# Topics

1. Automatic update by external databases
2. Introduction to basic analysis and reporting features
3. Measuring and benchmarking seasonality
4. Comparing the guest mix of destinations
5. Market volume and growth analysis (‚Portfolio A.')
7. **MICE database (revised) by Lidija Lalicic**
8. Shopping barometer (ECM)
9. **Webanalytics (revised) by Irem Önder**
10. Analysis of tourism intensity
11. Travel distance estimator
12. Visitors to attractions and sites
13. MyTourMIS
14. Outlook (possible developments for the next years)

New: Interface to external databases
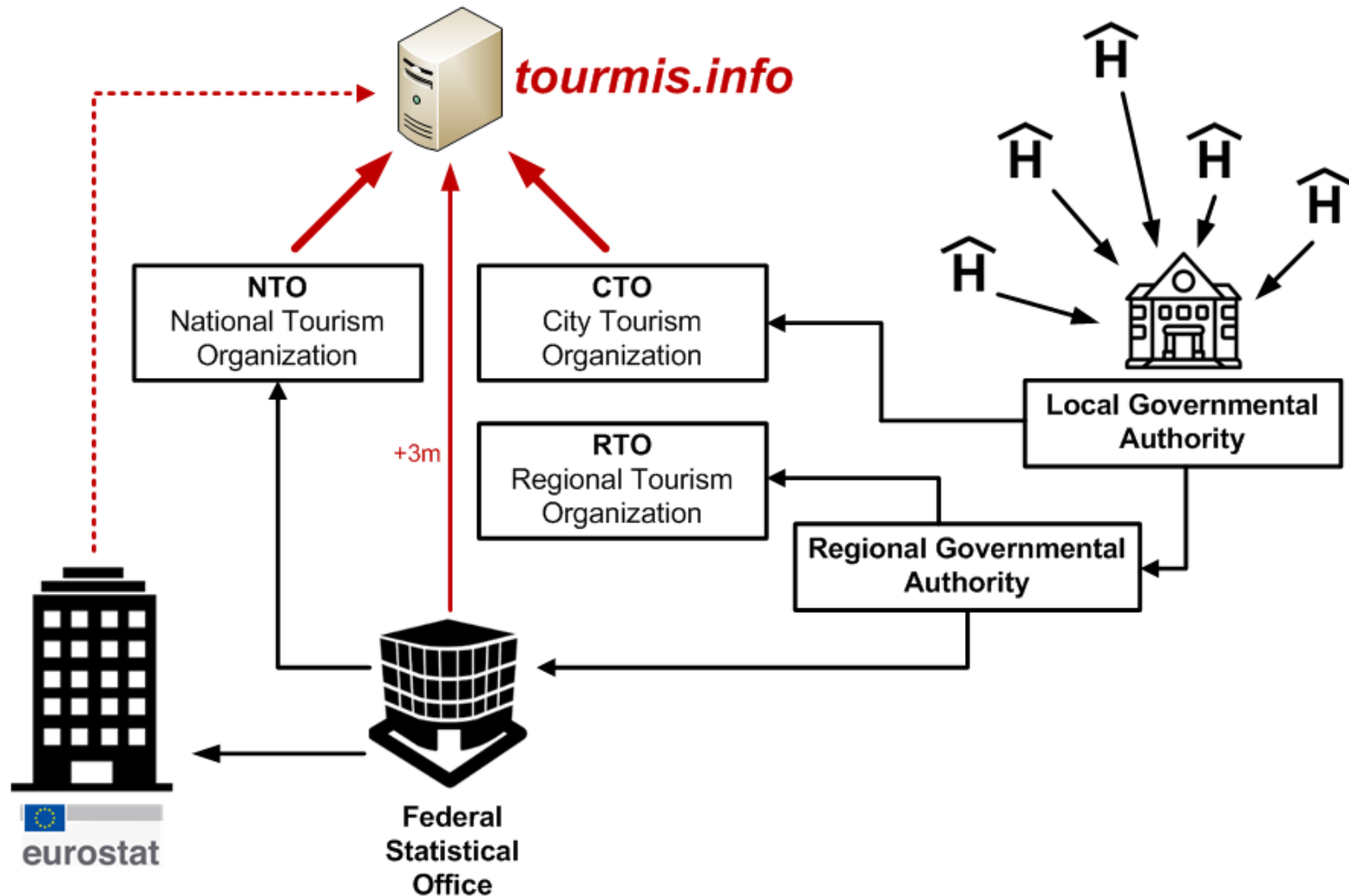
Eurostat > Industry, Trade, and Services > Tourism (Database by themes)

Annual data

1. **Nights** spent at tourist accommodation establishments by country/world region of residence of the tourist (tour_occ_ninraw)
   a. **European countries**; 57 markets; Nace_r2 = I551-I553; since 1990 => Bednights in all forms of paid accommodation (NA)
   b. European countries; 57 markets; Nace_r2 = I551; since 1990 => Bednights in hotels and similar establishments (NG)
2. Nights spent at tourist accommodation establishments (tour_occ_ninat) – **same as (1) ?**
   a. European countries; ZZ, ZA, ZI; Nace_r2 = I551-I553; since 1990 => Bednights in all forms of paid accommodation (NA)
   b. European countries; ZZ, ZA, ZI; Nace_r2 = I551; since 1990 => Bednights in all forms of paid accommodation (NG)
3. Nights spent at tourist accommodation establishments by NUTS 2 regions (tour_occ_nin2)
   a. **Cities?** ZZ, ZA, ZI; Nace_r2 = I551-I553; since 1990 => Bednights in all forms of paid accommodation (NA)
   b. Cities? ZZ, ZA, ZI; Nace_r2 = I551; since 1990 => Bednights in all forms of paid accommodation (NG)

Eurostat

Eurostat > Industry, Trade, and Services > Tourism (Database by themes)

Annual data

1. **Arrivals** at tourist accommodation establishments by country/world region of residence of the tourist (tour_occ_arnraw)
    a. **European countries**; 57 markets; Nace_r2 = I551-I553; since 1990 => Arrivals in all forms of paid accommodation (AA)
    b. European countries; 57 markets; Nace_r2 = I551; since 1990 => Arrivals in hotels and similar establishments (AG)
2. Arrivals at tourist accommodation establishments (tour_occ_arnat) – **same as above?**
    a. European countries; ZZ, ZA, ZI; Nace_r2 = I551-I553; since 1990 => Bednights in all forms of paid accommodation (NA)
    b. European countries; ZZ, ZA, ZI; Nace_r2 = I551; since 1990 => Bednights in all forms of paid accommodation (NG)
3. Arrivals at tourist accommodation establishments by NUTS 2 regions (tour_occ_arn2)
    a. **Cities?** ZZ, ZA, ZI; Nace_r2 = I551-I553; since 1990 => Bednights in all forms of paid accommodation (AA)
    b. Cities? ZZ, ZA, ZI; Nace_r2 = I551; since 1990 => Bednights in all forms of paid accommodation (AG)

Eurostat > Industry, Trade, and Services > Tourism (Database by themes)

Monthly data

1. **Nights** spent at tourist accommodation establishments - monthly data (tour_occ_nim)
   a. **European countries**; ZZ, ZA, ZI; Nace_r2 = I551-I553 (NA); since Jan 1990
   b. European countries; ZZ, ZA, ZI; Nace_r2 = I551 (NG); since Jan 1990
2. ~~Nights spent by non-residents at tourist accommodation establishments – 1990-2011 – world geographical breakdown – monthly data (tour_occ_ninrmw)~~
3. **Arrivals** at tourist accommodation establishments - monthly data (tour_occ_arm)
   a. **European countries**; ZZ, ZA, ZI; Nace_r2 = I551-I553 (NA); since Jan 1990
   b. European countries; ZZ, ZA, ZI; Nace_r2 = I551 (NG); since Jan 1990
4. ~~Arrivals of non-residents at tourist accommodation establishments – 1990-2011 – world geographical breakdown – monthly data (tour_occ_arnrmw)~~
5. Net **occupancy rate** of bed-places and bedrooms in hotels and similar accommodation (NACE Rev. 2, I, 55.1) - monthly data (tour_occ_mnor)

Eurostat

Eurostat > General and regional statistics > Urban audit (Database by themes)

Cities and greater cities

1. Population on 1 January by age groups and sex - cities and greater cities (urb_cpop1)
   a. DE1001V – Population on the 1st of January, total

Functional urban areas

2. Population on 1 January by age groups and sex - functional urban areas (urb_lpop1)
   a. DE1001V – Population on the 1st of January, total

Measuring and comparing 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)**

- **Problems:**
  - 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

- **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)**
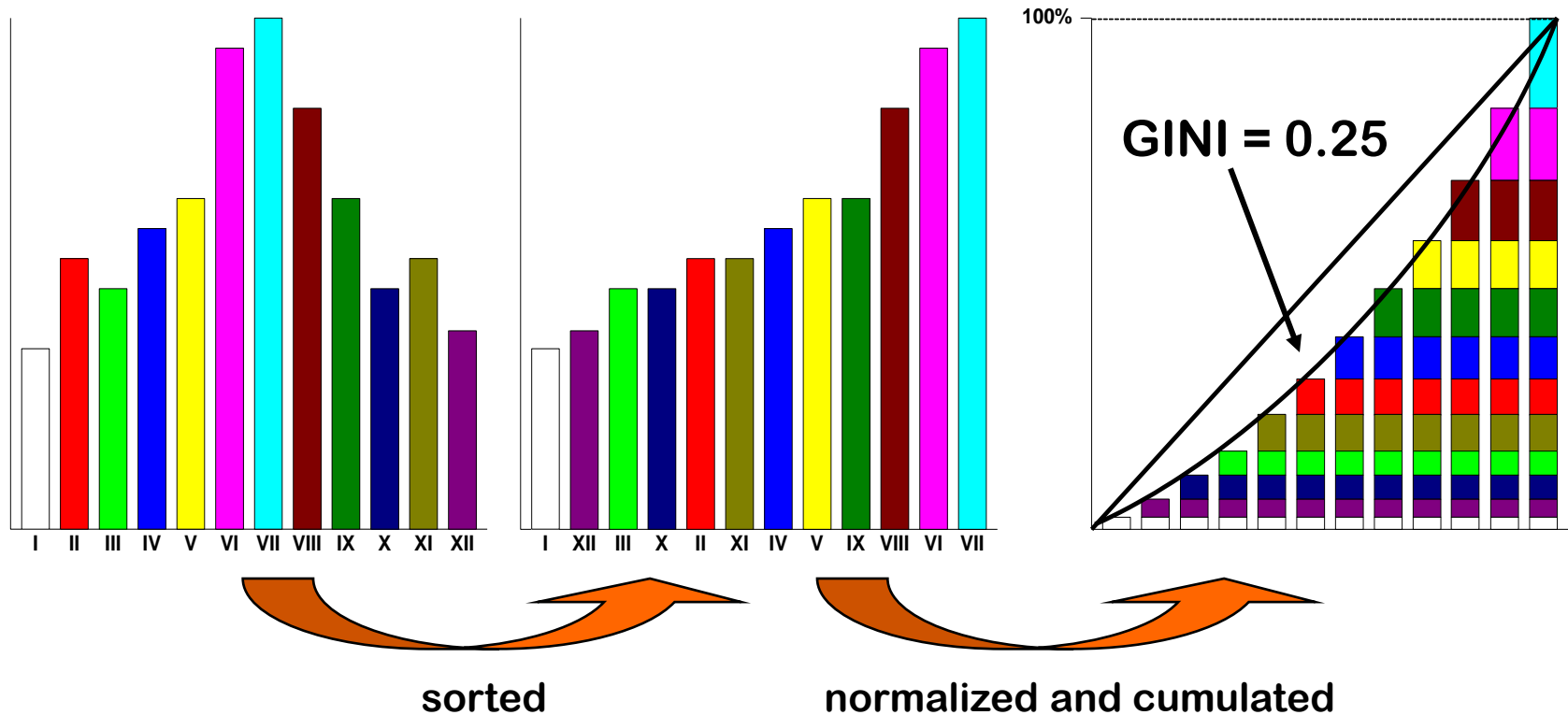
Gini coefficient
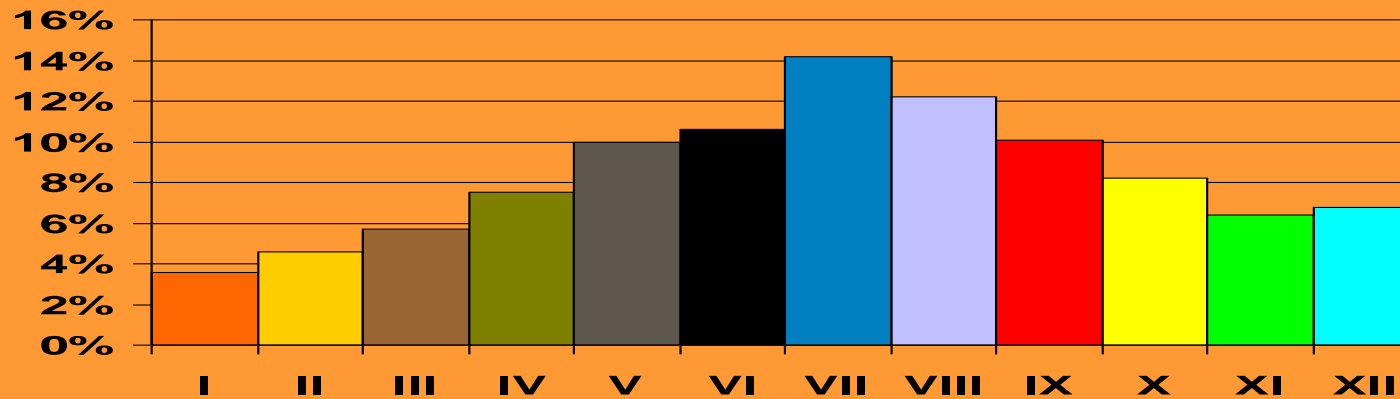
LÜBECK

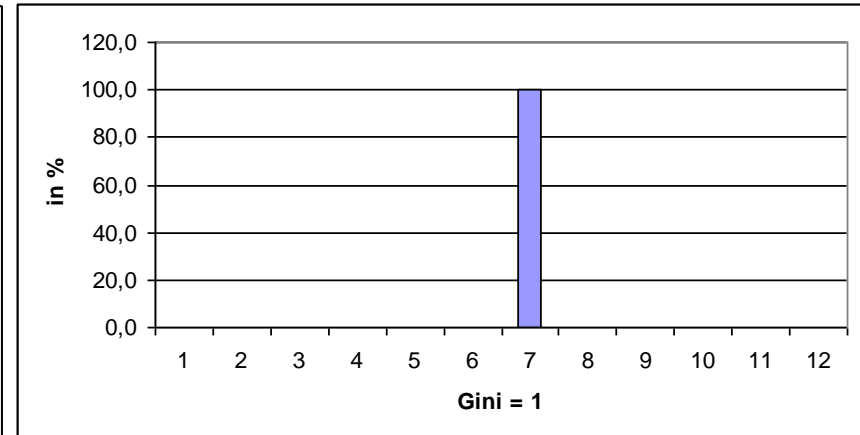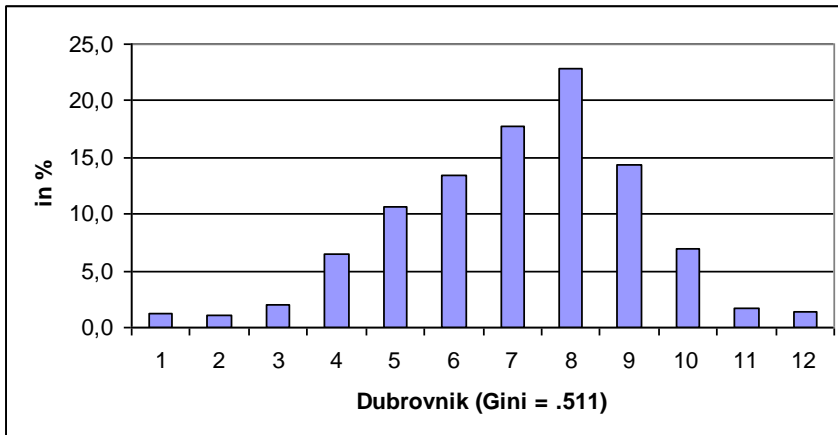**Gini=0.207**
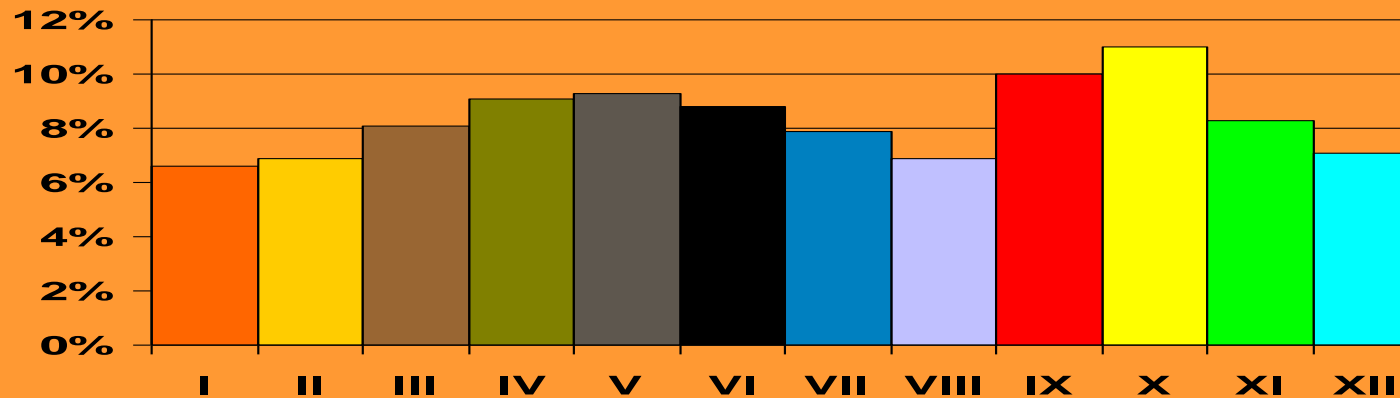
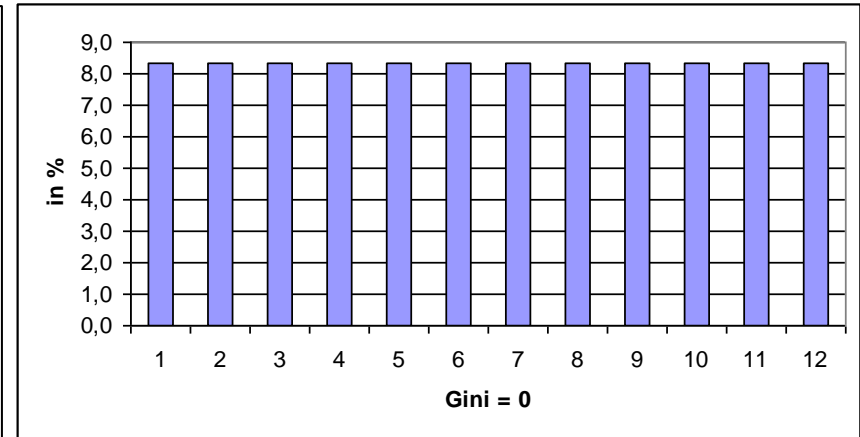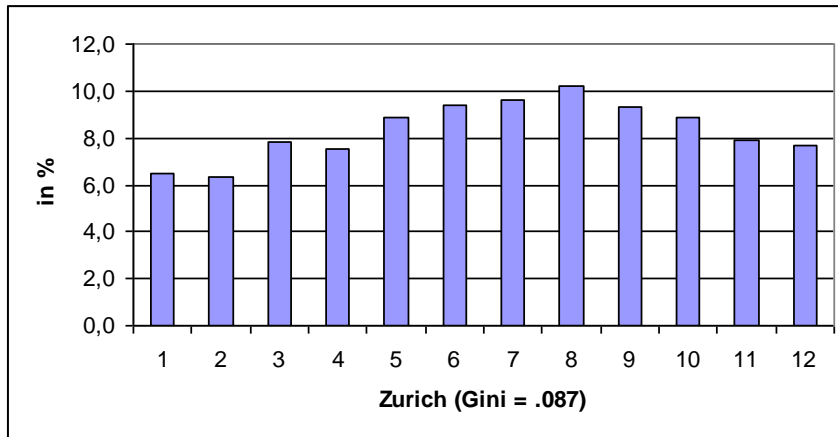**MADRID**

Gini=0.088

The Gini coefficient

Measure of statistical dispersion. The Gini can be approximated with trapezoids:

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

GINI = 0.25

sorted   normalized and cumulated

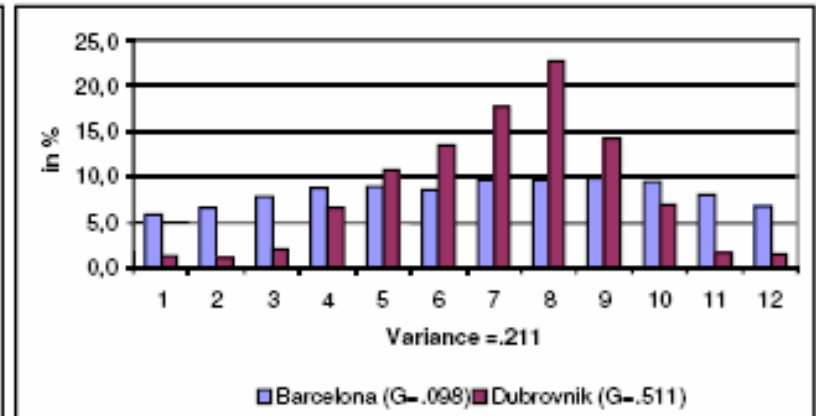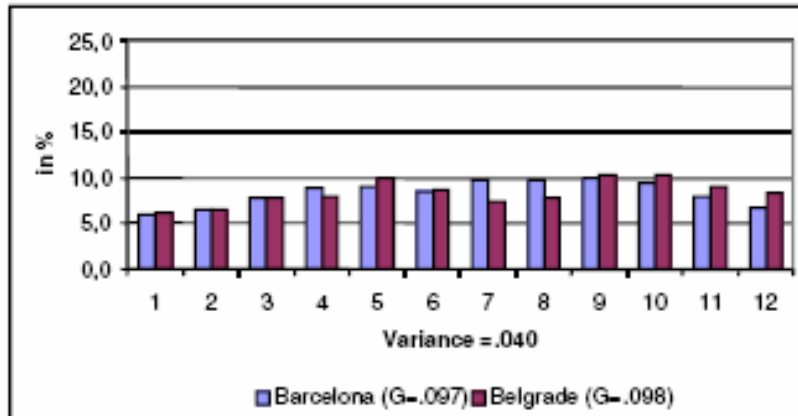# Measuring seasonality (Gini coefficient)

Similarity of seasonal patterns
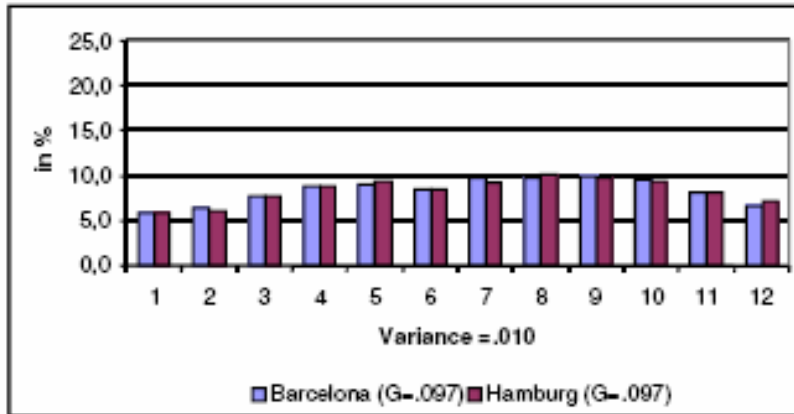
$$d = \sqrt{\sum_{i=1}^{12}\left(x_i - y_i\right)^2}$$

Similarity of seasonal patterns of <u>two</u> destinations. Multiple destinations?
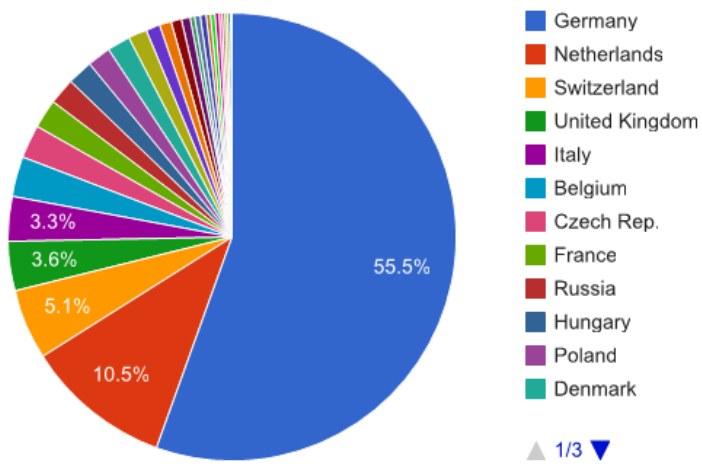
Comparing the guest mix of destinations

Diversity of guest mix

Assumption: A high diversity of guest mix spreads the risk of negative economic developments in single markets

Average length of stay of a market in all ETC destinations - Bednights (preferred definition) 2012

- Germany — 55.5%
- Netherlands — 10.5%
- Switzerland — 5.1%
- United Kingdom — 3.6%
- Italy — 3.3%
- Belgium
- Czech Rep.
- France
- Russia
- Hungary
- Poland
- Denmark

▲ 1/3 ▼

Austria (Gini = 0.792)

Average length of stay of a market in all ETC destinations - Bednights (preferred definition) 2012

- Germany — 21.8%
- Austria — 8.2%
- Italy — 6.3%
- Russia — 6.2%
- United Kingdom — 6.2%
- Czech Rep. — 5.5%
- Poland — 3.9%
- Netherlands — 4.3%
- United States
- Romania
- France
- Spain

▲ 1/3 ▼
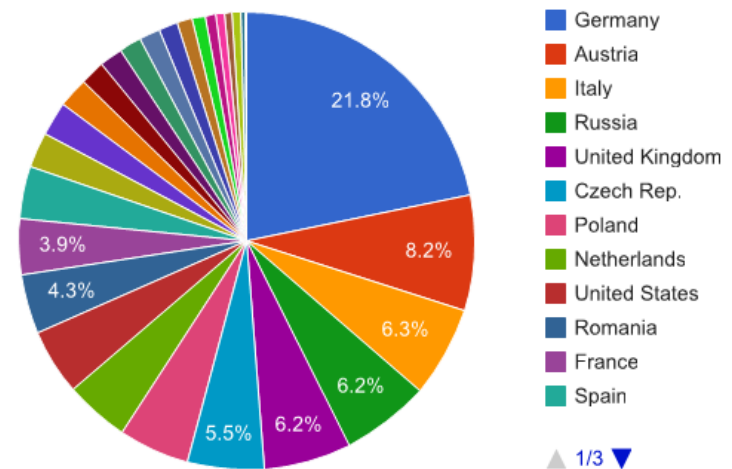
Hungary (Gini = 0.525)

Analyzing the similarity of guest mix

Assumption: The comparison (variance) of guest mix shares defines a destination's exposure to interregional competition

Barcelona
France, Germany, Italy, Japan, US, UK, Domestic, Other

Vienna
France, Germany, Italy, Japan, US, UK, Domestic, Other

Budapest
France, Germany, Italy, Japan, US, UK, Domestic, Other

V = 0.364

V = 0.193
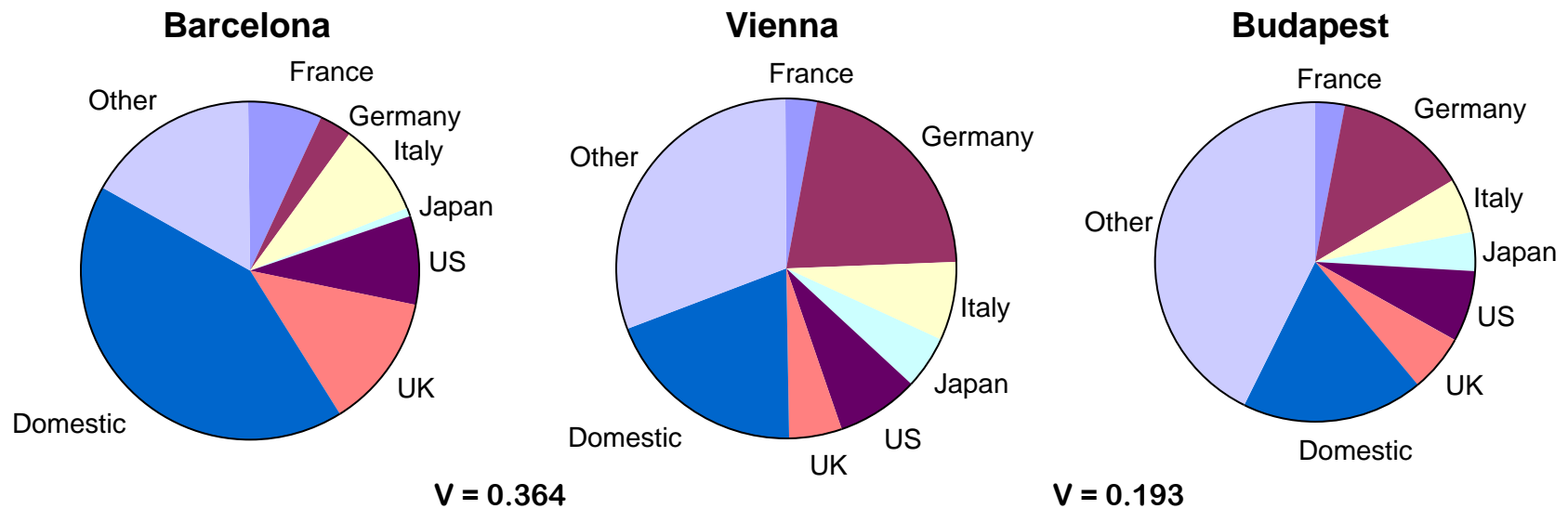
Market volume and market growth analysis

& Portfolio visualization

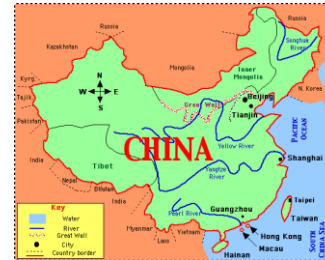**To find the right (optimal) mix of target markets**

Implications for strategic (long-term) decisions and for the budget allocation process (e.g. where should we invest?)

2 basic questions:

- **What makes a market attractive?**
- **What are our chances in attracting visitors from a particular market?**

Portfolio analysis

What makes a market attractive?

1. **Size/volume**

2. **Growth/Prospects**

- **Market volume and market growth indicators**
  - **# of travellers/arrivals/bednights <u>or</u> spendings**
  - **either measured at the country of origin (source market) <u>or</u> in all destinations (e.g. total bednights in all destinations)**

What are our chances in attracting visitors from a particular market?

„Market chance indicators"

- **Destination awareness**
  - Knowledge, preference and sympathy towards a destination
- **Relative price level**
  - Comparison between prices of tourism goods and travel budget of travellers
- **Level of distribution**
  - Availability of a destination within the generating country's distributional system of tour operators and travel agents and online reservation systems
- **Competitive pressure**
  - Advertising budget invested by all competitors in a market
- **Travel distance**
  - Average financial input to cover travel distance

Strategic Key Performance Indicators

- **Market volume** is an absolute number describing the volume of tourism generated by a particular market

- **Market growth rate** is the percentage change of the market volume (in %)

- **Absolute market share** is the ratio when comparing the performance of a particular destination with the overall market volume (in %)

- **Relative market share** is the ratio of the market share of a particular destination compared to the market share of the leading destination (or the second best destination if the destination of evaluation is the market leader)

- **Guest mix share (= importance value)** is the proportion of bednights sold of a particular market compared to the overall number of bednights recorded in a tourism destination (in %)
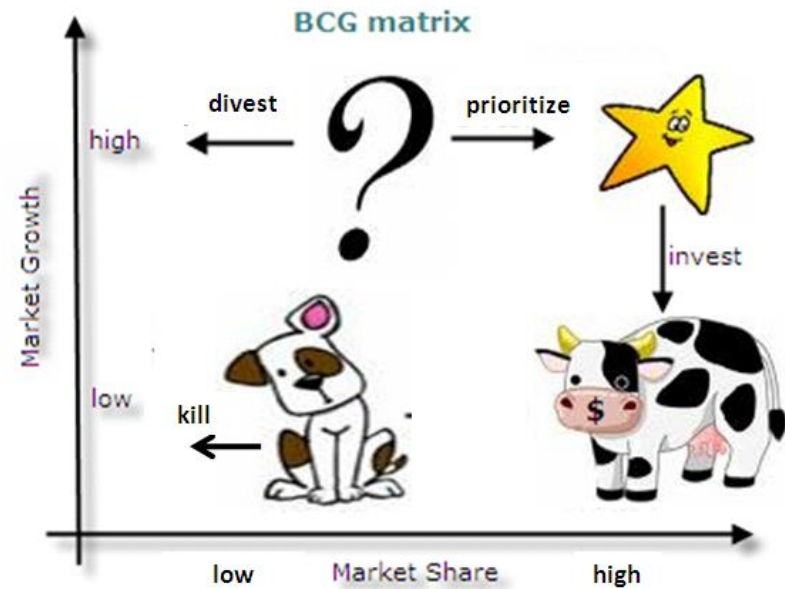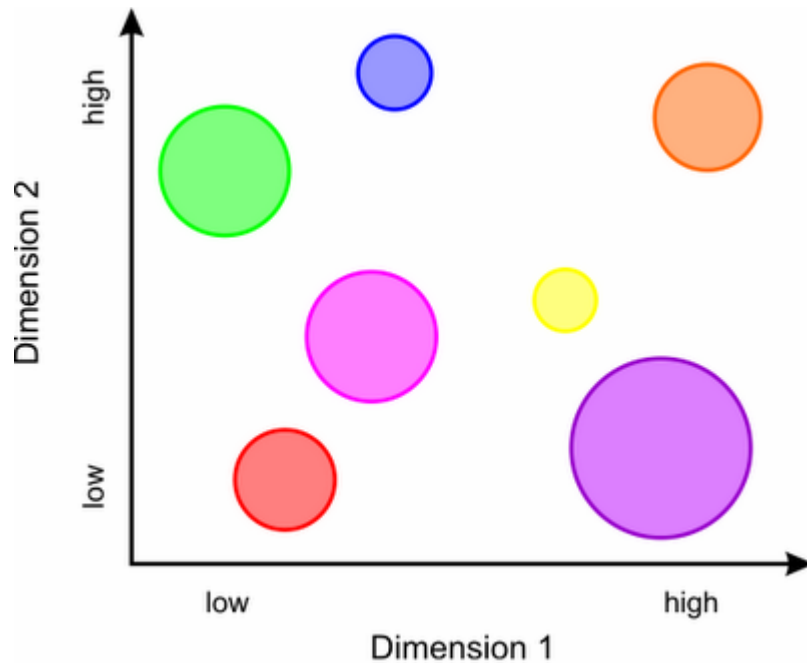
Visualization

The ECM Shopping Barometer

The ECM shopping barometer

- ## Objective
  - To shed light on the costs differential existing across cities in Europe, collecting publicly available data for a specific set of items among those commonly consumed by visitors.
  - The final goal of the project is to rank destinations according to their costliness and to gain a deeper insight on visitors' perception of their experience in a city.

- ## Problems
  - What prices to collect?
  - Comparability of services and a prices

- ## Sample size
  - 2012: 10; 2013: 38; 2014: 32; 2015: 16; 2016: 8

The ECM shopping barometer

- **Guidelines (Manual) – Prices should:**
  - **reflect the final price (i.e. include VAT and eventual tourists taxes)**
  - **refer to the regular price for individual's consumption (discounts for groups or special categories are not considered)**
  - **are collected from businesses in the city center**
  - **are collected in the local currency (converted into Euro)**
  - **are collected at a specific time of the year, but refer to a one-year period**

- **The shopping bundle covers the main service categories required by tourists at the destination**

The ECM shopping barometer

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- **The shopping bundle covers the main service categories required by tourists at the destination**

The ECM shopping barometer

16 items

Category	Item	Notes
Local transport	Taxi from airport to city centre (1 person including luggage)	If the city has more than one airport, the researcher has to select the **airport** recognized as the one where the majority of international guests arrive. The name of the airport has to be specified in the notes.
	Train from airport to city centre (1 ticket, 2nd class) OR public transport bus from the airport to the city center (1 ticket, regular)	
	1 day ticket for the local public transport	
Food and Beverage	Price for a business lunch of 3 courses, no drinks, in the restaurant of a 4-star hotel in the city centre	The restaurant can be part of one of the hotels contacted for the room rates.
	Price for a dinner of 3 courses, no drinks, in the restaurant of a 4-star hotel in the city centre	
	Price of a classic pizza, Margherita with 2 toppings, for 1 person	Price collected at a Pizza Hut in the city centre
	A Coke, 0,33 l, in a Pizza Hut restaurant in the city centre	If a 0,33 l Coke is not available, the price should refer to a medium size Coke (or other soft-drink).
	A Beer, 0,33 l, in a Pizza Hut restaurant in the city centre	If a 0,33 l beer is not available, the price should refer to a medium size beer.
	Big Mac meal at McDonalds in the city center	The price refers to a Big Mac menu, including 1 Big Mac, french fries and one drink at a regular price (no special offers)
	Espresso in the lobby bar of a 4-star hotel	The bar can be part of one of the hotels contacted for the room rates.
Entertainment	Regular price for 1 ticket for the opera, 1 adult, no reductions.	The opera should be a classical piece. The seat should be in the parterre, 5th row in the middle.
	Regular price for 1 ticket for a classical concert, 1 adult, no reductions.	The seat should be in the parterre, 5th row in the middle. If the concert takes place in different venues, select the price which represents the average between the different venues.
	Regular price for the entrance to the biggest/main museum (permanent collection), for 1 adult, no reductions.	The price should refer to the regular entrance fee and should not be collected on days with special offers.
	Regular price of 1 ticket for the hop-on hop-off sightseeing bus, 1 adult, no reductions	If the hop-on hop-off bus is not available, another similar sightseeing tour (e.g. tourist train) can be used and specified in the notes.
	Zoo, entrance of 1 adult, no reductions.	If the zoo is not available a similar attraction can be used (e.g. Tropicario, Mini Europe).

MyTourMIS

~ 80 users are currently using MyTourMIS

Setting: 'flexible period'

<u>**Today**</u>: **September 11, 2014**   <u>**Some day in the future**</u>: **e.g. November 2014**

Table 1: Juli 2014   **September** **2014**

Table 2: 2001 – 2012   ➡   **2001 – 2012**

Table 3: January 2011 – August 2014   **January 2011 – October 2014**

Travel Distance Estimator

Objectives:

1. **Analysis of market chances**
2. **Monitoring and comparing different forms of means of transportation (airline dependency)**
3. **Estimating CO_2 emissions**

Proposing new tables

Drafting a new table
Example: Average length of stay

Suggested label of table: Average length of stay in one ETC destination¶
Destination=<to be selected>¶
Type of Accommodation=<to be selected>¶
Period=mm1/yy1 - mm2/yy2<to be selected>¶
¶

¤	Arrivals¤			Bednights¤			Avg Length of Stay¤		¤
¤	mm1/yy1¶ −¶ mm2/yy2¶ (absolute)¤	mm1/(yy1-1)¶ −¶ mm2/(yy2-1)¶ (absolute)¤	% p.y.¤	mm1/yy1¶ −¶ mm2/yy2¶ (absolute)¤	mm1/(yy1-1)¶ −¶ mm2/(yy2-1)¶ (absolute)¤	% p.y.¤	mm1/yy1¶ −¶ mm2/yy2¶ (days)¤	mm1/(yy1-1)¶ −¶ mm2/(yy2-1)¶ (days)¤	¤
Market A¤	¤	¤	¤	¤	¤	¤	¤	¤	¤
…¤	¤	¤	¤	¤	¤	¤	¤	¤	¤
Market Z¤	¤	¤	¤	¤	¤	¤	¤	¤	¤

Submit to tourmis@modul.ac.at

- **MICE: Additional tables and graphs**
- **Improving the travel distance estimator**

- **Sharing data on tourism expenditures**
- **Forecasting**

- **Updating TourMIS Manual**
- **Additional languages (French, Spanish, Chinese?)**
- **„How-to-use" - TourMIS videos**
- **Additional external databases import opportunities**
- **APIs (e.g. TO's dashboards)**

Summary and Feedback

Thank you!