Challenges in data collection, consolidation and reporting for local government authorities in Tanzania

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Given that timely and quality data are important for planning and monitoring local service delivery, REPOA conducted a study that examined the systems of data collection, consolidation and reporting within six local councils and four central government ministries in Tanzania. The study found that integrated local planning is hampered by data systems which are vertically organized i.e. "management of data systems are controlled by central ministries". Ministries and councils experience similar constraints in data management, including a shortage of skilled staff (especially statisticians and IT staff) as well as limited or delayed funding. LGAs also lack adequate computer hardware and software. As a result, the dissemination of consolidated data by central ministries was hampered by late or incomplete reporting by LGAs, but the councils surveyed also cited that data collection forms were often not distributed by central ministries on time.

Based on the evidence gathered, the study proposes the following recommendations to strengthen data collection, consolidation and reporting for LGAs: i) improvement of staff capacity through training in data analysis, report writing and dissemination techniques; ii) allocation of adequate financial resources for monitoring, data quality assurance and logistics; iii) provision of sufficient, up-to-date computers, software and supplies, as well as adequate office space for data management; and iv) establishment of fully-equipped statistics/MIS departments at the council level. In addition, there must be a fundamental assessment of the data requirements for discharge of responsibilities at all levels under the national policy of Decentralisation by Devolution (D by D), as well as re-examination of the design of data systems to facilitate greater use of data by councils for improved delivery of services. Timely access by central authorities to data from all LGAs is also needed.

Introduction

Accurate and up-to-date data are critical to inform policies, strategies and programmes to improve the reach and quality of local services, and to enable non-state actors and the general public to hold local and central government officials accountable for service delivery. The Decentralisation by Devolution policy places responsibility with local government authorities (LGAs) for delivery of key public services. However, due to existing weaknesses in data management systems, the assessment of local government performance has had to rely on field work in only a sample of councils. There is an urgent need, therefore, for access to quality and timely data and information from all LGAs in

Tanzania to facilitate informed dialogue, monitoring and evaluation of development issues at the local level, and to enhance governance and accountability for improved delivery of services.

Methodology

Based on these concerns, REPOA commissioned a study on the challenges of collection, consolidation and reporting of data in six local councils and four central government ministries. The six councils involved were: Dodoma Municipal Council, Bahi District Council, Sumbawanga Town Council, Nkasi District Council, Arusha Municipal Council and Longido District Council. The ministries involved were: the Prime Minister's Office – Regional and Local Government (PMO-RALG), Ministry of Finance and Economic Affairs (MoFEA), Ministry of Health and Social Welfare (MoHSW) and the Ministry of Education and Vocational Training (MoEVT). The research was conducted between October and November 2009.

The study commenced with an in-depth desk review of studies, reports and other documentation on the data collection systems operated by LGAs and central ministries, departments and agencies (MDAs). Additional information was then collected through fieldwork in the councils and ministries. Interviews were conducted with relevant data handling and management personnel in councils, facilities (schools and health facilities) and in ministries. Within the councils, interviews were conducted with staff in three departments: planning/economics, health and education.

Findings

Data collection systems

The study identified a number of systems that are specifically designed to cater for the information needs of LGAs, PMO-RALG and sector ministries. The main systems examined in this study are:

- Planning and Reporting (PLANREP) and Epicor;

- Health Management Information System (HMIS), which is also known by its Swahili acronym MTUHA;

- Education Management Information System (EMIS) from which the Basic Education Statistics in Tanzania (BEST) reports are derived; and

- Local Government Monitoring Database (LGMD).

Planning and Reporting (PLANREP) and Epicor

PLANREP and Epicor are data systems designed by the Ministry of Finance and Economic Affairs to gather financial information required for budgeting and resource allocation processes. These systems capture budgeting resources required by LGAs including recurrent and development budgets, personal emoluments, and other charges such as for fuel, equipment, stationery, furniture and transport. Data are consolidated at the departmental level under the supervision of the council planning/economics department. The consolidated data are then submitted to the regional office, and finally to MoFEA and PMO-RALG for processing, analysis and reporting.

Health Management Information System (HMIS)

HMIS captures information on out-patients and in-patients utilising health facilities, pandemics or outbreaks of disease, and diagnostic activities and prescriptions given to patients. A series of booklets including forms which need to be completed are distributed to clinics, dispensaries, health centres, hospitals and referral hospitals, and are filled in by practitioners. Data are consolidated at council level, submitted to the regional office and then forwarded to MoHSW for processing, analysis and reporting.

Education Management Information System (EMIS)

EMIS is a data collection system designed and implemented by the Ministry of Education and Vocational Training. Data collected include student enrolments in primary and secondary schools, numbers of teachers and other personnel, school infrastructure, equipment and training materials. Collection of data is done by head teachers/masters at the school level before consolidation by the Ward Education Officer (WEO) and submission to the council education office. Further consolidation of the data takes place at the council level and reports are submitted to the Regional Education Officer before being sent to the Ministry where further aggregation, processing, analysis and reporting are completed. Basic Education Statistics in Tanzania (BEST) is the principal reporting output of the EMIS.

Local Government Monitoring Database (LGMD)

The LGMD system is a database designed by PMO-RALG to support the integrated planning of service delivery by LGAs including monitoring and evaluation of the Decentralisation-by-Devolution policy. The system was intended to capture critical data from sectors within the council and to enable processing, analysis, managing and reporting. All of these functions are supposed to be done within the council planning/economic office with the help of statistician/s.

Types and users of data collected

Table 1 summarises the types of data that are collected by LGAs and passed on to ministerial level. The economics/planning department within the council is principally responsible for coordinating data collection systems for all other council departments.

In the study, respondents were asked whether some types of data they considered relevant for planning and decision making were not currently being collected. This question aimed to assess whether existing data collection systems were comprehensive and adequate to needs. Generally, all respondents within the surveyed ministries considered their systems to be exhaustive in the types of data/information collected. As for duplication of efforts, responses indicated that the design of the LGMD system called for the recording of data on service delivery as well as financial and physical data which were also collected by sectoral departments. All the surveyed departments in LGAs reported that the main users of their data were central government and regional administrations. Data were also used internally by the LGAs.

Table 1: Types of data collected, 2009

LGA department/ (for submission to Ministry)	Type of data
Economics/planning department (to PMO-RALG)	• Service delivery data, including health, education, water supply, community development and demographic data. • Financial and physical data for LGAs, including revenue and expenditure by source, and human resources by function.
Economics/planning department (to MoFEA)	• Financial and physical data including revenue and expenditure by source, and human resources by function.
Health department (to MoHSW)	• Health delivery data, including facility data, disease data, medicine, equipment, re-productive and child health statistics, and employment data such as numbers of physicians, nurses and other technicians.
Education department (to MoEVT)	• Education data, including facilities, teachers and supporting staff, students, equipment, sector performance data.

Table 2: Qualifications of staff of MIS departments, by Ministry, 2009

Qualification	PMO-RALG	MoHSW	MoEVT	MoFEA
Secondary education	-	-	-	7
Certificate in statistics/IT	-	-	-	-
Diploma in statistics/IT	-	3	1	-
First degree	4	6	4	-
Masters	2	6	2	-
PhD	1	-	-	-
Total	**7**	**15**	**7**	**7**

Table 3: Availability of equipment in the MIS department of surveyed ministries, 2009

Type of Equipment	PMO-RALG	MoHSW	MoEVT	MoFEA
Desktop computer	4	10	15	50
Laptop computer	7	10	3	25
Printer	3	16	6	20
Photocopier	2	1	2	18
Scanner	2	-	3	12
Internal network – LAN	1	1	1	1
Internet connection	2	1	1	1
Fax machine	1	-	-	4

Challenges and constraints in data production and management

A number of challenges and constraints facing data collection, consolidation and reporting were identified. The three most prominent constraints were: i) limited institutional capacity; ii) inadequate systems of data collection, consolidation and reporting; and iii) lack of funding and/or delayed disbursement of funds.

Limited institutional capacity

Effective data management depends on the availability of skilled staff, computer and other office equipment, and statistical software. Lack of adequate personnel for data collection, management and analysis was one of the major constraints identified by ministerial respondents. Table 2 shows the number and qualifications of employees under the departments/directorates of Management of Information Systems (MIS) in the ministries surveyed. All departments / directorates reported having much fewer staff than their requirements.

The situation was even worse in LGAs. Although LGAs reported that they had a section responsible for handling statistics, in practice, none of the LGAs surveyed had a statistics unit. At most, councils have a statistician within the planning/economics department, responsible for handling the LGMD system. Out of six LGAs, only Bahi District Council and Sumbawanga Town Council had a qualified statistician.

Regarding equipment and facilities, ministries reported having sufficient computers for their MIS departments (Table 3). All the surveyed ministries also indicated having sufficient storage facilities to handle the amount of data collected. Three of the ministries use servers to store data. Other means of storage include CDs, files and reports which complement the electronic databanks.

In contrast, all six LGAs in the study did not have adequate equipment for data collection and management (Table 4). Existing computers, most of which were old and outdated, cannot run modern statistical packages or even connect to the internet. Out of the six LGAs, only three had internet facilities – Dodoma and Arusha Municipal Councils and Nkasi District Council.

Table 4: Equipment in the economics/planning departments of LGAs surveyed, 2009

Equipment	Dodoma	Bahi	Sumbawanga	Nkasi	Arusha	Longido
Desktop computer	1	1	2	1	1	1
Laptop computer	1	-	1	1	4	1
Printer	1	1	1	1	3	1
Photocopier	-	-	-	-	-	-
Scanner	-	-	-	-	-	-
Internal network (LAN)	1	-	-	1	-	-
Internet connection	1	-	-	1	1	-
Fax machine	-	-	-	-	-	-

Unlike the ministries, all six LGAs reported mostly using files and hard copy documents for storing the information collected and consolidated from the various routine data systems. Other storage media employed to a lesser extent included CDs and computer hard drives. None of the LGAs had advanced storage facilities such as servers or websites. Limited availability of IT equipment and supplies and lack of statisticians were pointed out as the major challenges to handling data in all of the surveyed LGAs. Other challenges cited were lack of funds, transport, timeliness of data collection due to poor infrastructure, and lack of training on IT and statistics.

Inadequate systems of data collection, consolidation and reporting

Each of the sector ministries surveyed has designed a routine data collection system based on their objectives and functions. Each ministry has a set of booklets or data collection tools. These tools are prepared at the ministry and distributed to the respective sector departments in all LGAs and to local facilities, to health facilities by MoHSW and schools by MoEVT. Once data collectors at the facility/school level fill in the forms, they send them back to the respective departments at the council where consolidation takes place. Data are then forwarded to regional authorities where further consolidation occurs before being submitted to sector ministries, where data is compiled, processed and analysed. Sector ministries produce and disseminate publications to data users. These publications present mostly aggregated data and information needed by the central government for policy making, planning, monitoring and evaluation. Very few central government publications have disaggregated data down to council level. Moreover, there is no consistent reporting to local government authorities.

These data collection systems are facing a number of challenges. Ministries report the biggest challenges lie in the shortage of skilled staff within MIS departments down to the lower levels, inadequacy of funding and lack of equipment. Similarly, the main challenges identified by all councils were shortages of statisticians and IT staff, especially within sectoral departments, as well as the inadequacy of equipment, transport and office space. Lack of training, funds and transport were also cited. Other constraints were that data collection, consolidation and reporting were still being done manually due to the lack computers, and lack and/or incompatibility of software. Reporting lags behind as a result.

Linking and harmonising the various data systems within LGAs is key to providing a one-stop centre for data/information. The LGMD is an attempt to do this. There are two major reasons for the lack of progress with institutionalising the LGMD. First, LGAs are overwhelmed by the different systems of data collection from sector ministries and sometimes from donors and NGOs. Second, each system has its own pathways, specific data requirements and different collectors: HMIS

Table 5: Challenges of handling statistics at LGA level, 2009

Equipment	Dodoma	Bahi	S wanga	Nkasi	Arusha	Longido
Lack of reliable storage systems	√	√			√	√
Inadequacy of equipment	√	√	√	√	√	√
Inadequacy of transport	√	√	√	√	√	√
Inadequacy of office space	√	√	√	√	√	√
Inadequacy of funds	√	√	√	√	√	√
Poor technology for data collection and management	√		√		√	√
Lack of statisticians and IT staff	√	√	√	√	√	√
Lack of training	√				√	
LGMD not working	√	√		√	√	√

data are collected by health practitioners; EMIS by head teachers; while PLANREP and LGMD are managed by the planning/economics departments. Other challenges cited by respondents were low awareness of the importance of data collection and lack of ownership of data. The lack of a reliable power supply particularly at lower levels, was also mentioned. Table 5 summarises the challenges of handling statistics cited by respondents in the surveyed LGAs.

Lack of funding and delayed disbursement of funds

Inadequate funding and/or delayed disbursement of funds were also reported to be major constraints in the operation of data systems. MoEVT and PMO-RALG indicated that delayed release of funds or receiving lower than requested budgets from the central government resulted in delays in the distribution of forms and data collection activities. Also, inadequate funds limit training, monitoring, reporting and supplying up-to-date equipment and/or software to LGAs. This finding was consistent with evidence at council level where respondents observed that forms were received late on many occasions.

Conclusions and Recommendations

Timely and accurate reporting of LGA data is constrained by lack of staff capacity and inadequate resourcing for management information systems, especially within LGAs. Moreover their capacity for analysis of the data they collect is hampered by the design of information systems by central ministries on whose behalf they collect the data. Based on the evidence from this study, the following recommendations are made to strengthen LGA data collection, consolidation, reporting and use.

1. A fundamental assessment of the data requirements for discharge of responsibilities under the national policy of Decentralisation by Devolution is called for, and a re-examination of the design of data systems to facilitate greater use of data by LGAs for improved delivery of services as well as timely collection and submission of data by LGAs to central authorities.

2. Increased training and resources for staffing and information systems are needed, particularly:
   a. Training in data analysis, report writing and dissemination techniques;
   b. Allocation of adequate financial resources for monitoring, data quality assurance and logistics;
   c. Provision of sufficient, up-to-date computers, software and supplies, as well as adequate office space for data management; and
   d. Establishment of fully-equipped statistics/MIS departments at the council level.

3. The routine production and sharing of reports with council-disaggregated data and the exchange of data management technology between central and local authorities would help ensure the timely flow, analysis and use of data to improve service outcomes and accountability.

References

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