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A Brief History of Statistics and its Development in the Indian Subcontinent

T. J. Rao
CRRao Advanced Institute of Mathematics, Statistics and Computer Science
Hyderabad, India

Bikas K. Sinha
Indian Statistical Institute
Kolkata, India

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Abstract

In this article we shall briefly review the history and evolution of Statistics in the Indian subcontinent, comprising of India, Pakistan and Bangladesh. We shall first discuss the Statistical System of India which laid the foundation for official statistics in all the three countries. After attaining independence in 1947, both India and Pakistan aimed at a socio economic development of the countries which involved a great deal of innovations and applications of Statistics as the new 'key technology'. We shall mention some of these efforts. Next we move on to the stage when the erstwhile East Pakistan has become Bangladesh in 1971 and describe its early efforts to establish a sound economy and the role played by its Statistics Division. We shall then discuss briefly the teaching of statistics and training of statisticians in these countries during the British period and immediately after independence. Finally, we shall take a brief look at the present scenario. Since the evolution of Statistics in India is documented well (Ghosh et al. (1999), Rao (2010), among others), we shall briefly review this aspect and discuss Pakistan and Bangladesh in some detail to the extent possible.

Keywords and Phrases: Statistical system in British India; Post independence Statistical Systems in India and Pakistan; Statistical System in Bangladesh; Central Statistical Organization; National Sample Survey; Indian Statistical Institute; Institute of Agricultural Research Statistics; Institute of Statistical Research and Training; P. C. Mahalanobis; P. V. Sukhatme; C. R. Rao; Q. M. Husain; National Statistical Commission; Federal Bureau of Statistics; National Statistical Council; Teaching and Training of Statistics; Five Year Plans; Quality Movement.

1 Introduction

Kautilya's *Arthasastra*, dated back to 3rd century B.C., gives a detailed description of the conduct of agricultural, population and economic censuses and of industrial and commercial practices in the villages and towns of ancient India, thus pointing out to a highly developed early official statistical system in ancient India. In another peak and glorious period of the Indian history under the great emperor Akbar's rule (circa 1590 A.D.), one finds a unique compilation of administration and control through various departments of government in the masterpiece *Ain-i-Akbari* written by Abul Fazal.

2 Statistical System in British India

The instability of the governments of the subsequent Moghul rulers during the 18th century led to the increased presence of the British who came to India as traders, businessmen, missionaries, plantation owners etc.. Statistical data collection and its maintenance needed for governance suffered and the British initially interested in trade, finally established the East India Company in Eastern India which turned out to be an organ of political power. Eventually, almost all of the undivided India came under the rule of British Empire (1757-1947). During the British Raj, in Eastern India, a 'permanently settled' system of tax collection employing Zamindars was introduced consisting of a permanent amount to be paid to the British treasury by the Zamindar by the sun set on a particular date. This 'permanently settled' system following the 'sun-set law' had a set back because of the non availability of the village level functionaries called *patwaris*. Also there was no official statistical agency for keeping track of primary statistics or the revenue.

It is at this point of time that the Court of Directors of East India Company sent an urgent dispatch asking for carrying out a statistical survey of the Presidency of Fort William. In 1807, the Survey of Eastern India was conducted by the Governor-in-Council, Dr. Francis Buchanan. This Survey covered an area of 60,000 sq. miles starting from the district of Rangpur and proceeding in the west and south directions of the Ganges up to the boundaries of the Company and ending up towards Dacca and the districts in the Eastern frontier. It covered 15 million British subjects at a cost of 30,000 Pounds. Buchanan's Report (Buchanan, 1807) was directed to a number of subjects such as topographical account of each district, conditions of the inhabitants, their religion and customs, the natural produce of the country, details on fisheries, mines and forests, vegetables grown, manure types, farm sizes, state of landed property, progress made in fine arts, commerce and a list of rare, useful and curious plants and seeds.

About thirty years later when Montgomery Martin was sent to India to assess the report, he was so impressed that he (Martin, 1838), himself eventually published *The History, Antiquities and Statistics of Eastern India* in three volumes covering nine districts of Bengal. A few years later, Col. Sykes established a small Department of

Statistics in 1847 in India House which can be reckoned as the beginning of an Official Statistical System for the British India. Baines (1918), while tracing the development and progress of Official Statistics in India during the early British days, comments that "*Official Statistics, in the present sense of the word, are the offspring of British rule*". He further adds: "*. . . . . from the introduction of the British rule, attention has been paid to the record of fiscal transactions and of the sea-borne trade. Administrative statistics followed fitfully, it is true, but keeping pace with the development of the Province, and dating back, accordingly, to different periods in each local series of returns*". The Department of Statistics initiated by Sykes, started to collate data and release a series of statistical papers on India from 1853. One could also trace early statistical records and a census published by Shakespear in 1848 which referred to the area and revenue of each *pargana* (district) in North West Provinces of Bengal.

The first census in the territories of what are now Pakistani Punjab and NWFP was undertaken in 1854 under the guidance of Richard Temple as the census officer. In 1881, a large scale census was carried out under Denzil Ibbetson, who later became the Lt. Governor of Punjab.

The East India Company had taken a few censuses during 1769-1855 and the Crown during 1858-1869 but these were fragmentary and lacked uniformity. In 1862 a Statistical Committee was set up for preparing model statistical forms for compilation of a uniform system of Imperial Statistics. This led to the publication entitled *Statistical Abstract of British India* in 1868. This publication was based on the returns of the local administrations and contained useful statistical information for all the British Provinces and became an annual feature till 1923.

The first systematic enumeration of the whole population of India by *actually counting heads* was attempted during the years 1867 to 1872. But this was not synchronous and also lacked uniformity. The second census of 1881 was synchronous, more complete and modern and continued every 10 years. Dynes (1899) comments thus: "*In the census of India, in Bengal, for example in 1881, steps were taken to cover all cases so effectively that everyone in the country on a given night was believed to be recorded, travelers on river boats or railways included, thus loosing, as the officials claimed, from a direct count only those absent on voyages by sea.*" Kingsley Davis (1951) while correcting and adjusting the census figures, notes that "*the Indian censuses are remarkable not only for the information they reveal but for the special obstacles they have had to overcome.*" For example, the 1931 reports appear in 46 separately bound volumes of huge size. During 1941, Census Commissioner, Yeats proposed to cut down the size of these volumes and resorted to the "*humbler role of just collecting the statistical data, doing as little as possible of writing and leaving the figures to speak for themselves*" (Davis, 1951).

It is interesting to note that the administrators also were responsible for releasing the Gazetteers of India along with the census reports. It is remarked that: "*No comparable area of the world has anything like the prodigious compilation of statistical data and demographic and historical material as a country which is almost a conti-*

nent in the immensity and diversity of its character" (Chaudhuri, 1964). Hamilton's Gazetteers of 1815, 1828 and Thornton's of 1854 are some of the early Gazetteers. Dr. W. W. Hunter was appointed in 1869 as the first Director General of Statistics in India and he submitted to the Governor General in Council a comprehensive plan for a coordinated statistical survey. This resulted in the *Statistical Account of Bengal* (Hunter, 1875) in 20 volumes. This survey was followed in other regions and by 1881 the Imperial Gazetteer of India was released in nine vols. covering 15 British Indian provinces comprising 240 districts. By 1885-1887 the size increased to 14 vols. and by 1901 to 26 vols. and the process of releasing gazetteers continued.

It is said that "*if the census officials in India have had any defect at all, it is that they have been scholars and government men first and statisticians second*" (Davis, 1951). The Census Commissioners, Risley in 1901, Gait in 1911 and Hutton in 1931 were all involved in anthropological surveys.

The publications *Statistical Abstracts for the several colonial and other possessions of the United Kingdom 1854-1868*, sessional papers, cmd. 146 and the *Statistical Abstract relating to British India, 1861-1870* (London, H.M.S.O. 1870) have a good collection of data. For a later period , data on prices and cost of living is found in *Statistical Summary of the Social and Economic Trends in India* (Subramaniam, 1945). Data for British India relating to various industries, demographic trends, levels of living of workers, estimates of national income among others are presented in *Economic History of India*: 1857-1956 (ed. Singh (1965)).

Several Commissions such as the Indian Industrial Commission (1916-1918) , the Royal Commission on Agriculture in India (1924-1925) and the Famine Enquiry Commission (1945) suggested special departments for Industries and Agriculture in the provinces as well, with qualified Statistical Officers to be self sufficient in the respective fields of statistics.

Before 1882, there was no systematic collection of agricultural data. Following the recommendations of the Indian Famine Commission, Agriculture Departments were opened in 1881 in various provinces. The Secretary of State forwarded a set of tables compiled in India Office. Even though they lacked uniformity and were incomplete, they were published in *Agricultural Statistics of India*, in two volumes one for British India and the other for Indian States. A Statistical Branch which was established in 1862 in the then Finance Department of the Government of India was converted to a full-fledged Statistical Bureau in 1895 and was given the job of scrutinizing and summarizing these volumes. This bureau was under the Director General of Statistics who also coordinated trade, industrial and price statistics. Thus, the Director General of Statistics was responsible for the compilation and publication of almost all the principal statistical information until 1914.

In April 1914, a separate Directorate of Statistics came into being. Subsequently, the Directorate of Statistics and the Commercial Intelligence Department were merged into a single organisation, which was renamed as the Directorate of Commercial Intelligence and Statistics in January 1925. *The Indian Trade Journal* appeared in 1906.

Data on exports and imports, balance of trade and the role of banks during mid 19th century to 1918 was reported in Shirras' book on *Indian Finance and Banking* (Shirras, 1919).

At this juncture, the question of adequacy of the statistical data available and the desirability and possibility of supplementing it was considered and it was recommended by two committees, the Economic Enquiry Committee, headed by Visweswarayya in 1925 and another by Bowley and Robertson in 1934 that the government should set up an Inter Departmental Committee which should look into the possibility of formation of a Central Statistical Office. Such an office should be chiefly for coordination and maintenance of all important statistics for the entire country.

3 Statistical System after Independence : India

Immediately after independence, an urgent need was felt for a statistical structure towards a socio-economic development. By then Mahalanobis has already established himself as an expert in organizing large scale sample surveys especially in relation to crop acreages and yield, besides developing theoretical multivariate statistical tools. He founded the Indian Statistical Institute in 1931. He was elected as a Fellow of the Royal Society based on his work described in the 1946 paper of *Journal of the Royal Statistical Society*. The government of India had appointed him as the Honorary Statistical Advisor in 1949 and a Central Statistical Unit was created under the charge of the Statistical Advisor in 1949. In May 1949, a permanent office for the Census and Vital Statistics was established under a Registrar General and ex-officio Census Commissioner. In 1951 the Central Statistical Organization was formally established. The Central Statistical Organization, recently termed as Central Statistical Office, is responsible for the coordination of statistical activities in the country and for evolving and maintaining statistical standards. National Income Accounting, Annual Survey of Industries together with follow-ups, and the compilation of Indices of Industrial Production and Consumer Prices are its most important activities. It also publishes Human Development and Gender Statistics, releases from time to time Trade, Energy, Construction and Environment Statistics, and provides training in Official Statistics.

Around the same time in the late forties, the National Income Committee established in 1949 and chaired by Mahalanobis, along with the Standing Committee of Departmental Statisticians, found large gaps in the statistical information.

It was on 18 December 1949 that the first Prime Minister of Independent India, Pundit Jawaharlal Nehru, expressed the desire that a sample survey should be organized covering the whole country to collect essential information. By 25 December an abstract scheme for organizing a National Sample Survey (NSS) had been prepared by Mahalanobis and was approved by the government in January 1950 and on 10 March the National Income Committee recommended the use of sampling methods to fill the gaps in information. Thus, in October 1950 the first round of data collection in the NSS took place.

4 Statistical System after Independence : Pakistan

The Statistics Division of Government of Pakistan has three main departments, namely, the Federal Bureau of Statistics (FBS), Population Census Organization (PCO) and the Agricultural Census Organization (ACO). The requirements for a socio economic development of Pakistan in accordance with the needs of the economy depend very much on reliable and timely production of data which the division collects. In addition to the population census, the division is also involved in agricultural and livestock censuses.

Immediately after independence, just like India, a Central Statistical Office (CSO) was established by the Government of Pakistan in 1950. Though periodic reviews took place, it was not until 1972, that the Central Statistical Office was upgraded to a full-fledged Statistics Division on the recommendation of IBRD Mission. The Division was re-organized in 1981 when the CSO was renamed as Federal Bureau of Statistics (FBS). Provincial Bureaus of Statistics are established at the provincial level to meet the data requirements of the provinces. Further, there are small statistical cells in Ministries at Federal and Provincial level.

The Government of Pakistan has recently approved the modernization of Federal Statistical System of Pakistan to make it more responsive to the national requirements and for purposes of increased autonomy and credibility. This includes merger of attached departments and technical wing of Statistics Division into a new entity "Pakistan Bureau of Statistics" and enactment of a unified statistics law.

The main statistical advisory body, namely, the National Statistical Council, headed by the Minister for Finance, Economic Affairs, Revenue and Statistics has been established for setting statistical priorities and it coordinates the functions of different statistical authorities at national level, advises and guides them on projects relating to filling of gaps in statistical data. Provincial Statistical Councils have also been constituted in the provinces for coordinating provincial statistical activities. The Statistics Division is Secretariat of the National Statistical Council while Provincial Bureaus of Statistics act as the secretariat of concerned Provincial Council .The Council ensures economic and efficient utilization of field services, machine tabulation equipment and other costly and scarce resources. In addition, it promotes research and training in statistics.

A high level Committee named as Technical Advisory Committee (TAC) headed by Director General, FBS and comprising of Panels and Expert Groups is also constituted to review the statistical system and functions of related organizations for improvement.

In the next few paragraphs we shall briefly outline the different types of Official Statistics collected by the division:

The Federal Bureau compiles and disseminates the National Accounts of Pakistan following the frame work of the UN SNA – 1993. GDP estimates based on the production as well as expenditure approach, at both current and constant 1999-2000 prices and details of industry -wise fixed capital formation are released.

The Bureau releases the Consumer Price Index, Producer Price Index and Whole-

sale Price Index on a monthly basis. In addition, Sensitive Price Index on a weekly basis is released on every Friday with the base year 2000-01 to assess the price movements of 32 food items and 21 other essential commodities. For 18 of these items, prices are collected on daily basis. Price statistics are also released for the International Comparison Program.

The State Bank of Pakistan (SBP) plays a major role in compiling International merchandise trade statistics for Balance of Payments (BOP) based on Foreign Exchange records. The FBS also produces and disseminates the monthly review of foreign trade and external trade indices and terms of trade on a quarterly and annual basis for total exports and imports and for selected commodity groups. The monetary and financial statistics as well as Balance of Payments (BOP) statistics are also compiled by the SBP. These conform, in general, to the methodology in the Monetary and Financial Statistics Manual (MFSM) and the Balance of Payments Manual, 5th Edition (BPM5). External Debt Statistics is collected by the Economic Affairs Division.

Modernization of the Pakistan Statistical System and data collection to match the international standards is being supported by various international agencies such as World Bank, Asian Development Bank (ADB), IMF, DFID and the GTZ. Pakistan is gradually improving its statistical system to meet the SDDS requirements of the IMF.

The most recent population census was conducted during 2-18 March 1998. The first census was conducted after independence in 1951, and again in 1961, 1972 (delayed by one year), 1981, and 1998 (delayed). The 2008 census is also delayed to 2010 or later. The first census during the British rule in the territories of what are now Pakistani Punjab and NWFP was undertaken in 1854. Sir Richard Temple, 1st Baronet was the census officer. In 1881, a large scale census was carried out under Denzil Ibbetson, who later served as Lt. Governor of Punjab.

5 Statistical System after Independence : Bangladesh

Bangladesh Bureau of Statistics which is under the Ministry of Planning consists of Regional Statistical Offices and Sub District Offices and has six technical functional wings relating to Census, National Accounting, Agriculture, Computer, Demography and Health, Industry and Labor.

On attaining independence in December 1971, large data gaps were noticed and the existing statistical system was found to be weak and disintegrated. The data generated by different agencies was inadequate, incomplete and the methods were inefficient.

It was in August 1974 that the Bangladesh Bureau of Statistics (BBS) was created by the government by merging the Bureau of Statistics, the Bureau of Agriculture Statistics, the Agriculture Census Commission and the Population Census Commission with a Director General as its head. About a year later in July 1975, a Statistics Division was created after a gap of one year which was under the Ministry of Planning. This division was supposed to provide guidance in policy formulation and also coordinate, develop and carry out all programs of training in official statistics. The

Statistics Division was headed by a Secretary who was also the Director General of Bangladesh Bureau of Statistics.

In 2002, the Statistics Division merged with Planning Commission while the BBS is now controlled by Ministry of Planning. BBS is responsible for generating all official statistics needed for preparing national plans and development programs. The Bureau has a decentralized network for a smooth implementation of its programs. Its head office is located in Dhaka, while the regional statistical offices and sub district offices are located in the 64 districts in Bangladesh.

The *Census wing* consists of three sections relating to Population Census, Agriculture Census and Economic Census. The first population census was conducted in 1872 during the British period and after attaining independence the first Agriculture Census and the first Economic Census were conducted in 1977 and 1986, respectively. The last recent population and housing census took place in 2001 and the country is gearing up to the next 2011 Census.

The *Agriculture wing* is responsible for collecting statistics relating to Agriculture which consist of structural and annual statistics. FAO guide lines are followed once in ten years to release the structural statistics, while annual and seasonal surveys are conducted to collect the annual statistics. A subjective method is followed for crop estimation of about 100 minor crops while an objective probability sampling technique is used for obtaining crop statistics for the 6 major crops. The traditional crop-cutting method which was used in the undivided Bengal by Mahalanobis and the Indian Statistical Institute is still followed for determining the yield rates of major crops. 9348 sample clusters of plots are covered in the last survey all over the country for measuring area cultivated and yield per acre of major crops. It is interesting to note that Circular cuts of 100 sq. ft. are taken from the plots reporting the crop within sample clusters. The cuts are located randomly from the sample plots. The 100 sq. ft. cut is obtained in three concentric circular cuts.

The main activities of *Demography and Health Wing* include inter-census demographic surveys on vital events, fertility, life expectancy, disability, nuptials etc. as well as post census enumeration checks. Gender statistics and demographic indicators are also released by this wing.

National Accounting Wing of BBS is mainly responsible for the collection, compilation and dissemination of statistical data on Gross Domestic Product, Price and Wage Rates, Foreign Trade, and Quantum Index of Industrial Production.

The *Industry and Labor Wing* is responsible for collection, compilation and dissemination of data relating to all economic sectors/activities except agriculture. Thus the main activity of this wing is to conduct Census of Manufacturing Industries, Annual Establishment and Institution Survey, Labor Force Survey etc.

Computer Wing of Bangladesh Bureau of Statistics (BBS) is a service oriented wing. It is responsible for data processing of different censuses and surveys conducted by BBS.

During 1992-2001, under the project 'Statistical Staff Training Institute' infras-

tructural facilities were developed and in all, 1800 personnel were given training in different courses for better data collection and dissemination. It is now desired to establish a modern and well-equipped statistical training academy in the country.

6 Teaching of Statistics and Training of Statisticians

The oldest Department of Statistics at Calcutta University was started by Mahalanobis in 1941. Faculty members made fundamental contributions in Multivariate Analysis, Construction of Designs, Sample Surveys and Inference. Mahalanobis thought that a Post Graduate Program could be much strengthened if the students were trained in Statistics at the undergraduate level itself. Thus in 1944, an undergraduate Department of Statistics was established in the Presidency College, Calcutta, the syllabus of which became a model for all other later Statistics Departments in India, Pakistan and Bangladesh. It may be noted that even before this, Basic Statistics was being taught as a paper in Mathematics Curriculum in several colleges in the Indian subcontinent. Among others, D.Basu and D.B.Lahiri, both of Indian Statistical Institute had such courses from Universities of Dacca and Rangoon, respectively.

Around 1947, Stuart Rice and Mahalanobis, both past Presidents of the International Statistical Institute, strongly felt the need of an International Program for Education in Statistics in "those countries which do not possess the present or potential resources of trained personnel". Subsequently, in 1950 an International Statistical Education Centre (ISEC) was established at the Indian Statistical Institute, Calcutta. Since its inception, the Centre has provided training for more than 1450 government statisticians from over 75 countries. These include statistical officers from Pakistan and Bangladesh as well.

C. R. Rao, was a student of the first batch of post graduate course of Calcutta University "*who influenced the growth of the Indian Statistical Institute (ISI) more than any one else except Mahalanobis and, along with Mahalanobis, is the most famous statistician to come out of the Indian subcontinent*" (Ghosh et al., 1999). C. R. Rao later became the Director of the world famous Research and Training School of the Indian Statistical Institute and organized the research and training activities.

In Pakistan, the Pakistan Statistical Association, which had since 1976 gone defunct and inactive, had been revived after about twenty years through the productive and effective efforts of a sub committee of the Association to meet the current requirements for the advancement of statistics, promotion of the interests of statisticians and development of statistical profession in the framework of Pakistan's National Statistical System. Unfortunately, Pakistan Statistical Association (PSA) became defunct again in 2004. The role of PSA seems to have been taken over by Islamic Society of Statistical Sciences (ISOSS), headquartered in Lahore. ISOSS in collaboration with various universities and institutes is active in organizing statistical workshops, short courses, symposiums and conferences at various places within Pakistan. It may be mentioned that additionally ISOSS also organizes biennial international conferences

held in different countries.

Department of Econometrics and Statistics started within the Pakistan Institute of Development Economics, an autonomous institution since 1984, helps in carrying out theoretical and empirical research in Statistics, Economics and related Social sciences besides organizing a course named Masters in Econometrics and Statistics. It also provides necessary background information for policy making. Departments of Statistics in the University of Karachi, Bahauddin Zakaria University in Multan and Peshawar University among others established around 1963, 1975 and 1976, respectively, also participate in the Statistical Education of the country. The Department which started in Punjab University, Lahore in 1950 was later converted into Institute of Statistics (Bio statistics) in 1954. The first under graduate program was started at a government college in Bahawalpur. Around 2001, Statistics is being taught in more than 600 colleges and at a post graduate level in about 26 universities (Ahmad, 2001).

Atiqullah (1995) while giving recommendations to bring about the necessary changes in the system of statistical education in Pakistan, reports that in 1995 Pakistan had about 40 Ph.D.'s in Statistics or related subjects and 12 universities offer Master's degree in Statistics. Habibullah (1992, 1999) discusses statistical education in Pakistan and training of Pakistani teachers of Statistics. For encouraging doctoral/post-doctoral research, Fulbright Scholarship Program, Commonwealth General Scholarship Program and HEC Indigenous PhD Fellowship Program have been introduced.

Department of Statistics, University of Dhaka now known as Department of Statistics, Biostatistics and Informatics, University of Dhaka was established in 1949 with Q. M. Husain as Reader and the Founding Head of the Department.

Early in 1921, S. N. Bose moved to Dacca University from Calcutta as reader in Physics. Regarding his work on derivation of Planck's Law, he said:

"I was not a statistician to the extent of really knowing that I was doing something, which was really different from what Boltzmann would have done from Boltzmann statistics. . . . . applied the statistics in my own way, but I did not think that it was different from Boltzmann's statistics." Thus Bose not only recognized the importance of statistics, but perhaps should be regarded as the first person to realize the need for introducing Statistics in Dacca University. Husain was a physicist working under Bose and on the recommendation of Bose was sent on deputation to the Indian Statistical Institute(ISI) from Dacca University to study Mathematical Theory of Statistics during April – December, 1937. He received a Diploma in Statistics from ISI in 1938 as well as an MA degree in Mathematics from Calcutta University. Statistics as a course was first introduced for B.Ag. students of the Dhaka Agricultural Institute in 1939 by Husain. He had a Ph.D. from Dacca (now known as Dhaka) University in 1951. Known for the 'Husain's Chain Rule', he was the first academic statistician of East Bengal, now called Bangladesh. The University of Dhaka introduced Statistics as an optional paper in the BSc honours level in 1940 and in MA/MSc courses in 1941 and BSc pass course in 1944. The first batch of MA/MSc in Statistics from the Statistics Department of the Dacca University came out in 1951, a decade after Calcutta started

its PG course, which by then had a department separate from Mathematics.

This department served as a focal point for development of Statistics immediately after independence in East Pakistan. Thus, the University of Dacca felt the need of a Statistical Institute as early as 1952. As a first step, Husain started a Statistical Survey Research Unit (SSRU) in the university with a separate constitution of its own. Eventually, The Institute of Statistical Research and Training (ISRT) was established in 1964 under Dhaka University with Professor Husain as the Founder-Director. The main aim and object of this institute is to provide facilities for training and advanced studies in statistics and to conduct survey and research on statistical methods and analysis. Husain is also known as Mahalanobis of Pakistan. Husain had great admiration and attachment for ISI and tried to develop ISRT in the image of ISI.

Another old Department of Statistics which started with three teachers and a batch of 15 M.A./M.Sc. students in 1961-62 was the University of NameRajsahi, founded by Professor K M Hossain. Three year Honours courses were introduced from 1962-63 session and Integrated Honours courses were introduced from the academic year 1992-93. The department also conducts research for higher studies leading to M.Phil and Ph.D degrees. Further, University of Chittagong introduced Statistics Post-graduate Degree Program in 1970. So did Jahangirnagar University in Savar, at a short distance from Dhaka. Of late, Shahjalal University of Science & Technology introduced this program in Sylhet in 1991. ISRT, Rajshahi, Chittagong and Jahangirnagar universities are publishing Statistical Journals.

During 1992-2001, under the project 'Statistical Staff Training Institute' infrastructural facilities were developed and in all, 1800 personnel were given training in different courses for better data collection and dissemination. It is now desired to establish a modern and well-equipped statistical training academy in Bangladesh like the newly started National Academy of Statistical Administration (NASA) in India.

7 Quality Movement in the Subcontinent

During his visits abroad in the mid-forties, Mahalanobis was impressed by the Quality Control (QC) techniques that were being used, and he advocated the use of these in the still growing Indian industries. Mahalanobis invited Walter Shewhart to India in 1947. Under his guidance, ISI organized a one-week conference on 'Standardization in Industrial Statistics' in Calcutta in February 1948 jointly with the Indian Standards Institution. The Indian Statistical Institute now has a full-fledged Statistical Quality Control and Operations Research Division with service units throughout the country to provide training, professional expertise and consultancy in all areas of Quality Management and Quality Systems related to the certification of ISO series and to conduct research.

The Pakistan Standards and Quality Control Authority (PSQCA), under the Ministry of Science and Technology, is the national standardization body which came into operation on 1 December 2000. It formulates Pakistan Standards and promulgates

these. PSQCA has also been established to advise the Government on standardization policies, programs and activities to promote industrial efficiency and development, as well as for consumer protection. The main function of the Department is to foster and promote standards and conformity assessment as a means of advancing the national economy, promoting industrial efficiency and development, ensuring the health and safety of the public, protecting the consumers, facilitating domestic and international trade and furthering international co-operation in relation to standards and conformity assessment. This rather young department plans to 'provide sustainable industrial quality infrastructure for global compatibility and market place through standards and conformity assessment'.

Bangladesh Quality Control is a quality inspection company in Bangladesh offering Quality Inspection, Factory Audit and Product Testing for buyers and importers. Bangladesh Quality Control performs Pre Shipment Inspection on behalf of its clients in order to ensure that finished products are in accordance with client's specifications and expectations. This is performed using random sampling techniques, commonly known as ANSI / ASQC Z1.4, BS 6001-1.

8 Development Plans in the Subcontinent

Encouraged by the first Prime Minister of India, Pundit Jawaharlal Nehru, Mahalanobis prepared the draft of the Second Five Year Plan at the ISI. Many important studies concerning planning and national development were conducted by the Planning Unit of the Research and Training School of the Institute. India is now in its 12th Five Year Plan. Early in 1948, Government of Pakistan established a Development Board for coordinating development plans of the provincial governments and a Planning Advisory Board was set up which drew up the First Five Year Plan in 1953 for 1955-60 which was approved only in 1958. With much instability around, the plans could not achieve what was expected. The scheduled Eighth Five-Year Plan for the years 1993-98 did not take off till 1994 and economic policies were decided through short term annual plans. In view of these difficulties, the Five year Plans are renamed as Medium Term Development Framework (MTDF) and such a frame work for 2005-2010 is made ready.

Before the birth of Bangladesh, the Planning Board of Pakistan used to evaluate the development plans of East Pakistan. Later in 1971 the Bangladesh Government established a Planning Cell, which mainly has the role of formulating a reconstruction and rehabilitation program. Subsequently, this cell has become a full fledged Planning Commission with effect from 31 January, 1972. It started off with the First Five Year Plan, 1973-78 (Islam, 1974) and in the words of Sheik Mujibur Rehman, it is "a plan for reconstruction and development of the economy taking into account the inescapable political, social and economic realities of Bangladesh". Due to high inflation and other uncertainties, this was followed by a two year plan, 1978-80. Even though the term of Fourth plan was 1990-95, it was approved only in 1995. The period of Fifth Plan

was supposed to be 1997-2002. However, the progress in development goals is slow and the targeted economic growth could not be achieved due to various reasons such as political instability, natural disasters (Noor, 2010).

9 A Brief Look at the Present Situation

A review of the present scenario relating to the Official Statistical System in India, would be easier if one refers to the Report of the National Statistical Commission (2001) which is almost like a treatise on the subject of Official Statistics. The Government set up a Commission in 2000 to address appropriately the growing statistical needs of the society under the Chairmanship of Dr. C. Rangarajan.

Based on the recommendation of the Commission, the establishment of a statutory apex body, to be known as National Statistical Commission (NSC) for policy-making, coordination and maintaining quality standards of core statistics has been implemented by a Government Order. This body assumed charge on 12 July, 2006. The Chief Statistician of India also acts as the Secretary of the Ministry of Statistics and Program Implementation. The Commission has recently constituted professional committees to assist it on various technical issues. The Central Statistical Office and the National Sample Survey Office have the same role as the earlier corresponding Organizations.

The recently inaugurated National Academy of Statistical Administration near Delhi would be helpful in enhancing skill development and capacity building of statistical personnel in the country. It is interesting to note Bangladesh is planning to establish a modern and well-equipped statistical training academy after a successful implementation of the project 'Statistical Staff Training Institute' for developing infrastructural facilities in the country.

10 Summing up

All the three countries, India, Pakistan and Bangladesh had the benefit of a well established Statistical System during the British period. Most of the civil servants (I.C.S.) were not only good administrators but were interested in the Anthropology, Agriculture, Population Sciences, Statistical Surveys and Censuses etc. This helped in building up a sound foundation for Official Statistics in British India. After independence in 1947, India was more successful in its plans and programs. Probably, Pakistan suffered from different types of instability. Bangladesh too could not attain the needed progress, once again due to instability, natural and untamed disasters.

It may be noted that Bangladesh or the erstwhile East Pakistan had great statistical heritage. It is evident that quite a few of the statisticians of Bangladesh/East Pakistan origin have earned international recognition.

India with its projects ISSP and SSSP is already modernizing its statistical system and Pakistan and Bangladesh are also following suit. India is a subscriber to the International Monetary Fund's (IMF) Special Data Dissemination Standards (SDDS) and

is currently fulfilling the Standards. Pakistan and Bangladesh too are adhering to the SDSS as we have noted in our review. The Ministry of Statistics and Program Implementation has been designated as the nodal Ministry to facilitate the implementation of the SAARC Social Charter in India.

The 15th Conference of the Commonwealth Statisticians was organised in India during 7-10 February 2011. The main purpose of the conference was "Commitment to sharing experience and information, continuous dialogue, collaborative networking, building trust, bridging gaps between people, infrastructure and processes for the strengthening and improvement of the statistical systems in the Commonwealth countries". We believe that this was an occasion for all the three countries of the Subcontinent, India, Pakistan and Bangladesh to have a successful participation and further the statistical ties between these countries.

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