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Indicators for assessing statistical capacity in Africa

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I. Introduction

Over the years, the United Nations system, Bretton Woods's institutions, the African Development Bank and other multilateral and bilateral organizations have supported capacity development of national statistical offices (NSOs) and other constituents of national statistical systems (NSSs) in Africa. Financial and technical support has covered an array of activities, including; statistical organization, strategic planning and management; infrastructure; training; data collection, processing, analysis and dissemination; and developments and improvement of specific statistical areas, such as national accounts, consumer price indices, agricultural and industrial statistics, etc.

While these interventions have generally been welcome and helped address specific needs, there are still lingering questions to be answered, including:

- (i) What statistical capacity, if any, has been realised in African countries?
- (ii) If there are any improvements in capacity, are these sustainable over time?
- (iii) How can we assess/ monitor statistical capacity in Africa?

In an attempt to answer some of the above questions, the Committee for the Coordination of Statistical Activities (CCSA) saw the need for identifying relevant indicators for assessing and monitoring statistical capacity in Africa. The CCSA, therefore, formed a Task Team on "Assessment of the effectiveness of capacity building in Africa", with the following terms of reference:

1. Identify a set of empirical indicators to assess the status of statistical capacity in African countries;
2. Test the indicators on a sample of African countries;
3. Formulate recommendations to CCSA on how to use the proposed indicators to measure the improvement of statistical capacity in Africa.

II. Process adopted in selecting indicators for assessing statistical capacity

There are already a number of frameworks for assessing statistical capacity that attempt to address some of the above concerns, including the ones developed by PARIS21¹, the World Bank², the International Monetary Fund³ and the Economic Commission for Africa⁴. These general frameworks provide general tools for assessing statistical capacity. They do not, however, include specific indicators on all areas to be used to regularly assess and monitor the effectiveness of statistical capacity building activities in Africa.

In order to identify the areas to be monitored and the key elements under each area, consultations were held with heads of some NSOs and regional and sub-regional statistical offices in Africa (such as ECA, Afristat and the Southern African Development Community (SADC)). The 15 main areas identified to monitor statistical capacity are described below.

III. Areas of statistical capacity

1. Functioning of the national statistical system (NSS)

The NSS comprises all institutions in a country that produce official statistics, including: the national statistical offices; line ministries and departments; and the Central Bank. Assessment may include the measurement of degree of dialogue between various groups of users and producers of statistics.

Elements to assess the functioning of an NSS

- Leadership and coordination
- User/producer consultations
- Producer/producer consultations
- Governance arrangement (degree of autonomy, governing board/council etc.).

2. Functioning of statistical legal framework

Statistical legal frameworks, in Africa, vary in their degree of comprehensiveness and in age. Whereas, *ceteres paribus*, the more recent the legal framework is the better, there is also a need to assess its comprehensiveness.

Elements to assess the functioning of a statistical legal framework

- Existence of statistical law/act
- Year when drafted
- Updates and revisions (provisions in line with the UN Fundamental Principles of Official Statistics)

¹ Framework for determining Statistical Capacity Building Indicators.

² Statistical Capacity Country Profile, including a component o Statistical Practices.

³ Data Quality Assessment Framework of the General Data Dissemination System (GDDS).

⁴ ECA has been working on an index to rank African countries on the basis of the implementation of the Reference Regional Strategic Framework for statistical capacity building in Africa (RRSF).

3. Design and implementation of national strategies for the development of statistics(NSDS) and master plans

The Development of NSDS and master plans is fairly recent in Africa and only a few countries could be said to be implementing their second or third strategic statistical development plans. Comprehensive strategic plans provide an opportunity for statistical capacity building.

Elements to assess status of NSDPs

- Existence of NSDS and/or Master Plans
- Plan period
- Extent of implementation

4. Statistical areas covered by NSS/NSO

Critical mass of statistics produced in a country should, to the extent possible, include: economic, demographic, social and environment statistical areas. There may be need to assess specific areas covered and frequency of data production.

Elements for assessing capacity

- Areas covered
- Quality measures of statistical products

5. Status of statistical infrastructure

In order to produce adequate and good quality statistics there is need for countries to have viable statistical infrastructure.

Elements for assessing the adequacy of infrastructure

- Availability of good , comprehensive area frames and business registers
- Adequacy of physical infrastructure/office equipment
- Connectivity (internet and intranet connections).

6. Availability and use of information and communication technology (ICT).

Given that ICT is an integral part of statistical development, it is essential to record numbers and capacity of computers in the NSS. Use of ICT for data collection, processing, storage and dissemination may also be assessed.

Elements to assess the availability and use of ICT

- Existence and use of internet, local area network, number of computers, etc.

7. Data collection activities

Statistical data at national level are collected through different sources. It is therefore, important to know which sources are used in order to assess how comprehensive the data collection systems are. It is important to note that most of these sources are complementary.

Element to assess the comprehensiveness of data collection activities

- Have population censuses been conducted? What is the periodicity?
- Does an integrated household survey programme exist?
- Is there a comprehensive civil/vital registration system?
- Is there an establishment census/survey system? What is the periodicity?

8. Statistical publications and timelines of outputs

The number of publications the NSS/NSO produces, to some extent, gives an indication of the responsiveness, to various user demands by having an array of statistical publications covering different subjects.

Elements to assess adequate availability of publications and responsiveness to the demand of stakeholders.

- List of publications by: topic, periodicity and data release dates
- Availability of release calendar and extent of following calendar (as stressed by the GDDS framework)

9. Financial and human resources

Adequate resources are crucial to the success of a statistical programme. In general, an increased budget is a sign that availability of resources may not be the major constraint to statistical operations. It is also important to assess in what percentage the government is supporting statistical activity and physical infrastructure, versus the amount of funds provided by donors.

(a) Financial resources

Elements to assess adequacy of financial resources by government

- Annual budget
- Proportion of budget released
- Timeliness of fund release

Elements to assess donor contribution

- Amounts to supplement the overall statistics budget
- Amounts to support NSDP
- Amounts to support special programmes in line with donors' interest

(b) Human Resources

An increasing number of professional staff is a positive indicator of growing statistical capacity and a good response to an increasing demand for and use of statistics.

Elements to assess adequacy of human resources

- Number of professional staff
- Ratio of professional to overall staff establishment
- Rate of annual turnover of professional staff

10. Presence of field organization

Some national statistical offices have permanent field offices with staff that specialise in data collection through surveys and censuses. The presence of the field organization on a continuous basis, more often than not, ensures retention of technical expertise. At headquarters a methodology and research unit is maintained to oversee activities of the field organization.

Elements for assessing existence of a field organization

- Existence of a field organization
- Regional coverage
- Presence of Methodology and Research Division

11. Level of Statistical Advocacy

The role of advocacy in raising awareness about the use and usefulness of statistics cannot be overemphasized. Advocacy can, among other things, stimulate investment in statistical production, and encourage their correct use by policy makers and other users.

Elements to assess effectiveness of advocacy

- Extent of advocacy at country level
- Extent of advocacy at sectoral level

12. Statistical Integrity

The implementation of international standards can, to some extent, be measured (indirectly) by a country's participation in say GDDS/SDDS and adoption of the SNA93, Principles and Recommendations for population and Housing Censuses and other international statistical guidelines and standards.

Elements to assess integrity of the NSS

- Implementation of international standards
- Impartiality in data release (simultaneous release to all users; a release calendar)
- Meta data availability for all produced series (specifying sources, methods, procedures, quality etc.)
- Migration to SNA93

- Participation in GDDS/SDDS

13. Effectiveness of dissemination of statistics

The value of statistics can greatly be enhanced if they are widely disseminated.

Elements to assess the effectiveness of the dissemination programme

- Dissemination policy
- Dissemination formats and media
- If possible, degree of user-satisfaction

14. Availability and use of statistics training institutions

Well qualified staff, in adequate numbers, is an asset to any NSS. It is therefore imperative to regularly assess the trained staff situation in order to measure statistical capacity.

Elements for assessing adequacy of trained manpower in statistics

- number of statistical institutions and turn out of graduates in statistics
- Level of institution

15. Technical assistance

Technical assistance is a mixed bag. The more experts you have the better the immediate statistical capacity. In the long run, however, it may display a systemic weak national statistical capacity situation translating into a dependency syndrome.

Elements to help assess the impact of technical assistance on statistical capacity

- Number of foreign experts and statistical areas.
- Duration of presence in the NSS
- Number of officers sent to other countries as experts by the NSS (South to South technical assistance).

Some suggestion was made to explore the impact of statistical work on policy. This area was not addressed here because it is a complex.

IV. The way forward

At the outset it should be pointed out that this the first stage of the exercise, is identifying the areas/indicators that can be used to assess statistical capacity in Africa. This will be necessary in order to tap the varied levels of statistical capacities in the region.

In order to achieve the desired goal of assessing statistical capacity we propose the following steps:

- Developing a questionnaire that will include the items described above, clearly identifying the relevant diagnostic elements. The questionnaire will have items for which quantitative and qualitative responses will be solicited as a case may be.

For instance, Examples of the former are the amount of money included in the national budget and donors' contribution and number of computers. On the other hand scales will be developed to capture nominal levels of qualitative responses. Also, we propose the use of a combination of process and output/production indicators.

- Testing the questionnaire in a few selected countries, to assess whether the items included in the questionnaire capture the constructs we intend to measure. It should be pointed out that most of the suggested areas/indicators have already been empirically tested in some African countries by different organizations. Reference will be made to the results already obtained from such tests.
- Developing an analytical framework, depicting suggested methods deriving indicators and methods of aggregation to be used if necessary. In this regard it may be necessary to consider weighting of the indicators. Some indicators may be considered to more critical than others. Indeed some will just be simple unweighted indicators.

The tested and finalised questionnaire would be sent to all African countries to collect the relevant information. The data would then be analysed and the report written and submitted to the CCSA. The summary results of indicators may be presented under broad headings such as: Organization and management; infrastructure; resources; data development; information products and indicator availability; and data dissemination and use. Such a classification would clearly identify how countries are fairing under these broad domains and may facilitate easier comprehension of the results.

The CCSA is asked to review the proposed areas for which indicators will be produced and the proposed future steps.

Annex

List of proposed areas for assessing statistical capacity in African countries:

1. Functioning of the national statistical system
2. Functioning of legal framework
3. Design and Implementation of strategic statistical development plan
4. Statistical areas covered by NSS/NSO
5. Status of statistical infrastructures
6. Availability and Use of information and communication technology (ICT)
7. Data collection
8. Statistical publications and timelines of outputs
9. Financial and human resources
10. Presence of field organization
11. Level of Statistical Advocacy
12. Statistical Integrity
13. Effectiveness of dissemination of statistics
14. Availability and use of statistics training institutions
15. Technical assistance

Other references

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