standortkosten nach Flughafengruppen

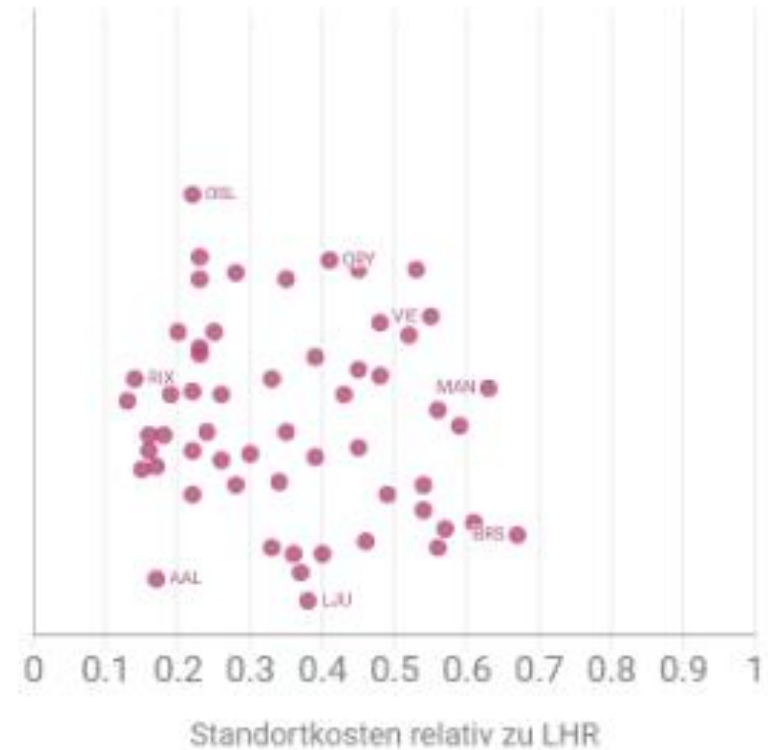
## Große Flughäfen und Drehkreuze



## Touristisch geprägte Flughäfen in Südeuropa









## Alle anderen Flughäfen mit mehr als 1 Million Passagieren

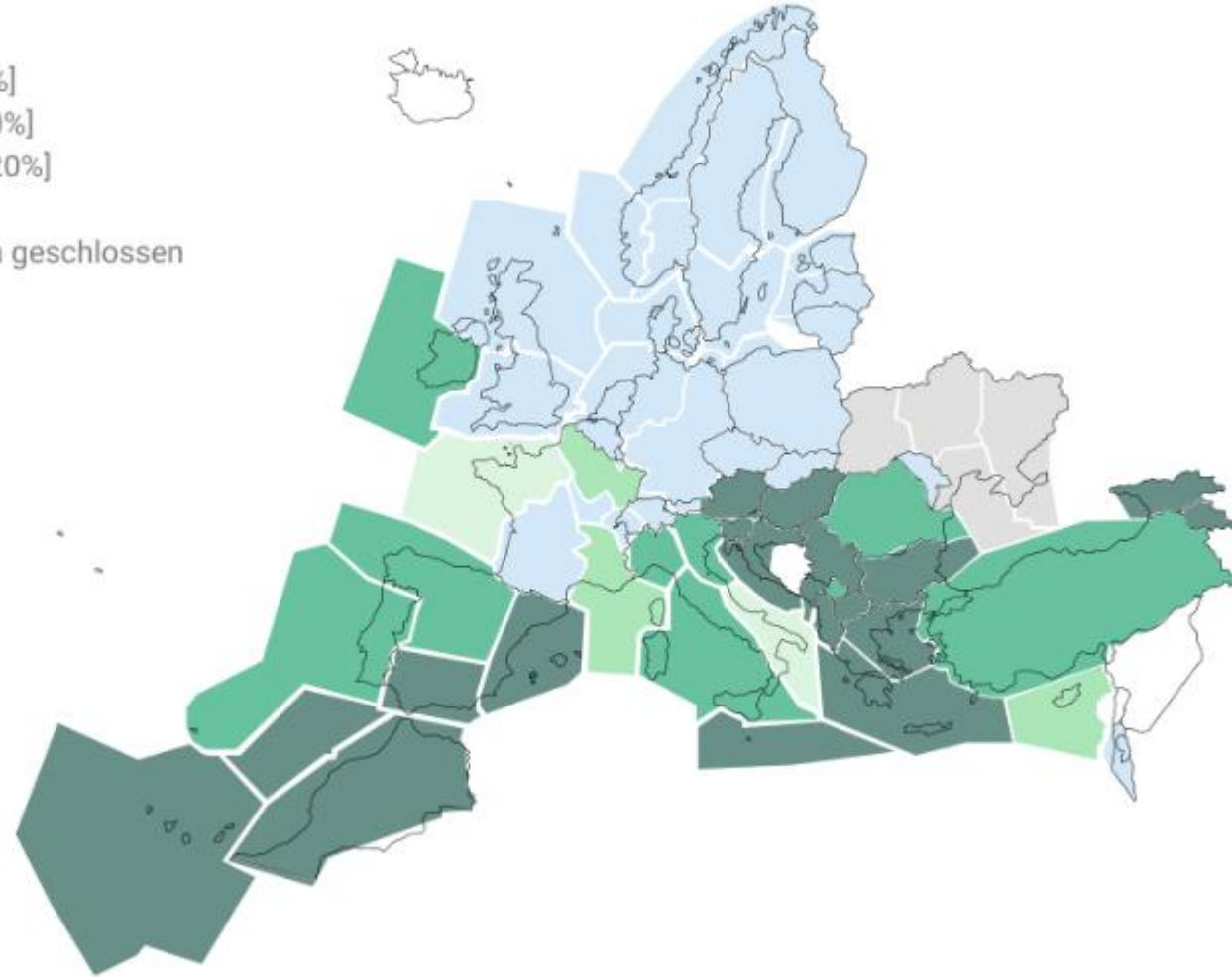


Location costs for sample flight



## Verkehrsvariation zwischen dem ersten Quartal 2025 und 2019

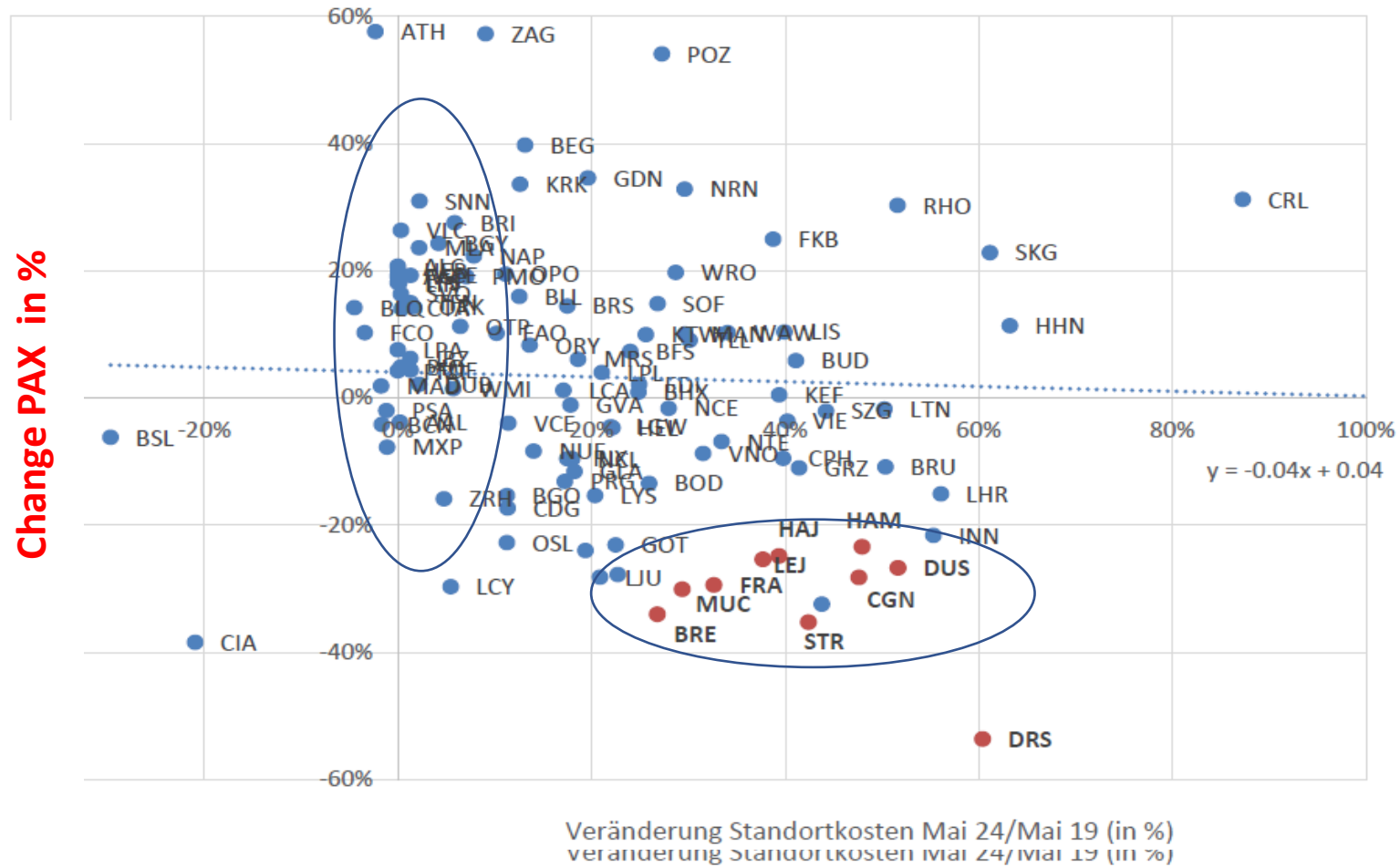
-  < 0%
-  [+0%;+5%]
-  [+5%;+10%]
-  [+10%;+20%]
-  > +20%
-  Luftraum geschlossen



Quelle Eurocontrol

# Further questions

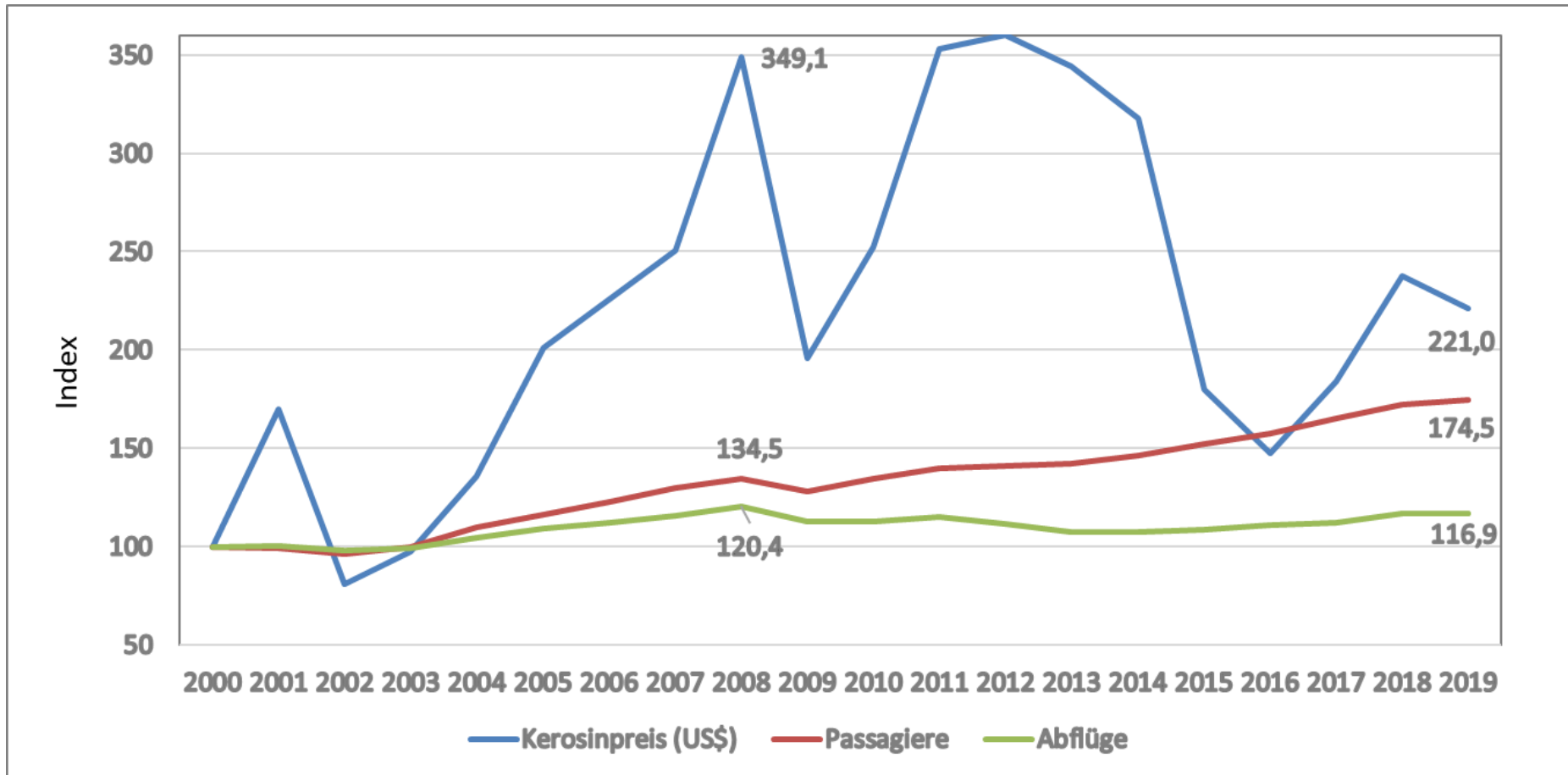
- (1) Location cost and PAX (ok.)
- (2) Change of location cost vs change of PAX**
- (3) Change in kerosene prices vs change of PAX**
- (4) Location cost vs ticket prices**
- (5) Change of ticket prices vs change of PAX**



### Change of location cost May 24 vs May 19

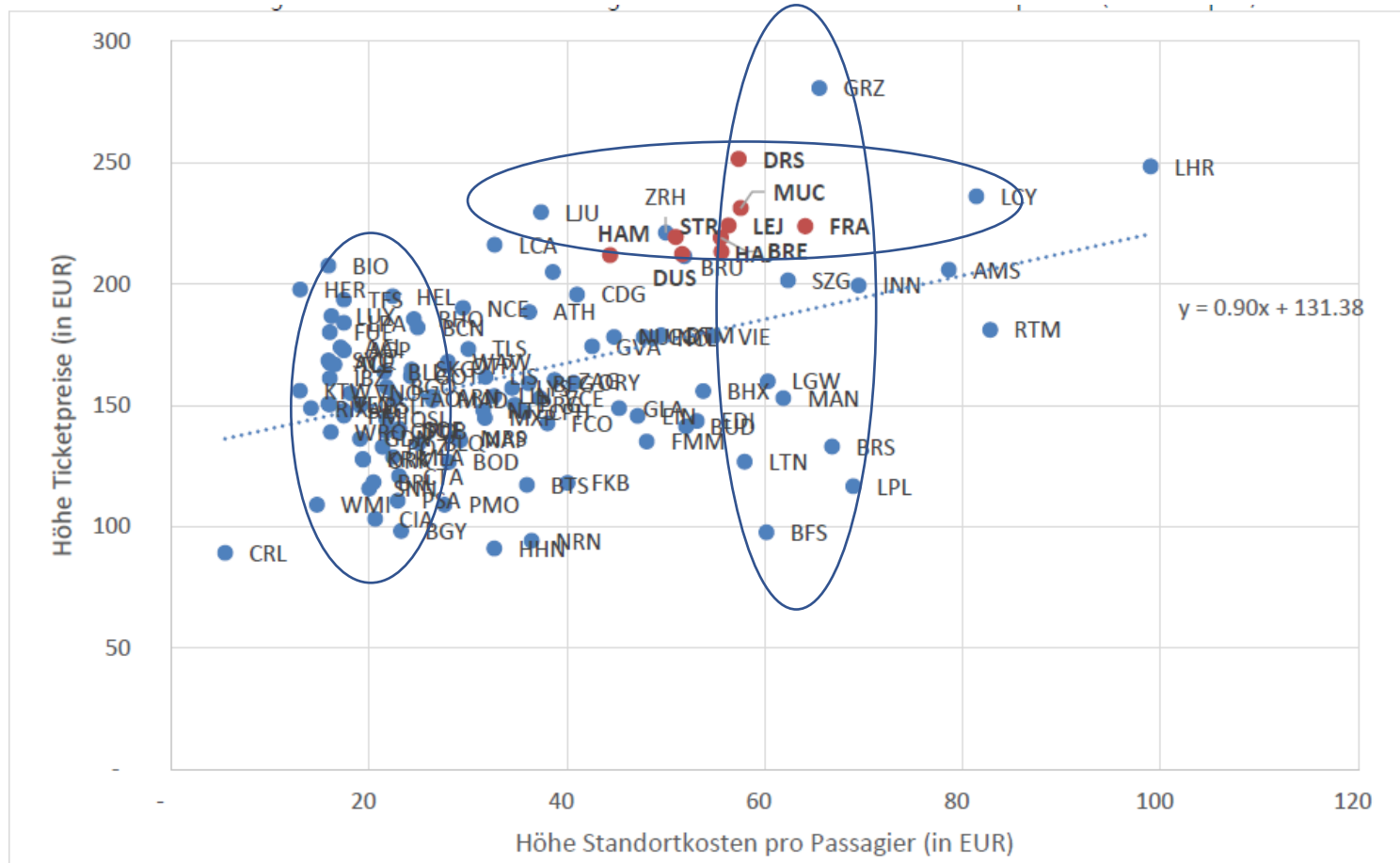
Changes in location-based costs and passenger numbers for various airports. *Explanation:* Vertical axis = change in passenger numbers; horizontal axis = change in location-based costs. The vertical oval highlights airports that show wide variation in traffic growth despite identical changes in cost. The horizontal oval shows German airports, which display relatively small differences in traffic despite substantial cost divergence. Data: SabreMI, RDC Airport Charges. Measurement period: May 2019 to May 2024.

Kerosene price – PAX – Departures



Growth strategies based on this approach led to persistent overcapacity and, as a result, low-cost offers. This was referred to as price-induced demand (arising from the need to fill excess capacity) as opposed to the natural demand for air travel, for example driven by GDP growth. Against this backdrop, the rapid expansion of Europe's air transport supply despite continuously rising resource costs up to the 2020 COVID-19 crisis can be explained.

**Ticket price in (Euro)**



**Location cost / PAX (Euro)**

Location-based costs per passenger (absolute, in euros) and ticket prices (absolute, in euros) for various airports

Data sources: SabreMI, RDC Airport Charges. Measurement period: May 19 to May 24; DLR, 2025, p. 39

# Changes in ticketprices and changes in PAX („price elasticity of demand“)

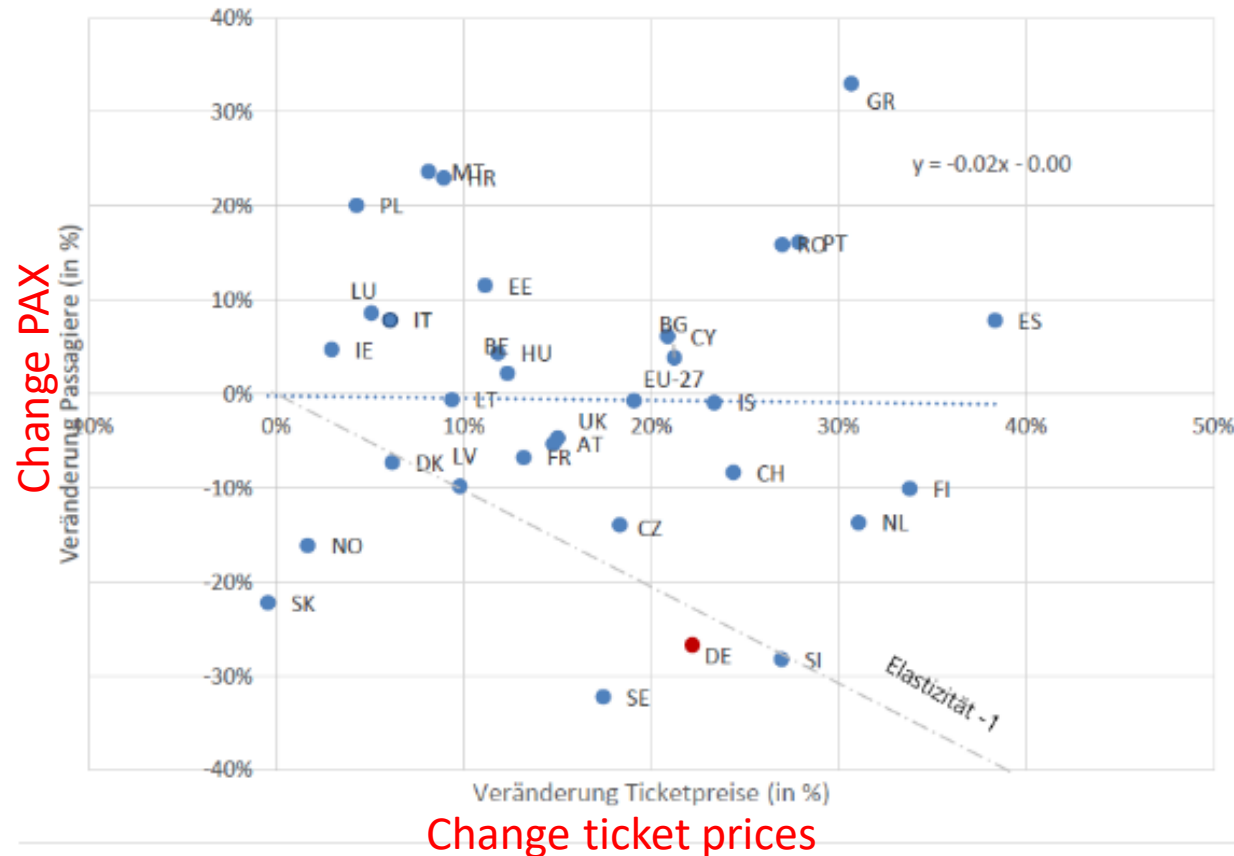



Abbildung 5: Veränderung von Ticketpreisen und Passagiermengen Winter 23/24 gegen Winter 18/19 (Quelle: DLR 2025)

# Problems of price elasticity

## Structural change

- Ticketprices
- *Available income (GDP/capita; crises, boom)*
- Available capacity of airlines
- *Competition from cars, railways, touristic*
- Convenience of journey
- Availability of flights
- Type of journey *business, leisure, friends and family*
- Type of airline (*Low cost, traditional*)
- Market structure (*intensity of competition*)



*Prof. Dr. Christoph Brützel*  
Aviation Consulting 

Many thanks