Stats Café on Mobile phone data for official statistics

Measuring human mobility with the use of MPD

- Case of Georgia

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General Introduction

The main source of Migration, NSO Geostat

- Administrative data – International Migration (MIA, Border Cross Data);
- Population Census – Internal Migration

Challenges/Data gaps, Georgia

- Estimate population by sex and age at the municipality/regional level on annual basis;
- Migrants by destination and country of origin (International Migration);
- Timeliness (Internal Migration).
Works performed in the field of Human Mobility

**Cooperation with the UNSD/DESA:**

Meetings/Workshops and other activities:

- International meeting on measuring human mobility (March 2019, Tbilisi, Georgia);
- Regional training workshop on the use of mobile phone data for official statistics (June 2019, Jakarta, Indonesia);
- Mobile Phone Data Task Team member of the UN Global Working Group on Big Data for Official Statistics (starting from 2019);
  - Member of subgroup on tourism statistics;
  - Lead of the subgroup on migration statistics
    
    **Members:** Geostat, GNCC, UNSD, EU-JRC, Positium, Flowminder, IOM.
- Currently working on the finalization of the Chapter on the use of mobile phone data for official statistics.
The main objective of the chapter is to assist NSO’s and other agencies responsible for producing the official statistics on Migration.

The chapter of Migration Statistics will discuss on the following issues:

Outline of chapter on Migration Statistics

Introduction
Traditional sources vs New approaches
Data quality and Privacy issues
1. Applications
2. Data Sources
3. Methods

Expected results:

Chapter/guidance on the use of MPD for migration statistics.
Cooperation with the Georgian National Communications Commission (GNCC):

- Several meetings held with the representatives of GNCC (regulator) during 2019-2020;
- First working version of the methodology (draft ideas) have been sent to the GNCC for further pilot processing of the data (2019);

Pilot processing of the data

- GNCC conducted pilot processing of the data (roamers and non-roamers data) using Call Detail Records (CDR) and Internet Protocol Detail Record (IPDR) data events from the for assessing tourism and migration
- and presented the preliminary results on the platform in the interactive format.
Works performed in the field of Tourism Statistics

Pilot processing of the data - TOURISM

- Platform provided the user with the visualized data outputs, and possibility of filtering out the data according to the different variables and the following data was available:
  - Distribution of the number of roamers on the territory of Georgia;
  - Distribution of the number of visits on the territory of Georgia;
  - Average Staying Period by the roamer’s country of origin (average length of staying is calculated based on the first and last connections);
  - Roamers services by the country of origin and type of connection;
  - Distribution of the number of roamers by the municipalities and roamer’s country of origin;
  - Roamers services per hour by the country of origin;
  - Roamer Profiles section, which gives an opportunity to compare roamer’s patterns by different parameters across countries.
Cooperation with the GNCC – Important factors → Limitations:

- **IT infrastructure**: Lack of adequate infrastructure, which is required to process huge data (commission request);

- **Access to data/Partnership Model**: In Georgia, there is no direct collaboration with the MNOs, but rather through GNCC (see the Figure). Due to the current legislation, the Commission has a limited right to provide Geostat (or other third parties) with individual data received from mobile operators.

- **Data quality**: the data do not include demographic characteristics, which is important for assessing the structure of the population and migrants.

- **Since the project is temporarily on hold the methodology could not be tested on the real data.**
ITU project (2018): ITU was undertaking a pilot project to use big data from the telecom industry to improve and complement existing statistics and methodologies to measure the information society.

The following six countries were participating in the pilot: Colombia, Georgia (GNCC), Kenya, Philippines, Sweden and the United Arab Emirates.
Conclusion

Benefits of MPD for Migration and Tourism Statistics

1. MPD can fill the current data gaps.
2. The governments, researchers, internal and international organizations will benefit;
3. MPD researched and relatively well proven to determine stocks and flows for migration and tourism.
Thank you for your attention!

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