

Bangladesh - Annual Establishments Survey 1989

BANGLADESH BUREAU OF STATISTICS

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Overview

Identification

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Version

VERSION DESCRIPTION

PRODUCTION DATE
1990-07

Overview

ABSTRACT

The Annual Establishment Survey (AES) has been developed as part of an integrated program of the Bangladesh Bureau of Statistics (BBS) in order to provide timely information for various economic sectors needed for national accounting and other policy, management purposes. The Industry and Labour Wing has been formed in order to conduct economic surveys on the sectors that are not related to agricultural activities. Those sectors are: (i) Manufacturing (ii) Trade (iii) Service and (iv) Household based economic activities. These sectors have been divided into two groups, namely, small establishments and large establishments. In the manufacturing sector the small establishments are those that employ 19 people, and those that employ 10 or more people have been classed as large establishments. In the trade and service sectors the establishments that employ 1-19 people are called small establishments and those employing 20 or more people are large establishments.

The main objective of the AES is to provide annual estimates for the key variables in each sector. The variables are:

1. value of products sold or manufactured and services rendered (gross output)
2. value of raw materials and other inputs (industrial cost)
3. operating cost
4. input cost
5. employment by sex and category
6. employment cost
7. value of inventories (change in stock)
8. fixed assets
9. fixed assets information (capital expenditure)
10. gross value added
11. value added at factor cost

The information obtained for each non-agricultural economic sector is defined by an industry group following the Bangladesh Standard Industrial Classification (BSIC).

KIND OF DATA
Sample survey data [ssd]

Scope

NOTES

Small-scale manufacturing industries, wholesale and retail trades and some selected service industries as well as household based economic activities are within the scope of the survey. Excluded from the BSIC groups and sub-groups are:

1. Agriculture, Forestry, Hunting and Fishing
2. Mining and Quarrying
3. Electricity, Gas and Water
4. Constr
5. Transport, Storage and Communication
6. Financial Institutions
7. Insurance
8. Real Estate
9. Central Administrative Offices and Ancillary Establishments
10. Public Administration and Defense Services and
11. International Bodies

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
BANGLADESH BUREAU OF STATISTICS	Statistics Division, Ministry of Planning

FUNDING

Name	Abbreviation	Role
Statistics Division	SD	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
BANGLADESH BUREAU OF STATISTICS	BBS	Statistics Division, Ministry of Planning	Documentation of the study

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DDI-BGD-BBS-AES-1989-v01

Sampling

Sampling Procedure

The sampling strategy for each sector was determined on the basis of the survey objectives and the nature of the sectors. The total persons engaged (TPE) for the survey sectors (Wholesale Trade, Retail Trade and Services) are heavily concentrated in the area frame, since most of the establishments are small. The sampling for each of these sectors was designed to provide reliable result at a more aggregate level, as well as for the larger BSIC groups. The universe covered by this component of the AEIS consisted of all permanent establishments with 20 or more TPE in the Wholesale Trade, Retail Trade and Services sectors. The sampling frame consisted of a directory list of permanent establishments with names and addresses. The directory was compiled from data obtained from the economic census of 1986.

The overall sample size was determined on the basis of the precision required for the individual BSIC domains with an upper limit set by resource constraints. At the first step, the overall sampling strategy for each sector was determined on the basis of distribution of the establishments by size and optimum allocation criteria. Table-1 represents the distribution of establishments in the directory list frame by economic sectors and TPE size groups, and Table-2 shows the sampling rates for each sector by TPE size group determined for the sampling approach.

A one-stage systematic sample selection from a list frame with specified sampling rates is fairly straight-forward. For each stratum this sampling rate was determined by using Table-2. The sampling interval (l_h) will be the inverse of the sampling rate, obtained an integer random start (R_h) between 1 and l_h . The sample establishments were selected for stratum "h" beginning with the random start, and multiples of the sampling interval were added until the end of list for stratum "h" was reached. The selected establishments carried the following order numbers: $R_h, R_h+l_h, R_h+2l_h, R_h+3l_h$, etc.-----

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
1989-02-12	1990-02-26	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collectors

Name	Abbreviation	Affiliation
Statistics Division	SD	Ministry of Planning

Data Processing

Data Editing

Manual Editing :

After completion of the enumeration, the enumerators submitted the filled-in questionnaires to the headquarters. After receiving the questionnaires the respective officers checked the work of the enumerators. If any gross mistake or omission or duplication was observed the concerned officers, as far as possible, corrected it accordingly, and advised the concerned enumerators not to make such errors in future. Then the filled-in questionnaires were manually edited as per instruction provided to the editors. The edited schedules were checked on sample basis. If the error rate was found beyond acceptable limit for any editors, then 100% check was made.

Computer Processing & Tabulation :

After completion of editing and coding work, the filled-in schedules were sent for computer processing of the data. The data were keyed into diskettes and subsequently transferred into magnetic tapes, and were edited by the computer thoroughly to identify the suspected relationships among the data items and possible incorrect markings by the enumerators. Complete listings of the potentially erroneous questionnaires were prepared. These were reviewed for inconsistencies and corrected whenever found necessary. The data were then prepared for processing. Necessary computer programmes were written to produce statistical tables as per tabulation plan. A total of 86 statistical tables were prepared comprising all sectors/sub-sectors of the economy covered by the AEIS both through area sample and the list sample.

Data Appraisal

Estimates of Sampling Error

Sample Design for AEIS Area Frame of Small Establishments and Household Economic activities :

Initially, it was planned to obtain AEIS estimates at the district level. Later on, taking into consideration the budgetary and operational constraints, it was decided to concentrate on obtaining reliable national level estimates with urban and rural breakups. Thus, the sample frame was stratified by division (Chittagong, Dhaka, Khulna & Rajshahi), urban & rural, that is 8 geographic strata, and hoping that it may still be possible to obtain reasonable estimates for some of the most economically important districts, an implicit stratification was made through ordering of the EA's by districts for systematic selection of sample EA's. Taking into account seasonality within each economic sector, it was planned to carry out data collection throughout the 12 months of the year. Therefore, the survey was based on monthly national sub-samples of EA's covering the entire year. In order to improve the national-level estimates, a sample of 1440 EA's were allocated to each stratum in proportion to its size considering the number of persons employed in each economic sector and the variety of BSIC groups represented. Another 60 EA's having exclusively handloom activities were also selected for proper representation of all EA's constituting Bangladesh. Thus, a total of 1500 EA's were selected.

Variance estimation for the survey estimates :

The following formulas were used in calculating the ultimate cluster variance estimates for totals Variance Estimate for Totals :

$$\text{Var}(X) = \sum_h \left[\frac{N_h}{N} \cdot S_{ij}^2 \left(\frac{X_{hi} - X_h}{N_h} \right)^2 \right]$$
, where: $X_{hi} = \sum_k (W_{hjk} \cdot X_{hk})$, the weighted total of variable X for the i-th EA in stratum h.

Service Industries (business, community, social and personal services)-
1 Establishments of all sizes.

This part of AEIS was conducted for Service Industries with a long-form questionnaire for establishments having 20 or more persons working following the list frame and with a year reference period, whereas, a short-form questionnaire for smaller establishments having 1-19 persons working was used with a month reference period following the area frame. Data collected with two different frames and questionnaires were, however, combined together in 19 statistical tables of this part providing thereby, estimates for the establishments of all sizes by Industry Division (2-digit), Industry major groups (3-digit) and also by Industry Groups (4-digit) in some of the tables.

The main objective of the AEIS is to provide annual estimates for the key variables in each sector. The variables are:

value of products sold or manufactured and services rendered (gross output) value of raw materials and other inputs (industrial cost) operating cost input cost employment by sex and category employment cost value of inventories (change in stock) fixed assets fixed assets information (capital expenditure) gross value added value added at factor cost The information obtained for each non-agricultural economic sector is defined by an industry group following the Bangladesh Standard Industrial Classification (BSIC).