

**THE DEVELOPMENT OF STATISTICAL SYSTEMS
AND STATISTICAL CHALLENGES BROUGHT
ABOUT BY PRSPs**

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BACKGROUND

Historically, statistical activities in SADC member states had a modest beginning during the colonial period. Invariably documentation on how activities evolved and progressed over time has been poor. This paper presents Tanzania Mainland as a case study on how the development of statistical system evolved. This part of the paper will address evolution on legal framework, data collection, institutional arrangements, infrastructure, regional and international cooperation, staffing, training, finance, user community and data collection, impact of IT and transformation to semi-anomaly.

During the decade of the 1990's poverty issues came to the center stage in nation states, sub-regional and regional groupings and globally. The Highly Indebted Poor Country Initiative (HIPC) was followed by request for respective countries to prepare Poverty Reduction Strategy Papers (PRSPs) which presented themselves as being very much "data hungry" undertakings. In the second half of this paper I will present the Tanzanian experience of the extent to which the National Statistics Office struggled to be proactive or even creative within the evolution and follow-up of the poverty reduction initiative and how stakeholders have found informed decision making crucial and agreed on financing collection of data sets to compute indicators to monitor poverty reduction strategies.

The paper will address itself to the period up to 1999, when semi-autonomous status was attained.

DEVELOPMENT OF THE STATISTICAL SYSTEM IN TANZANIA MAINLAND

Introduction

In 1946, a statistics section was formed in Nairobi, Kenya, under the East African Governor's Conference (Tanganyika, Kenya and Uganda) and was responsible for;

- Maintaining Statistical series prepared in earlier years,
- Analyzing returns from censuses and surveys pursued in the three colonies, and
- Working out the planning of pertinent statistical networks.

Branches were opened up in Tanganyika and Uganda in 1949, with mainly responsibilities of data collection.

At Independence in 1961 and thereafter up to 1964 the Tanganyika Statistics Unit was transformed to a Statistics Division in the Ministry of Finance. From 1964 to date this Government Function has been under the Ministry responsible for Economic Development and Planning. The first Tanzania Chief of Division was appointed in 1969 and was the third in the series since independence. The current head is the fifth.

Legal Framework

Records show that a Statistics Act in East African Colonies existed as early as 1949. At the time of independence Tanganyika enacted the Statistics Ordinance 1961 which spelt out the main responsibilities of the new Statistics Department as:

- Taking population census,
- Collecting, compiling, analyzing and publishing statistics relating to economic, social and cultural activities of the people, and
- Organizing a scheme of economic and social statistics.

Among the shortcomings of this ordinance were:

- No provision for the coordination of statistical activities,
- Possibility for duplication in data collection and thus published statistics/indicators,
- No enforcement of the adoption of standard concepts, definitions and classifications as well as sound statistical methodologies,
- Too strict confidentiality clause for researchers to access raw data leading to independent data collection on the same (often of poor quality) and thus burden to respondents, and
- No provision for the organization, administration and financing of the National Statistics office.

All these have been address under the Executive Agencies Act of 1997 and the Statistics Act 2002.

Data Collection

Very little is documented in statistics production during the German rule which ended in 1918 as well as the British rule up to independence in 1961 except the following:

- African population of Tanganyika 1913 (based the number of adult male tax papers),
- African Population Censuses 1921, 1928 and 1931 (all mainly based on the methodology used in 1913),
- Modern (complete) population census 1948 done in different months in a year for Africans and Non-Africans,
- The Dar es Salaam Cost of Living Index for low paid Europeans first collected and published in 1951,
- Dar es Salaam Index of African wage Earners 1951,
- Dar es Salaam African Retail Price Index (from 1951),
- African Budget Surveys 1956, 1959/60,
- Agriculture Survey 1956,
- Agriculture Census 1958,
- Dar es Salaam Industrial Survey 1954, 1956,
- National Income of Tanganyika 1952 – 54,
- Domestic product of Tanganyika 1954/57 (containing sources and methods of estimating GDP),

- Public Finance in Tanganyika – An Analysis, 1959, and
- Other current statistics including transport, health, employment and earnings as well as trade.

These data collection and statistical activities were continued after independence in a regularized manner (on a current and intermittent basis) involving:

- Employment and Earnings survey,
- Survey of Industrial Production,
- National accounts Statistics,
- Foreign Trade Statistics,
- Survey is Retail Trade,
- Population census – 1967, 1978, 1988,2002,
- Agricultural sample census 1971/72, 1998/99,2003,
- Census of Industrial Production, 1979,1989,
- Household Budget Survey 1969, 1976/77, 1991/92,2000/01,
- Labour Force Survey 1990/91, 2000/01,
- Demographic and Health Survey 1991, 1996, 1999,
- Survey of Hotels and National Parks – since 1981,
- Survey of Large Scale forms – since 1986,
- Quarterly Survey of Industrial Production – since 1987, and
- Informal Sector Survey – 1991.

Some of these surveys were not conducted with he regularly intended.

In collaboration with Ministries, Departments and Agencies data were also collected administratively, e.g. foreign trade, migration, aviation, income tax births, death and other vital events, to mention a few. This was initiated in mid 1960s through a deliberate policy pronouncement of creating small but viable statistics unit in such ministries and institutions. There, however, has never been controlled of such staff by the Central Statistics Office.

Statistical products were in publications (books) and from 1991 permission was granted by Treasury to sell such publication without going through the Government Bookshop. The money collected was remitted to Treasury as part of Government revenue. With the introduction of Executive Agency status the money is retained as institutional income.

The statistical products are currently (from 1999) detail in the Business Plan and eventually a (prior) release calendar will be incorporated.

Institutional Arrangements

During the British rule the Tanganyika Statistics units, as it was for those of Kenya and Uganda were under the East African Statistics Department, answerable to the office of the Director and Statistical Advisor to the East African High Commission. After independence the statistics department has mainly been reporting to the Ministry Responsible for Economic Development and Planning.

Before 1953 the Tanganyika Statistics Unit had nothing like an organizational structure. From 1953 the unit was structured into two sub-units:

- Basis Statistics, and
- Development Statistics.

In 1968 the department was organized into nine subject matter areas with a ninth unit dealing with Administration as follows:

- General Economic Statistics,
- Agriculture Statistics,
- Tourism and migration statistics,
- Labour and Price statistics,
- Statistical Information,
- Household Surveys,
- Sampling,
- Population Census,
- Industrial Statistics, and
- Administration Unit.

There were continuous intermittent reformulations of the above structure during the period up to 1989.

Outreach (regional) offices were created based on the experience during the 1967 population census in which the need for temporary regional office was

observed and implemented. Permanent zonal offices were introduced in 1970. By 1979 there was a statistics office in each region.

A major development in terms of status came with the restructuring in Government and the introduction of the Planning Commission in the Office of the President in 1989. The position of the Government Statistician; A plan Co-ordination and Monitoring Directorate; and two Deputy Principal Secretaries (one for Macro Economic Affairs and the other Sectoral Planning) each reported to the Principal Secretary and Secretary to the Planning Commission. The Act establishing the Planning Commission stated that the Bureau of Statistics would be an independent department under the Planning Commission. This clause took ten years to see the light of the day. Circumstantial evidence shows that all the Principal Secretaries who came and went were never prepared to “let go”.

In 1994 steps were initiated by the Bureau of Statistics Management to seek the promised autonomy suggesting an organogram with a Chief Government Statistician, three assistants and several heads of sections at the level of Assistant Directors in the Civil Service. The structure was approved but positions never substantially filled.

However, this initiative was overtaken by events as at the same time the results of “an organization and efficiency Review of the Planning Commission suggested that steps be taken to make the Bureau of Statistics an independent entity, with dedicated capacity to meet Government’s needs for which a subvention would be paid. The Bureau was thus established as

an Executive Agency and launched in March 1999, with a Chief Executive and four Directorates, based on the following considerations:

- The need to have an appropriate span of control of functions and sub-functions,
- Avoiding the involvement of too many professional staff in supervision activities at the expense of technical duties,
- The need to reduce the number of managerial levels in order to improve communication and reduce overhead costs, and
- The need to group related functions together in order to avoid the overlapping functions.

Infrastructure

The Bureau of Statistics has never been one of the favoured departments in Governments when it comes to office accommodation. The amount of square metres available for office space has never been adequate. Located in old building, funds for refurbishment have also been difficult to come by.

Statistical products in the form of publications have not been seen as priority at the office of the Government Printers. In the late 1980's, through donor support, printing machines and related facilities for a print shop were procured. However, lack of competent staff to run the print shop, dishonesty and shortage of recurrent budget all contributed to a state that did not improve the situation.

During the early 1960's the Bureau of Statistics is recorded to have had only one vehicle. Provision was made for the few senior members of staff who owned vehicles to be paid mileage allowances whenever they used their vehicles in data collection. Vehicles to the Department came with the 1967 Population Census and then replenished during the 1978 census. In the 1960's as well as early 1970's when accommodation in the regions by way of guesthouses was not readily available, field staffs were provided with tents, beds and cooking utensils.

Regional and International Cooperation

The Department started having direct contact with regional and international institutions in the mid 1960's, mainly UNDP and SIDA. Short and long term experts worked for the censuses and major surveys as well as national accounts. Much as experts were able to complete their assignments, no lasting effect in terms of capacity building to the department was realized in those early years mainly due to the low level of counterparts minimum level of qualification. Beginning with the 1980's UNDP, UNFPA, SIDA, UNICEF, World Bank, European Union and JICA concentrated support, in addition to statistical production to general management, improving conditions in regional offices, dissemination and improvement of administrative data collection efforts including community (village) based data collection. Vehicles, computers, photocopiers, expendables as well as training (short and long term) and technical assistance were offered.

Staffing

In 1950 the Tanganyika statistics unit had four employees:

- One statistician – British,
- One (female) clerk – British,
- One (male) clerk-African, and
- One Office Boy – African.

The number increased gradually with added responsibilities.

By 1959 there were 27 staff members headed by a Deputy Government Statistician. By 1962 the number had increased to 35 including 5 statisticians (all British citizens). By 1964 statistician had increased to eight with the initial two African graduates included. In 1999 there were 42 graduate statisticians, all Tanzanians among a staff of about 250.

Training

No training is in records to the staff in the Department of Statistic during the period 1950 – 1960, other than a few days training prior to major census/survey undertakings.

In 1963 an in-house one-year training course was initiate to selected 5 statistical assistants. The trainer was a UN Expert. The training included statistical theory, applied statistics, and mathematics, among others. Four of these continued with a second year in-house course. A second batch of four was also engaged in the course in 1964. All training was during office hours and full-time. As a consequence in 1965 three participants got sponsorship

to join London Polytechnic for a certificate course of the Institute of Statisticians. In 1966 yet another joined the course in London (Dr P. Namfua) for a three-year training course.

At the same time (in 1965) the EASTC was opened in Dar es Salaam offering Middle Level Certificate and Intermediate Level Certificate Courses. During the academic year 1967/68 a Department of Statistics at the University of Dar es Salaam started enrolling its first batch for a degree in statistics.

From 1970 the statistics department has been training its staff in various training institutions, i.e.:

- EASTC,
- University of Dar es Salaam,
- ISAE – Makerere,
- US Bureau of Census,
- The Munich center,
- Cairo Demographic Center, and
- Institute of Statistics Calcutta.

Finance

Prior to independence the Tanganyika statistics unit had no control over its finances. All the expenditures were controlled from Nairobi by the East

African Statistical Department. This Department got its finances directly from the East African High Commission.

From 1961/62 to 1963/64 the budget of the statistics department was not shown separately. It was part of the budget of the Ministry of Finance. However from 1964/65 financial year, probably prompted by exigencies in planning for the 1967 population census, the department started having a known budget provided both as recurrent for regular expenditures including data collection (on a monthly to annual basis) and development (for intermittent big surveys and censuses). The finances were however controlled at the level of the ministry. For the statistics units in the ministries, this situation continued until MTEF processes were initiated later. It was not uncommon for funds earmarked for certain data collection to be directed (without any prior notification) for unrelated expenditures even at the ministry responsible for statistics. At any rate the amounts allocated were never adequate for comprehensive data collection, processing and dissemination.

During the period 1961/62 to 1981/82 both recurrent and development budgets were financed from internal sources. Any external support was with regard to technical assistance. From 1982 dependence on external source has continued.

At the time of the transformation of the statistics department to a Government Executive Agency (1996 – 1999) one of the contentious issues was Government funding of statistical activities. The strategy was to get the

Government to agree and commit itself to funding of a set of “core statistics”.

User community and data collection

In periodic censuses and surveys the users have invariably been involved during questionnaire design and tabulation plans, mainly through user committees. The needs of international user community were assumed taken into account though the use of respective international standards. Further, the main aim for data collection in earlier years have been to meet the demand of completion of national accounts. Thus, apart from the planning ministry it has been the Central Bank being an effective customer. Further, as publications were mostly giving statistics at national level, lower levels of administration got dis-interested and when pushed to the corner attempted own data collection initiatives. In addition, tables on official publications never met the needs of users as years passed since analytical demand on the same data usually change with time. The statistics department did not have the technology to rerun tables as and when demanded. In such circumstances some users considered the department not useful.

Further, analytical capacity to make data sets produce information useful for planning and management in sectoral ministries was heavily constrained. This situation tempted sector ministries to consider and whenever funding became available to work on parallel data collection initiatives mainly spearheaded by long term experts. The Bureau of Statistics, under current thinking, was partly to blame as “unwanted customer demands” were never to be entertained.

Impact of Information Technology

Prior to 1965, all data processing was done manually using hand calculators. In 1965 the department acquired ten Hollerith Key Punching Machines, four verifiers, two hand punch machines all principally for the 1967 population census. Punch card were read and processing done at the Government computer center in the Ministry of Finance using an ICL 1500 mainframe. This data capture system was replaced, for 1978 census, with an ICL 8950 Key Edit System with 16 work stations acquired and installed in 1979. Processing was again at the Government computer center then using an ICL 1901 mainframe initially, but later finalized at the Tanzania Harbours Authority's ICL 1905 mainframe.

All this time, data for current statistics was still being processed manually. Further the 1969 Household Budget Survey, the 1971/72 Agricultural Census and the 1976/77 Household Budget Survey used the mainframe. Records show that results were very much delayed.

The first three desktop computers acquired and put to use were of the Apple IIe type in 1983. Training in WordStar, dbase and Supercal was conducted in-house. Eventually Jet 80 T microcomputers were procured which operated under CPM environment.

The 1988 Population Census utilized ICL DRS Model 340 bulk data entry machine with 32 workstations. The strategy was to connect this equipment with the Treasury computer (ICL ME 29/45) via cable for electronic transmittal of data and access to clean data files. This link, though put in

place never became successful. More powerful PCs which had been made available at the Bureau of Statistics were used to process the census data. This became the end of using the mainframe.

The impact of transformation from Government Department to an Executive Agency

In 1994 an Organizational and Efficient Review of the Planning Commission was carried out. One of the pertinent recommendations was the department of statistics get semi-autonomous status and thus later to be an Executive Agency. According to the Executive Agency Act of 1997 agencies are established with the following objectives:

- To improve the delivery of public services,
- To create an environment conducive to efficient and effective management,
- To improve the quality of services, and
- To promote the potential for the continuous improvement of services.

It was realized that the above objectives can be achieved only if the agencies are freed from the Government bureaucracy through granting of the necessary freedoms. The Executive Agency Act gives the following as the general freedoms:

- Being capable of entering into contract in their own names,
- Being capable of suing or being sued in their own names, and

- Being capable of borrowing money and acquiring, holding and disposing of moveable and immovable property.

The following are general principles followed by all agencies in carrying out their functions:

- Provision of service in the most efficient and effective manner,
- Management of their affairs in a business like and cost effective manner, and
- Ensuring that their operations are designed for provision of the best services and maintain a high degree of responsiveness to customers.

To conclude this part of the paper we note that the National Bureau of Statistics Tanzania, after not less than half a century of evolution has now a fairly advanced statistical system back up by the Executive Agencies Act (for semi-autonomous Status) and a recent 2002 Statistics Act (for harmonized and quality products). A Strategic and Business Plan is prepared each year, though the National Bureau of Statistics has yet to publish for wider consumption.

This part of the paper is an abstract from a book still in manuscript form titled “Historical Development of the National Statistical System in Mainland Tanzania”.

STATISTICAL CHALLENGES BROUGHT ABOUT BY PRSPs

Introduction

During the mid 1990's major policy initiatives were being articulated in Tanzania. Partners involved were Government, NGOs, Private Sector, Academic Institutions and Development partners. These initiatives included:

- Tanzania Assistance Strategy,
- National Poverty Eradication Strategy,
- Poverty Reduction Strategy Paper, and
- Vision 2025.

All these were consistent with Global declarations including Millennium Development Goals. Pronouncement of targets and importance of monitoring were being emphasized. In Tanzania the process was principally lead by the Ministry of Finance. Historically the Department of Statistics has been considering the Ministry of Finance as not appreciating the importance of a statistical office and its products.

Opportunities and challenges

As the Ministry of Finance was now chairing these initiatives which showed explicitly to be a lot demanding with respect to data, this was taken up by the Department of Statistics as an opportune time. The Department demanded representation in practically all such fora and took that

opportunity to lobby for recognition and importance of its contribution to the whole process. Sympathetic stakeholder impressed upon the Ministry of Finance with respect to the cost of data collection, processing and dissemination. Additionally, the importance of the motivated technical staff to ensure retention and the possibility of recruiting the best from the market was underscored.

The consequences of all these was:

- A set of core statistics was decided upon as part of regular products (monthly, quarterly, semi-annually and annually). Funds were to be voted each financial year and were to be ring-fenced,
- Sequenced censuses and surveys, bounded by consecutive censuses years, were deliberated on and agreed to meet requirements of some agreed annual list of indicators. Pooled funding by government and a number of development partners (multilateral and bilateral) was to be firmed up.

With these moves, the issue now was for National Bureau of Statistics to draw up sound plans, convincing implementation strategies, guaranteed proper accountability on expenditures and a schedule of release of statistical products.

CONCLUSION:

In this paper we have present what may be considered the evolution to an efficient statistical system. We have noted that the evolution takes time and also need considerable pushing as well as influential sympathizers. We also emphasize that early, as well as enhanced achievement require some “driver”. In the case of Tanzania the Highly Indebted Poor Country Initiative and the subsequent PRSP was such a “driver”. These have increased the visibility of the institution. The challenge on the part of the National Bureau of Statistics is how to sustained this visibility into the future irrespective of such facilitating “drivers”.