

*Random Thoughts on Statistics and Surveys**

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I am thankful to the organisers for giving me the privilege and pleasure of being with you at the Workshop on 'Use of Surveys by Central Banks', organised jointly by the South-East Asian Central Banks (SEACEN), Irving Fisher Committee (IFC) - Bank for International Settlements (BIS) and the Reserve Bank of India. It is a collaborative effort of several institutions and spread over many countries, but with a unity in purpose. Let me extend a warm welcome to all our visitors.

I notice that participants from the central banks of several countries from Asia and Far East are participating and we had the privilege of having the guest speakers from the European and Asian central banks, apart from the speakers from the Reserve Bank. The schedule of the workshop indicates that a wide gamut of subjects relating to surveys in central banks has been deliberated upon in the workshop and different country perspectives have been appreciated. The valedictory address that I have been called upon to deliver is basically in the form of sharing some thoughts on statistics and surveys considered relevant from the perspective of central banking.

Today is the National Statistics Day, commemorating the birth of Shri P C Mahalanobis, FRS the founder of Indian Statistical Institute, who had contributed immensely for the development of statistics globally and in particular, in India. Professor Mahalanobis was President of International Statistical Institute in 1957, Chairman of United Nations Statistical Commission during 1954-58, and was associated with many other international fora. He was the architect of the Central Statistical Organisation and the National Sample

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Survey Organisation - two major statistical wings of Government of India. In his view, statistics is a 'key technology', having its bearing in every walk of life. This message has far reaching implications and the objective of National Statistics Day is to assess where we stand *vis-a-vis* international standards. Let me add that we observe Statistical Standards and Codes and follow best practice on coverage, periodicity and timeliness on data dissemination as prescribed in IMF's Special Data Dissemination Standards (SDDS).

As regards importance of statistics in national development, Professor Mahalanobis said:

"Statisticians, in fact, have a four-fold task in national development. Firstly, to conduct properly organised surveys for the collection, analysis, and interpretation of relevant statistical data. Secondly, on the basis of such information, to help in the choice of an efficient programme of action. Thirdly, when the plan goes into operation, to measure the progress of work and to assess the results achieved. And, finally, on the basis of such assessment, either to report that the work is proceeding as desired or to give the danger signal that the results attained are not proceeding in accordance with the plan or are not commensurate with the effort; in which case the plan itself may have to be modified. In this way the four-step cycle would begin again."

This succinctly explains the importance of statistics in the formulation of policy and its evaluation. Infact, many developments since the statement was made, in terms of technology, quantitative methods, and marketisation as well as globalisation have

reinforced what Professor Mahalanobis observed. The use of statistics has increased manifold and the demand is for real time or near real time data on almost all aspects of life and economy. The System of National Accounts and the related accounting system on balance of payments, fiscal and financial statistics provide the basic framework for collection of statistics. As the monetary policy responds quickly to emerging developments in the economy, and its effectiveness depends on market expectations, the set of data required for the same, like business expectations and inflation expectations, need to be collected through quick surveys.

With increased globalisation and liberalisation of financial system, informed decision holds the key to successful implementation of policy. While administrative (regulatory) and supervisory information are collected by statutory and control returns, information gap on financial statistics and other related areas in central banks is typically supplemented by surveys. In today's world, central banks' surveys conducted exclusively for monetary policy can broadly be defined as a type of analysis of conjunctural developments.

I would like to highlight the importance of surveys with reference to experience with regulation. In some economies, the control systems in financial and external sectors were dismantled without putting in place appropriate monitoring mechanism, which led to a vacuum in availability of information on ongoing economic activity. In other words, deregulation must be accompanied by appropriate monitoring systems, or alternatively, by surveys to

make up for the loss of information due to removal of controls. In fact, many analysts hold the view that the financial crisis that hit the Asian economies about ten years ago was partly occasioned by inadequate data on the activities of the banking system.

In highly deregulated regimes, sometimes, conducting a survey is the only option available for obtaining the data necessary for policy making. However, we do recognise that a survey has to be properly designed to serve the objectives. Firstly, quality of data derived from surveys depends on the methodology and standards used for these surveys. An international conference of this type is useful for sharing of country experiences on these issues and, hopefully, you will benefit by learning from varied experiences in making judgments on the complex issues involved.

Secondly, in a country like India with significant diversity, the matching of survey-design with target population is important. The diversity encompasses several languages, different customs and culture, and variation in levels of literacy and understanding. No doubt, respondents vary across objectives of surveys.

Thirdly, even a perfectly prepared questionnaire is of no use if large number of people fail to complete it. Thus, the main goal of any survey implementation plan should be to obtain a high response rate. As far as our experience with survey responses is concerned, we do not encounter problems with the regulated entities like banks from whom the response is generally more than 90 per cent in most of the surveys conducted whereas the response rate drops significantly when the

survey is conducted amongst non-regulated entities. However, the response of households to the inflation expectations survey is almost 100 per cent. Even after increasing the sample size considerably, we continue to get good response, though it is difficult to ascertain the reliability of responses from different categories of households, in view of the varying degrees of awareness. In any case, the erroneous responses in this sector are likely to be higher than in the case of banks and other financial institutions, where the percentage of erroneous responses is normally remaining in single digit.

Fourthly, survey data are subject to well-known types of bias. For example, since respondents know that they are being studied, and have at least some idea why, they may change their answers, either consciously or unconsciously, to show themselves in a better light or to conform to the expectations of those who are studying them. This is fairly common in inflation expectation survey.

Fifthly, from the perspective of policy-making, the primary purpose of conducting a survey is to produce data that will help answer important policy questions. Once collected, the data must be so collated, organised, summarised, and described as to be eminently useful for policy purposes. For example, summary measures such as means, frequencies, standard deviations, and correlations and creating tables and graphs that illustrate important findings, are of immediate use to us, though they need to be viewed with great caution, especially in terms of level of confidence that one can have in the sample estimate.

Finally, a word of caution. If conducted properly, surveys can accurately represent the opinions and judgments of a population of people but this doesn't mean that these opinions are right. Further, a survey can establish whether or not a relationship exists between two variables but may not be sufficient to determine the direction of causality.

Let me take this opportunity to share with you the survey-work by the Reserve Bank in India and our current intentions.

Among the surveys conducted by the Reserve Bank in the past, the most important one was 'All-India Rural Credit Survey'. Results of this survey had significant bearing on subsequent credit policies of the Reserve Bank. The objective of the survey was to collect data that would assist the Reserve Bank and the Government of India in formulating an integrated credit policy for rural credit and to assess the extent of indebtedness of rural households to financial institutions in the organised and unorganised sectors. After nationalisation of major commercial banks in 1969, there was need to evolve a suitable credit policy to meet the developmental needs of select sectors of high priority. In this context, the Reserve Bank conducted two separate surveys, viz., 'Survey of Small Scale Industries' and 'Survey of Traders and Transport Operators'. In addition, the 'Survey of Non-Profit Institutions Serving Households' (NPISHs), conducted by the Reserve Bank, provided information about the structure, employment, financial resources, financial performance, etc., of NPISHs. Furthermore, an *ad hoc* survey on 'remittance of non-

resident Indians' helped the Reserve Bank in formulating policies on non-resident deposits.

At present, we, in the Reserve Bank, are conducting around 20 surveys on a regular basis, with varying periodicity; we also conduct several need-based *ad hoc* surveys. In view of the size of the population of the country - in terms of individuals, corporates and financial institutions - we are sometimes consciously not considering the entire sector while conducting some of the surveys because of cost, time and efforts involved. In such cases, we are conducting some supplementary surveys to capture more details from reduced samples like the small borrowal accounts survey in the case of banking sector and survey of unclassified receipts in the case of external sector.

The surveys conducted by the Reserve Bank can be broadly classified into five categories. In the external sector, these include survey of foreign liabilities and assets for corporate, insurance and mutual fund sectors; coordinated portfolio investment survey; survey on software export; unclassified receipt survey used for BoP; survey on balances in Nostro /Vostro account used in BoP, and survey on non-resident deposits. In the banking sector, the surveys cover distribution of credit, deposits and employment; composition and ownership of deposits; investment portfolio; debits to deposit accounts; international assets and liabilities of banks and small borrowal accounts. In the corporate sector, the survey of performance of private corporate business sector, conducted since 1951-52, has been of considerable interest to the analysts.

Surveys in India directly relevant to monetary policy are industrial outlook survey, inflation expectation survey for households, and survey of inventories, order books and capacity utilisation. There are also *ad hoc* surveys such as census of non-banking financial companies not accepting public deposits.

Of greater interest to this group may be the steps recently initiated by the Reserve Bank to make use of survey methods for operational purposes like assessing the extent of financial inclusion. You may be aware that in India, Government as well as the central bank attach importance to financial empowerment of the rural poor and the Reserve Bank has taken steps for Financial Inclusion and spread of the Self Help Groups.

I should confess that we have to considerably strengthen the surveys required for formulation of monetary policy. In this regard, we are collecting information on the surveys conducted by other central banks. Among the surveys conducted by other central banks, we observe that some relate to household sector such as access to financial services, demand for housing, consumer confidence, credibility of monetary policy, *etc.* There are also those relating to markets

such as assessment of efficient and fair conduct of financial markets, survey of professional forecasters and of economists' expectations. I would, therefore, urge Dr. Barman and his team to monitor international developments carefully, take into account the country experiences and draw upon the expertise of the multilateral institutions in charting the further course of survey work in the Reserve Bank.

Before concluding this address, I would like to endorse two observations made by Governor Njuguna Ndung'u, Governor of the Central Bank of Kenya a couple of weeks ago (June 12, 2007) in his opening address at the workshop on the compilation of banking statistics in Kenya. First, there are varied users of the banking data such as Government, central bank, market participants, researchers, *etc.* The data and analysis, therefore, have to be user friendly. Second, he stated that the dynamic nature of our economies necessitates our becoming dynamic in our approach to data compilation. For my part, I would like to add, by way of concluding remarks, that in data or surveys, there should be consistency with global standards but the scheme has to be tailored to meet the domestic interests and needs. No doubt, we have to learn from each others' experience but need to adapt to the country-specific context.