



Workshop on the use of mobile positioning data for tourism statistics

Prague (CZ), 14 May 2014

Opening session

EUROSTAT, Unit G-3 "Short-term statistics; tourism"

Aim of the workshop

Gathering relevant stakeholders ()*

... to present and discuss the outcomes of the feasibility study

... and to discuss the way ahead or possible next steps

(taken from the Call for Tender's "Terms of Reference")

(*) Stakeholders:

Commission departments [3], tourism authorities at regional [4], national [9] and international level [2], the tourism industry [-], the research community [12], statistical services in charge of tourism statistics [20]

Agenda of the workshop

- 13h00** Introduction, background of the project and project objectives
Christophe Demunter (Eurostat)
- 13h30** **Presentation of the feasibility study's findings**
Consortium partners (Margus Tiru, Rein Ahas, Ossi Nurmi, Ulf Sonntag)
- 16h00** Country presentations on current & future initiatives
Peter Laimer (AT), Nico Heerschap (NL), Jiri Novobilsky (CZ)
- 16h20** Presentation on the use of Big Data for statistics
Christophe Demunter (Eurostat)
- 16h30** Panel discussion on next steps
All speakers, audience is invited to actively participate!

Why a project on using mobile phone data?

The world changes !

- **Geo-political environment**
 - abolishment of border controls (e.g. "Schengen") has put pressure on the feasibility of tourism border surveys
- **Technological environment**
 - use of new tools/devices has entered every citizen's daily life (mobile phone, gps, internet & social media)
 - promising research results were being published bit by bit
- **Statisticians' working environment**
 - managerial/political decisions to change the production methods for official statistics
 - increasing user needs vs. burden & budget reduction

Why a project on using mobile phone data? (2)

The current world of tourism statistics is not perfect !

Strengths & weaknesses

- National data collection systems have been set up
- Harmonised and comparable data on tourism in Europe, at national level and EU-28 level
- Official statistics on tourism answer a wide range of user needs

Why a project on using mobile phone data? (3)

The current world of tourism statistics is not perfect !

Strengths & weaknesses

- Timeliness (often a trade-off with other aspects of quality)
- Relevance (focus more on physical flows, not on monetary flows)
- Completeness (good coverage of domestic and outbound tourism, inbound tourism only partly covered)
- Accuracy (undercoverage, sample surveys, recall, underreporting)
- Coherence (differences in methodology)
- Cost and burden (administrations, respondents)

Why a project on using mobile phone data? (4)

Potential of the project, expectations

- Making collection and compilation of data more efficient: reducing burden (and improving quality)?
- Improve quality
 - e.g. reduction of data entry error, reduction of recall bias (short trips, same-day visits)
- Partly replace data collection on tourism flows within the EU (domestic, outbound)?
- Complete or enhance current data on domestic and outbound flows (Regulation 692/2011) with data on total inbound flows

Why a project on using mobile phone data? (5)

Potential of the project, expectations (continued)

- Further harmonisation?
 - e.g. use of algorithms rather than subjective opinion/memory of the respondent
- Extension to other domains?
 - e.g. travel, passenger mobility, migration
- Information previously not available
 - e.g. data at more detailed regional level or destination level, infra-monthly data (day, week, weekends)



Which were the main objectives of the project?

In a nutshell:

Getting *answers* to the many *questions* raised by "non-believers" (but also by "believers") in big data, in particular mobile phone data as a source for tourism statistics

Which were the main objectives of the project? (2)

"Vertical" objectives (task by task)

- Assess feasibility to **access** databases with mobile positioning data in European countries
- Assess the feasibility to **use** mobile positioning data for tourism statistics in the European context
- Identify, discuss and address the **main challenges** for implementation
- Assess the potential **impact on cost-efficiency** of data production
- Assess the possibility to expand the methodology to **other domains** and define joint algorithms

Which were the main objectives of the project? (3)

"Horizontal" objectives (cross-cutting approach)

- Mix of **scientific/theoretical** & **practical/empirical/applied** work !
- Can the methodology/technology be applied to the particular case of tourism statistics (with its specific international definitions)?
- Can it be applied across a wide group of countries in a similar way?
- Can the outcomes be generalised to all countries?

What was the set-up of the feasibility study?

Task 1: Stock-taking

- Overview/inventory of the work already done (focus on Europe)
 - ✓ Use of mobile positioning data for research, in particular for statistics on tourism flows or any other field of official statistics
 - ✓ Institutional set-up (users involved, MNOs involved, technological aspects)
 - ✓ Outcomes (success? failure?) and lessons to be learnt for this project

👉 **Report 1**

What was the set-up of the feasibility study? (2)

Task 2: Feasibility of access in the context of official statistics

- Discussion of potential barriers (and how to overcome these)
 - ✓ privacy issues (operator, national law)
 - ✓ continuity of access (contingency planning, robustness if one or more operators withdraw, ...)
 - ✓ flexibility to make changes to the requirements, extractions
 - ✓ cost (initial investment, regular extractions)
- Understanding of issues linked to access, from a theoretical/scientific point of view (based on the research of existing projects) and from a practical/empirical point of view (based on concrete tests in the participating partner countries)

What was the set-up of the feasibility study? (3)

Task 3a: Feasibility of use - methodological issues

- Data collection and compilation
 - ✓ sampling design, stratification, calibration, ...
- Representativeness (systematic / sampling bias?) of the technique, assessment compared to traditional techniques for data collection
- Applying tourism statistics scope and definitions
 - ✓ exclude flows within the usual environment, longitudinal data, ...
 - ✓ impact of algorithms on series

What was the set-up of the feasibility study? (4)

Task 3a: Feasibility of use - methodological issues

(continued)

- Feasibility of use for other domains (but tourism) in official statistics
- Discussion of all issues linked to use of mobile positioning data for statistics, in particular tourism, from a theoretical/ scientific point of view (based on the research of existing projects) and from a practical/empirical point of view (based on concrete tests in the participating partner countries)

 **Report 3a**

What was the set-up of the feasibility study? (5)

Task 3b: Feasibility of use - coherence

- Mobile positioning data vs. existing official tourism statistics
- In-depth tests, production of statistics based on mobile positioning data and coherence / consistency of the results with existing data (level and reasons for deviations?) – for at least 3 countries

👉 Report 3b

What was the set-up of the feasibility study? (6)

Task 4: Opportunities and benefits

- Potential gains in quality (including timeliness)
 - Potential burden reduction (including cost)
 - How to integrate mobile positioning data in the current tourism statistics in the EU and synergies with other domains (in particular travel statistics)
 - Statistics/indicators previously not available
- Using mobile positioning data as compared to the currently used production process, on the basis of actual datasets and tests conducted for the feasibility study)

Where can I find the results and reports?

All reports will be publicly available for download from the Eurostat website (target date: mid-June 2014)

- <http://ec.europa.eu/eurostat/tourism>
 - ✓ In the section "Methodology", scroll to "Feasibility study on the use of mobile positioning data for tourism statistics"
- 1 consolidated report (50 pages, incl. 10 pages executive summary)
- 5 comprehensive reports:
 - ✓ Stock-taking
 - ✓ Feasibility of access
 - ✓ Feasibility of use (methodological issues)
 - ✓ Feasibility of use (coherence)
 - ✓ Opportunities and benefits

Some preliminary observations?

- General **interest** (and high **expectations**) from stakeholders, including the producers of statistics
- Getting **access** is currently the **Achilles' heel**
 - ✓ even in the context of the project, only in one of the four countries in the consortium, actual datasets could be obtained from national Mobile Network Operators
 - ✓ mix of an ambiguous legal framework (grey areas) and different stakeholders' risk-aversion
- Using mobile positioning data will (in the short term) **not replace** current tourism statistics production, but can contribute to improving quality and completeness and can provide additional indicators/breakdowns



Thanks for your attention

Eurostat - Unit G-3

Short-term business statistics and tourism

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