Producing establishments statistics in developing countries: Tanzanian Experience by 2015

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Abstract:

Establishments are the major, if not the sole, source of economic and some social statistics of any nation. That is why all countries strive to keep updated central registers of establishments in their countries. The establishments are supposed to be grouped according to acceptable International Classifications. There are, however, major challenges that developing countries encounter in producing these statistics. Among them are; weak or totally absence of statistical systems, inadequate professional staff, insufficient funding for statistics production, low statistical awareness among citizens leading to low statistical demand. These lead to the vicious cycle of statistical underdevelopment in these countries.

The paper attempts to scan the history of production of economic statistics in Tanzania, more so, establishments' statistics. The focus is on their scope, periodicity, usefulness (demand) of these statistics, how they employ international standards, and sources of funding for their production. It goes on outlining prospects and challenges in producing these statistics in the country. Further on, it proposes a system that can help in producing these statistics at a low cost as compared to undertaking periodic sample surveys. The paper concludes with an appeal for a pragmatic approach to raise statistical awareness in the country.

Key Words: Gross Domestic Product (GDP), National Statistical System (NSS), International Standard Industrial Classification (ISIC), Representative Sample

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1. Background

The history of Business Survey in Mainland Tanzania, as an independent country, dates back to the year 1965 when the first attempt to compile a directory of industries was made by a UN expert. The compiled directory was considered preliminary until the first industrial census was finalized in 1967 by the then Central Bureau of Statistics. The census operation revised and updated the directory by incorporating additional information gathered from records maintained by the Ministry of Labour, government departments and several other sources available.

Since then, the exercise of compiling directory of industries remained to be a regular annual task of the Central Bureau of Statistics but with the intention to extend its coverage to other industries such as agriculture, construction and others. The intention could not be achieved until 1978 when the notion was revived by Takwimu-Statistics Sweden Project (TSSP) funded by the Government of Sweden through the Swedish International Development Agency (SIDA).

To accomplish the mission, a Technical Committee under the chair of the Head of Industrial and Construction Statistics was established the same year to coordinate and harmonise the various registers which existed and held by several institutions in the country. The registers were then merged into one standard register called the Central Register of Establishments (CRE). The Register has since been developed and maintained by the National Bureau of Statistics (NBS), formerly called the Central Bureau of Statistics (CBS) and later on Bureau of Statistics (BS).

> An establishment, according to United Nations (2008) is described as an enterprise or part of an enterprise that is situated in a single location and in which only a single (non-ancillary) productive activity is carried out or in which the principal productive activity accounts for most of the value added.

In Mainland Tanzania, lists of establishments, called Central Registers of Establishments (CRE) were kept and updated periodically for every district/local government. The updating is done once in every six (as of 30th in June and 31st December).

Earlier version of the CRE was a directory of local socio-economic units called establishments. It aimed at containing information on all establishments and enterprises on Mainland Tanzania which would serve as a sampling frame for subsequent establishment-based surveys. It would, also, be useful to authorities concerned with regulations pertaining to employees, industrialists concerned with deciding where to invest and to planners who advise the policy and decision makers. Early registers had information on six items for each establishment. These were:
- Name;
- Post Box Number;
- Town;
- Location;
- Industry (according to ISIC);
- Sector (according to type of ownership); and
- Number of employees presented in column-wise.

Almost all establishments had information for all items except on location where many of them were missing, NBS (1994). Subsequent versions added two items on Telephone and

Fax Numbers of each establishment. These two were, again, blank for almost all the establishments, NBS (1997).

The latest format for the CRE contained more information (NBS, 2005) and changed the following items; Industry to ISIC Code and Sector to Ownership. Additional items were on Location of the establishment, Size (by number of employees) and e-mail address. Compilation of CREs was made possible by the National Bureau of Statistics (NBS) collaboration in with the Tanzania Revenue Authority (TRA), The National Social Security Fund (NSSF), the Cities, Municipals, District Councils and other Local Authorities.

2. Experience of establishments' based sample surveys in Tanzania

2.1 Historical background

Surveys of Industrial Production in Mainland Tanzania were carried out by the East African Statistical Department for 1954, 1956 and 1958 (by then the country was known as Tanganyika), covering establishments employing 5 and more persons. The first survey included Dar es Salaam region only, the second was extended to Arusha, Moshi, Mwanza, Tabora and Tanga regions, and in 1958 it was conducted throughout the country irrespective of the size of the statistical unit. All industrial activities such as Mining, Manufacturing, Building and Construction, Generating Electricity and Water Supply were covered.

The Central Statistical Bureau (CSB) conducted another comprehensive census of Industrial Production for 1961, for all industrial activities, regardless of the size of the establishment. The primary processing of agricultural raw materials (sisal, tea, and coffee) was also included. In the frame of the International Recommendations on the 1963 World Programme of Basic Industrial Statistics, a census was carried out but the responses were not sufficient for any data processing.

The 1965 Survey of Industries covered the whole territory of Mainland Tanzania including all establishments having 10 and more persons engaged in manufacturing activities and in production of electric energy (CBS, 1967). Subsequent surveys were then carried out for 1966 (CBS 1969), while the others were undertaken by the Bureau of Statistics (BS), after CBS was renamed as BS. These were the 1967 survey (BS 1970), 1968 (BS 1971), and 1970 (BS 1974). These covered establishments engaged in manufacturing, generation and distribution of electricity, and employed 10 and more persons.

 Among the challenges that the Bureau faced were high non-response rates, delays in returning filled questionnaires by establishments, and delays in data processing. This trend continued until in the late 1980s.

These surveys were not undertaken between 1991 and 1999 because of financial constraints. During this period the manufacturing sector was being estimated on the basis of quarterly surveys, while other industrial sectors of mining and quarrying, and electric energy were being estimated on the basis of quantities produced by the respective establishments (NBS 2003).

Beginning the year 1999, the coverage of the annual industrial surveys were extended to cover other sectors of the industrial classification as per ISIC Revision 3.

The main objective of the survey was to obtain comprehensive data on the contribution of industrial sector to Gross Domestic Product (GDP). Broadly, the survey provided baseline data on the economic characteristics of the industrial sector for use in planning, policy formulation, monitoring and evaluation of government programmes aimed at improving the sector.

Specific objectives were to;

1. Obtain an updated list of operating industrial establishments during the survey period;
2. Measure the size of employment in the industrial sector;
3. Measure workers' remuneration in the industrial sector;
4. Measure the amount of stocks held in the industrial sector;
5. Measure cash income in industrial sector;
6. Measure value added in the industrial sector;
7. Measure expenditure on fixed assets in the industrial sector;
8. Collect information on the principal activity, size and ownership in the industrial sector;
9. Get benchmark data for other subsequent industrial surveys to be used for updating data series in the industrial sector; and
10. Enhance technical capacity and workplace skills development for departmental staff.

The Ministry of Industry, Trade and Marketing (MITM) undertook a survey for the year 2008 on manufacturing establishment only, results of which were published in a report entitled "Annual Survey of Industrial Production and Performance (MITM, 2010)

The objective of this survey aimed at providing information on the economic characteristics of Tanzania's industrial sector to management, policy makers and the private sector for uses in planning, policy formulation/review and monitoring and evaluation of Government programmes for the improvement of the sector.

Specific objectives were to;

1. Analyse the current status of the industrial sector in the economy;
2. Identify conditions that affect firm-level productivity and competitiveness;
3. Secure inputs to be used by the government to develop/review policies, programmes and strategies that support sector-productivity growth;
4. Provide the private sector with facts to support dialogue with government and other partners to enhance public-private sector partnership; and
5. Update existing data at the level of industrial establishment.

Limitations of the survey

1. The tendency among establishments to hide information relating mainly to outputs and to over-report on inputs because of the belief that information supplied would be transmitted to the tax authorities.
2. Many establishments engaged in several equally important but similar activities. Because of non-availability of separate records, these establishments were classified according to the activity with the highest output.
3. Some establishments could not provide detailed information for certain items such as;

- Consumption of electricity, water and fuels separately;
- Purchase of raw materials and sales from own production by main product; and
- Values of stocks as well as values of fixed assets by type

These and other missing data had to be estimated.

2.2 Business Sample Surveys

Prior to 2003, the country had been collecting Economic Statistics through surveys and annual censuses using the CRE as a sampling frame. It was latter, however, noticed that CRE was not an exhaustive enough in covering all the formal and informal businesses due to lack of enough funds. For the purpose of improving the coverage on Economic Statistics, there was a need to have a reliable and complete sampling frame of businesses in the country. The NBS, therefore, requested funding from the Department for International Development (DFID) in order to carry out a Business Survey in an effort to address the problem.

The objective of the Business Survey was to give basic structural data about the business sector of the country in order to have an updated list of businesses for estimating Gross Domestic Product (GDP) as well as for planners, investors, researchers and Local Authorities to undertake their development programmes more efficiently. It was thought that the resulting list would give a more reliable sampling frame for establishments' surveys. Information was collected on names and address, location with corresponding Geographical Positioning System (GPS) co-ordinates, type of premise, main activity, ownership, employment size and year of business commencement.

The survey enumerated socio-economic businesses in all sectors regardless of size. The enumeration, however, excluded the sector of Agriculture, Hunting and Forestry because it was covered in the 2002/03 Agricultural Sample Census. The Enumeration of Businesses was full coverage for Zanzibar and Dar es Salaam region. In other regions with cities or municipal status and the sampled regions, coverage was in pure urban wards only. Data were collected from pure urban wards in only 16 regions out of 19. The aim for the future was to cover the entire country if funds would be available (NBS, 2006).

The second business survey was undertaken in 2007-08. The objective and methodology of this survey were as for the 2003-05 one. It was undertaken under the programme of Developing Economic Statistics in Tanzania (DESTA), whose ultimate objective was to improve economic statistics and national accounts estimates. The survey covered a total of 64 wards in Dar es Salaam region and a total of 721 wards in the other 20 regions. Sub-samples of these totals were distributed to rural, urban and mixed wards in different proportions. The funds for this survey were obtained from Developing Partners through the MKUKUTA basket fund. The Tanzania Government contributed staff and vehicles to the project (NBS, 2006).

2.3 Integrated Business Surveys

In the year 2010 the National Bureau of Statistics undertook two integrated business surveys in Mainland Tanzania. One was on the distributive trade and the other was on construction industry.

2.3.1 Integrated Survey on distributive trade establishments

The main objective of this Survey was to measure performance of key indicators of the Distributive Trade, Accommodation and Food Services of the economy. The information collected was used in the compilation of National Accounts aggregates such as Gross Domestic Product (GDP). Specifically the survey aimed at:

- Obtaining information on the number and geographical distribution of distributive trade and services establishments;
- Estimate the number of persons engaged in these sectors;
- Obtain data on the type and flow of goods and services in order to allow policy formulation or policy change so as to strengthen the sectors;
- Get estimates on the contribution of distributive trade and service activities to Gross Domestic Product;
- Get information on the effectiveness of the existing economic policies on these sectors; and
- Obtain data that could be helpful in formulating socio-economic plans and programmes.

ISIC Rev. 4 document was a major reference for concepts and definitions used in the survey (NBS, 2012). A total of 1418 establishments were covered in 21 regions, however, information on the sampling procedure of these establishments could not be obtained.

There were challenges that this survey encountered during the enumeration period. They included the task of identifying the selected establishments. This posed a major hindrance because it was found that some of such establishments lacked permanent physical addresses, others changed locations and nature of activities. This led to covering less establishments than the intended sample. The other constraint was delays in obtaining necessary funding for the survey.

Specific limitations that could be noted were the following;

1. By the nature of this sector in the country, there is large number of micro, unorganized/informal trading activities taking place. Such activities, like the following are not usually captured in censuses and surveys. These include;
   - Most of micro kiosks or groceries had no regular paid employees;
   - Matching Guys, side walk vendors, ambulant peddlers, hawkers
   - Trading of cellphone cards purchased by dealers, particularly households/employees that serve as dealers
   - Non-store retail selling, like selling by vending machines, online buy and sell, house to house selling of goods; and
   - Trading activities done by members of the households which form part of their secondary source of income.
2. The tendency among small and medium scale distributive trade establishments to conceal information relating to outputs and over reporting

on inputs due to the belief that if such information is correctly supplied would be transmitted to the income tax authorities.

3. A number of establishments were engaged in several equally important but dominant activities. Because of non-availability of separate records, such establishments were classified according to the activity with the highest output.

4. Many establishments could not provide detailed information for certain items, such as;
   - Consumption of electricity, water and fuels separately;
   - Purchase of raw materials and sales from own-account production by main products;
   - Values of stocks as well as values of fixed assets by type;
   - Some did not provide information on the level of stocks and assets; and
   - Failure of business owners to separate between businesses' and households' purchases and costs/inputs. (NBS, 2012).

2.3.2 Integrated Survey on construction industry establishments

The main aim of the Integrated Business Survey on construction industry establishments was to measure the performance of the construction activities in the country. Specific objectives of the survey were to:

- Provide information on the number and geographical location of construction establishments in the country;
- Get estimates of its contribution to GDP;
- Estimate the number of persons engaged in the sector;
- Obtain data on the type and flow of goods and services in order to allow policy formulation or policy change to strengthen the sector;
- Get information on the effectiveness of the existing economic policies on the sector; and
- Obtain data that could be helpful in formulation socio-economic policies, plans and programmes.

Specific limitations of the survey were similar to those of the survey on distributive trade establishments, which were:

1. There were many micro, un-organised/informal sector construction activities taking place in a country.
2. The tendency among small and medium scale construction enterprises to conceal information relating to outputs and over reporting on inputs due to the belief that if such information is correctly supplied would be transmitted to the income tax authorities.
3. A number of contractors were engaged in several equally important but dissimilar activities. Because of non-availability of separate records, such establishments were classified according to the activity with the highest output.
4. Many contractors could not provide detailed information for certain items such as consumption of electricity, water and fuels separately; purchase of raw materials and sales from own production by main product; values of

stocks as well as values of fixed assets by type; others did not provide information on the level of stocks and assets. (NBS, 2013).

2.4 National Baseline Survey on micro, small and medium enterprise

The survey was undertaken by the Ministry of Industry and Trade in 2010 with its results published in 2012.

The overall objective of this survey was to provide a representative national baseline of Micro, Small and Medium Enterprises (MSME) segment in Tanzania that would allow for statistically significant statements on regional basis.

The survey was specifically aimed at:

- Establishing the size and structure of the small business segment in the economy;
- Estimating the contribution of small business to Tanzania's national economy in terms of income and employment;
- Identifying constraints and opportunities of the small business segment;
- Quantifying the demand for financial and business development services;
- Profiling this demand and segmenting small business in ways that are practical for the design of appropriate interventions and services; and
- Developing new segmentation approaches that allow better understanding of the needs and dynamics of small business.

It was. Furthermore, expected that the survey results would motivate and enable various organisations to improve their knowledge of small business and provide more appropriate services to MSMEs accordingly. (Ministry of Trade and Industry, 2012).

Sample size determination

It is pointed out that, in order to achieve the desired level of quality of statistical data at national and regional levels, the survey applied a three-step sampling process:

1. The survey referred to Tanzania's 2002 Census frame for the selection of Enumeration Areas (EAs). An attempt was made to use the EAs that were used for the 2009 Second FinScope Survey but it was found that because of the demographic changes that occurred since then, new listing of households in all, but the same, EAs was made;
2. In all selected EAs, a complete listing of households was made to identify all households that either was currently owning and running a small business or that had closed a small business in the period of two years prior to the interview date. Based on that list, a sample of 9 or 12 households in the first group and a sample of 2 or 3 households in the second group were randomly selected from each EA. A simple questionnaire was administered to these selected households; and
3. In households that had more than one family member who owned and ran a small business, a Kish Grid method was used to select the respondents for the survey (responding household members had to be at least 16 years old).

Limitations of the survey

The following were highlighted as limitations of survey in a final results report:

1. The scope of MSMEs excluded smallholdings in farm and livestock businesses due to financial and organizational constraints. It was recommended that future such surveys should include them;
2. The use of household-based survey made it that some business data could not be accurately collected because in some cases those data were either not kept by the business at all (such as accounting data) or they could not be referred to during the interview because the interview was administered in a household rather than at the business premises;
3. The sampling method of EAs and then households did not result in an adequate representation of businesses that do not occur frequently in the universe of small businesses;
4. It was difficult to decide on the inclusion or exclusion of a business to MSMEs because the criteria leading to such decisions were not adequate.

2.5 Baseline Survey of Business Register, 2011/12

The report of the 2011/12 Baseline Survey of Business Register indicates that this was the third initiative made by the National Bureau of Statistics to improve the establishments' directory, known as the Central Register of Establishment (CRE). The second initiative was made in 2006/07 and the first one was in 1985. The CRE was a list of all businesses, both public and private that exist and operate in Mainland Tanzania. The structure of CRE follows the ISIC Revision 4 and has the following information:

- Name of the establishment;
- Location;
- Post Address;
- Type of ownership;
- Number of employees by sex; and
- Type of industrial activity.

The report indicates that the shortfalls observed, together with advancement in science and technology, and the presence of the ISIC Revision 4, had led to the use of information technology in the production of a list of establishments by size (micro, small, medium and large scale). In addition to that the prevailed demand from stakeholders had necessitated the needs of improving it by adding new variables, including;

- Initial investment;
- Ownership by nationality;
- Annual turnover; and
- Registration status.

Significance and scope of the survey

It was thought that the implementation of the 2011/12 Baseline Survey was an important exercise since the information collected would be used to improve the CRE in order to meet the prevailed demands of users and stakeholders. The baseline survey findings would have been used to develop a database of existing establishments in the country.

Unlike the prevailed CRE, the resultant Business Register (BR) would have a list of establishments which were registered and active.

The updated BR report would also provide quality and adequate sampling frame for establishments' based surveys. This would facilitate planning and decision making within the government, the business community, institutions and other stakeholders. It would, also, stimulate research and informed public debate through the provision of relevant, reliable, timely and quality statistical service in general.

Sample design

A representative sample of administrative units (wards) was drawn per region in order to have unbiased results. The selection of these wards used purposive and random sampling methods as follows:

- Stage One: selection of all pure urban wards in regions and Dar es salaam was done purposively;
- Stage Two: selection of 50 percent of mixed wards in regions was done randomly; and
- Stage Three: selection of 25 percent of rural wards in regions was done randomly.

Limitations of the survey

The report indicates that the survey was conducted when its results were urgently needed by stakeholders. Because of that, there was not enough time for the survey field work. This had resulted in under coverage such that the generated BR would not replace the existed CRE, rather served as an update of it. The teams lacked adequate funds and time for data collection, which involved travelling and manual editing in the field. Additionally, the mailed questionnaires were not checked for quality of submitted data (NBS, 2012).

There is an effort to publish a new report on this aspect from a survey that was carried out in 2014/15. It is expected that CRE will formerly be replaced by BR after a release of this report.

3. Prospects of these surveys in the country

There is a bright future for establishments-based surveys because there seem to be a growing demand for these kinds of statistics/data both by the government and the general public. The actual demand is low at the moment but the potential one is high, especially with the current government appearing to appreciate evidence based decision taking at all levels in the management of national affairs.

4. Challenges in undertaking establishment-type surveys in the country

The surveys of this kind seem to have encountered a number of challenges since their inception in this country. These include the following;

1. Inadequacy of professional statistical staff in the country

   Given that professional statisticians has to have a base in mathematics, and given that few people either do not like mathematics or are weak in mathematics, and

given that there are very few institutions that train professional statisticians in a country (only one that has just started) leave very few who pursue statistics at professional level. Most people who work in statistics portfolios in different capacities in a country, are either trained on job or have no training on the same at all (Msokwa, 2014).

2. Low statistical awareness in the country

Right from the education system in a country, statistics is taken as a mathematical subject. This is because all statistics related topics that are taught in formal education system, from primary to university level are part of mathematics. Therefore, any person who is either weak or does not just like mathematics, will totally be ignorant of all statistical aspects in his/her all life. This is even more critical for current and potential users of statistics in their working places. Statistics to them is that hard mathematics, this is because the prominent topic that put off many students in formal education is probability. (Msokwa, 2014).

3. Absent of (or presence of a weak) statistical system

The statistical system in the country is not well established. There is, at times, taking the National Bureau of Statistics as the national statistics system. According to the government paper, statistics is only a national matter. Lower government administration organs seem to be barred to carry out statistical activities at their levels (URT, 2006). There is in general a weak and unclear national statistical system to stream line the production and use of the same at different levels (Msokwa, 2014), (Msokwa, Forthcoming)

4. Insufficient funding from the government

Greater share of funding the undertaking these surveys come from the donor community and development partners. In some cases contribution of the government is only on staff and office space.

5. Limited scopes of the sample surveys

There are four types of scope that are being referred to here. The first one is geographical, second one is sectoral, third is employment capacity, and the fourth is formality/informality of establishments.

Geographical scope

It is evident that none of the surveys undertaken so far covered the whole country. For example, the early surveys of the 1950s, their coverages were as follows; the first one (1954) was for Dar es Salaam only, the second (1956) was extended to other areas, namely; Arusha, Moshi, Mwanza, Tabora and Tanga. Other parts of the country were left out. It was only the 1958 survey that covered the whole country as well as all establishments irrespective of size. Subsequent surveys covered some regions and just parts of the selected regions, like only urban areas

or selected only some census Enumeration Areas (EAs). For whatever reason Dar es Salaam is being treated different from other parts of the country, having been covered almost in every survey.

Sectoral scope

The current ISIC (Rev.4) has 21 Sections. Most surveys covers up to five sections of the ISIC, mainly of industrial statistics nature, that is; Mining and quarrying (Section B), Manufacturing (Section C), Electricity, gas, steam and air conditioning supply (Section D); and Water supply; sewerage, waste management and remediation activities (Section E). However, Section C has been frequently covered more than any of them. It is the only one covered in quarterly surveys.

Employment capacity

Establishments with 5 and more employees are selected in the samples of these surveys though some have 10 employees as the minimum number. Quarterly surveys use a cut of point as at least 50 employees.
Formality/informality of establishments

This refers to whether the establishment is formerly registered as the business entity under existing laws in a country or not. There are some surveys which target only the formal establishments while others try to cover every business entity that exist in the survey areas.

6. Use of hazy sampling procedures

There is no definite approach in determining the sample sizes of establishments covered in every survey. The first challenge is that apart from having a CRE (which could be a sampling frame), it appears it has not been used as such by any survey until it is being discarded. All surveys seem to use administrative areas as sampling frames, where the selection of areas are made purposively at some stages and randomly at others to come up with the ultimate responding units. In other surveys there is a mixture of areas, households, individual members of households and then establishments owned by such members. It is not clear on how weighting are reached at from such sampling schemes. It is indicated in the 2003 Business Survey Report, that CRE was a sampling frame for establishment surveys but for all the surveys reports that we could get access to could not support this assertion.

7. Lack consistency and periodicity in undertaking these surveys

There is no definite periodicity and consistence in issues that are covered in similar surveys whenever they are undertaken. One time they were being called surveys of industrial production, at other times they were called business surveys, with different objectives and topics as well.

8. Absence of a clear mandate of carrying out these surveys (obligation) in the country

So far it is not clear which institution is obliged to be carrying out these surveys in the country. There are times they are carried out by the National Bureau of Statistics and other times by the Ministry of Industries and Trade, with varying scopes.

When all the challenges are taken together, one feels that the country has to work hard to improve in the undertaking establishments-based surveys. There is need to have a clear mandate in undertaking these surveys, system in guiding the frequency, and topics that have to be consistently collected overtime at different levels of administration. This will enable proper policies to be made at national level and correct rules and procedures to be effected at lower levels of government administration.

5. Conclusion

Establishments-based surveys in Tanzania are still in the development stage. There are a number of issues (technical, financial and organizational) that have to be addressed before the country produces statistics of these entities to acceptable levels of both quantitatively and qualitatively.

6. Recommendations for further improvements in these surveys

1. There is a need to have an inclusive statistical system that handles the production and use of statistics in the country. The system has to outline different stakeholders, their obligations and rights in producing and using different statistics in a country.

   Production of establishments' statistics and statistics in general, being cross-cutting products, should involve all stakeholders in the country at respective stages. That is, it should involve producers, users, statistics trainers, the general public, and statistical professional bodies, if they exist. It is only when all stakeholders work together in an amicable manner that can lead to the production and use of statistics for the improvement of the socio-economic aspects of the societies.

2. For the case of Tanzania, it is recommended that establishments' statistics production and use should start at the Local, Town and District Councils levels. This is because the councils are better positioned since they can easily reach each and every establishment in their areas of jurisdictions (Msokwa, Forthcoming). With this in mind, Business Registers can easily be updated at these levels other than at national level. This can only become possible with establishing strong statistical units or departments at every council to handle statistical activities. Heads of such departments have to be professional statisticians.

3. Production of establishment statistics should target formal business entities only. This shall ease the task of building up the sampling frame. Study on informal establishments should exclusively be handled by surveys on informal activity undertakings. It is in such an approach where peculiar issues associated with each subsector can easily be articulated.

4. There is a need to raise statistical awareness in a country starting from grass-root levels. The education system in collaboration with statistical professional entities should collaborate in this aspect. It is only when the whole society is statistically literate that they can demand for their production.

5. The government at every level should fund the production of statistics. The realisation of the above recommendations as well as addressing most of the foreseen challenges shall depend on the availability of necessary funding. The government has to, therefore, be responsible for the production of its statistics by consistently setting aside sufficient funds for statistical activities.

References

Bureau of Statistics (1970). Survey of Industrial Production 1967

Bureau of Statistics (1971). Survey of Industrial Production 1968

Bureau of Statistics (1974). Survey of Industrial Production 1971

MITM (2010). Annual Survey of Industrial Production and Performance, 2008

Ministry of Trade and Industry (2012). Micro, Small and Medium Enterprises in Tanzania. National Baseline Survey Report

Msokwa, Z.E (2014). Challenges and prospects for professional statistical training and statistical education in Africa – Tanzanian experience. Published in the International Journal of Education and Research Vol. 2 No. 3 March 2014

Msokwa, Z.E (2014. Development of national statistical systems in Africa by 2012: Lessons learnt and prospects. Published in the International Journal of Applied Science and Technology: Vol.4 No.1; January 2014

Msokwa, Z.E (Forthcoming). Beyond official statistics

CBS (1967). Survey of Industries 1965, The United Republic of Tanzania

CBS (1969). Survey of Industries 1966, The United Republic of Tanzania

NBS (2003). Annual Survey of Industrial Production 1999 and 2000, Volume I, Methodology Report

NBS (1994). Central Register of Establishments

NBS (1997). Central Register of Establishments, Singida Region

NBS (2005). Central Register of Establishment, Pwani Region

NBS (2006). Business Survey 2003-05; Volume One, Dar es Salaam Report

NBS (2008). Business Survey 2007-08; Volume One, Dar es Salaam Region Report

NBS (2008). Business Survey 2007; Volume Two, Other Regions Report

NBS (2012). Integrated Business Survey, 2010, Tanzania Mainland, Distributive Trade Analytical Report

NBS (2012). Business Register Report 2011/12 Tanzania Mainland

NBS (2013). Integrated Business Survey, 2010, Construction Industry Analytical Report, Tanzania Mainland,

UN (2008). International Standard Industrial Classification of All Economic Activities Revision 4, Statistical Papers, Series M No.4/Rev.4

URT (2006). Local Government System in Tanzania