Agricultural Statistics: Who should be in Charge, The National Institute of Statistics or the Ministry of Agriculture?

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Executive Summary

Agricultural Statistics are indispensable in designing development policies in the agricultural sector and the national economy in general. They constitute a sub-system within the National System of Statistics (NSS). The NSS operates on the basis of consultation and coordination and mainly seeks to harmonize concepts, definitions, methods, indexes and nomenclatures. In general, the NSS is organized in two distinct forms: - centralization, practised by some developed countries and in which the National Institutes are responsible for producing all public statistics; and decentralization whereby public statistics are produced by more than one organization. In France, for instance, the Institut national de la statistique et des études économiques (INSEE) is the main and most renowned statistic institute, although there are departments in ministries in charge of producing statistics at the ministerial level in their respective fields of activities. A sound coordination of activities is carried out by the National Council of Statistical Information (Conseil national de l'information statistique). In Africa, and more especially in French-speaking African countries, the system applied is decentralization but this is poorly coordinated. The national system of agricultural statistics in Africa as a whole suffers from a sheer lack of identity and appropriation. Whereas National Institutes of Statistics are generally responsible for all official statistics, agricultural statistics are usually under the responsibility of the ministry of agriculture and livestock which has local services in all administrative constituencies across the country. Moreover, there is little collaboration between services in charge of agricultural statistics and the National Institute of Statistics (NIS). A clear-cut description of responsibilities in the production of statistics, as well as the promotion of partnership between NIS and agricultural statistics services will certainly help break this isolation, and improve the production of agricultural statistics.

I- Introduction

The aim of public statistics, as opposed to mathematical or experimental statistics, is to provide a data-based description of the socio-economic situation of a country so as to enable decision-makers to base their actions on a sound and objective foundation.
Agriculture is one of the areas concerned with public statistics. Agricultural statistics are important in designing development policies in the agricultural sector and the national

economy at large. However, there are a number of constraints plaguing the designation of the organization that should be in charge of producing such statistics.
Every country has a statistical system that needs to be reviewed in order to identify the characteristics of each form of organization.

II- The statistical system

A set of elements and their mutual relationship

- Each element may be considered as a system or a sub-system
- Each sub-system has its own organization and its own management
- The global system may or may not have its own organization or management.

The elements of a statistical system include:

- The central statistical body (example: the National Institute of Statistics);
- Departments in charge of statistics in ministries (for example: the Department of Agricultural Surveys (DEA), etc.);
- The statistics services in various organizations;
- Producers of administrative data that can be used as statistics;
- Committees or commissions (when such organizations exist) in charge of the functioning of the system, for example the National Council of Statistics;
- Training institutions.

In some countries, there is usually some sort of misunderstanding of how statistics pertaining to the various fields of study are managed. A difference must indeed be made between the institutions that request and analyze data and those that produce such data.
The former are not really statistical institutions, but they are directly related to the fields of study for which they are responsible. Such user institutions are numerous and isolated and include ministries, public or private offices, research institutes, professional organizations, NGOs, international organizations, etc.
However, some of these institutions that use statistics should also be producers. That is usually the case in Africa where ministries of agriculture, that use agricultural statistics, also have a department of statistics in charge of conducting surveys on the agricultural sector. Yet, such institutions produce only part of the statistics they use and, on the other hand, they produce statistics that can be used by other institutions.
How then can the production and dissemination of public statistics be optimized?
Through the establishment of a "National System of Statistics" (NSS), which we define here as the set of services that produce statistics and help to attain one common goal: the provision of socio-economic statistical information to those who need it, including government, economic stakeholders, the civil society, academics and researchers, international organizations, etc.
NSS is not a mere combination of elements strictly centred around the word 'statistics'. It is an entity that must have objectives as well as the means needed to achieve them.

III- Statistical consultation and coordination

There is no statistical system worthy of the name which operates without consultation and coordination. However, for the words consultation and coordination to be

meaningful, they must have clear objectives and be practised within specific bodies, while relying on specific instruments.

III-1. Objectives

The objectives of consultation and coordination can be summarized in two points:

- To make all of a country's public statistics production available for all users; which implies that all statistical operations, no matter which ministerial department conducts them, should be designed and carried out using harmonized conceptual and technical bases.
- To avoid duplication of, and competition among actions, and pool scarce resources:
  - technical (survey, manual or computer-assisted processing, analysis, setting up a data base, dissemination); or
  - material (computers and other equipment, vehicles, etc.).

That indeed is what PROSMIC[1], developed by AFRISTAT and its member States, stipulates: "Coordination both among statistics services and with statistics users avoids duplications, facilitates harmonization of concepts and methods, promotes experience sharing between partners and the services in charge of surveys … and is helps in budgetary savings".

III-2. Instruments

To guarantee comparability and complementarity between statistical sources, all services using or producing statistics must use common instruments, including:

- concepts and definitions (for example 'farm household, farm, assets);
- nomenclature (of agricultural products, of activities);
- indexes (of enterprises and establishments, of modern farms);
- methodologies (techniques for data collection and processing).

Some statistical studies, that need the contribution of a part or whole of NSS and can only be conducted on the basis of such common instruments, play a unifying role and can therefore be considered as coordination instruments. Such studies include mainly the national accounting and, in the area of agriculture, food balance-sheets. Concerning certain products or groups of products, these cannot be made if the nomenclature of products are not the same, be it for production, consumption, or external trade whose statistics are produced by different services.

III-3. Centralization or decentralization?

Centralization: the central statistical body is responsible for all or most of the fields in statistical production.
Decentralization: each field in statistical production is under a specific ministry or body in charge of the said field.
Advantages of centralization

- Economies of scale
- Homogeneity of the corps of statisticians

[1] Programme Statistique Minimum Commun (AFRISTAT)

- Easy steering of the Global system
- Automatic harmonization of concepts, methods, nomenclatures, etc.

Advantages of decentralization

- Easy access to data production units
- More collaboration between national institutes and sector decision makers in the sub-system concerned
- Better utilization of the statistics produced within the sub-system concerned
- Reduction of collection costs

Decentralization constraints

- Steering of the system made more difficult
- Programme of action not harmonized
- Concepts, methods and nomenclature inconsistent

A decentralized system cannot achieve optimum functioning without solid coordination, i.e. "Governance" of the system.

IV- A few examples

Various organizations in the world carry out statistical production

1- Centralized systems: Canada, Sweden, Holland, Germany, etc.

Canada, for instance, has a completely centralized system. This means that only one statistical institution has the responsibility of conducting all statistical studies for organizations in charge of various economic or social sectors (e.g. Agriculture).

2- Decentralized systems with solid coordination: France, U.K., etc.

France has a widely decentralized system in which the ministry of agriculture has a department of statistics (SCEES) in charge of producing agricultural statistics. However, this decentralization requires considerable coordination effort. The better part of the coherence of the system stems from the homogeneity of INSEE professionals. They have the same training, use the same methods, the same references, and abide by the same code of ethics.

3- Decentralized systems with little coordination: USA, French-speaking Africa, etc.

In Africa, the decentralized form of organization is dominant, though with some variations. There is usually on the one hand, a National Institute of Statistics (NIS), which deals with demographic and economic statistics as well as most household statistics, and on the other hand, statistical services specialized in various sectors, including agriculture.

Indeed, agriculture employs over 50% of the working population in Africa. In general, farmers use rudimentary farming methods and live in rural areas. Yet, most NISs in Africa are based in the provincial capital and, most often, they do not reach the crucial size that might make them efficient and enable them to cover all the administrative units

due to lack of personnel and financial means. In contrast, ministries in charge of agriculture have their services even in the smallest constituencies of the country.
These ministries are also responsible for conducting major operations (agricultural censuses), but the NISs must provide them with significant assistance both upstream (designing and appropriation of new methods or techniques, or new tools) and downstream (analysis and dissemination).

V- Cameroon's Case

The Cameroon National Statistical Information System (NSIS) comprises all organizations which play a role in the production, dissemination and use of statistical information. NSIS coordination is carried out by the National Institute of Statistics (NIS). NIS implements the major guidelines defined by the policy organ, which is the National Statistics Council (NSC).
Like that of most African countries, Cameroon's system is decentralized for example, the production of agricultural statistics is done by the Ministry of Agriculture and Rural Development. Many reasons account for this:

- Agriculture is the main activity in Cameroon employing about 75% of the working population. Farm households are therefore seen everywhere across the national territory.
- The ministry in charge of agriculture has its services in all administrative constituencies of the country with the necessary human resources for agricultural data collection.
- In Cameroon, farm households are illiterate and are not used to dealing with statistics, hence incapable of providing reliable data.
- Besides, NIS does not have adequate human and financial resources to cover all the administrative units in the country.

In Cameroon, there is little coordination due to the fact that NIS is still a burgeoning institution and all the measures (regulatory instruments, management organs, etc.) needed for a solid coordination are not all effective yet.

VI- Conclusion

Between total centralization and total decentralization, there are intermediary solutions which, while applying the principle of decentralization, help to mitigate the shortcomings of a totally decentralized system. Such solutions include:

- As mentioned earlier, strong coordination must first of all be ensured within the national system of statistics among various institutions, especially between the department of agricultural surveys and NIS. This coordination falls naturally under the responsibility of NIS. As stated in PROSMIC, "technical coordination, i.e. bringing institutions closer so as to avoid duplications, will not be enough either, if, upstream, pre-eminence of national institutes of statistics is not recognized in terms of conceptual and methodological coordination".
- Secondly, it can be envisaged that major special operations, involving onerous tasks of data collection and analysis, and heavy investments be backed in their majority by NIS which generally has more skilled staff than the departments of

agricultural surveys, and that current and more specific operations be put under the responsibility of these departments.

To ensure a better management of public statistics, especially the production and dissemination of agricultural statistics, it would be necessary to map out the statistical system. This would mean:

- identifying all elements of the system
- understanding their specific organization
- defining their mutual interaction
- understanding the possible link of each element to the other systems or sub-systems (example: the Department of agricultural surveys in Cameroon's Ministry of Agriculture and Rural Development is under both the National Statistics System and the National Agricultural System).

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