HOUSING, BUILDING AND CONSTRUCTION STATISTICS

1. Introduction

Statistics on housing, building and construction are quantitative information on all types of dwellings, non-residential buildings and other civil engineering works in respect of a country during a given time period. Building and construction can be classified into two sectors, but they have always been considered as one sub-sector in the System of National Accounts. They are separated from other items in the capital formation sector because the outputs are immovable. They are also based on virtually identical inputs. The Federal Ministries of Works and Housing & Urban Development are variously in charge of civil engineering works and housing in Nigeria. Some of the latter responsibility has been ceded to the Federal Housing Authority [FHA].

Some peculiarities of this sub-sector do not only affect the scope for data collection, but also the type of statistics that can be collected. The observed peculiarities are as follows:

(i) The items to be 'counted' in the sub-sector are heterogenous and, therefore, not easy to classify. This often limits the international comparability of data obtained. For example, houses as well as civil engineering works vary by type of design and material composition.

(ii) The building and construction sub-sector is not organised along factory lines. The organisation of production is more complex than that of the manufacturing sub-sector.

(iii) The outputs of the sub-sector are immovable and cannot readily be traded internationally and the tendency for each building and each piece of construction work to be a products of its environment is an added source of the heterogeneity of the output of the sub-sector.

(iv) Secondary sources of data are fragmented and consequently the statistics tend to be characterised by omissions, irregularities and unreliability. Almost every sub-sector of the economy is a secondary source of information on building and construction.

2. Coverage, Scope, Uses and Users of Building and Construction Statistics

This sub-sector is classified as a category of the International Standard Industrial Classification of all Economic Activities (ISIC), revision 3. It has only one division coded 45 and entitled Construction.

Building and construction statistics cover data on works undertaken in a given period on site preparation, building of complete constructions or parts thereof, civil engineering, building installation, building completion, and renting of construction or demolition equipment with operators. There is considerable agreement that such statistics should include some measure of the size and number of the items. However, the classification of buildings on the basis of some criteria for enumeration purposes usually reflects local circumstances.

Building and construction statistics have a range of uses, which include computing the value information on the capital formation component of national accounts. This can be achieved by combining physical measurements of items in the sub-sector with suitable price or unit value information. The statistics are also useful for population estimates in general town planning.

Similarly, information on the output of passive public assets during a given period can be used in monitoring the performance of Government in the provision of basic infrastructure, adopting appropriate statistical indicators.

Finally, the annual time-series data on building and construction activities are important ingredients for Government agencies and corporate bodies (especially State agencies) for planning purposes in the areas of housing and urban development. The data will be particularly useful to the National Planning Commission, researchers on Regional and Urban Planning, the Urban Development Bank, the World Bank and the Surveyor-General's Office.

3. Sources and Methods of Compiling Building and Construction
Statistics

There are two categories of sources of data on building and construction activities in Nigeria: administrative and surveys & census.

Administrative Sources

Nigeria's Administrative Statistics on housing, building and construction in Nigeria come from four main sources namely, Federal

and State ministries responsible for works and housing, Town and Area Planning Authorities, Major Construction Firms and Housing Corporations, Property Development Authorities, among others.

(a)   The Federal Ministries of Works and Housing & Urban Development and their State counterparts are directly or indirectly responsible for executing or supervising all building and construction activities of Government throughout the country and are therefore, major sources of administrative statistics on housing, building and construction in the country.   The Ministries are structured into various Departments and Division which generate series of administrative statistics in their day-to-day operations. Records of these departments at the Federal and State levels are always in such forms that the following details can be obtained in respect of public buildings and other passive assets:

Number, dimension (area, length, volume) and estimated values of works on buildings and other passive assets (roads, bridges, dams, airports, etc.).
-    commenced and completed during the year.
-    completed during the year.
-    commenced during the year.
The nature of work done could be: new construction, rehabilitation, maintenance, extension (dualisation) or demolition.

(b) Town and Area Planning Authorities.:
(i)   information on private building plans approved as
-    residential.
-    non-residential buildings with each category classified by size and estimated value.
(ii) information on major extensions and completed buildings are also available from the town planning authority if certificates are issued before completed buildings are occupied.

(c)   Major construction firms and Housing Corporations are sources of information on: number, dimension, and value of building and other engineering works
-    commenced and completed during the year.
-    completed during the year.
-    commenced   during   the   year   and   categorized   into residential/non residential and public/private.

Construction firms also provide information on other passive (usually public) assets such as roads, bridges, flyovers, dams and other structures.

(d) Property Development Authorities are good sources of information on existing and old buildings constructed under their authority.

(e) Other administrative sources include:
(i) records of public utility boards (water and electricity corporations) in respect of newly connected consumers.
(ii) tax returns of firms and households.

All these five sources overlap and call for cross-checking to minimise the duplication in counting.

Surveys and Censuses
The National Bureau of Statistics has made several attempts to collect data on building and construction through surveys and censuses. Three surveys were conducted before 1982. In subsequent years, surveys of construction industry were planned and executed in the same manner as the survey of manufacturing establishments. In 1988, Building and Construction were included in the modules of the National Census of Industries and Businesses (NCIB). The last major attempt by the NBS to collect data on building and construction was the survey of Nigeria's Capital Stock (NCS) which was sub-contracted to a consulting firm.

In the earliest surveys, attention was focused on the activities of establishments engaged in general building, civil engineering and other construction activities as well as special trade contractors. A minimum value of contract was used in drawing up a list of registered contractors to be included in the survey. The list Excl.uded the so-called petty building and construction companies. In the 1980 survey, questionnaires were mailed to 1025 establishments registered to undertake building and construction work worth N200,000 and above. Information was collected on employment, wages and salaries, costs, gross output, ownership of establishments and values-added. In spite of efforts made by the NBS to validate and cross-check the responses, some establishments did not submit authentic reports for fear of taxation.

In the 1980s, the NBS (then FOS) attempted to include building and construction survey as one of the modules of its establishment

surveys and censuses. Instead of financial status, employment as the basis for selection was used and establishments employing ten or more persons who engaged in the relevant kind of activity (building, civil engineering work, other construction work or special trades) were included in the survey. Later, the National Census of Industries and Businesses (NCIB) included establishments employing 5 or more persons, while a sample of those employing below five was carried out in 1988. The questionnaires used for the surveys and censuses overlapped in several areas and contained more questions than those used in 1980. They included questions on types of construction projects, purchases of building and construction materials and physical outputs of selected items of construction and civil engineering works. Most probably as a result of non-response and uncompleted responses, all these attempts made by the NBS to collect data on building and construction have not been very successful.

The last major step aimed at obtaining survey information on Nigeria's passive assets was the Measurement of Nigeria's Capital Stock for Economic Planning and Policy Analysis or Nigeria's Capital Stock Survey, commissioned in 1986 by the then Federal Ministry of National Planning (now the National Planning Commission). It was designed and executed by a consulting firm which used the field staff of the then FOS. It was a pioneering survey which focused on the physical enumeration, measurement and valuation of Nigeria's passive and active capital assets, including the development of a survey-based perpetual inventory model for Nigeria's civil engineering works. The aspects of the survey relevant to the development of a database containing housing, building and construction statistics are those on:
- household buildings.
- establishment buildings (medium/large, small).
- farm structures (modern and peasant farm).
- institutional buildings.

The six questionnaires administered for collecting information (FORM NCS 87 - 100 to 600) contain questions on location, ownership, size, age and value of different categories of buildings and structures.

The second part of the survey was the perpetual inventory model where attention was focused on data that can be used to estimate quantity and the current value of the country's civil engineering works, including roads, harbours, airports, railways and irrigation system. The questionnaire designed for the perpetual inventory

survey included questions on location, ownership, characteristics of asset (type of road surface, class of airport), age and historical cost.

In the progress report issued by the consultants, data collection for the two phases (capital stock survey and perpetual inventory survey) took about 18 months and response rate of about 50 per cent of the frame size was achieved in respect of mainly corporate bodies (medium and large establishments, modern farms and public institutions). Higher response rates came from households and respondents in the informal sector (household buildings, small-scale enterprises and peasant farmers). The final report is yet to be published but the experience of the consultants has confirmed most of the problems which have confronted data producers, especially the National Bureau of Statistics.

4. **Current Methods of Data Storage and Dissemination**
Nigeria does not have a system of building and construction statistics in the form of time-series of observations on key variables. The maiden edition of the **Digest of Statistics** published in 1994 by the then Federal Ministry of Works and Housing contained both in-house data and data generated by its relevant departments.

Before the publication of the digest, the then FOS was the sole agency responsible for publishing, on an ad-hoc basis, results of its building and construction survey. Data on building and construction are now available in hard copies of time-series in various publications, including:
-    Publications of the Federal Ministries of Works and Housing & Urban Development
-    ad-hoc reports on building and construction surveys conducted by the NBS.
-    Annual Abstract of Statistics published by the NBS.
-    Annual Reports and Press Briefings issued by the Federal Ministries of Works and Housing & Uran Development.
-    Unpublished Mimeographs.

During the survey of the Nigerian Statistical System conducted on a piece-meal basis between 1991 and 1993 by the UNDP Consultants to the the National Data Bank (NDB), it was gathered that the Planning, Research and Statistics Department of the then Federal Ministry of Works & Housing was penciled down for assistance in establishing a data bank. Subsequently, it was reliably learnt that the Ministry had a proposal to establish such a facility at its headquarters to keep time-series data of its activities. When this facility is set up by either

or both the current Federal Ministries of Works and Housing & Uran Development, they would become ministerial nodes of the National Bureau of Statistics.

5. NBS Data Base Coding System for Housing, Building and Construction Statistics

The attempt made in coding this sector follows the 1988, revision 3 issue of the International Standard Industrial Classification [ISIC]. Thus the division code or the first two digits of the code is taken from the ISIC. Going by this coding system, Housing, Building and Construction is given ISIC code '45'.

While efforts have been made to ensure that the Division Code or the first two digits of the code assigned to each variable confirms as much as possible with ISIC, the Items and Details Codes which form the last four digits of the code assigned for each variable are arbitrarily determined. The Division-Item-Details [DID] coding system is the basis for coding NBS's data sets. The item under each data set is the elementary entity or group of elementary entities (multiple-item cases), about which statistical data are gathered. For instance, "Highway and Road Activity Statistics in Nigeria" coded 4502 is an item with 10 details.

Generally, the National Bureau of Statistics is using a six-digit-code for attributes (variables). The first two digits are used to identify a particular division, the first four for a particular item under the division, while the next two to identify the items under that division. Where an item is repeated in two or more divisions, it is assigned the same 3rd and 4th digits code. The single-item cases have details peculiar to them such as Item 0203 titled "Length of Road/Highway Already Commissioned".

In coding the details, six digits are used to identify a particular attribute (variable) as follows: The first two are the division code, the next two for the item and the last two as the Detail (variable) under the division and the item code. Based on this coding system, the NBS data structure (Statement of Requirements) for Housing, Building and Construction Statistics in Nigeria is as shown below:

6. CONCLUDING REMARKS

The National Bureau of Statistics has made spirited attempts to produce time-series data on the building and construction sub-sector.

The peculiarities of the sub-sector as well as other problems of data collection in Nigeria (especially those of non-response and inadequate responses) have affected the quality of results achieved.

Since all the efforts of the NBS are survey-based and a substantial proportion of the required time-series data can be routinely collected by the line ministries responsible for building and construction activities, the onus is on the their PRSDs and those of the State counterparts to design a system for collecting and reporting building and construction statistics.

It is hoped that the proposals for the establishment of a data bank by either or both the Federal Ministries of Works and Housing & Urban Development would also be preceded by the building of data production capacities in their PRS and other relevant Departments and at the State level. Consequently, even if the data bank does not come on-stream early enough, the PRSDs will have the competence to produce data, especially non-survey-based routine statistics. The details identified in the SOR will provide a guide to the types of data to hold in the proposed data bank(s).