

# A Review Of Our Statistics

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It is needless to say that reliable data are the basis for economic planning, development activities, evaluation of various projects, research works and so on. But lack of reliable and dependable statistics is a well-known and long standing problem in our country as pointed out once again by the World Bank in a recent report. The old process of collection and analysis of primary data is being continued as ever without due regard to the methodology and other normal practices at various stages of inquiries. As a result the very basis of our development strategy is uncertain. It is high time that some positive steps should be taken to put the track on sound and correct footing.

**PRESENT STATISTICAL SYSTEM:** Bangladesh Bureau of Statistics (BBS) is the biggest Government organisation for statistical activities in the country. There are several departments in the Bureau. Population census, Agricultural census and Agricultural Statistics wings are the major departments. In addition, there are about 20 statistical cells operating under various ministries to cater to the needs of the respective ministries.

The main purpose of a national statistical net work is to provide adequate and proper feed-back to the agencies responsible for national planning and evolution of viable economic programmes. This objective is difficult to achieve because of (a) lack of trained personnel (b) failure to match the personnel with the statistical assignments, (c) small field staff compared with large official staff at the headquarters, (d) absence of appropriate scientific methods for conducting sample surveys.

Realising the important role of statistics, Government has created a sub-cadre for statisticians working in the Government offices and instituted a National Statistical Council as the highest policy-making body. But the statisticians working in various ministries/organisations have no entry in the former while the latter has become almost inactive and it has only 45 statisticians out of a total of 19 members.

Regarding teaching of Statistics, it may be mentioned that there are more than a hundred Government colleges in the country. But Statistics which is very useful in almost all spheres of our life, is taught in only 45 colleges. In many disciplines of Faculties of Commerce, Social, Science, Physical, Biological and other technical sciences, Statistics is invariably taught as a cognate subject.

But it is unfortunate that such teaching is usually done by persons who are not qualified in Statistics. Graduates in some of these disciplines are often appointed statisticians in various organisations.

Thus there are many factors that contribute to the problem in our statistics. This state of affairs should not continue any longer.

It will not be out of place to have a look at what is happening in India where Statistics has had a much congenial atmosphere to develop. Statistics is taught in many colleges. There are some Statistical Institutes for development of statistical methodologies suited to the needs of that country. The Indian Statistical Institute at Calcutta has long been entrusted with the task of conducting country-wide national sample surveys to obtain reliable and dependable data needed for national planning and development. A separate all India Statistical service has been set up for which recruitment is made by central public service commission through a competitive examination in Statistics only. Statistical councils at both national and State levels have 50% members as qualified Statisticians to advise.

The leadership in developing Statistical methodologies suited to the conditions of our country, is not forthcoming because of the incongenial and apathetic situation prevailing here. There is no substitute for accurate data. If the basic data on which far-reaching conclusions are to be made are wrong and unreliable, no theory or methodology can improve their quality and produce any miracle.

Many Government offices and autonomous bodies collect and publish primary data in course of their normal duties. These are gathered through respective field staff stationed at various places of the country. Usually, there is no scientific basis for collection of data at the lowest tier.

Improper use of statistical tools by persons with little or limited statistical knowledge is a main reason for deficiency in the quality of our statistics. Non-Statisticians are often appointed to the posts of purely statistical work. Naturally, appropriate and sophisticated application of statistical methodology cannot be expected of them.

In recent years, huge sums of money are often spent for collection and analysis of primary data through survey investigations. This is usually done with the help of private agencies and consulting firms for feasibility, baseline or ad-

hoc studies. For this, it is often observed that some urban and rural areas are selected purposively. Case studies are also undertaken sometimes at the instance of foreign advisers. But as is well-known, there are two drawbacks for such procedures, (i) errors of the estimates cannot be obtained and (ii) results are valid only for the investigated areas and not for the whole population.

Random or probability samples are free from these defects and should be adopted for collection of all kinds of data in this scientific age. At times, consulting agencies also conduct so called random samples mostly without due regard to appropriate methodology.

One main reason for poor quality of primary data obtained through field investigation is that the amount of money spent on field work is small in comparison with other expenses.

It happens sometime that sample designs for survey investigation are quite complicated but estimates are computed with the help of formulae of simple designs. This is not valid due to changes in probabilities.

Other reasons for poor quality of our basic data are due to non-sampling errors. These include lack of proper supervision of field work, replacement of inconvenient samples by convenient ones self-filling of questionnaires by interviewers inability of respondents to provide accurate information, changes of data at various stages without logical basis, non-response, communication and psychological problems.

It is also observed that due attention and effort are not usually given to tabulation, processing and analysis of raw data. As a result non-sampling errors creep in at this stage also.

**SOME SUGGESTIONS FOR IMPROVEMENT:** Basically, there are three ways of improving the situation. First collection of primary data by subjective methods like guessing or estimation is to be discontinued as soon as possible. Secondly, scientific sample surveys should be adopted for collection and analysis of basic data for all kinds of sample investigations. Thirdly, non-sampling errors should be minimised as far as possible.

First measure can be adopted by administrative decisions. Second measure is not difficult to attain. Modern sampling technology is available for designing sample surveys suitable for any situations. The methodology of multi-stage sampling with equal or unequal probability with or without replacement is so flexible that it

can be applied to almost all situations especially in large-scale surveys. Simplified formulae are available for estimates and standard errors especially for self-weighted designs.

Control of non-sampling error is much more difficult and complicated especially in our society which is beset with manifold problems. Some of the aspects of non-sampling error may be tackled by taking recourse to alternative methods. For example, in order to collect data on area and production of agricultural crops and on land use, plots in the fields may be selected on random sample basis and field investigators may go to the selected plots during season time and collect accurate information by themselves, without depending on the memory of mostly illiterate farmers. Observation technique, random checking, interpenetrating subsample etc. may be used for removing non-sampling errors. Intensive research and analytical studies are needed to devise ways and means for dealing with non-sampling errors.

Other ways to obtain better results include use of more money and efforts in field work, collection of data by local people, intensive supervision of field work, if any framing of questionnaires by psychologists etc.

It is thus clear that collection of dependable primary data is anything but an easy job. An independent institution appears to be the need of the hour for developing appropriate methodologies and for evolving ways and means for solving the problems faced at various stages of collection and analysis of reliable data. Such an institution may also conduct specialised training programmes for working statisticians. It may also maintain a data bank for use by workers of different fields of our national activities.

Indian Statistical Institute at Calcutta, Asian Statistical Institute at Tokyo and Institute for Social Research at the University of Michigan, USA, are internationally famous organisations which are engaged in these types of work. As an interim measure, a research and development section may be set up for the purpose at ISRT Dacca University, where sample surveys are undertaken on project basis for collection of primary data. The data-collecting firms and agencies are well advised to follow appropriate methodology and other normal practices for collection of basic data. Bangladesh Statistical Association and Statistics Departments of Universities may provide necessary advice and help in this regard.