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**
  - abolition 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)

♫ Report 2
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)

☞ Report 4
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](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

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