FIRST MEETING OF THE Friends of the Chair Group

Economic Statistics

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The institutional transformation of NSOs – New methods, services and roles.

New data sources

1. **If we want to discuss the future of any statistic we must not forget that the NSOs are not the same around the world.** What for many is the past for others it is still the future.

2. **What are the reasons for NSOs to restructure?** To begin a discussion about the search for new data sources, it is necessary to understand clearly what leads the NSOs to seek new alternatives for the estimation of statistics and, consequently, their reorganization and a new institutionalization.

3. **Today an NSO has to face the growing demand for more data and more themes.** More quantity, quality, diversity, timeliness, subjective variables or granularity, among many other reasons / pressures. More integration between statistics and geodata.

4. **NSOs no longer have the capacity to generate all the statistics needed to understand reality.** As the demand for statistics increases, governments have systematically reduced staffing and budgets. The most usual ways to meet demand are to partner with other data producers to produce statistics, search for new data sources, and search for more efficient collection methods.

5. **Census and sample surveys need complementation.** They no longer meet all the demands; however, they are still the best means of listening and connect households and people.

6. **The use of administrative records is already considered a traditional data source to produce statistics. However, this alternative is still new in many countries**. There are issues about the access to administrative register data base, whether technical or legal, to overcome in many countries. It is necessary to differentiate the simple sharing of administrative databases, without greater statistical treatment, with the building, from administrative records, of integrated bases. Conceptually coherent, with the possibility of being associated (matching), that allow its use systematically and with access to microdata (protected by statistical confidentiality) and its utilization for generating official statistics.

7. **The use of administrative data is still subject to legal and cultural restrictions.** It is necessary to make institutional and legal changes so that the use of administrative records can be seen as a regular practice in the production of official statistics, and also,

in order to change the habit of considering databases as individual properties or the agency that obtains it.

8. **Considering the use of administrative records, there is still a need to improve frameworks to produce statistics in several countries.**

9. **So far censuses, sample surveys and administrative records are indisputably official data.** With few exceptions, produced by official agencies of a country.

10. **Big data et al (including geoprocessing).** The understanding of new alternatives, their potential and limitations, should consider different angles. What we have, to advance, in a generic way:

    i) **Technology:** new tools for data collection, search, processing and storage of information;
    ii) **More data:** large databases that require special processing. That can be collected with new technologies or build upon administrative records, owned by someone or available on the internet.

11. **The challenge: TOOL x DATA => Statistics**.

12. This all new "statistical environment" brought to the NSOs the need to reorganize.

    -Technical staff needs new skills - there is an increasing need for technological knowledge;

    -The structure should be modified to incorporate a new way of producing statistics;

    -There is a need to broaden the national statistical system and update legislation.

13. **Data: the challenge of accessing private databases owned by companies.** How to establish access at the level of detail necessary for the generation of official statistics, within all principles. Buying is not a definitive solution.

14. **Databases generated on the internet**. Will they have potential to be used in estimating statistics? There is still a lot of research to be done.

15. **Big data et al must not be seen neither as the panacea nor as a revolution. It is an evolution adding more methods and technologies in our stock.**

Some experiences

16. *The use of geoprocessing associated with the collection of information.* The use of mobile collection devices associated with geoprocessing is one of the ways in which data collection operations can obtain data from the control of the data devices. The Agricultural Census of 2017/18 in Brazil had all its geoprocessed collection, for quality control and registration of parameters. Each collection device was controlled and recorded - in addition to the coordinates of each reporting unit, the entire path traveled

by the enumerator (streets, roads, tracks etc.), filling time and other variables of quality control. In the end, as a by-product of the Census, the mapping of all rural producers and a base with all the rural roads used were created – a fundamental aid for environmental control and assistance in case of natural disasters. (800,000,000 GPS tracking coordinates, 90,000,000 GPS questionnaire coordinates, 2,000,000,000 registers of enumerator actions)

17. **Satellite imagery.** Brazilian satellite coverage and land use accounts are primarily based on satellite imagery.

18. **Electronic Invoices - an example of using administrative records with big data.** All legally registered sale transactions in Brazil are registered individually in the databases of the state governments and, in a second step, in a central federal government database. The invoices contain normative information for the whole country, adopting the same format with activity classification and standard products, values and amount transacted. The use of this database will allow a significant advance in the production of conjunctural and structural economic statistics such as price monitoring, trade and services indexes, household consumption and, above all, increasing the geographical coverage to the level of states and municipalities. A project of this nature presents two major challenges: the institutionalization of IBGE access to the database and training of the teams with tools to process an enormous amount of information.