Census data for the development of functional geographies: the case of Labour Market Areas

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1. Geographies: administrative and functional
2. The concept of Labour Market Areas (LMAs)
3. Work done at EU level on LMAs
4. LMAs in Italy: use
5. Next census round and LMAs: challenges
6. Conclusions
The geographical dimension is a key issue in Official Statistics.

Historically censuses collect the most detailed geographical information.

The usual geographies are administrative ones (NUTS1, 2, 3 and LAUs, e.g. Tercet Reg.).

Functional regions are defined by a particular set of activities or interactions that occur within it (e.g. Commuting - Functional Urban Areas).

Functional geography are commonly used in some topics (especially related to comparability).
Labour Market Areas

LMAs are functional regions built so that the majority of the labour force lives and works within their boundaries.

They cover the whole of the country: we are able to produce functional regions both in the city and in rural areas.

- A Eurostat Task Force produced an harmonised concept and methodology based on the commuter flows between place of residence and place of work (Travel-To-Work flows);

  **Sound methodology (based on Coombes et al., 2012)**

  **No predefined cores (e.g., Cities)**
Labour Market Areas – Work done at EU level

- Istat has released
  - Open source IT tool to identify LMAs: the R package LabourMarketAreas
  - Complete documentation of the implementation
  - Shared guidelines on the LMA delineation process
From 2016 several MSs contributed to the work done: Portugal, the Netherlands, Germany, France, UK, Denmark, Poland, Hungary, Bulgaria, Italy
Labour Market Areas in Italy derive from census data

**Precise definition**: Commuters are those leaving the place of residence **every day** to go the **SAME place of work** and **going back** within the **same day**

2011 Italian population census evidences:

- 8092 LAUs
- > 19 millions of commuters
- ≈ 540 thousands flows

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Labour Market Areas – use

- **Survey-based indicators**
  - Employment/unemployment rates
  - Small area estimators

- **Policy-use: identification of areas hit by industrial crisis**

Istat, Unemployment rate, 2016
• **Register-based indicators**
  - Committed register: Frame-SBS-Terr, 2015
    - Register of local unit of enterprises
    - Economic performance information (value-added, labour cost, salaries, turnover, etc.)
    - 1st release: June 2018

• **Policy-use: identification of areas hit by industrial crisis**
• **Industrial Districts (IDs)** are LMAs with a high concentration of small-medium size enterprises in the same main economic specialization.

• They are 141 in 2011.

• The analysis of their economic specialization is made using the 9th Industry and Services Census.

• Industrial districts represent about one-fourth of the Italian economic system, both in term of LMAs (23.1% of the total), workers (24.5% of the total) and local units (24.4% of the total).
Labour Market Areas – Istat modernisation programme

- ISSR – Integrated System of Statistical Registers
  - Base registers
    - identify frame populations
  - Committed registers
    - identify the elements needed for targeted processes
  - Functional registers
    - identify the elements common to many production processes
Labour Market Areas – Istat modernisation programme

ISSR – Integrated System of Statistical Registers

- **Individuals and Households Register**
  - ID_person
  - ID_address
  - ID_adminTerr_unit

- **Labour Register**
  - ID_employer
  - ID_address_employer
  - ID_adminTerr_unit_employer

- **Addresses**
  - ID_address

- **Functional Units**
  - LMA
  - ID_lma

- **Administrative**
  - ID_adminTerr_unit

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Labour Market Areas – Permanent Census

- Census 2011 = Complete enumeration
- Census 2021 = Administrative and survey data

- Data stemming from surveys: the precise definition of commuters but: commuters refer to different periods in time, possibly different sub-populations, probably different administrative units, sample.

- Data from administrative source: possibly no side information on the type of work, the commuting, if any, and its frequency; all possible types of works are represented? etc.

- Sophisticated integration/estimation methods need to be developed.
Conclusions

• LMAs are designed to have an explicit validity that is relevant to release information and statistics on employment and socio-economic structures.

• The challenges for the next round Population Censuses:
  • Improvement of the concepts of commuters and LMAs and the relationships between them;
  • the integration of different data sources in order to unbiasedly estimate travel-to-work commuting flows.
Thank you!