

MANUFACTURING STATISTICS

1. Introduction

Manufacturing activities have significant impact on the economy of a nation. In developed economies, for instance, they account for a substantial proportion of total economic activities. In Nigeria, the sub-sector is responsible for about 10% of total GDP annually. In terms of employment generation, manufacturing activities account for about 12 per cent of the labour force in the formal sector of the nation's economy. This is why manufacturing statistics are relevant indices of the economic performance of a nation.

Manufacturing statistics, as a component of industrial statistics, provide information on such sectoral activities as:

- [i] total production.
- [ii] Costs and other outlays accompanying such production.
- [iii] Inter-relationship between wages, salaries, interest rates, depreciation, business taxes and operating surpluses.

Consequently, manufacturing statistics, like other elements of economic statistics, are invaluable in the preparation of tables of national aggregates such as national accounts, input-output tables and relations.

2. Coverage, Scope, Uses and Users of Manufacturing Statistics

Activities in the manufacturing sector cover a broad spectrum ranging from light agro-based industries to heavy iron and steel companies. Manufacturing statistics should be provided on all tiers of Government; that is, Local Government Area, State, Regional and National levels. The sub-sector occupies an important position in the national economy both in terms of revenue generation and employment opportunities. Data on this sub-sector are therefore, crucial in the appraisal of the performance of the national economy in order to facilitate economic planning. Such data would help local and international investors make decisions on new investments in the sub-sector.

3. Sources and Methods of Compiling Manufacturing Statistics

Sources of data on manufacturing activities can be grouped into two. These are the secondary and primary sources.

The secondary sources of manufacturing data are administrative documents such as

- [i] tax returns.
- [ii] Balance sheets.

Most of the data on manufacturing which can be extracted from these sources are fragmentary and often relate to loosely-defined statistical units. Due to these and other familiar limitations of secondary sources, they are usually unsuitable as the basis for computing most economic indicators which are of interest in the study of the manufacturing sector.

Primary sources are, therefore, the most reliable sources of information on this sector. These are surveys which take place annually and censuses which are conducted less frequently. Such censuses and surveys include:

- [i] Sample Survey (e.g. labour force survey).
- [ii] National Integrated Survey of Households.
- [iii] National Censuses of Industries.

The most important primary source of data on manufacturing activities in Nigeria is the National Bureau of Statistics (NBS). Other sources are the Bank of Industry (BOI), Central Bank of Nigeria (CBN) and Manufacturers Association of Nigeria (MAN).

Although these agencies collect data series on some variables in respect of which NBS also collects data (e.g. costs, sales, investment and employment in manufacturing activities), their coverage of the establishments in the sub-sector is much smaller than that of the NBS.

Of the three major primary sources identified above (BOI, CBN and MAN), the CBN maintains an index of industrial production based on data obtained from the NBS. The apex Bank also generates (from its sample of MAN), the following estimates regarding certain groups of manufacturing activities on a half-yearly basis:

- [i] percentage of capacity utilised.
- [ii] percentage of raw materials locally sourced.
- [iii] cost and ex-factory price behaviour.
- [iv] capital investment.
- [v] employment.
- [vi] unplanned stock of finished goods.

A major limitation of the series produced by MAN is that the samples are not homogenous, and it is therefore, not meaningful to reconstruct annual series from the data obtained.

Initially, the NBS published the summary of results of industrial surveys in the **Annual Abstract of Statistics** for the whole country and for each of the States of the Federation. It included the following 8 details in respect of each ISIC four-digit or merged establishments:

- [i] number of establishments.
- [ii] number employed.
- [iii] wages and salaries.
- [iv] gross output.
- [v] industrial costs.
- [vi] value-added.
- [vii] net capital expenditure.
- [viii] non-industrial costs.

Also in **Industrial Survey of Nigeria**, the NBS publishes these summaries in greater detail for the country and for several years.

In addition to these regular and occasional publications, the Bureau also produces, in mimeographed form, summaries of results of industrial surveys containing some of the information listed above. The output of the NBS Quarterly Surveys of Industrial Production reported above is also made available to users in mimeographed form.

The CBN **Index of Manufacturing Production**, which is based on the NBS data and has 1972 as base year, is published in that organisation's **Economic Report, Economic and Financial Review** and **Annual Report and Statement of Accounts**. One limitation of this index is that the procedure for arriving at the weights is not published.

The Manufacturing Association of Nigeria (MAN) publishes two half-yearly reports annually. The series cover a range of topics for January-June and July-December of each year, including:

- [i] capacity utilisation.
- [ii] local sourcing of raw materials.
- [iii] employment.
- [iv] cost trend.
- [v] export of manufactures.

4. Current Methods of Data Storage and Dissemination

A vast amount of statistical information on production is provided by producers of statistics such as Government departments, ministries, parastatals and private sector organisations. The range of information is usually so wide and units of measurement so varied that summarisation in the form of indices is inevitable for the data to be useful for planning purposes at the macro level.

Another major source of statistical information on production, is the census of production which is based on infrequent surveys of virtually all known production units in an economy. As will be shown later, the data sets for constructing indices of production are obtained from both the frequent sample surveys of industries and the censuses of production.

Data on manufacturing activities are available in bits and pieces, in hard copies, files and occasionally in reports from various sources and summaries of activities at the Ministry of Industry, National Bureau of Statistics, Central Bank of Nigeria and Manufacturers Association of Nigeria. Some of these data are obtained through paper documentation, electronic and computer databases.

The National Bureau of Statistics may only be able to store aggregate or average information for all the sources where manufacturing statistics are obtained in its database. The storage of the data in aggregate form makes it possible for the data to be retrieved and disseminated to the various uses and users of manufacturing statistics.

5. NBS Data Base Coding System for Manufacturing Statistics

The attempt made in coding this sub-sector follows the International Standard Industrial Classification [ISIC], revision 3 of 1988. The division code (or the first two digits of the code assigned a six -code variable, which identifies the division to which the data set belongs) is, wherever feasible, taken from the ISIC. Going by this system, manufacturing is given the ISIC Code “5”.

The details are almost completely gender-specific in respect of observations on human beings. Even where numeric data are not available separately for male and female, the codes are created for each gender and the total for both genders.

While efforts have been made to ensure that the Division Code or the first two digits of the code assigned to each variable conform as much as possible to the 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 datasets. The item under each dataset is the elementary entity or group of elementary entities (multiple-item cases) about which statistical data are gathered. For instance, "Production of Meat and Meat Products" coded 1511 is an item with 63 details.

Generally, the National Bureau of Statistics (NBS) is using a six-digit-code for attributes (variables). The first two digits are used to identify a particular division; the first four digits for a particular item under the division, while the first two are to identify the division and the last two to identify the item under that division. Where an item is repeated in two or more divisions, that item is assigned the same 3rd and 4th digit code. The single-item cases have details peculiar to them. Based on this coding system, the NBS data structure (Statement Of Requirements) for Manufacturing Statistics in Nigeria is as shown below:

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6. CONCLUDING REMARKS

One of the greatest challenges in this sub-sector is the need to standardise data collection from the various segments. There is a considerable volume of statistics on the sub-sector, but there is a need for coordination.

The coding system proposed by the NBS offers a convenient way out of this problem, if every segment will put it into operation.