



TOURMIS **W**ORKSHOP



Part II Analysis and Reporting Features

 Austrian National
Tourist Office
www.tourmis.info



18th TourMIS Workshop

September 7, 2023

Analysis and Reporting Features

1. Examples and new tables & features

1. Basic analysis
2. Longitudinal analysis
3. Benchmarking

2. Measuring seasonality

3. The Connectivity of Railroads in Europe

14:45 coffee break

Measuring seasonality in European destinations

Causes of seasonality in tourism

- **Seasonality: The systematic intra-year variation in visitation caused by exogenous factors**
 - Natural (e.g. climate)
 - Institutional
 - caused by the markets of origin (e.g. timing of school holidays)
 - caused by the destination (e.g. regular mega-events)
 - Calendar effects (e.g. Easter)
- **Challenges**
 - The need to **optimize the use of tourism infrastructure** such as roads to accommodate high flows during certain periods
 - Seasonality **increases the risk of high unemployment** during the low seasons
 - In dryer regions the issue of **water scarcity** is of particular concern

Actions to overcome seasonality

- **Product**

Development of new offers, events, packages, ...

- **Pricing**

Providing discounts for periods with less demand

- **Promotion**

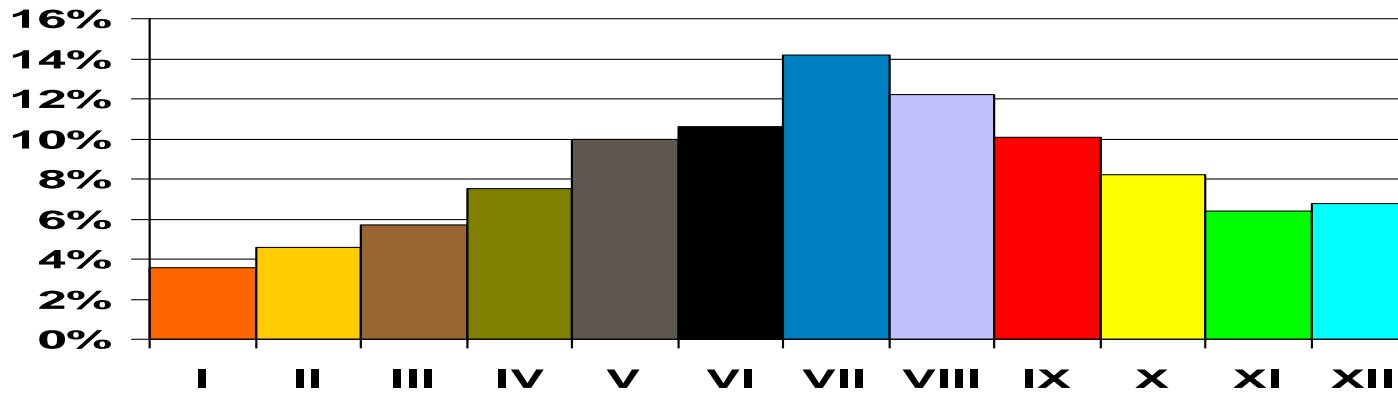
When and how intensively we will promote the tourism products

- **Placement**

Which geographic region/market should be promoted

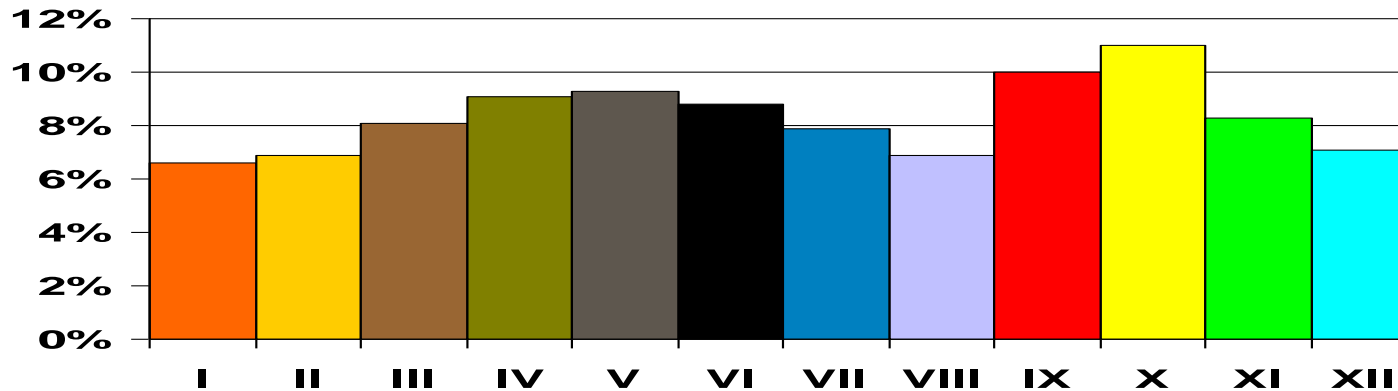
Which segments (e.g. young adults, families, business people)

Gini coefficient



LÜBECK

Gini=0.207



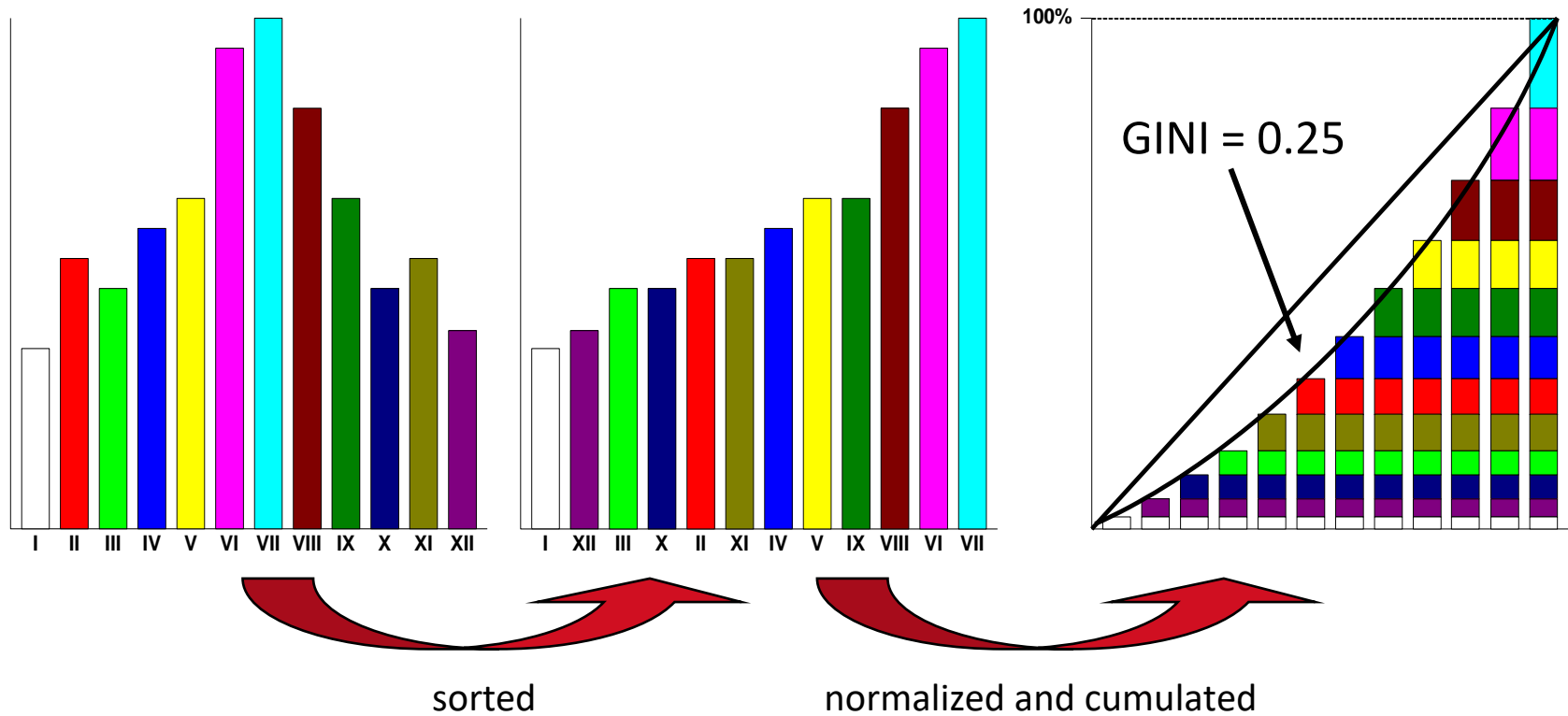
MADRID

Gini=0.088

Gini coefficient

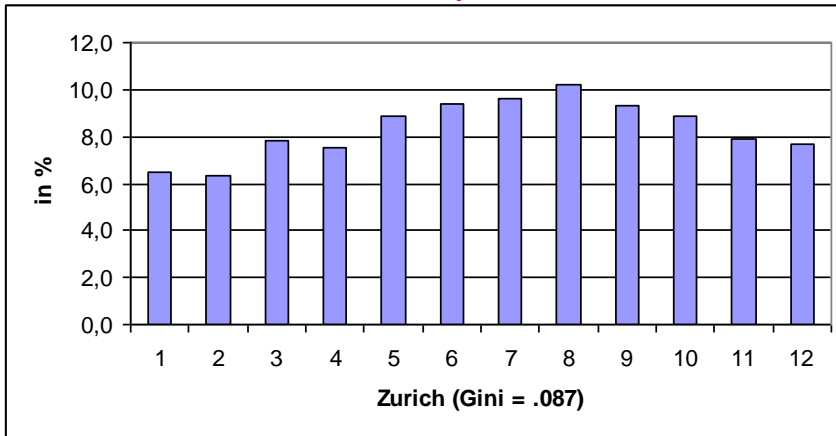
Measure of statistical dispersion. The Gini can be approximated

with trapezoids:
$$G^* = 1 - \sum_{i=1}^{12} (X_i - X_{i-1}) \times (Y_i + Y_{i-1})$$

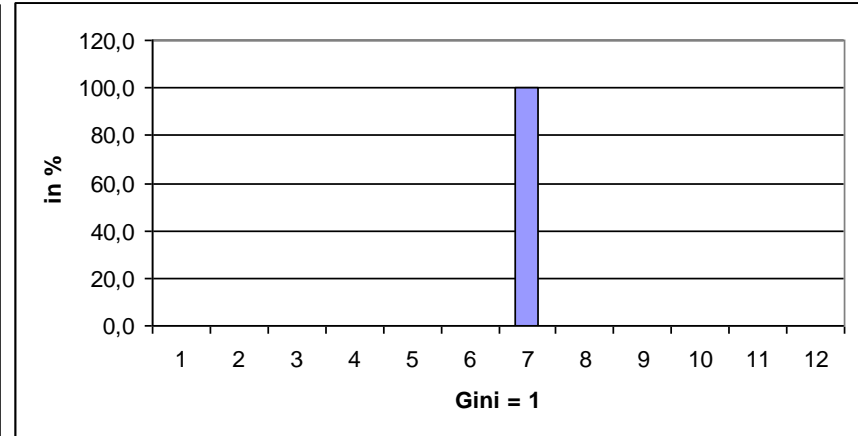
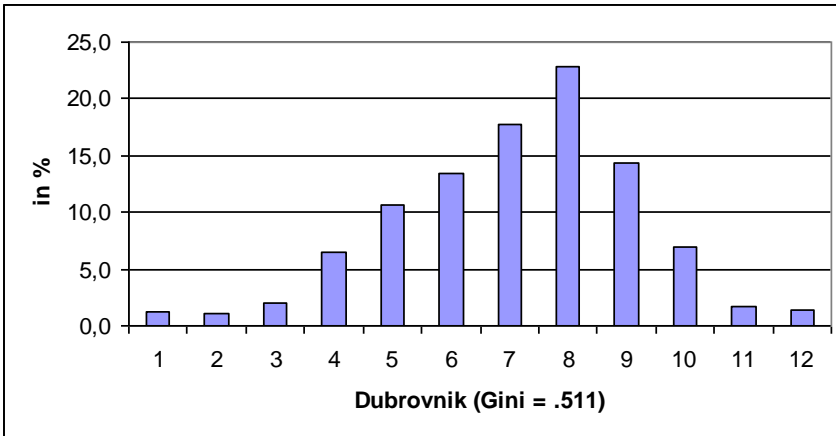
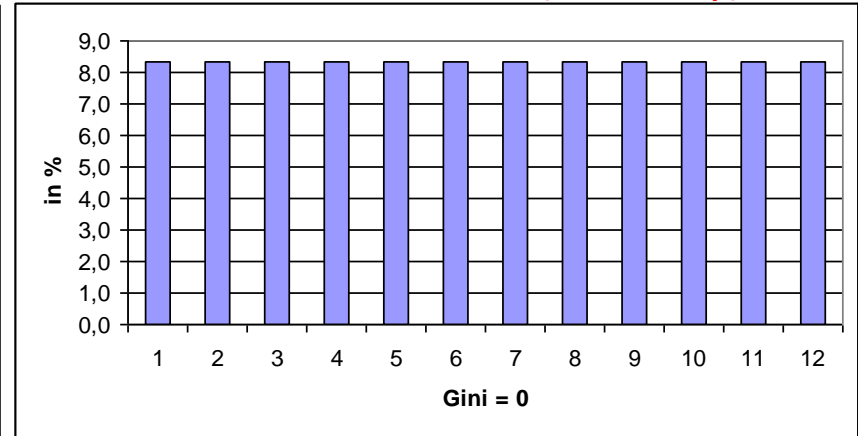


Measuring seasonality

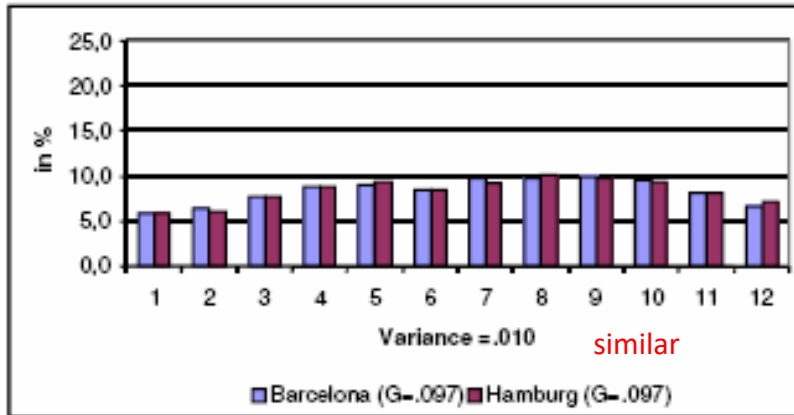
Examples



Extreme situations (in theory)

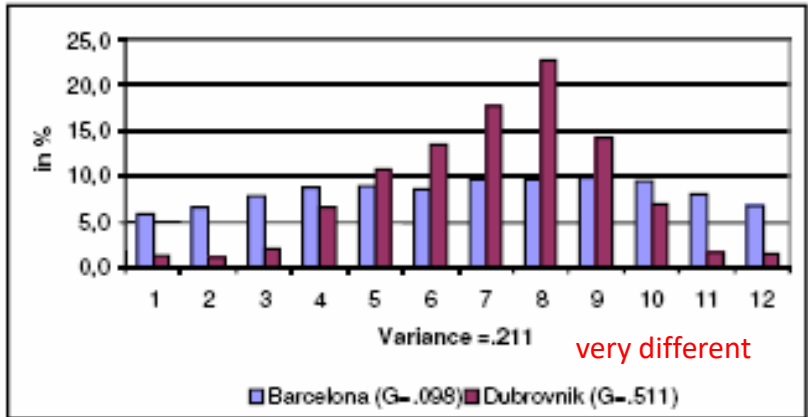
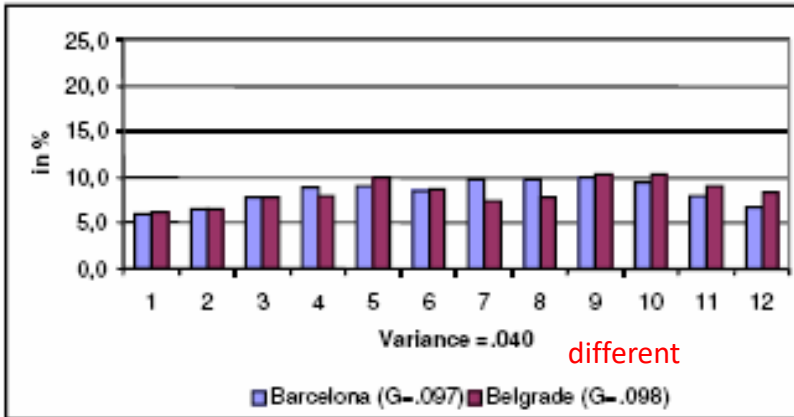


Similarity of seasonal patterns



$$d = \sqrt{\sum_{i=1}^{12} (x_i - y_i)^2}$$

Similarity of seasonal patterns of two destinations. Multiple destinations?



The connectivity of railroads in Europe

Working Group Members

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Lone Alletorp Callard, *Wonderful Copenhagen*

Alba Lajusticia, *Barcelona Tourism*

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Travel by rail gaining importance

- 2021 “European Year of Rail” EU Action Plan
- 2022 “DiscoverEU” campaign (European Year of Youth)
- Sustainability: for efficient and green mobility
- Post COVID-19: relaunching transport and tourism
- New Train Routes: EU connectivity initiatives
- Intermodal integration & Digitalisation

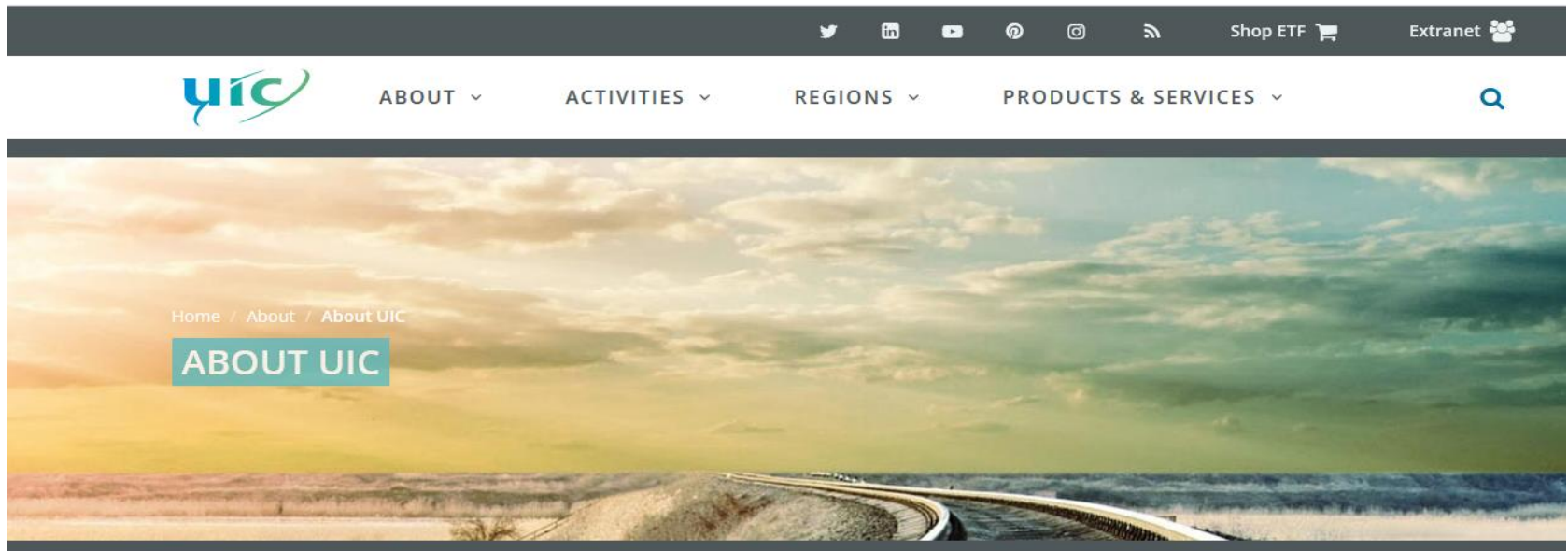
Rail still only represents 8% total travel within EU (measured in passenger km)

EC Action plan: double rail traffic by 2030, triple by 2050

Eurostat (2020) People on the move: Statistics on Mobility in Europe. 2020 edition.

Travel by Rail

- Measuring the tourism share of rail travel is difficult
- Replacement: Measurement of connectivity - quality of rail connections between tourism destinations and major markets in Europe
- International Union of Railways - MERITS database



The Connectivity of Railroads in Europe

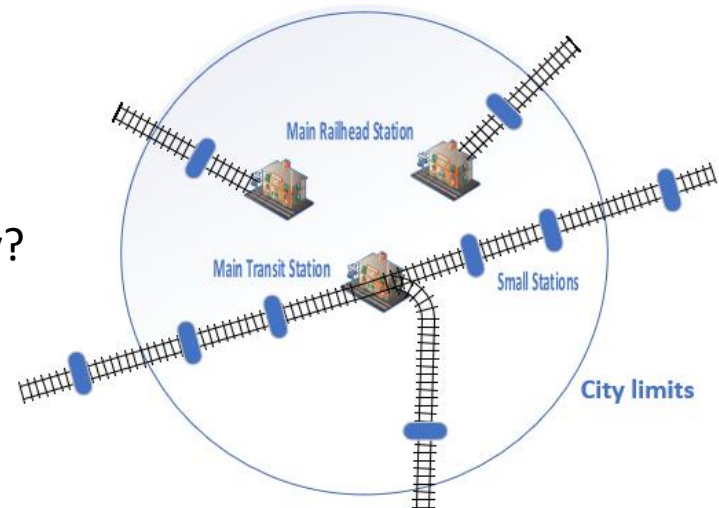
- Acquisition of the MERITS database (all 2021 timetables) by CityDNA
- Review of the data material (completeness, information content)
- Data uploaded to TourMIS
- Aim: Analysis of direct connections between the most important European cities
 - Direct and indirect connections between (CityDNA) cities
 - Number of (international) trains
 - Average speed
- Reporting in the latest edition of the **City Travel Report** by CityDNA



The MERITS Database 2021

Big and complex data set

- Number of railway companies: 1,534
 - **195 (12.7%) providers of passenger services**
 - Number of trains: 639,389
 - Number of departures: 8.7mn
 - Number of stations: 24,001
-
- Which station belong to a particular city?
 - Main train stations?



Seven reports in TourMIS

1. List of stations
2. Information on specific trains
3. Stations in cities
4. Arriving and departing trains by stations
5. Arriving and departing trains by city
6. Direct connections between cities
7. Direct connections between cities and markets

White paper (Manual) on who to use and interpret the Merits database on TourMIS