

Rethinking Statistics for National Development in Africa

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Summary

The result-based management framework requires African statisticians to start their work with prior understanding and meticulous observation of African economic and social realities. They are expected, through a multidisciplinary approach, to identify the permanent features of these realities, their measurable characteristics and dynamics, to which, they will, thereafter, apply relevant internationally established rules. This entails promoting statistics as a language, a communication tool aimed at facilitating the emergence of an African statistical culture. The purpose of this article is to call for statistical research on this issue, especially on aspects such as the producer-user dialogue as well as conceptual and methodological frameworks necessary for measuring outcomes of development projects and programs.

Key words

Statistics, culture, language, development, outcome, result-based management.

Résumé

La gestion du développement axée sur les résultats nécessite dorénavant que le travail du statisticien africain commence par la compréhension a priori et une observation méticuleuse des réalités économiques et sociales africaines. Il s'agit, dans une approche multidisciplinaire, de dégager les régularités de ces réalités, leurs constantes et leurs dynamiques mesurables, avant de leur appliquer les mathématiques et autres règles établies au plan international. Il convient pour cela de promouvoir la statistique en tant que langage, outil de communication facilitant l'émergence d'une culture statistique africaine. Le présent article est une invitation à la recherche statistique dans ce sens. Il propose dix pistes de réflexion allant de l'équation producteur-utilisateur à l'élaboration de cadres conceptuels et méthodologiques de mesure des impacts des projets et programmes de développement.

Mots-clés

statistique, culture, langage, développement, impact, gestion axée sur les résultats

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1. Introduction

The strengths and weaknesses of African statistics have been the subject of recent studies: in 2000-2001, in the context of the evaluation of the Addis-Ababa Plan of Action, then in 2005, in preparing the Reference Regional Strategic Framework for Statistical Capacity Building in Africa.

Generally speaking, African national statistical systems do not give the required priority to research and methodological development. They tend to resort to methodology shortcuts and proxies, for lack of a true, a priori understanding of the phenomena they are expected to observe, some of which stem from new development challenges. The difficulty in adapting to these challenges is apparent in almost all the countries of the region: issues relating for example to poverty, gender inequality and HIV/AIDS require to be addressed in terms of the underlying social and economic circumstances prevailing in the countries.

There have nevertheless been many examples of progress in different aspects of statistical systems development where internationally established conceptual and methodological frameworks exist and have been integrated into statistical training curricula at all levels.

These reference frameworks set the standard in countries where planners and decision-makers have, with varying degrees of success, incorporated statistical data in analysis and macroeconomic management and results-based decision making.

After several decades of development of statistical systems in Africa, the overall results remain mediocre. In terms of measuring development outcomes, one has good grounds for stating that the contribution of these systems remains so far insignificant. African statistics are not yet, in fact are far from becoming, a broadly applied and well-proven instrument of measure of development results: they do not yet systematically contribute to improving the populations' living conditions, individually or collectively.

This brief document proposes to pursue certain lines of thought on the rationalization, systematization and ensured sustainability of this contribution, by: (i) revisiting the advocacy directed at political decision makers; (ii) moving beyond the producer-user equation; (iii) proposing systemic interpretation of social and economic realities; (iv) setting up a statistical observatory mechanism; (v) promoting a statistical culture; (vi) formulating conceptual and methodological frameworks for gender analysis; (vii) formulating equivalent frameworks for measuring development outcomes of projects and programmes; (viii) efficiently organizing Africa's contribution to the formulation and revision of international statistical norms and standards; (ix) incorporating greater ambition into the training of African statisticians; and (x) establishing an African society to promote development knowledge.

2. Proposed Areas of Thought

2.1 Advocacy Directed at Decision-makers

Most statisticians readily proclaim that efficient management of public affairs requires the sensitization of political leaders and decision-makers on the strategic importance of statistical data and information to the process of formulating and managing development policies.

This truism basically solves no problems, but rather reveals an even deeper malaise than perceived:

- African statisticians appear to be unaware that political leaders are members and emanations of their society, therefore they embody the culture of their society as regards information, analysis and decision-making,
- The ad hoc efforts at sensitization of political leaders are all the more ineffective because of the fickleness of political contexts and groups: this means constantly starting all over again, with varying degrees of success.
- All political authorities have their own information systems, intended to perpetuate their power. It is to the statistician's advantage to know these systems so as to contribute to the streamlining of the collective, objective and measurable aspects of these systems. This requires getting more familiar with such systems, listening to their concerns, meeting their primary needs and proving to them the comparative advantages of an information system that would take advantage of statistical analysis frameworks.
- Politics, with its election-oriented emphasis, is a hierarchical process, linking the individual and his/her immediate community. In its policing facets, it remains focused on the people and their immediate communities. However, it appears that African statisticians have not yet explored this terrain. How then can they contribute to the primary information systems of the political authorities?
- Poverty paradigms are at the heart of development policy. Statisticians contribute to them by providing data relating to the Millennium Development Goals (MDGs) and Poverty Reduction Strategy Papers (PRSPs), whereas they have not yet given thought to the people and human groups as actors and objects of poverty. What is the social and political or even economic relevance of the statistics they prepare?

2.2 Beyond the User-Producer Equation

To date, the overall efficacy of statistical production, is measured in terms of the dialogue between users and producers. Maximum effectiveness would therefore be attained at the point where total statistics production (P) is equal in quantity, quality and time to the needs (U) expressed by users (the public authorities foremost).

The approach implied clearly has limitations. Indeed, on the one hand, the public authorities' poor or lack of interest and knowledge of statistics is generally deplorable; and, on the other hand, statisticians intend to base the bulk of statistical production on their needs. Such needs as expressed by public authorities might be incomplete. If the needs are expressed on their behalf by other entities, the public authorities might not necessarily identify with them. This statement applies for the other categories of statistical users.

Instead of a $P = U$ equation, we might have a double inequation where U is less than the total needs (N) which should be, ideally, expressed by the entire economy and society as well as the international community, and P covers a portion of U and another portion of $(N-U)$ but not the entire N .

On the one hand, the $N-P$ gap remains to be identified and filled; on the other hand, the $N-U$ gap shows the extent of statistical advocacy to be carried out.

While striving to adjust the supply (P) to the statistical demand (U), we propose that necessary mechanisms be put in place for a statistical reading of social realities, bearing in mind that life, as a complex fabric of qualitative aspects, justifies and underlies quantitative analysis.

2.3 Systemic Reading of Social and Economic Realities

2.3.1 Proposal for a 12-stage systemic approach

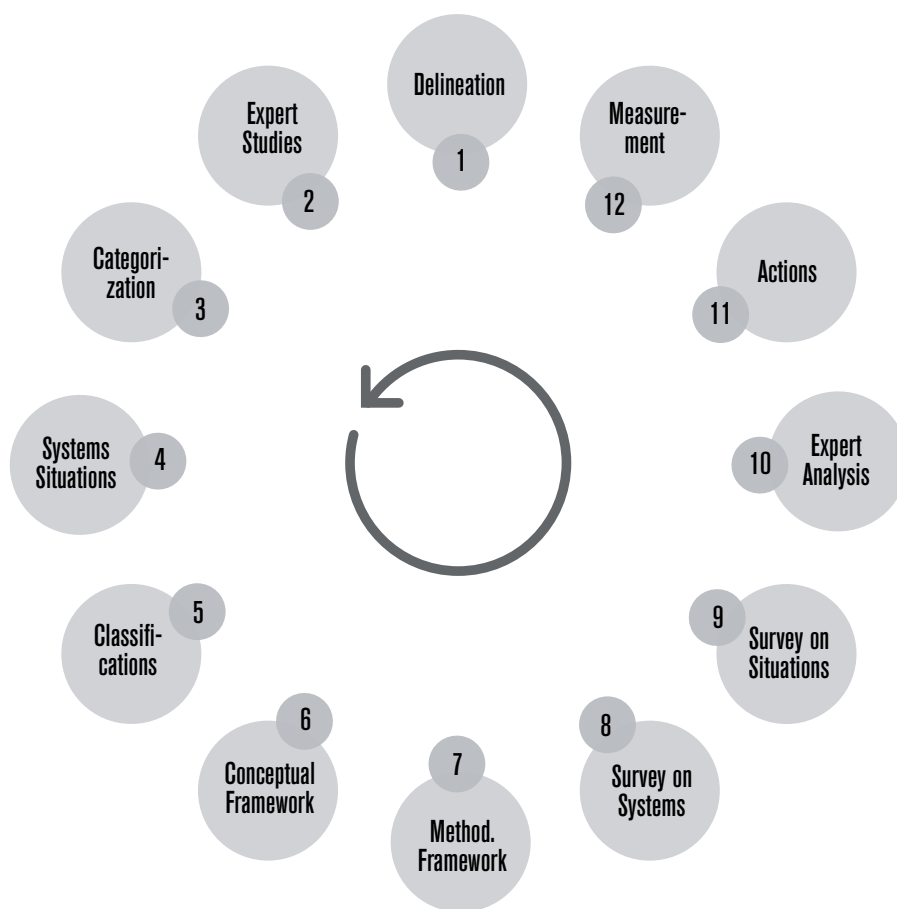
Social and economic realities that statistics are intended to measure concern human beings and their self-organized systems. They can be studied as cybernetic systems; that is series of interacting elements that engage in exchanges, thus producing information as the fundamental link characterizing all living systems.

The challenge posed would consist in translating this natural information into statistics, using a systemic approach whereby African statistics would be a genuine digital representation of socio-economic reality. Diagram 1 presents a proposed 12-stage cycle that covers the following:

1. Phenomenological and time/space delineation;
2. Experts' studies (sociologists, geographers, physicians, nutritionists, economists, statisticians, etc.);
3. Categorization (partitions and fuzzy categorization): segmentation, typology, taxonomy ;
4. Identification of systems and situations ;

5. Development of classifications;
 - o Individuals and social groups;
 - o Objectives, principles, beliefs, etc ;
 - o Social links, relationships;
 - o Spatial partition;
 - o Time segmentation;

Diagram 1: A 12-stage systemic cycle



- o Functions, social roles
- o Operations;
- o Means of action (fungible, semi-durable, durable, etc.);
- o Relation to environment;
- o Notion of results, principles of satisfaction.

6. Devising of a conceptual framework;
7. Development of a methodological framework;
8. Statistical surveys on systems;
9. Statistical surveys on situations, actions, flows and results;
10. Experts' analysis and recommendations (sociologists, geographers, physicians, nutritionists, economists, statisticians, etc.);
11. Inventory of actions implemented as a follow up to analyses and recommendations;
12. Assessment of impact of these actions on the space and systems considered.

There are numerous and varied areas of application of the systemic approach including:

- Understanding and analysis of poverty
- Gender inequality
- Economic behaviour
- Measurement of projects and programme outcomes
- Local economies
- Informal sector

Concerning the informal sector, both traditional and modern systems prevailing in areas where the informal sector exist, should be studied as cross-fertilizing systems. Here, tradition will be considered as the identity of a particular community that contributes, one way or the other, to the impact of projects, programmes and other development activities.

2.3.2 Statistics of systems and measures

With the systemic approach, a distinction will be drawn between systemic surveys (aimed at describing social, political, economic, survival, religious structures and other systems of living conditions) and surveys on situations, actions, relationships and flows (aimed at assessing the active relations between elements, human or otherwise, as well as between these elements and the ambient systems).

The periodicity of systemic surveys (3, 5, 7 years, etc.) will depend on the assumptions about the pace at which significant transformations occur in these systems, as the results of actions performed by the elements making them up.

Surveys on situations and actions will be scheduled within the framework of a statistical monitoring system.

2.4 Statistical Monitoring System

2.4.1 National statistical strategies as scoreboards

Management of all statistical activities should be exclusively within the framework of the NSDS (National Strategies for Statistical Development). These should be reviewed annually by the stakeholders of the National Statistical Systems (NSS) themselves. An annual questionnaire should be self-administered by the NSS, with a view to deciding any adjustment required to the remaining NSDS activities. The aspects to be addressed in the self-evaluation questionnaire will include: political changes, social shocks, delays in the implementation of NSDS activities, new constraints, new opportunities, emerging challenges, etc. This questionnaire would serve as a score card for statistical monitoring.

Statistical monitoring implies that the NSS organizes itself as a permanent framework to record political, economic and social decisions and developments, in a spirit of statistical journalism.

The aim would be to make the NSDS a permanent rolling system for the management of statistical development.

2.4.2 Short and medium-term outlook

Statistical journalism will involve recording economic and social developments with statistical facets (new political orientations, signing of international agreements and conventions, etc.) and will inform short and medium-term projections of likely impacts of these events on the populations' living conditions (through the systems, situations, categories, classifications, etc.), and on the environment and the economy of the country. Such projection will also include provision for taking these impacts into account in updating NSDS.

2.5 Statistical Culture

Language is the first natural medium of any group culture. The development of a culture of observation, measurement and analysis and numerical projection requires that the members of the group – as a self-organized living system - speak the same language and exchange information using that language. This can for example be along the following lines:

- Inclusion of statistics at all levels of the education system (nursery, primary, secondary, university, vocational) in every form possible:
 - o Formal courses/lectures;
 - o Practicals;
 - o Formulation of teaching manuals for geography, history, mathematics, civics, economics, sociology, psychology, chemistry, physics, biology, biochemistry, etc, containing numeric examples presented in the form of statistical tables and graphs. National statistical production units would be encouraged to negotiate with the appropriate agencies of the national education systems on the modalities for developing a vast programme aimed at incorporating statistics in the language, the classes, exercises, the work and research of schools.
- Agreements with all newspapers for the insertion, at certain intervals (weekly, monthly, quarterly, etc.) of articles written jointly by journalists, experts in various socio-economic fields and statisticians on the measurement of social and economic facts and highlighting the related actual or possible impact on the centers of interest of the target populations. All population layers will be targeted through specific articles. A network (informal) for drafting, selecting and validating such articles will be put in place on the initiative of the National Statistics Office, and around a duly constituted multidisciplinary team.
- Organization of televised and radio game shows, using material taken from articles on the measurement of social and economic aspects reported in the leading publications or in statistical publications available to the public at large.
- Development of other media for informing the public concerning their living conditions.

2.5.1 Rationalize and ensure continuity of information gathering

Familiarity with the social networks for information distribution and exchange and the economic set-up (productive, relating to solidarity, consumption, etc.), as well as political, education, health-related, religious and hierarchical will facilitate and reduce the cost of information gathering and dissemination. In this respect the role of non-profit institutions such as NGOs, community organizations, etc., will be critical, given their knowledge of people's conditions.

2.5.2 Effective monitoring of non-profit institutions

The non-profit institutions serving households (NPISH) are defined in the 1993 U.N. System of National Accounts (SNA-93) as institutions that provide households with goods and services, free of charge or at economically insignificant costs. This notion of institutions that many African national accountants interpret in the limited sense leads to considerable underestimation of this sector's contribution to the Gross Domestic Product. Community life in

African cities and villages is primarily organized around associations and groups that are not officially identified and which should be registered as part of a broad social research effort.

2.6 Developing Conceptual and Methodological Frameworks for Gender Analysis

Gender analysis through official statistics generally involves disaggregating economic and social indicators, including those whose definition and calculation modalities hardly allow for gender breakdown. It is essential to put in place an integrated approach, ranging from the understanding of gender dynamics to the gathering of corresponding data as well as the desired economic and social aggregations in the form of indicators. This will make it possible to minimize or even eliminate the biases (conceptual, methodological, statistical, and analytical) that are so often denounced in the current analysis of gender–disaggregated statistics.

Such an approach would hinge on 4 main modalities:

- Contextual
 - o Delimitation of space and time
 - o Description of infrastructure
 - o Description of environment
 - o Identification of climate characteristics
 - o Inventory of natural resources
- Institutional and political
 - o Analysis of political systems
 - o Identification of decision-making bodies
 - o Highlighting types of participation/room for individual and collective decision
- Socio-cultural
 - o Understanding of social perception of the world/ cosmogony
 - o Analysis of beliefs, standards and values
- o Identification of the sociological bases of status
 - o Study of social relations
- Economic
 - o Survey on the terms and conditions for taking account of collective and individual needs
 - o Inventory of the means of meeting economic needs
 - o Survey on the means of production and technological resources.
 - o Analysis of the rules of distribution and exchanges (solidarity, reciprocity)
 - o Survey on the modes of consumption

2.7 Formulation of Conceptual and Methodological Frameworks for Projects and Programmes

Economic and social development policies are generally implemented through sectoral or spatially limited projects and programmes whose development impact has to be statistically measured and recorded. The African Development Bank has undertaken to measure this impact as far as its development interventions in the region are concerned.

The statistical approach that is being contemplated consists in designing conceptual and methodological frameworks for each project or programme, considering the time/space of a project or programme as an economy and a local social space for which a systemic study will be conducted in accordance with the process presented above.

It is recommended that this approach be made systematic and applied to all projects and programmes, whatever their source of finance. In many cases, the approach will be implemented based on existing satellite accounts or will require the development of such systems.

2.8 Organizing Africa's Contribution to the Formulation and Revision of International Norms and Standards

For a number of reasons, African countries do not yet contribute to defining or reviewing the systems prescribed by international institutions, even if they do participate in certain technical meetings.

It is proposed to organize permanent thematic working groups, under the responsibility of regional and sub-regional groups whose work programmes entail or may entail the organization of sub-regional and regional seminars and participation in international meetings. The technical discussions of these working groups will be conducted by Internet and alongside sub-regional and regional seminars/meetings.

2.9 Strengthening the Training of African Statisticians

To remedy the lack of statisticians, it is proposed to considerably increase the number of statisticians trained each year. There is need to train as many statisticians as possible, with a view to penetrate all job sectors and thus consolidating the development of a statistical culture.

In addition, we suggest to establish an annual conference of statistical training centers and universities aimed at reviewing training curricula and progress made in making training of statisticians more relevant to the demands imposed on the National Statistical Systems.

These should be reviewed in line with the development challenges, in relation to which each course should be conducted within an integrated reference framework. For example, all economic statistics courses should be designed and delivered with a view to facilitating the compilation and analysis of national accounts. Economic as well as social statistics courses should be geared towards the preparation of result-based analysis frameworks.

These courses should be structured around the observation and understanding of the facts and systems relating to living conditions and their translation into information systems.

2.10 African Society for Promotion of Development Knowledge

The multi-dimensionality, complexity and immensity of development measurement tasks justify the establishment of an African statistical society as a pan-African forum for all specialists (economists, sociologists, statisticians, physicians, etc.) involved in activities relating to the measurement of economic and social development of African groups, peoples and nations.

The principal mission of this African society would be to: (i) inventory and gather all studies, research and surveys shedding light on group development processes, notably social and economic, and to identify measurable constants (or measurable permanent features); (ii) promote research in that area; (iii) develop statistical methods of assessing the outcomes and impact of projects and programs on the populations' well being; (iv) contribute to international debates on comparable issues and on the development of international standards and recommendations.

3. Conclusion

The proposals made herein seek to return the human role to the center of statistical development issues. They hinge on three main aspects: statistical advocacy, promotion of a statistical culture aimed at populations at all levels and capitalization of all African intelligence on the issue of development measurement.