



**REPORT
OF**

**THE INDIAN STATISTICAL INSTITUTE
REVIEW COMMITTEE**



GOVERNMENT OF INDIA
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CHAPTER I

INTRODUCTORY

1.1 The Indian Statistical Institute, Calcutta, was started in 1932 and registered as a non-profit-distributing learned society under the Societies Registration Act, No. XXI of 1860. Its Memorandum of Association is given in Appendix I. The Indian Statistical Institute Act, LVII of 1959 (Appendix II), which came into force on 1st April 1960, declared the Institute to be an institution of national importance. In pursuance of section 9(1) of the aforesaid Act, the Central Government appointed the present Review Committee on the 15th February 1966 to review and evaluate the work done by the Institute, to inspect its buildings, equipment and other assets and to advise the Government about (a) the strengthening and expansion of the regional activities of the Institute; (b) improvement in its administrative set-up and financial control and (c) its association with the National Sample Survey work. A copy of the notification constituting the Committee and detailing its terms of reference is given in Appendix III. The Committee was asked to submit its report within six months but in view of the volume of work and the need to consult various specialists, Indian and foreign, the time was extended to the 31st December 1966.

1.2 Immediately after the appointment of the Committee, the Chairman had informal consultations with such members as were available in Delhi and with Professor P. C. Mahalanobis, Secretary of the Institute. The Committee held its first formal meeting at Calcutta on the 21st March 1966 when it appointed four sub-committees to undertake a detailed examination of different points included in its terms of reference, *viz.*, (1) review and evaluation of technical and scientific work done by the Institute including its regional activities; (2) assessment of its association with the National Sample Survey work; (3) inspection and assessment of its buildings, equipment and other assets and (4) examination of the administrative set-up of the Institute and its financial and budgetary control. The composition of the four sub-committees is given in Appendix IV.

1.3 Dr. D. M. Bose, Director of the Bose Institute, Calcutta, though not a member of the Review Committee, was requested to accept the Chairmanship of the Technical Evaluation sub-committee. In spite of heavy pre-occupations, he acceded to the request and rendered extremely valuable service to the sub-committee as well as the Committee as a whole. The Committee places on record its deep obligation to him.

1.4 The members of the Committee examined a large volume of material. Over 1,200 closely typed pages were submitted by the Institute, the Central Government, some of the State Governments and a number of specialists in different fields. The Chairman and members of the Committee, jointly and severally, paid visits to the Institute and its City Office at Calcutta, the operating centres for

National Sample Survey work at Delhi and Giridih, the Statistical Quality Control units in Calcutta, Delhi, Baroda, Bombay, Madras, Bangalore, Ernakulam and Trivandrum and the Centres of Evening Courses at Madras and Trivandrum. The Committee, the sub-committees, and the Chairman by himself or with other members of the Committee, held discussions with eminent scientists, statisticians, economists and other specialists. These included persons on the staff of the Institute and officers of the Central and some State Governments. The Committee also met representatives of the Indian Statistical Institute Workers' Organisation both at Calcutta and Giridih. It was gratified to note that all classes and grades of workers of the Institute were keen about the growth and development of the Institute and put forward many constructive suggestions. Towards the end of its work, the Committee met the Council of the Institute and discussed with its members some of its tentative conclusions.

1.5 The work of the Committee has not been easy. The Institute occupies a unique position amongst scientific institutions in the country. Scientists are often men of exceptional quality and at times temperamental. A scientific institution therefore poses many problems of personal relations that are unknown to administrative bureaus and industrial concerns. Nor is it always easy to evaluate the work of a great scientific institution as it involves reference to technical data on which even experts often disagree. As already stated, the Committee has been helped in its difficult task by the cooperation of a large body of eminent scientists and other distinguished men. The approach of the Committee has been that the fine work done by the Institute should continue and circumstances created for still greater progress in the future. The Committee has not gone into details and has concerned itself mainly with broad trends and developments. It holds that its recommendations can be carried out within the framework of the Indian Statistical Institute Act, 1959, though some changes in the Memorandum of Association and the Rules of the Institute may be required.

ACKNOWLEDGEMENTS

1.6 The Committee wishes to acknowledge its indebtedness to the many distinguished statisticians, scientists, economists, administrators and others who gave evidence before it or helped through written notes and memoranda. It had the benefit of discussions, among others, with Prof. T. Kitagawa, Kyushu University, Fukuoka, Japan; Dr. R. C. Bose, University of North Carolina, USA; Dr. R. L. M. Syngé, Nobel Laureate, Rowett Research Institute, Bucksburn, Aberdeen, UK; Dr. D. R. Gadgil, Vice-Chancellor, Poona University and Shri Dharma Vira, Governor of Punjab and Haryana who as former Cabinet Secretary was incharge of the Department of Statistics. Dr. Leon H. Keyserling, Consulting Economist and Attorney at Law, Washington, formerly Chairman of the President's Council of Economic Advisers, USA, was invited by the Government to help the Committee in its work. In addition to interesting suggestions made during discussions, he submitted a memorandum which has been extremely useful. Sir Harry Campion, Head of the Central Statistical

Office, UK, was also invited by the Government but was not able to come. The Chairman had useful discussion with him during visit to London in other connection. The list of persons whom the Committee met is given in Appendix V. The Committee is grateful to all of them and others who gave their views on various aspects of the work of the Institute.

1.7 The supply of the voluminous material required by the Committee imposed considerable strain on the staff of the Institute and the Committee appreciates the promptness with which most of it was furnished. Special mention may in this connection be made of Shri B. Roy, Assistant Secretary of the Institute, who was appointed by the Institute to work as Liaison Officer with the Committee.

1.8 The Committee would like to place on record its appreciation of the help and cooperation extended by Professor P. C. Mahalanobis, Secretary of the Institute. Discussions with him and Dr. C. D. Deshmukh, former Minister of Finance, Government of India, and President of the Institute from 1945 to 1964, have helped the Committee to get a deeper insight into the programmes and problems of the Institute. The Committee is grateful to them for their assistance and help. In view of their long association with the Institute, it has included the memoranda submitted by Professor Mahalanobis and the record of discussion with Dr. Deshmukh as Appendices VII and VIII respectively.

1.9 Finally, the Committee would like to express its appreciation of the services rendered to it by its Secretary, Shri S. P. Jain, and his colleagues. Shri Jain has organised the work of the Committee in a most efficient manner and borne the main burden of collection of data and their analysis. Mention must also be made of Shri V. P. Luthra who has assisted Shri Jain ably in his work.

CHAPTER II

HISTORICAL

2.1 In the early twenties, a small group of young men gathered round Professor P. C. Mahalanobis, then Professor of Physics in the Presidency College, Calcutta, to discuss problems of mathematical statistics and the application of statistical methods to the solution of practical questions. It was at the initiative of this group that the Indian Statistical Institute was registered on the 28th April 1932 as a non-profit-distributing learned society under the Societies Registration Act, XXI of 1860. Sir R. N. Mukherjee was the first President of the Institute and held this office till his death in 1936. He was followed by a number of leading businessmen and industrialists as Presidents. In 1945, Shri C. D. Deshmukh, then Governor of the Reserve Bank of India, was elected President and continued till 1964 after which Shri Y. B. Chavan, now Home Minister of India, became President. From the inception of the Institute, Professor Mahalanobis has been its Secretary and has given it the best part of his life and energies. It is no exaggeration to say that it is mainly through his efforts that the Institute has attained its present status and dignity.

2.2 Four stages in the development of the Institute stand out clearly. In the beginning, it functioned as a scientific society and a laboratory for analytical studies. From 1938 onwards, the number and scope of its economic enquiries—of which crop estimation surveys were the most important—increased greatly. The third stage started in 1950 with its increasing collaboration with the Central Government, first in the National Sample Survey work and later when the Institute shared in the formulation of the draft plan-frame which formed the basis of the Second Five Year Plan of the country. The fourth and present stage began in 1960 with the coming into force of the Indian Statistical Institute Act when the Institute was declared to be an institution of national importance and given the authority to grant degrees in statistics.

2.3 In 1933, the Institute started 'Sankhya', the Indian Journal of Statistics, as its official organ. It soon came to occupy a leading place amongst the statistical journals of the world. In 1935, a separate non-profit-distributing organisation, called the Statistical Publishing Society, was registered to take over the financial and business responsibility for 'Sankhya'. This Society gradually built up the Eka Press which now prints a large number of scientific publications.

2.4 It was in 1935 that the Institute received its first research and training grant of Rs. 5,000 per year from the Government of India. This enabled the Institute to have a small whole-time staff of its own. Since 1937, sample survey of agricultural crops and a little later, large-scale economic and social surveys of all kinds became the

most important activity of the Institute. A survey of family budgets was conducted in 1938-39. Extensive work on crop-cutting experiments, started in 1939, still continues.

2.5 From the start, the Institute was engaged in research and training. Between 1932 and 1939, more than 150 persons from all over India came to the Institute for short training courses in statistical methods. Such training was largely on an individual basis. In 1939, in spite of limited resources, the Institute started an organised course of instructions which gradually developed into the present Research and Training School. The efforts of the Institute led to the establishment in 1941 of a post-graduate Department of Statistics in Calcutta University with Professor P. C. Mahalanobis as the Head. The first batch of students reading for the Master's degree passed out in 1943 with Shri C. R. Rao, now Director of the Research and Training School, topping the list. For five years, the University's Department of Statistics was located in the Institute and the entire teaching work was done by a joint staff which worked both in the University and the Institute. During the years, the activities of the Research and Training School have substantially increased. As mentioned earlier, after the passing of the Indian Statistical Institute Act, the Institute has acquired the authority to grant degrees in statistics.

2.6 As a result of the war situation, the Institute was advised to move out of Calcutta in 1942. A portion was accordingly shifted to Baranagar, the present premises of the Institute. Another portion moved to Giridih in Bihar where an operating centre of National Sample Survey work is now located. By 1945, the Institute had made substantial progress in all branches of its activities. The number of workers in the Institute had increased to nearly 1,000 and the budget to nearly Rs. 12 lakhs. The country was, however, passing through a difficult period, both economically and politically. This was having its repercussion also on the activities of the Institute. It was at this critical juncture that Shri C. D. Deshmukh agreed to become its President. In the meantime, the work of the Institute had steadily gained recognition in and outside India. In 1946, Professor P. C. Mahalanobis was appointed a member of the Statistical Commission of the United Nations. He was elected Chairman of the Commission in 1954 and Honorary President of the International Statistical Institute in 1957.

2.7 In 1949, Professor P. C. Mahalanobis became Honorary Statistical Adviser to the Cabinet. In 1950, the Government established the Directorate of National Sample Survey to fill gaps in the country's statistical information and to provide the Government and other organisations with socio-economic data required for planning and other purposes. In May 1951, the Central Statistical Organisation was set up with a view to securing better coordination of statistical activities in different Ministries of the Government of India and State Governments and promoting statistical standards. The Institute undertook the responsibility for preparing the design and processing the data for the entire National Sample Survey work. In order to retain immediate contact with basic data-collection work, the field work of data-collection relating to West Bengal and the city of Bombay

was entrusted to the Institute. For the rest of the country, this work is handled by the National Sample Survey Directorate. As will be seen in the relevant chapter, the National Sample Survey work of the Institute uses more than 60 per cent of its annual budget and nearly 50 per cent of its staff. Apart from field offices in different places in West Bengal and the city of Bombay, the Institute has data-processing centres at Calcutta, Delhi and Giridih.

2.8 In September 1954, the Institute was asked by the Planning Commission to undertake jointly with the Central Statistical Organisation and the Finance Ministry an examination of two important problems. The first concerned the possibility of solving the problem of unemployment in ten years and the second of increasing national income at a reasonably rapid rate. On the basis of these joint studies, a draft plan-frame was prepared by Professor P. C. Mahalanobis in 1955 which was accepted as the basis for the formulation of the Second Five Year Plan of the country. The Government held that the technical and statistical work undertaken by the Institute in this connection should continue with greater attention to perspective planning. It was thus that the Planning Division of the Institute came into being.

2.9 It was about this time that the Institute started its Statistical Quality Control work. Whole-time Statistical Quality Control units were established at Bombay, Bangalore and Calcutta. Later, more units were set up in Delhi, Baroda, Madras, Coimbatore, Ernakulam and Trivandrum. All-India conferences on Statistical Quality Control and visits to India by a number of foreign experts invited by the Institute gave great impetus to this movement. Statistical Quality Control work has been one of the most important pioneering activities of the Institute.

2.10 In recognition of the important role played by the Institute in various fields of statistics and considering the substantial financial assistance it received from public funds, the Government decided to place the Institute on a statutory footing by declaring it an institution of national importance. The Indian Statistical Institute Act was accordingly passed in 1959. With the passing of this Act, Government grants to the Institute substantially increased. The major activities of the Institute today are Research and Training, National Sample Survey work, studies in Planning and Statistical Quality Control.

CHAPTER III

ROLE AND OBJECTIVES

3.1 The work of the Indian Statistical Institute in statistics and allied disciplines will be better appreciated in the background of general development of statistics in the country. Apart from academic work relating to research and teaching in statistics carried on in the Institute and in a number of universities, different types of statistical work in the country may be broadly divided into three categories—(i) collection of administrative statistics; (ii) sample surveys and (iii) application of statistical techniques and methodology in various fields.

3.2 Independent India's developmental programme in agriculture, industry, education, health and other spheres increased the demand for reliable statistics for purposes of planning and administrative decisions. Most of the Central Ministries have statistical units to meet their operational needs. Each State has its own Bureau of Statistics. The collection of primary statistics is thus a part of administrative work of departments and government agencies. The Central Statistical Organisation functions under the Department of Statistics and is responsible for coordinating statistical work at the national level. The National Sample Survey Directorate has a net-work of trained investigating staff and together with the Institute supplies field data for the whole country on a uniform basis. The Institute is responsible for sampling and processing of data for the entire country and maintains groups of experts for the purpose. It also provides valuable checks for internal consistency, inter-state comparability and validity of final results.

3.3 In the development of statistics in India, the Indian Statistical Institute has played a leading part and has done commendable work in theoretical and technological fields. Its research and teaching work has been of high order. So also its work relating to Statistical Quality Control. With regard to its National Sample Survey work, the promise of earlier years has not been maintained.

3.4 In a statement before the Committee, Professor P. C. Mahalanobis said that the Institute has four-fold functions. It is a staff college; a research institute; a degree-awarding university and a project organisation. In actual practice, the Institute has gone far beyond the confines of the functions mentioned above. In the last ten or twelve years, it started a number of activities not strictly relevant to its work. These expanded activities today lack cohesion and homogeneity. In an over-all assessment of the work of the Institute, the Committee is of the view that the Institute would have done better if it had not unduly diversified its activities.

3.5 The objects of the Institute as set out in its Memorandum of Association are:—

- (i) to promote the study and dissemination of knowledge of and research on statistics and other subjects relating to planning for national development and social welfare;

- (ii) to provide for, and undertake, the collection of information, investigations, projects and operational research for purposes of planning and the improvement of the efficiency of management and production;
- (iii) to undertake any other activities which in the opinion of the Council may be usefully carried out by the Institute in furtherance of national development and social welfare.

In fulfilment of its objects, the Institute may undertake a large variety of activities detailed in paras 3.1 to 3.30 of its Memorandum of Association (Appendix I). These objects, the Committee feels, are too wide and there is need for clearer enunciation of the objectives and programmes of the Institute.

3.6 In the opinion of the Committee, the objects of the Institute should be modified so as to read:—

- (i) to promote the study and dissemination of knowledge of and research on statistics and related sciences and planning for national development and social welfare;
- (ii) to provide for, and undertake, the collection of information, investigations, projects and operational research for purposes of planning and the improvement of efficiency of management and production;
- (iii) to undertake any other ancillary activity in fulfilment of (i) and (ii) above.

It will be in the interest of the Institute to operate within a specified field instead of undertaking activities which are not legitimate functions of a learned society.

CHAPTER IV

(a) RESEARCH AND TRAINING SCHOOL

4.1 The Research and Training School of the Institute is its pivotal unit. It provides theoretical teaching in statistics and allied subjects. It is also a technological institution where practical training is imparted on the basis of live data and specific problems. Subject to general supervision by the Council of the Institute, the management of the School vests in a Governing Body composed of representatives of (i) the Council of the Institute; (ii) the Government of India and (iii) a number of public bodies. The Indian Statistical Institute Act, 1959, empowered the Institute to confer degrees in statistics and the B. Stat and M. Stat courses were introduced from July 1960. The School also accepts students for doctorate degrees. In addition, the School offers a number of diploma and certificate courses including one-year Evening Course in statistics at Calcutta, Delhi, Bombay, Hyderabad, Madras and Trivandrum. A list of these courses is given in Appendix VI. Professor P. C. Mahalanobis was the first Director of the School. In August 1964, he was succeeded by Dr. C. R. Rao, also a statistician of great repute. As an adjunct, the School has an international centre known as the International Statistical Education Centre established under the aegis of UNESCO in collaboration with the International Statistical Institute. The Centre has till now trained 500 scholars representing 26 Asian and African countries. It also offers facilities for specialisation to a limited number of senior participants and visiting statisticians. The School has maintained very high academic standards and has won appreciation for its work both within the country and outside. The Committee is glad to recommend that with the growing need for persons trained in statistics, the work of the School should not only continue but should be expanded and strengthened.

4.2 The Committee was told that even though the B. Stat course started only in 1960, there was a proposal for giving it up. Those who favoured this argued that much of the energy of professors was spent on under-graduate work and that it could be better employed in higher research and teaching. The Committee considered the question at length and had useful discussions with a number of eminent educationists. In the Committee's view, contact with younger students has many advantages and stimulates new lines of thinking. The Committee has therefore noted with satisfaction the decision of the Institute to continue this course.

4.3 It has been stated before the Committee that the syllabii for the B. Stat and M. Stat courses need to be revised. As too many subjects are included in the B. Stat course and tend to dissipate the energy of young students, the Committee holds that it would be adequate if in addition to English, Statistics, Mathematics and Economics, the general sciences are taught only in broad details. While both natural sciences and social sciences should form part of the syllabus, it may be considered by the appropriate academic body

whether it is necessary to teach both for all the four years. It may be an advantage to permit a student to drop one and specialise in the other in the final year of the course. It has also been represented to the Committee that it would be useful to include information theory in the syllabus for the B. Stat and the M. Stat courses. This point also may be considered by the appropriate academic body.

4.4 At present, the duration of the B. Stat course is four years. The M. Stat is a two-year course but students taking their B. Stat degree from the Research and Training School may, in certain cases, do it in one year. In the Committee's view, one year is not adequate for the M. Stat course. The duration of the course should be two years for every one and efforts should be made to get a larger number of students from outside the Institute.

4.5 The Statutory Committees appointed by the Government under section 8(1) of the Indian Statistical Institute Act have repeatedly recommended that scholarships should be awarded not to all B. Stat students but only to a proportion as is done in other technological institutions supported by Government. The Committee holds that all post-graduate students may be awarded scholarships but for B. Stat students, the recommendation of the Statutory Committees should be accepted. It should, however, be open to the Institute to award scholarships to a larger number of B. Stat students by raising money from other sources including industry and State Governments.

4.6 In addition to its main research and teaching work, the Research and Training School has the following research units in various disciplines:—

- (i) Anthropometry
- (ii) Bio-chemistry
- (iii) Bio-metry
- (iv) Botany
- (v) Chemistry
- (vi) Crop science
- (vii) Demography
- (viii) Meteorology
- (ix) Flood research
- (x) Geology
- (xi) Haematology
- (xii) Historical research
- (xiii) Linguistics
- (xiv) Physics
- (xv) Psychometry
- (xvi) Sociology

The existence of these units has been defended on the grounds that (a) statistics is a key technology with continually increasing application to a large number of industrial and social sciences and (b) useful contributions to statistical inferences, sample survey techniques, information theory, etc., have been made as a result of direct contact with problems in the fields mentioned above. It has been

argued that a centre of statistical research has on the one hand necessarily to work in close collaboration with active research groups in other sciences, on the other the latter have to be made conscious of the need of statistical methodology in experimentation, observation and inference. The Committee discussed this issue with a number of experts including Professor P. C. Mahalanobis. The latter holds strong views on the subject and considers these research units essential for the development of statistics. He has submitted a note on the subject given in Appendix VII.

4.7 After carefully considering the question, the Committee has come to the view that subject to certain conditions, the Institute may start and maintain small units in the Research and Training School for purposes of research. The advantage of such research is that it may throw up useful data leading to advances in statistical theory or technique. The Committee is, however, not in favour of such units being continued or started in a haphazard manner. Subjects for research should be selected with great care. Also, there should be intensive work in a few selected fields instead of frittering away time and resources over a wide range. To each unit, whether existing or to be started, the three-fold criteria suggested by Professor P. C. Mahalanobis should be applied, namely,

- (i) whether the unit is actually supplying, or is likely to supply in the near future, suitable observational and experimental data for teaching and research purposes;
- (ii) whether the unit is engaged on work of pioneering nature—this does not necessarily mean work of great significance for the advancement of science but it does mean something which is not merely imitative; and
- (iii) the extent to which studies on a thematic programme could be undertaken by collaboration between two or more units within the Institute or in collaboration with other research institutions and universities.

There should be periodic assessment to ensure that these criteria are being satisfied. A period of three to five years should be enough to decide about the utility of a unit. Eminent scientists from outside the Institute should be associated with such assessment. Besides, the continuance or start of each unit should have the specific approval of the Academic Council of the Research and Training School. The Committee is further of the view that expenses on such specialised units should not exceed twenty per cent. of the Research and Training School budget. The Institute should collaborate with other institutions and organisations in such fields of research to ensure the best results. As these units are intended to be temporary, collaboration with a suitable sister organisation would enable the continuation of the work and the utilisation of the personnel as and when the Institute decides to wind up or reduce a unit.

(b) PLANNING DIVISION

4.8 The Planning Division of the Institute is located at Calcutta and has a branch in Delhi. The research work carried on at Calcutta relates to various fields of applied economics and econometrics, such as studies in national income, trends in

the level and distribution of consumption, etc. The Delhi branch has been working in close collaboration with the Perspective Planning Division of the Planning Commission and the Ministries concerned with planning. Its research work includes development of suitable models of growth with corresponding long-period projections of consumption, movement, production, technical manpower and analysis of current problems, such as growth in agriculture and potential for mobilisation of resources. The staff of the Planning Division both at Calcutta and Delhi also participates in the teaching of economics, econometrics and planning for the various courses organised by the Institute. Seminars and lectures on advanced topics in these subjects are arranged for the benefit of research workers. This Division has been publishing a mimeographed series—"Studies relating to Planning for National Development" incorporating working papers and technical notes by visiting experts as well as members of the staff.

4.9 While assessing the work done by the Planning Division, the Committee has noted one serious defect. It arises from a lack of clarity in the Division's relationship with the Government. Since the Institute is an independent academic body, its Planning Division should also be independent of the Government. Its work is, however, closely integrated with the work of the Planning Commission which is purely a Government organisation. Professor P. C. Mahalanobis, Secretary of the Institute, is a member of the Planning Commission. The Head of the Perspective Planning Division of the Planning Commission is a Joint Secretary in the Institute. Thus, there is inter-mixture of both functions and persons between the Government and the Institute. It is difficult for the Planning Division, as at present constituted, to make an independent evaluation of the work of the Planning Commission or of the Plans formulated by it. It has also been represented to the Committee that many of the publications of the Division are not related to the urgent problems of the country.

4.10 The Committee has considered a suggestion that the Institute should provide training and research facilities in the subject of economic development and planning to trainees from India and abroad. This is a specialised field in which training even at the best of universities is either not available or is inadequate. Such training requires intensive theoretical studies and empirical orientation towards the problems of planning and development. For the proper formulation of plans and their implementation, the country would require a large number of persons trained in principles and practice of economic development and planning at the Central, State and district levels. Arrangements for such training must therefore be made on an increasing scale.

4.11 The Committee is satisfied that the Planning Division of the Institute has an important role to play if its activities are properly re-oriented to the practical needs of the country. The Division has the necessary expertise and academic talent to make an objective and critical evaluation of the economic policies of the Government. This it can do only if it functions independently of the Government

without the present intermingling of functions and authority. The Committee accordingly recommends that the Planning Division of the Institute should be re-organised into a Department of Economic Planning and Social Sciences to carry out training, research and appraisal in the field of planning. It should function entirely outside the Government but maintain close liaison with the Planning Commission without any organisational or personal link-up. It should also organise courses, short and long-term, for the personnel engaged in planning at various levels.

4.12 The Committee has given some thought to the question whether the new department as proposed above should function as an independent unit in the Institute. In the Committee's view, it would be an advantage if this Department constitutes a part of the Research and Training School. As research and teaching will be integral activities of the new department, this arrangement will bring the entire research and teaching work of the Institute under one directional control. The Department must of course have a person of requisite status and competence as its Head with a suitable designation. As branches of the Department will be located both at Calcutta and Delhi, it may be an advantage if the Head of the Department is stationed at Delhi. If this is done, he could also function as the regional head of the Institute at Delhi.

4.13 For the reasons already stated, the Committee does not consider intermingling of functions between the Planning Division and the Planning Commission or any other organisation of the Government to be healthy or desirable. It therefore recommends that the Delhi Unit should have no operational link with the Government and for this purpose, it would be desirable to shift the Unit at present located in the building of the Planning Commission to other premises. If the Planning Commission or any other Government department needs the services of some workers in the Institute, it could take them on deputation for a specified period. The new Department may also undertake consultancy work assigned to it by the Planning Commission, any other Government department or an outside agency.

4.14 The Committee understands that the Institute obtains considerable information on planning through the Delhi Unit of its Planning Division. It is necessary to ensure that this information, whether in possession of the Planning Commission or other departments of the Government, continues to be available. The Institute should also be in a position to study and wherever possible participate in the process of thinking involved in the formulation of Plans. The Committee is convinced that it is in the national interest to make the data used by the Planning Commission and Departments of Government more accessible and acceptable to scholars and research institutions. This will broaden the basis of national planning and ensure that all relevant factors are taken into consideration.

CHAPTER V

NATIONAL SAMPLE SURVEY

5.1 When the Government set up the National Sample Survey Directorate in 1950, its technical work was entrusted to the Indian Statistical Institute. Co-ordination in work is brought about by the Central Statistical Organisation. The National Sample Survey Division of the Institute constitutes its biggest single sector in terms of financial outlay and manpower. Its expenditure on this work during the five years ending 1964-65 was Rs. 352 lakhs. The budget for 1966-67 is Rs. 90 lakhs.

5.2 The basic data-collection in the country is the responsibility of the National Sample Survey Directorate except for West Bengal and the city of Bombay where it is done by the Institute. The rest of the work, from the planning of surveys to the preparation of reports containing the result of the surveys, is handled by the Institute with the help of funds provided by the Government. The processing and tabulation work in the Institute is carried out at three places—Baranagar in Calcutta, Giridih in Bihar and in New Delhi. The total staff employed in the National Sample Survey Division of the Institute is a little over 1100. Since the National Sample Survey started, 145 reports have been prepared by the Institute of which 109 have been printed and published. Before publication, these reports have to be cleared by the Government.

5.3 Before 1959-60, Government paid the Institute advance annual grants determined on the basis of anticipated expenditure for its National Sample Survey work. From 1960-61, at the request of the Institute, the basis of payment was changed to one of contract. This system remained in force for five years during which the Institute had interminable disputes with the Government regarding its dues. Deliveries of tables remained behind schedule. Since payments were to be against deliveries, a financial crisis faced the Institute. There was also no agreement about the basis of financial evaluation of work. As a temporary solution, the Government made 'on account' payments to the Institute. This attracted severe criticism by the Public Accounts Committee from time to time. Eventually at the Institute's request, the contract system was discarded with effect from 1st April 1964 and the grants-in-aid system revived. A three-man Committee was set up in May 1964 to examine the claims of the Institute for these four years and to recommend a settlement but it has not yet submitted its report.

5.4 In 1956, at the suggestion of its President, Dr. C. D. Deshmukh, who was then Finance Minister of India, the Institute invited a number of eminent statisticians from abroad to review its National Sample Survey work. This Committee consisted of the late Sir Ronald Fisher (UK) as Chairman and Mr. M. H. Hansen (USA); Mr. T. Kitagawa (Japan); Mr. A. Linder (Switzerland) and

Mr. F. Yates (UK) as members. The Committee in its report made *inter alia* a number of useful suggestions:—

- (i) More speedy publication of results—the time-lag between collection of data and publication of results must be reduced to the minimum;
- (ii) Better communication and coordination with users so that the work of the National Sample Survey reflects more fully the needs of various users;
- (iii) Stabilisation of certain parts of the programme—some of the important phases of work should be standardised both as to time-schedule and contents. Efforts must be made to simplify the questionnaires.
- (iv) Quick publication of results and elimination of delay at the clearance level;
- (v) Placing the field work and the processing operations under one unified control.

It appears that although ten years have passed, no action has been taken to implement these recommendations which remain equally valid today.

5.5 After discussions with a large number of experts, statisticians, economists, scientists and administrators, the Committee is convinced of the need to re-organise the National Sample Survey work and the Institute's association with it. The Institute is basically a scientific organisation and should not become involved in large-scale routine operations to the detriment of its more important work in teaching and fundamental and applied research. After huge outlays made over a period of years, the Government has not obtained timely data for planning and administrative purposes. Even under ideal conditions, the Institute would, according to the experts of its National Sample Survey Division, take not less than 27 months from the close of a round to publish the report relating to the round. In other countries, reports relating to a round are made available within twelve months and urgent data even within a few weeks or months. If the results of a survey are available after several years, their utility is greatly reduced. It appears that little use of National Sample Survey data has been made in any quarters including the Planning Commission.

5.6 Delay in the processing of data is not the only criticism of the National Sample Survey work. Before the establishment of the National Sample Survey, a large volume of statistics was being collected through normal administrative machinery by user organisations like the Ministry of Food and Agriculture, the Ministry of Labour and Employment, the Department of Economic Affairs, the Reserve Bank, etc. This information has, for convenience, been described as administrative statistics. It has been represented to the Committee that a good deal of data collected by the National Sample Survey involves duplication and hence waste of resources. The Ministry of Food and Agriculture holds that its data collection work has been hampered by the establishment of the National Sample Survey Directorate and considers the change to be a retrograde step. The question of reverting to the old arrangement is said to be under consideration by the Government at the highest level. The

conflicting figures of agricultural production published by the Ministry of Food and Agriculture and the National Sample Survey have given rise to severe criticism in a vital field and affected planning in respect of both production and supply of food.

5.7 Earlier, the Institute had done excellent work in the theory and applied technique of large-scale sample surveys and had conducted high-level research in the field of sampling. After its involvement with the National Sample Survey, this work which gave such high reputation to the Institute has been neglected and has now become its weakest spot. The Government is also not free from blame in the matter. There has been no clear concept regarding the aims and objects of the National Sample Survey work. The conflict between administrative statistics and National Sample Survey statistics has not been resolved. The financial dispute between the Government and the Institute has been allowed to drift. A contributory factor is the intermingled and confused relationship between the Institute and the Government. Professor P. C. Mahalanobis is the Secretary and executive head of the Institute. He is also Honorary Statistical Adviser to the Cabinet in which capacity he exercises supervisory control over the Central Statistical Organisation. The Institute undertakes National Sample Survey work on behalf of the Government. In other words, Professor Mahalanobis is both the giver of the contract and its executor. It has been suggested that this is a major reason for the failure to make an objective assessment of the performance of the Institute in regard to National Sample Survey work.

5.8 The Committee is of the view that National Sample Survey work should be re-organised to serve as a necessary instrument in national planning. It makes the following recommendations for the purpose:—

- (i) The entire National Sample Survey work consisting of designing, data collection, processing and interpretation should be brought under one unified control. This work, except for the State of West Bengal, should be entrusted to a new autonomous organisation under the Government which would take over the existing work both in the Institute and the National Sample Survey Directorate.
- (ii) All stages of the work relating to West Bengal, from designing to interpretation, should be done by the Institute so that it continues to have basic material for its research students. The proposed division of work between the new organisation and the Institute would also make it possible to have a comparative assessment of cost, efficiency and speed.
- (iii) As it is essential to have a uniform design for the whole country, the responsibility for finalising the design, including that for West Bengal prepared by the Institute, will be that of the proposed organisation in consultation with the National Sample Survey wing of the Institute and other competent bodies or specialists in the field.
- (iv) At present, the Institute has processing units at Calcutta, Delhi and Giridih. With the Institute's responsibility for work confined to West Bengal, it will not be necessary

for it to maintain the units at Delhi and Giridih. It will be for the new organisation taking over the National Sample Survey work to decide at what place or places its work will be located.

- (v) The work at present handled by the National Sample Survey is to a considerable extent repetitive and of doubtful utility. The collection of operational statistics by the normal administrative machinery should be strengthened and the Ministries concerned should assume full responsibility for data collection in respect of their own needs. This, the Committee understands, is the practice in UK, USA and Japan. The Ministries concerned may, however, utilise the new organisation for assigning to it such sample surveys as they consider desirable.
- (vi) The autonomous organisation proposed above should have an effective Programme Advisory Committee to fix priorities and to ensure that there is no duplication of work. This Committee should also be entrusted with the work of deciding upon the concepts and definitions for collection of data undertaken not only by the National Sample Survey but also by the administrative Ministries and the State Governments so that the data collected all over the country are comparable. It should be made obligatory on the data collecting organisations to conform to these concepts and definitions.
- (vii) The new autonomous organisation for National Sample Survey should principally concern itself with collecting statistics related to national income, consumer expenditure, capital formation, etc., and undertake enquiries in order to fill up gaps in the data for the estimation of national income according to the concepts and definitions formulated by the National Income Unit. It may also undertake enquiries (a) which pertain to the work of several Ministries; (b) which can, in the opinion of the Programme Advisory Committee, be undertaken more conveniently by the National Sample Survey and (c) which are entrusted to it for any special reason by a Ministry. In order, however, to put a check on unnecessary enquiries being entrusted to the new organisation, the user Ministry should be called upon to pay for the work on an agreed basis.
- (viii) In the interests of speed and efficiency, it should be permissible for the proposed National Sample Survey organisation to entrust such part of processing and other work as may be feasible to private firms on a contract basis. It should also organise its own computer facilities.
- (ix) The Committee understands that the Government is receiving ten Honeywell computers from USA. It recommends that one of these should be allotted to the Institute.
- (x) At present, the questionnaire is too detailed. It should be simplified so as to fall into two parts—(a) general which would be the same for the whole country and (b) regional

which would contain questions relevant to a particular region. Some reduction in the details of information will be more than compensated by reduction in the processing time. All enquiries should include two elements—(a) building up a time-series and (b) information capable of quick extraction for immediate use. In revising the questionnaire, care should be taken to ensure that its simplification does not defeat the long-term objective of building up an adequate time-series while ensuring that information urgently required is quickly available.

- (xi) Some enquiries, have to be done on annual basis while others may be on periodic basis. Instead of repeating the same enquiries year after year, it should be possible to categorise them as (a) annual; (b) periodic and (c) ad hoc.
- (xii) At present, there are heavy arrears relating to National Sample Survey work in the Institute. Time and money need not be wasted on completing the whole of this work. The Department of Statistics should immediately take a decision as to which part of this work should be completed and which part may be deferred. The work in arrears which has to be completed should be isolated and tackled separately by the new organisation. For work so transferred, the Government should pay the Institute immediately on the basis of recommendations made by the Committee on National Sample Survey contract work appointed by the Indian Statistical Institute in 1962. This will enable the Institute to meet part of its uncovered financial liabilities.
- (xiii) With employment of adequate man-power and machine resources, it should be possible to complete a given work within 12 months of the collection of data. Urgent data should be available earlier. Proper priorities should be fixed from the very outset.
- (xiv) The information whether collected in the past or to be collected in the future should be reduced to microfilm. It would be desirable to prepare three sets—one for the Indian Statistical Institute, the other for the National Library and the third for the National Archives.
- (xv) In order to avoid dislocation in work, the new arrangement may be brought into force from 1st April 1968.

5.9 The Committee strongly recommends that no employee of the Institute should be thrown out of employment as a result of the proposed reorganisation. This objective can be achieved by adopting the following steps:—

- (i) Recruitment to various posts in the new organisation should be made mainly from the existing National Sample Survey staff of the Institute. This staff falls into three broad categories—(a) designing; (b) data-collection and (c) processing. As the Institute will continue to

handle work relating to West Bengal and the designing for large or small samples would need approximately the same staff, the staff dealing with this work is not likely to be rendered surplus. As for the data-collection staff, only a small number employed for work pertaining to the city of Bombay will be rendered surplus which the new organisation would require for its own field work. It is the staff employed on processing work which will constitute the main problem. A major part of it may be needed for handling the current work and the rest for clearing the arrears. Absorption of staff by the new organisation will naturally take into consideration relevant factors like qualifications, length of service, etc.

- (ii) Staff who decline offer of employment by the new organisation shall cease to be the responsibility of the Institute. Any residual staff will remain with the Institute which will make every effort to find them alternative employment.
- (iii) While appointment at the existing locations cannot be guaranteed, every effort should be made to avoid hardship to low-paid staff inherent in transfer to a new place.

CHAPTER VI

STATISTICAL QUALITY CONTROL

6.1 Quality control is today recognised as an essential condition for industrial expansion. In a broad sense, it seeks to ensure that finished products conform to specified standards of appearance, utility and durability. Statistical Quality Control goes further—it is a management technique for larger and better output at lower cost. This is secured by maximum utilisation of machines, minimum rejection of products, reduction in operational costs, economy in raw materials and improvement in the quality of finished goods. The Statistical Quality Control units of the Institute at Bombay, Bangalore, Calcutta, Delhi, Baroda, Madras, Coimbatore, Ernakulam and Trivandrum are rendering this useful service to industry. These units maintain close cooperation with other institutes like the National and Local Productivity Councils, the Institutes of Management, the Institutions of Engineers, Textile Associations, etc. They organise general training courses for spreading the SQC movement and in-plant courses for creating a receptive climate for SQC in an industrial unit.

6.2 The Chairman and one or other member of the Committee have visited practically all the SQC units located at different places. Visits have also been made to some of the industrial units which are making use of SQC consultancy service. The Committee is glad to record that the SQC Division of the Institute is doing commendable work. There is an acute shortage of trained personnel and the Institute regularly loses members of its staff when more lucrative assignments are offered to them either by the industrial units which they have serviced or by other consultancy services in the field. In spite of these handicaps, the Institute's work has been highly appreciated in the industrial units which have availed of its services. Most of the industrial units including the public sector undertakings are, however, not fully aware of the benefits of SQC and it is necessary to create a better climate for this work.

6.3 The Committee is strongly of the opinion that the SQC Division of the Institute needs to be adequately strengthened. It needs more money and more trained personnel. Since SQC deals with men in commerce and industry, it is important that the Head of the SQC Division and the officers-in-charge of various units should have adequate status. At present, there is a diploma course in SQC at Calcutta. There should be similar courses at Delhi, Bombay and Bangalore to assure an adequate supply of trained personnel in different regions. This will require a two-fold approach. On the one hand, more persons will have to be trained; on the other, increasing awareness for the need of SQC will have to be created in industry so that the trained personnel may find suitable employment. The idea that all SQC work should be self-supporting is not quite tenable. Apart from training for which money would in any case have to be provided by the Government, the promotional work

in SQC will also need to be financed for some more time. The consultancy service, however, should aim at self-sufficiency.

6.4 The SQC units function under the overall guidance of the SQC Policy Advisory Committee. The Committee understands that the Chairman of this Committee, Dr. C. D. Deshmukh, resigned early in 1965 and a successor has not so far been appointed. No meetings of the Committee have also since been held. Coordination and guidance from a competent body is essential for units working at different places. The Committee would urge upon the Institute to reactivate this important body so that SQC work may receive proper guidance and attention from a central authority.

6.5 The Committee is of the view that in order to assure standards in industrial products, SQC must be used on an increasing scale. The public sector undertakings must give a lead in this regard. It should therefore be made obligatory on all public sector undertakings to make use of SQC techniques. This compulsion should also extend to factories which have an annual production of Rs. one crore or more. The application of SQC techniques acquires even greater importance in view of the national need to increase exports. The Indian Statistical Institute has an important role to play in this field but industrial units should be free to obtain SQC service from outside or by setting up their own units.

6.6 The Committee recommends that the Commerce Ministry should give a fillip to SQC work by making it obligatory for (a) public sector undertakings (b) large factories and (c) industries with an export orientation and by providing adequate subsidy for SQC activities. Even from the financial point of view, this will not mean any loss to the Government. The money spent in securing greater industrial output of improved quality will come back in the shape of larger taxes and will also help earn larger foreign exchange.

CHAPTER VII

MISCELLANEOUS ACTIVITIES

Society-Type Activities

7.1 The Institute started in 1932 as a Society and later took on academic and project work. Even after the promulgation of the Indian Statistical Institute Act, the status of the Institute as a society remains. The Institute has society-type branches at different places. The earliest were at Mysore, Poona and Bombay. Later, branches were established at Banaras, Madras, Lahore, Lucknow, Delhi, Aligarh and Trivandrum. The main work of these branches has been to organise lectures and discussions on statistical subjects. Branch activities have fluctuated a great deal depending largely on the initiative and enterprise of local members.

7.2 The Committee noted with regret that society-type activities in most branches have languished. The three active branches seem to be at Bombay, Mysore and Trivandrum. At Bangalore, the Chairman had a useful discussion with the President and members of the Mysore Branch. The members expressed the view that the Institute has not been taking sufficient interest in the branches and has in fact neglected its society-type work. They also mentioned that out of the subscription collected by a branch, two-thirds went to the Institute and only one-third was retained for expenditure in the branch. This was not sufficient to cover the activities of the branch.

7.3 The Institute is the premier statistical organisation in the country and has large resources, talent and manpower at its disposal. It should serve as a meeting ground for statisticians all over the country on a central as well as regional basis. Failure to bring statisticians on one platform at regular intervals has had a two-fold effect on the Institute. It has isolated the Institute from statisticians who do not belong to it and created avoidable prejudices. It has also given the Institute a sense of complacency. A continuous interchange of ideas with scientists and statisticians outside the Institute would have given a new dynamism to its development.

7.4 The Committee recommends that the Institute should pay special attention to its society-type activities by arranging conferences at headquarters and branches and publishing reports thereof; and by re-activating dormant branches and opening new ones. The Institute should be given adequate earmarked grant for this purpose. The Committee further recommends that the question of separating the society-type activities from the Institute may be examined after five years.

Development Workshop

7.5 A small workshop was established in the Institute in 1943 for the maintenance and repair of calculating machines and formed the nucleus for the Development Workshop which was started in 1950. The Workshop carried out development work on desk calculators and embarked on a project of manufacturing these calculators on a commercial scale with the help of machinery and equipment received as gift from the USSR under the United Nations Technical Assistance Administration. The project, however, faced many difficulties and by the end of 1965-66, it became clear that it will have to be abandoned. The Government grant for the purpose which had already exceeded Rs. 45 lakhs in ten years was accordingly stopped.

7.6 A visit to the Development Workshop revealed to the Committee that a major part of the equipment received from the USSR had not been used. Some of the machinery had not even been unpacked even though received some ten years ago. This equipment together with the staff is now being transferred by the Institute to the Garden Reach Workshop in Calcutta, a public sector undertaking under the Ministry of Defence.

7.7 The Committee is of the view that the manufacturing enterprise mentioned above was an unnecessary and wasteful venture. A small workshop for internal servicing of equipment is justified on grounds of convenience and economy but there was no justification for starting regular manufacturing activity on a commercial scale.

Electronic Division

7.8 At an early stage, the Institute realised the importance of the use of electronic computers for work relating to statistics and data-analysis. It started a small electronic laboratory in 1950. The current activities of the Institute in the field of mechanised computation fall under three broad categories:—

- (1) The Electronic Data Processing and Computation Unit provides computer services to public and private enterprises on a commercial scale with an IBM 1401 System.
- (2) The Computer Service Unit of the Research and Training School aims at evolving new computation and processing techniques and organises training courses in this field. Besides other training courses of various durations, the use of electronic computers in statistical computations is now a compulsory subject of study in all degree and other courses in statistics in the Institute.
- (3) The Computing Machines and Electronics Laboratory is engaged in the fabrication of modern computing equipment.

7.9 The Computing Machines and Electronics Laboratory has, in collaboration with Jadavpur University, developed an electronic computer which, it is claimed, is faster and larger than most of the existing computers in the country.

7.10 The work of designing and fabricating computers and their components is not, in the Committee's view, a legitimate activity of the Institute. The Institute had started these activities without proper planning and detailed consideration of the implications. Past experience has proved that large scale manufacturing activity will retard the work of the Institute in more vital and legitimate fields.

7.11 During discussions with the Review Committee, Professor P. C. Mahalanobis stressed the importance of computers for developing new methods and improving current practices in statistics. He expressed his disappointment that Government had not, on financial grounds, supported his attempts to obtain fast electronic computers for the Institute. Their use would have secured efficiency and speed in the tabulation of National Sample Survey data. The Committee has already recommended that out of ten Honeywell computers which the Government are receiving from USA, one should be allotted to the Institute.

Documentation Research and Training Centre

7.12 The Documentation Research and Training Centre of the Institute at Bangalore is doing useful work in connection with cataloguing, indexing, abstracting and retrieving documents with the help of scientific techniques under the guidance of Dr. S. Ranganathan, National Professor in Library Science, who is recognised as one of the foremost workers in this field. The major function of the Centre is its service to research and industry. Efficiency techniques in industry involve the study of a vast amount of technological literature. Documentation research provides guidance as to where the literature on a particular point may be found. To start with, documentation only helped to locate relevant books. The claim is that it can now locate relevant paragraphs.

7.13 The Committee has no doubt that the Centre is performing a useful and important function. It is, however, not sure to what extent its functioning under the Indian Statistical Institute is justified. It has been stated that the technology and machinery employed in documentation research are entirely statistical. The Committee recommends that for the time being, the Centre may continue as a part of the Institute but the position should be re-examined after five years.

Other Activities

(1) *The Kalyanshri Unit*

7.14 This is a cottage industry unit started with the object of studying the economic aspects of different crafts. For this purpose, a work centre was started on an experimental basis. Workers, mostly women, have been engaged on a piece-rate basis; their wages are met out of the sale proceeds of articles manufactured in the Centre. During inspection, the Committee found that the Centre is no longer active. Its products are purchased by the Institute itself and there are practically no outside buyers. There is considerable discontent amongst workers who demand placement on a regular

basis. In the opinion of the Committee, an activity like this is not a normal function of the Institute. The Committee recommends that the unit should be transferred to the State Government or a suitable voluntary organisation.

(2) *Appraisal Division*

7.15 This unit conducts research in statistical and psychometry theory and is oriented towards the development of improved methods of educational evaluation and personnel selection. Empirical studies are conducted on psycholinguistic meaning systems in the Bengali language, effect of the medium of instruction and examination on performance of science students, and "new mathematics" at the elementary education level. Theoretical studies are carried out on sampling estimates for psychometric errors of measurement and on component scores for selection and classification. The Committee does not consider the work of this unit to be relevant to the Institute's main objectives. To the extent its work is necessary, it should form a part of the Research and Training School.

(3) *Family Planning*

7.16 This unit is stated to have carried out several investigations with the help of a small group of workers on problems related to family planning, e.g., (i) efficacy of various agencies in transmitting family planning information and in discovering motives underlying both the acceptance and rejection of family planning, (ii) an attitude survey to determine primarily the factors affecting family size and (iii) a study of the rhythm method in exploring the pattern of sexual impulse in the human female. The Committee, appreciates the efforts of the Institute in this vital field but considers that the unit should find place in an appropriate organisation under the Ministry of Health and Family Planning so that its work may be utilised for family planning movement.

(4) a. *The Crop Museum*

7.17 This was started in 1960 and contains a collection of plant species, many of which are economically important. There are also over 150 rare specimens, mostly of medicinal plants and timber trees. An electronic device useful in detecting certain harmful insects inside plants has been made.

b. *Agricultural Chemistry*

7.18 This unit is engaged in research on (i) assimilation of elementary nitrogen by rice plants, (ii) fixation of nitrogen by algae at different depths of water-logged soils and (iii) chemistry of the decomposition of urea and ammonium sulphate in rice girds.

c. *Agricultural Farm*

7.19 The Institute has an agricultural farm in Giridih where experimental work on crop improvement is being carried on.

7.20 The three activities mentioned above are unquestionably useful but the Committee considers that they have no direct rela-

tion with the work of the Institute and should be placed under appropriate organisations in the Ministry of Food and Agriculture.

(5) *Visiting Scientists*

7.21 The Institute invites scholars from other countries to visit the Institute. There is an impression that a number of papers prepared by these foreign visitors have little practical relevance to the problems of the country. These visits, apart from their scientific utility, have an obvious public relations value. Some of these visits also result in reciprocal invitations to the staff of the Institute to visit institutions of higher learning in other countries which in itself is no small advantage. As these visits involve substantial expenditure, it is necessary that they should be carefully planned. The Committee recommends that a programme of invitations should be drawn up every year by the Director concerned and approved by the Executive Committee.

CHAPTER VIII

BUILDINGS AND EQUIPMENT

8.1 The activities of the Indian Statistical Institute are mainly concentrated at Calcutta. There are also regional centres for one activity or the other at Delhi, Giridih, Bombay, Madras, Bangalore, Coimbatore, Eranakulam, Trivandrum, Hyderabad and Baroda. Lands, buildings and equipment were acquired by the Institute from time to time according to requirements and against needs of future expansion. The capital expenditure grant given by the Government from 1951-52 to 1966-67 comes to Rs. 154 lakhs. The Chairman and/or other members of the Committee saw the buildings owned or hired by the Institute at different places.

8.2 The assets and equipment of the Institute fall into five categories:—

- (a) Owned buildings
- (b) Hired buildings
- (c) Owned land
- (d) Owned equipment
- (e) Hired equipment

The buildings owned by the Institute are situated mostly at Calcutta and Giridih. The cost of construction of owned buildings including sheds aggregates to Rs. 58.79 lakhs. Besides, the Institute is paying nearly Rs. 22,000 per mensem as rent for the buildings hired by it—Calcutta Rs. 8,000; Delhi Rs. 8,000; Giridih Rs. 2,000; other offices Rs. 4,000. During the last few years, the Institute has also purchased plots of land at different places as detailed below:—

Place	Area in acres	Cost of purchase (Rs. in lakhs)
Calcutta.	9.01	8.62
Giridih	4.03	1.44
Delhi	15.00	4.00
Baroda	3.41	0.28
Madras	5.87	0.21
Bangalore	21.26	1.53
Hyderabad	7.00	1.14

The value of equipment, machinery and vehicles acquired by the Institute out of government grants comes to Rs. 50 lakhs. This is in addition to the equipment for which hire charges amounting to

Rs. 12.61 lakhs are paid annually. The Institute has also a library which has over 1,10,000 books and journals.

8.3 Taking the owned buildings first, the Committee is constrained to remark that though the Institute spent Rs. 58.79 lakhs on them, their construction was undertaken without proper planning. In Baranagar, Calcutta, where most of the construction has taken place, buildings have been put up with no co-ordination and no master plan for present needs or future requirements. The standard of construction is often unsatisfactory. Some of the buildings lack essential amenities. The hostel for B. Stat students is below standard and that for M. Stat students hardly better. The cost of construction in practically all cases has been excessive in relation to standards and specifications. This visual impression of the Committee has been confirmed by the Additional Chief Engineer, CPWD, Calcutta, who has stated in his report:—

General standard of construction is poor; so also the general standard of maintenance. Architectural and structural planning are not up to the mark. Flooring in general is not done properly. Standard of wood work is also poor. Specification adopted is not proper for a permanent building of this nature. Size of frame and shutter thickness are much less than the standard adopted for such buildings. Number of toilets and lavatories provided are much below the requirements. Water proof is not provided over flat roofs. Plastering not done on the external surface and even on some interior surfaces.

8.4 The Committee was informed that most of the buildings put up by the Institute have been constructed through an organisation called the Baranagar Labour Co-operative Society. This Society has both workers and non-workers as its members. The Estate Officer of the Institute is the President of the Society. In entrusting the work to this Society, tender system was not followed. The Estate Officer in his capacity as President of the Co-operative Society executed the building contracts. In his capacity as Estate Officer, he supervised the work on behalf of the Institute. The training of this officer is only that of an overseer. Since the functions of the executing agency and the supervising agency are combined in the same person, it is not surprising that the standard of construction is so poor. Allegations of substantial leakage in the expenses on building operations were made before the Committee. It has accordingly made recommendations which should stop any further waste of public funds.

8.5 The position about hired buildings is also unsatisfactory. The Institute spends nearly Rs. 8,000 per month as rent in Calcutta and the same amount in Delhi. A sum of Rs. 3,270 plus taxes per month is paid to the Secretary of the Institute for the buildings 204 and 204/1, B.T. Road, Calcutta. In Delhi, Rs. 2,400 per month is paid for two buildings in which the National Sample Survey operating unit is located. Another sum of Rs. 2,500 per month is paid for the Guest House. An equal amount is spent on its maintenance. A sum of Rs. 3,000 is paid for six buildings which are used for housing records and as residence of staff for which proportionate recovery of rent is

made. This practice is followed at Giridih also. The Committee is of the view that the rent paid in Calcutta and Delhi is excessive and can be substantially brought down. Also, it is now recognised that combined official and private use of the same premises is not a healthy practice. There is a tendency to use a larger area for residential purposes. This always leaves room for doubt whether the portion of rent charged for residential purposes fully reflects the rent of the area in actual use. In view of the fact that the work of the Institute would be reduced, the question whether some of the buildings which have been hired from the office-bearers of the Institute could be returned, may be considered. The practice of carrying out additions and alterations to such rented buildings at the cost of the Institute and recovering the cost by increasing the quantum of rent is likely to be misunderstood and should be given up in future.

8.6 At Giridih, the Institute has a number of buildings both owned and hired. The offices are scattered at different places which makes coordination and supervision difficult. In the case of owned buildings, the construction is unplanned and poor in quality. Parts of various buildings are being used for storage purposes. It would be better if all the stores are kept together at one or two places. One of the buildings, Rose Villa, badly constructed like others, has a large unbuilt area running into acres. One particular building constructed by the Institute was intended to be used as a Health Centre. The Committee was told that it has hardly been used.

8.7 The Institute has in recent years acquired land at Calcutta, Giridih, Delhi, Baroda, Bangalore, Madras and Hyderabad. This has been done during a period when the Institute was passing through a financial crisis. A scientific and technical organisation must have adequate land and buildings not only for its present needs but also for future expansion. But acquisition or construction must be related to resources. It is regrettable that land has been acquired without any definite plan and by borrowing from sources that must remain inviolate.

8.8 As regards equipment, the Committee was told that most of it is being put to good and proper use. In view of the recommendation by the Committee that a substantial part of National Sample Survey work should be taken away from the Institute, the need for hired equipment will be reduced. While bringing about reduction in equipment, it should be ensured that equipment which has become obsolete and/or unsatisfactory should first be discarded.

8.9 The Committee makes the following recommendations in regard to the buildings and equipment of the Institute:—

- (i) Full assessment of the present and future utilisation of lands and buildings in possession of the Institute at Baranagar should be made. It seems that various plots of land in this area are not at present fully utilised. A comprehensive lay-out should be drawn up for the building activities of the Institute in this area for the next five years.

- (ii) The Institute should make plans as to how it proposes to utilise lands owned by it at different places. Lands not required in the foreseeable future should be disposed of as this would improve the Institute's financial position.
- (iii) The Research and Training School does not have adequate accommodation. The space provided for research workers is small and unsuitable. The School premises should be remodelled and more space provided for research workers.
- (iv) There should be a properly planned and phased programme for providing housing for essential academic and non-academic staff of the Institute.
- (v) Various units including records located in different parts of Calcutta should be shifted to Baranagar. This would ensure saving in rent and greater supervisory control. The premises at 9-B Esplanade East, should, however, be retained as the Institute must have a city office at Calcutta.
- (vi) The following steps should be taken to bring the building operations of the Institute under proper control:
 - (a) Before any new construction is taken in hand, the Executive Committee of the Institute should satisfy itself that extra accommodation is really needed.
 - (b) Proper procedures for scrutiny of plans and grant of financial and technical sanctions should be observed.
 - (c) All new construction should be entrusted to a reputed firm of architects who will be responsible for planning and detailing including sanitary and electrical installations and supervision thereof on mutually agreed terms which according to practice followed by the Institute of Architects would not in most cases exceed 4 per cent of the cost of construction.
 - (d) For each construction, open tenders should be invited and approved.
 - (e) Construction work should be supervised by a fully qualified engineer attached to the Institute. (The Committee noted with some surprise that even though Shri V. S. Bhat, a qualified engineer, is on the pay roll of the Institute, his services are utilised only for designing buildings.)
 - (f) Separate accounts for building operations should be maintained and a system of internal audit introduced so that no irregularity or leakage of money takes place.
- (vii) The Guest House at Delhi which costs the Institute nearly Rs. 60,000 per annum in rent, staff and maintenance is extremely expensive and unnecessary and should be closed. (This is also in accordance with the recommendations made by the Committee of Parliament on Public Sector Undertakings.) The guests of the Institute should

be accommodated in the Central Government hostels in Delhi or in a hotel. The position about guest houses at Calcutta and Giridih also needs to be examined.

- (viii) The practice of using hired premises for the combined purpose of official use and residence of staff should stop. Official requirements should be consolidated in one set of premises and separate premises may be hired, wherever necessary, for residential purposes.

CHAPTER IX

ORGANISATION AND MANAGEMENT

9.1 The Institute has membership of various categories. At present, the number of members is 389 consisting of 69 life members (including 5 honorary life members), 314 ordinary members and 6 institutional members. In addition, there are 79 sessional members and 156 student members. The General Body of the Institute is its controlling authority and elects the President who is the head of the Institute. One or more persons who may have rendered distinguished service to the Institute or to the advancement of statistics and allied subjects may be elected as Vice-Presidents. The President and Vice-Presidents have no specific functions and are not considered as office-bearers of the Institute.

9.2 Amongst the office-bearers are the Chairman, Vice-Chairmen, Treasurer, Secretary and Joint Secretaries. These are elected at the annual general meeting once in every two years or at such intervals not exceeding three years as may be prescribed. The Chairman presides at a general meeting of the Institute in the absence of the President and the Vice-Presidents. He has the right to give approval before its final confirmation to any regulation or statute in the case of emergency. He has certain powers of sanctioning capital expenditure. No separate executive functions are allotted to him. The Treasurer is the custodian of all funds belonging to the Institute. The Secretary has been given, subject to the control of the Council, all administrative responsibilities in connection with the affairs of the Institute. He is the chief executive agent of the Council in all matters, administrative and financial, and is assisted by Joint and Assistant Secretaries who exercise such authority as may be delegated to them.

9.3 The Council of the Institute consists of (a) office-bearers who are ex-officio members; (b) twenty members elected by the General Body; (c) three representatives nominated by the Government of India; (d) not more than five co-opted members elected by the Council and (e) Chairman and Secretary of each local branch of the Institute. The Council is in theory responsible for the management of the affairs of the Institute. In practice, this power is exercised by the Secretary. The Research and Training School has a separate Governing Body of its own. The regulations also provide for a Board of Management for purposes of ensuring smooth and co-ordinated work in the Institute.

9.4 The Committee feels that the administrative machinery of the Institute is extremely weak and ineffective. In earlier days, things were different. The Institute had a small band of devoted workers who looked up to Professor P. C. Mahalanobis for inspiration and guidance. All operations were based on dedicated service

and team spirit. Today, the Institute has developed into a large and complex organisation with an annual budget grant of the order of Rs. 180 lakhs and a staff of over 2300. The Institute's administration has not kept pace with its expanding functions and responsibilities. Neither the general body nor the Council as constituted at present is an effective instrument for managing the activities of the Institute. The offices of President, Vice-Presidents, Chairman, Vice-Chairmen and members of the Council have often been held by persons too busy with numerous other responsibilities to devote the necessary time and attention to the affairs of the Institute. The effective responsibility for the management of the Institute thus fell on the Secretary alone. All the activities in the Institute pivot round him. In theory, he can delegate his authority to Joint Secretaries and others. To a certain extent, this delegation is there. In practice, however, the officials concerned have hesitated to exercise the functions delegated to them. The Secretary has many interests in India and abroad which keep him away from Calcutta for long periods. The Joint Secretaries in the Institute who are expected to assist the Secretary in his work have generally been superannuated persons. Two young Joint Secretaries have recently been appointed—one for administration and the other for National Sample Survey work. Two superannuated Joint Secretaries, both part-time, still continue.

9.5 The Institute has not so far laid down any system of cadres nor formulated any rules for sanction of new appointments and creation of new posts. The staff in the Institute has not been classified. A proper appraisal of requirements of staff for various activities can only be made if there is classification of employees according to functional designations. In the absence of classification of staff, fixation of cadres and proper recruitment rules, there is justifiable discontent among the staff. High salaried appointments have been made without employing normal selection processes. Jumps in salaries have been given without conforming to any set rules. Without classification of staff and fixation of cadre strength, no norms of work can be fixed. It cannot be determined whether the staff is adequate nor whether the large expenditure incurred on overtime allowance is justified. The Committee made an interim recommendation to the Government that the Institute should take immediate steps to classify its employees into suitable categories. This work, the Committee understands, has not yet been completed.

9.6 An unusual practice in the Institute relates to the Leave Salary Fund. In Government service, a person becomes entitled to leave according to prescribed rules. This leave may be accumulated upto a particular limit beyond which it lapses. In the Institute, a person was allowed not only to accumulate leave indefinitely but also to cash on it if he so liked, instead of availing of it. And this encashment has been made at the rate of salary drawn by him at the time of encashment even though a major part of the leave was earned when he was drawing a lower salary. Some employees of the Institute have drawn several thousands of rupees in excess by way of encashment of leave at inflated salaries. The practice, except in the Research and Training School, has been discontinued since 1964.

9.7 Another unusual practice in the Institute may be mentioned. An employee at his discretion is authorised to spend for the Institute upto the limit of one month's salary without obtaining anybody's sanction and without even finding out whether funds are available.

9.8 The Committee is of the view that immediate steps must be taken to improve the administrative structure of the Institute. The Institute is a society of scholars and a professional organisation of statisticians. It is now also an institution of national importance. It is proper that its membership and administrative set-up should be such as would enable it to maintain and enhance its reputation. The Committee accordingly makes the following recommendations:—

(i) The authorities of the Institute should be as indicated below:

- (A) The President;
- (B) Two Vice-Presidents;
- (C) The Executive Committee;
- (D) The Council;
- (E) The General Body.

A. The President should be elected by the General Body of members once in four years on the recommendations of the Council. He should be a person distinguished in scientific and technical field so that he may be able to take effective interest in the progress of the Institute and its scientific and technical activities. He should also be able to represent it with distinction in national and international scientific meetings.

B. Two Vice-Presidents should be elected by the General Body of members once in two years.

C. The Executive Committee should consist of:—

Chairman	1
Director, Administration	1
Director, Research and Training School	1
Director or head of another Division in the Institute	1
Director, Budget and Finance	1
Representatives elected by the General Body	4
Nominees of the Government of India	2
Scientists and educationists outside the Indian Statistical Institute to be co-opted	3
	14

D. The Council should be re-constituted as follows:—

(a) Members of the Executive Committee	14
(b) Members elected by the General Body	14
(c) Representatives of staff of whom not less than 4 will be from the Research and Training School	9

(d) Elected by Fellows and Associate Fellows of the Institute	1
(e) Nominees of the Government of India	3
(f) M.Ps. from Lok Sabha	2
(g) M.P. from Rajya Sabha	1
(h) Representatives of the Inter-University Board	2
(i) Co-opted from amongst persons of eminence or benefactors of the Institute	4
	50

Representatives of the Research & Training School and other Departments will be elected by the respective staff committees. From amongst representatives of the General Body, three members will retire every year by rotation.

E. The General Body should consist of members with such academic and professional qualifications as may be prescribed by the Institute.

(ii) (a) The Executive Committee shall be responsible for the management of the affairs of the Institute. It will pass the annual budget in accordance with the five years' programme approved by the Council. In case of any substantial variations from the five years' programme, the Council will be duly informed. The Executive Committee will also lay down, subject to budget provisions, the limits of expenditure that may be incurred by heads of Departments or Divisions.

(b) The Executive Committee will lay down specific rules for recruitment, promotion, leave, punishment and appeal for all posts in the Institute.

(iii) The Council, in addition to the functions mentioned in rule 6.3 of the rules of the Institute, will approve a five years' programme of work for the Institute after taking into consideration the recommendations of the statutory committee appointed under section 8(1) of the Indian Statistical Institute Act.

(iv) The Institute should have the following office-bearers:

- Chairman;
- Director, Research and Training;
- Director, National Sample Survey;
- Director, Administration;
- Director, Budget & Finance;
- Other Heads of Divisions.

The Chairman should be a whole-time paid incumbent with the status of Vice-Chancellor of a University. He should be appointed by the Council for a term of not more

than five years, which would be subject to renewal, on the recommendation of a Selection Committee consisting of—

- (a) President of the Institute;
- (b) President, National Institute of Sciences;
- (c) President of the Indian Science Congress for the year;
- (d) Chairman, University Grants Commission;
- (e) Secretary to the Government of India, incharge of the Department of Statistics.

The Selection Committee will submit to the Council a panel of not more than three names.

All other office-bearers mentioned above will be appointed by the Executive Committee on the recommendations of duly constituted selection committees.

The Director, Budget and Finance, will assist the Chairman in the financial administration of the Institute and will be consulted regarding the availability of funds and propriety of expenditure in all financial matters other than those which fall within the competence of respective heads of Divisions under specific delegations made by the Executive Committee. If the Chairman over-rules the Director, Budget and Finance, in respect of expenditure beyond a limit to be prescribed by the Executive Committee, the case will be reported to the Committee.

The Director, Administration, will function as Secretary of the Executive Committee, of the Council and of such other Committees as the Chairman may direct.

- (v) The posts of Secretary, Treasurer, Joint Secretaries and Assistant Secretary should be abolished; so also the existing Board of Management.
- (vi) There should be the following five departments in the Institute:—
 - (a) Research & Training School;
 - (b) National Sample Survey;
 - (c) Statistical Quality Control;
 - (d) Library;
 - (e) Administration and Miscellaneous.

The Planning Division as reconstituted as also the Electronic Division should form part of the Research and Training School. Each of these units will be under the charge of an officer of requisite competence and status. In the case of Research and Training School, National Sample Survey and Administration, these officers will be called Directors. For other divisions also, suitable designations may be adopted. Each head of the Department/Division will exercise maximum autonomy within his Department/Division. Common subjects like transport, buildings, library, will be under the charge of the Director of Administration.

- (vii) The Research and Training School should have an Academic Council on the pattern of universities. The Academic Council should include some scientists from other academic bodies. The existing Governing Body should be abolished.
- (viii) There should be a Library Committee in which all Departments and Divisions in the Institute are suitably represented.
- (ix) In regard to matters within a Department/Division, the Director/Officer-in-charge will be assisted and advised by a staff committee. For coordination amongst various Divisions, there will be a Coordination Committee consisting of Chairman and Directors/Officers-in-charge.
- (x) The staff in the Institute should be immediately classified on a functional basis related to prescribed scale of pay.
- (xi) There should be no part-time employment in the administrative staff.
- (xii) The age of superannuation should be 60 years except in the case of the Chairman where it may be 65 years.

CHAPTER X

BUDGET AND FINANCE

10.1 The total expenditure of the Institute in the first year of its existence, 1932-33, was Rs. 238 out of which Rs. 50 were spent as registration fee. The budget increased to Rs. 24.75 lakhs in 1950-51 and Rs. 86.15 lakhs in 1959-60. The Committee has looked into the financial position of the Institute from 1960-61 onwards when it became an institution of national importance. The following table will show the total of current and capital expenditure of the Institute during the last seven years:—

Year	Amount (Rs. in lakhs)
1960-61	94.71
1961-62	120.76
1962-63	150.00
1963-64	154.00
1964-65	165.00
1965-66	172.00
1966-67 (R.E.)	180.00

10.2 With the coming into force of the Indian Statistical Institute Act, the efficient and smooth functioning of the Institute, including provision of funds for the purpose, became the responsibility of the Government. The Institute's independent character as a registered society however remained intact. This, in practice, created an anomalous situation. While the Institute has been getting funds from the Government for its non-project and project activities it has been reluctant to submit to financial controls usual in the case of institutions financed from public funds. The result has been that at the end of 1964-65, the Institute's debts mounted to Rs. 140.54 lakhs.

10.3 The Institute's system of budget-making and financial control has from the beginning not been in accordance with accepted procedures. Instead of each unit framing its own detailed proposals and a central organisation framing a unified budget, the budget of the Institute is prepared in the Central Office. Passing of the budget by the Council of the Institute is considered as sufficient authority for incurring the expenditure without waiting for sanction of funds by the Government. The Institute maintains a unitary system of accounts in which all receipts are kept in one pool. The Government sanctions grants to the Institute for specific activities/items. At times, the Institute has diverted monies provided for salaries, contribution to Provident and Gratuity Funds, etc., to capital and other avoidable expenditure or for satisfying previous liabilities thereby resulting in shortage of funds in respect of approved or committed schemes.

10.4 Under section 8(1) of the Indian Statistical Institute Act, the Government has the power to appoint a committee for

the preparation and submission to it, as far as possible before the commencement of each financial year, of statements showing programmes of work agreed to be undertaken by the Institute during that year for which the Government may provide funds, as well as general financial estimates in respect of such work and the settlement on broad lines of the programme of such work.

From 1960-61 onwards, each year the Government has been appointing a committee for this purpose, called the Statutory Committee. (Unfortunately, the Committee has till this year never submitted its report in time.) The Statutory Committee for 1964-65 mentioned in its report that the method of preparation of budget estimates followed by the Institute was inadequate and that many of the important details embodied in the annual budget statements of other scientific and educational institutions were lacking. The Committee added:

In order that no undue strain is caused to the Institute's financial stability, we deem it necessary to advise that the Institute should refrain from undertaking any expansion or fresh programme the funds for which are expected to be provided by Government unless it has received definite assurance from Government in advance to meet the expenditure.

The advice apparently went unheeded because the Statutory Committee for 1965-66 also made more or less similar observations.

10.5 The financial position of the Institute has deteriorated from year to year. Actual expenditure incurred has been in excess of the resources promised and made available by the Government. Since under the Act, the Institute functions as an autonomous organisation, and the Government does not have any direct say in matters relating to its administration, Government has not been able to prevent the Institute from running into financial difficulties.

10.6 Before the Committee makes its recommendations regarding budgetary and financial control in the Institute, it would like to touch briefly upon some unusual features of financial management which have come to its notice.

(a) *Common Services*: The common services budget of the Institute has no allocation of its own. Instead, its expenses are allocated to various other departments on a *pro rata* basis. In the closed accounts for the year 1964-65, out of a total expenditure of Rs. 147.39 lakhs, Rs. 104 lakhs represented direct expenditure, Rs. 37.58 lakhs common services expenditure and Rs. 5.35 lakhs library expenditure. In other words, excluding library expenditure, the incidence of common services on direct expenditure worked out to nearly 36 per cent. which is much too high. Out of Rs. 37.58 lakhs, Rs. 20.47 lakhs pertained to salary and allowances of a staff of 687 persons (Calcutta-576, Delhi 28, Giridih 83). This also is too high.

(b) *Borrowings by the Institute*: As mentioned earlier, the Institute's borrowings amounted to Rs. 140.54 lakhs at the end of 1964-65. The detailed break-up is as below:

Employees' Provident Fund	25.56 lakhs
Employees' Gratuity Funds	21.65 lakhs
Miscellaneous Funds	9.10 lakhs
State Bank	55.00 lakhs
Government of India	15.00 lakhs
Outstanding bills, etc.	14.23 lakhs
	<hr/>
	140.54 lakhs
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This situation arose mainly because substantial dues amounting to Rs. 106 lakhs claimed by the Institute from the Government on account of National Sample Survey work have remained unsettled. As already mentioned, the Government appointed a three-man Settlement Committee in May 1964. It is a matter of regret that this Committee has not yet submitted its report even after a period of 2½ years. At the end of 1965-66, the borrowings were reduced to Rs. 104.70 lakhs, largely as a result of part payment by Government against the dues claimed by the Institute on account of National Sample Survey work.

(c) *Funds*:—The Institute has eight special funds briefly described below:

(1) Supervision Fee Fund

In the earlier days, when the Institute undertook projects on behalf of sponsoring authorities, fees for their technical direction and supervision were credited to this Fund. From 1947-48 to 1952-53, accumulations in this Fund were Rs. 2.16 lakhs including interest. Out of this amount, Rs. 1.12 lakhs were spent for purchase of land. A large part of the balance has been borrowed by the Institute for current expenses.

(2) Development Fund I

Professor P. C. Mahalanobis worked as Honorary Secretary of the Institute from 1932 till his retirement from Government service in June 1948. Since then, he drew a salary of Rs. 3,000 per mensem. From 1st July 1963, he ceased to draw any salary and only availed of incidental advantages like travel expenses and daily allowance for his work outside Calcutta and medical care and other appropriate facilities. For a period of three years from 1951-52 to 1953-54, he offered to take a salary of Rs. 1,000 instead of Rs. 3,000, suggesting that the savings so effected might be kept at the disposal of the Institute for developmental and other purposes. The amount came to Rs. 72,000. In addition, for a period of six years from 1951-52, he allowed his house 'Amrapali', 204 B. T. Road, Calcutta, to be used by the Institute free of rent on the understanding that the rental value should be transferred to the aforesaid fund. This together with interest raised the amount of the fund to Rs. 1.08 lakhs. All this amount has been borrowed by the Institute for current expenses.

(3) Development Fund II

This Fund has a long history but it would be enough to mention that in 1956, the Government decided that instead of supervision fee, the Institute should be given a development grant of Rs. 2.5 lakhs per annum for three years. The Institute received Rs. 7.5 lakhs on this account during the years 1956-57 to 1958-59 and another Rs. 5 lakhs during 1962-63 and 1963-64. This together with interest brought the aggregate amount of the Fund to Rs. 12.82 lakhs. Out of this amount, the Institute has spent Rs. 9.96 lakhs on purchase of land, construction of buildings, purchase of vehicles, etc. A large part of the balance has been borrowed by the Institute for current expenses. The Government has held the view that the money in this Fund should have been utilised only for new experiments or lines of research and not on capital expenditure.

(4) Leave Salary Fund

This Fund was created in 1953 to accommodate the encashment of leave from time to time. It has a balance of Rs. 2.71 lakhs. As encashment of leave salary has since been abolished (except in the case of Research and Training School where also the Committee is recommending its abolition), the Fund has lost its utility. At present, the amount in the Fund has been borrowed by the Institute for current expenses.

(5) Gratuity Fund

The Gratuity Fund has been built on the basis of funding of salary for 18 days for each completed year of service of an employee in the Institute. Accumulation in the Fund at the end of 1965-66 was Rs. 24.71 lakhs. All of it has been borrowed by the Institute. Every year, Government makes a contribution of Rs. 2 to 3 lakhs on this account. Year after year, the whole of this contribution is diverted by the Institute for meeting other expenses.

(6) ISI General Provident Fund

As already stated, the Institute has utilised this Fund to meet its current liabilities. In addition to borrowings from the Fund, the Institute has also not been able to pay employers' contribution to it. The total assets of the Fund as on 31st March 1966 stood at Rs. 88.59 lakhs. The Committee felt strongly in the matter and made an interim recommendation to the Government that the Institute should be asked to register the Provident Fund immediately.

(7) Visiting Professors' Scholarship Fund

The Fund was created in 1952-53 to meet the expenses connected with the visits of scientists and teachers from abroad. The annual provision in the Fund has been at Rs. 1.5 lakhs with accumulation of savings upto Rs. 3 lakhs. In recent years, owing to rise in travel expenses and prices, it has not been possible to keep the expenditure of visiting professors within the annual limit of Rs. 1.5 lakhs and consequently there has been no saving. The balance in the Fund is only Rs 113. The Fund is thus more or less in disuse.

(8) Directors' Contribution Trust Fund

Like the Supervision Fee Fund, this Fund consists of fees received from various bodies that sponsor projects. In addition, Professor and Mrs. Mahalanobis gave cash donations to the Institute between 1932-33 to 1948-49 amounting to Rs. 5,600 which was added to the Fund. At the end of 1964-65, the amount in the Fund stood at Rs. 1.92 lakhs. Subsequently, the Fund was converted into a Trust. This Fund has also been utilised mainly for meeting current expenses.

10.7 From the foregoing it will be seen that the Institute has been incurring excess expenditure without reference to its resources. It has embarked on new projects, purchased land and carried out building operations when it did not have money even to meet its normal commitments. It has been running expensive guest houses and a costly hospitality organisation. There has been inadequate control of expenditure and lack of periodic scrutiny to ensure that expenditure is contained within available resources.

10.8 The Committee would like to point out that the Government are also not free from blame in the matter. They have not settled accounts and made necessary payments in time. This led not only to serious financial difficulties but also avoidable interest charges. Another unhealthy practice has been to refuse demands in the first instance and subsequently accede to them. Also, the Government have been imposing conditions and asking for details which the Institute considered to be irritating and time-consuming. The Statutory Committees appointed under section 8(1) of the Indian Statistical Institute Act have sometimes not been appointed in time and often made their recommendations in respect of a particular year long after the commencement of the year. This gave little help to the Institute and the Government in finalising grants to the Institute in the light of recommendations made. It is for this reason that the Review Committee made an interim recommendation that the Statutory Committee for 1966-67 should submit its report by June 1966 and that for 1967-68 by August 1966. The Committee feels that the Government should take effective steps to remedy these drawbacks and establish healthy and normal financial relations with the Institute.

10.9 The Committee makes the following recommendations to improve the budgetary and financial control in the Institute:—

- (i) The Institute should have a whole-time Director, Budget and Finance, to build up a sound system of financial administration and keep watch over the progress of expenditure.
- (ii) Each Department of the Institute should frame its own budget proposals and have an Accounts Unit to attend to this work and keep accounts. Budget proposals of different departments should be submitted to the Director, Budget and Finance. The consolidated estimates will then go to the Finance Committee, the Executive Committee and finally to the Government. A firm time-table for all these stages should be laid down.
- (iii) The present system of allocating common service charges to various units should stop. This has had the effect of

presenting a confused picture of expenditure relating to these units. It also makes the expenditure in common services not susceptible to proper verification and check. Each unit should include in its budget all items of expenditure pertaining to it. Only the residue, e.g., central library, vehicles, etc., should be included in common services. Expenditure under this head should form a separate budget and should not be proportionately allocated to other units.

- (iv) Adequate procedures should be prescribed for periodical report of actual expenditure and its over-all control with reference to the budget allotment so that excess and deficit financing are avoided. A system of internal audit should also be introduced.
- (v) There should be a Finance Committee of the Executive Committee consisting of not more than five members to scrutinise the budget before it is approved by the Executive Committee.
- (vi) The present practice of setting up a Statutory Committee every year under section 8 of the Indian Statistical Institute Act does not appear necessary or justified. Such a Committee should be appointed once every five years to help in the framing of the five-year programme of the Institute.
- (vii) All funds in the Institute other than Gratuity Fund and Provident Fund should be amalgamated and merged in the general receipts of the Institute. A separate Reserve Fund may, however, be created to permit of discretionary expenditure of an unforeseen nature relating to technical development. Accumulation in this Fund should not exceed Rs. 2.5 lakhs.
- (viii) Gratuity Fund should be registered and all borrowings from it should be repaid. The purpose of the Fund and annual contributions to it should have a direct relation with the needs for which the Fund has been constituted. An alternative would be to abolish the Fund and make the annual contribution of Government equal to the estimated amount of gratuity payable during the year.
- (ix) Provident Fund should be immediately registered and the amount in the Fund borrowed by the Institute should be repaid.
- (x) In order to enable the Institute to meet its liabilities to Provident Fund and Gratuity Fund and also to make a start on a financially clean slate, (a) all the claims pending with the Government in regard to completed rounds of National Sample Survey work should be settled by expediting the report of the Settlement Committee appointed by Government; (b) the National Sample Survey work in arrears relating to incomplete rounds should be transferred to the new National Sample Survey Organisation and payment for the works so transferred made on the basis proposed by the Committee on National Sample Survey contract work appointed by the Indian Statistical Institute

in 1962; (c) the moneys which may be available as a result of the closure of other Funds as recommended by the Committee may also be utilised for this purpose; and (d) the balance, if any, after taking into account any possible sale of surplus land should be made up by an *ad hoc* grant by the Government.

- (xi) The system of encashment of leave has been abolished for the rest of the Institute and should be discontinued in the Research and Training School also with immediate effect.
- (xii) In addition to the audit of the accounts of the Institute by duly qualified auditors, as provided in section 6(1) of the Indian Statistical Institute Act, there should be a test audit by the Comptroller and Auditor General of India once in five years to commence in a year before the Statutory Committee begins its work as mentioned in (vi) above. Such audit should be possible on a consent basis as in organisations like Council of Scientific and Industrial Research, Indian Council of Cultural Relations and other bodies like the Sahitya Akademi and other Akademies.

10.10 The Committee would like to add that the Government has an important part to play in stabilising the financial position of the Institute and assuring its further growth. The Institute must immediately have adequate funds to discharge its existing liabilities. The liabilities of the past must not become a drag on its proper functioning in the future. The Committee has also noted that delay on the part of the Government in making payment of grants has added to the financial difficulties of the Institute. This becomes acute on the opening day of the financial year and the Committee recommends that on such occasions the Institute must be given funds to meet its liabilities of the previous month. The Committee further recommends that an amount equal to a quarter's expenditure should be paid in advance so that the Institute always has funds to meet committed expenditure without need to incur debts. It is only through mutual understanding and cooperation between the Government and the Institute that the Institute will have financial stability and healthy growth.

Sd/- HUMAYUN KABIR

Sd/- K. T. CHANDI

Sd/- P. B. CHOWDHURY

Sd/- S. DUTT

Sd/- I. G. PATEL

Sd/- S. R. SEN GUPTA

Sd/- S. S. SHRIKHANDE

Sd/- M. R. YARDI

CALCUTTA,

December 22, 1966.

CHAPTER XI
SUMMARY OF RECOMMENDATIONS

Objects

1. The objects of the Institute as given in the Memorandum of Association should be modified so as to read:

- (i) to promote the study and dissemination of knowledge of and research on statistics and related sciences and planning for national development and social welfare;
- (ii) to provide for, and undertake, the collection of information, investigations, projects and operational research for purposes of planning and the improvement of efficiency of management and production;
- (iii) to undertake any other ancillary activity in fulfilment of (i) and (ii) above. [para. 3.6]

Research and Training School

2. The work of the Research and Training School should be expanded and strengthened. [para 4.1]

3. The duration of M. Stat course should be two years for every one and efforts should be made to get a larger number of students from outside the Institute. [para 4.4]

4. The Institute may start and maintain small units in the Research and Training School for purposes of research. Subjects for research should be selected with great care and there should be intensive work in a few selected fields instead of frittering away time and resources over a wide range. Only those units should be continued or started which satisfy the specified criteria. There should be periodic assessment to ensure that these criteria are being satisfied. Besides, the continuance or start of each unit should have the specific approval of the Academic Council of the Research and Training School. Expenses on such specialised units should not exceed twenty per cent of the Research and Training School budget. The Institute should collaborate with other organisations in such fields of research to ensure the best results. [para 4.7]

Planning Division

5. The Planning Division should be re-organised into a Department of Economic Planning and Social Sciences to carry out training, research and appraisal in the field of planning. It should constitute a part of the Research and Training School and organise courses, short and long-term, for the personnel engaged in planning at various levels.

The Head of the Department may be stationed at Delhi. If this is done, he could also function as regional head of the Institute at Delhi. [paras 4.11 and 4.12]

6. The Delhi Unit of the Planning Division should have no operational link with the Government. For this purpose, it would be desirable to shift the Unit at present located in the building of the Planning Commission to other premises. [para 4.13]

7. The information required by the Institute for its work, whether in possession of the Planning Commission or other departments of the Government, should continue to be available. The Institute should also be in a position to study and wherever possible participate in the process of thinking involved in the formation of Plans. [para 4.14]

National Sample Survey

8. The entire National Sample Survey work consisting of designing, data collection, processing and interpretation should be brought under one unified control. This work, except for the State of West Bengal, should be entrusted to a new autonomous organization under the Government which would take over the existing work both in the Institute and the National Sample Survey Directorate. All stages of the work relating to West Bengal should be done by the Institute. The responsibility for finalising the design, including that for West Bengal prepared by the Institute, will be that of the proposed new organisation. In order to avoid dislocation in work, the new arrangement may be brought into force from 1st April 1968. The autonomous organisation proposed above should have an effective Programme Advisory Committee to fix priorities.

9. The collection of operational statistics by the normal administrative machinery should be strengthened and the Ministries concerned should assume full responsibility for data collection in respect of their own needs.

10. Out of ten Honeywell computers which the Government is receiving from U.S.A., one should be allotted to the Institute.

11. The questionnaire should be simplified so as to fall into two parts—(a) general which would be the same for the whole country and (b) regional which would contain questions relevant to a particular region.

12. At present, there are heavy arrears relating to National Sample Survey work in the Institute. The Department of Statistics should immediately take a decision which part of arrears of National Sample Survey work should be completed. This work should be isolated and tackled by the new organisation. [para 5.8]

13. No employee of the Institute should be thrown out of employment as a result of the proposed re-organisation. [para 5.9]

Statistical Quality Control

14. The Statistical Quality Control Division of the Institute should be adequately strengthened by the provision of necessary funds and trained personnel.

15. Diploma course in SQC should be started at Delhi, Bombay and Bangalore.

16. The SQC Policy Advisory Committee should be reactivated.

17. The Commerce Ministry should give a fillip to SQC work by making it obligatory for (a) public sector undertakings (b) large factories (c) industries with an export orientation, and by providing adequate subsidy for SQC activities. [paras 6.3 to 6.6]

Miscellaneous Activities

(1) *Society-Type Activities*

18. The Institute should pay special attention to its society-type activities by arranging conferences, etc., at headquarters and branches and publishing reports thereof and by reactivating dormant branches and opening new ones. It should be given an adequate earmarked grant for this purpose and after five years the question of separating the society-type activities from the Institute may be re-examined. [para 7.4]

(2) *Electronic Division*

19. The work of designing and fabricating computers and their components is not a legitimate activity of the Institute. [para 7.10]

(3) *Documentation Research and Training Centre*

20. For the time being, the Centre may continue as a part of the Institute but the position should be re-examined after five years. [para 7.13]

(4) *The Kalyanshri Unit*

21. The Unit should be transferred to the State Government or a suitable voluntary organisation. [para 7.14]

(5) *Appraisal Division*

22. The work of the Appraisal Division is not relevant to the Institute's main objectives. To the extent its work is necessary, the Unit should form part of the Research and Training School. [para 7.15]

(6) *Family Planning*

23. The Family Planning Unit should be placed under an appropriate organisation in the Ministry of Health. [para 7.16]

24. Crop Museum, Agricultural Chemistry Unit and Agricultural Farm should be placed under appropriate organisations in the Ministry of Food and Agriculture. [para 7.20]

(7) Visiting Scientists

25. The visits of foreign scientists and scholars to the Institute should be carefully planned. A programme of invitations should be drawn up every year by the Director concerned and approved by the Executive Committee. [para 7.21]

Buildings and Equipment

26. Full assessment of the present and future utilisation of lands and buildings in possession of the Institute at Baranagar should be made. A comprehensive lay-out should be drawn up for the building activities in the Baranagar area for the next five years.

27. The Institute should make plans as to how it proposes to utilise lands owned by it at different places. Lands not required in the foreseeable future should be disposed of.

28. Premises of the Research and Training School should be remodelled and more space provided for research workers.

29. There should be a properly planned and phased programme for providing housing to essential academic and non-academic staff.

30. Various units including records located in different parts of Calcutta should be shifted to Baranagar. The premises at 9-B, Esplanade East, may, however, be retained.

31. (a) Before any new construction is taken in hand, the Executive Committee of the Institute should satisfy itself that extra accommodation is needed.

(b) For all construction, open tenders should be invited and approved.

(c) All new construction should be entrusted to a reputed firm of architects on mutually agreed terms.

(d) Construction should be supervised by a fully qualified engineer attached to the Institute.

(e) Separate accounts for building operations should be maintained and a system of internal audit introduced.

32. The Guest House at Delhi should be immediately closed. The guests of the Institute should be accommodated in the Central Government hostels in Delhi or in a hotel. The position about guest houses at Calcutta and Giridih should also be examined.

33. The practice of using hired premises for the combined purpose of official use and residence of staff should stop. Official requirements should be consolidated in one set of premises and separate premises may be hired, wherever necessary, for residential purposes.

Organisation and Management

34. The authorities of the Institute should be:

The President

Two Vice-Presidents

The Executive Committee consisting of 14 members

The Council consisting of 50 members

The General Body

The General Body should consist of members with such academic and professional qualifications as may be prescribed.

35. There should be the following office-bearers:

- (1) Chairman who will be a whole-time paid incumbent with the status of Vice-Chancellor of a University.
- (2) Directors (i) Administration; (ii) Budget and Finance; (iii) Research and Training School; (iv) National Sample Survey; and other heads of Divisions to be appointed on the recommendation of duly constituted selection committees.

The posts of Secretary, Treasurer, Joint Secretaries and Assistant Secretary should be abolished; so also the Board of Management.

36. The Executive Committee will be responsible for the management of the affairs of the Institute. It will pass the annual budget in accordance with the five years' programme approved by the Council. It will also lay down, subject to budget provisions, the limits of expenditure which the heads of Departments or Divisions will have the competence to incur. It will also lay down specific rules for recruitment, promotion, leave, punishment and appeal for all posts in the Institute.

37. The Council will approve a five-years programme of work for the Institute.

38. There should be the following five departments in the Institute:—

- (a) Research and Training School
- (b) National Sample Survey
- (c) Statistical Quality Control
- (d) Library
- (e) Administration and Miscellaneous

The Planning Division as reconstituted as also the Electronic Division will form part of the Research and Training School.

39. In regard to matters within a Department/Division, the Director/Officer-in-charge will be assisted and advised by a staff committee. For coordination amongst various Divisions, there will be a Coordination Committee consisting of Directors/Officers-in-charge, with Director of Administration as convener.

40. The Research and Training School should have an Academic Council on the pattern of universities. The Academic Council should include some scientists from other academic bodies. The existing Governing Body should be abolished.

41. There should be a Library Committee in which all Departments and Divisions in the Institute are suitably represented.

42. (1) The staff in the Institute should be immediately classified on a functional basis.

(2) There should be no part-time employment in the administrative staff.

(3) The age of superannuation should be 60 years except in the case of the Chairman where it may be 65 years. [para 9.8]

Budget and Finance

43. The Institute should have a whole-time Director, Budget and Finance.

44. Each Department of the Institute should frame its own budget proposals which should be consolidated by the Director, Budget and Finance. The consolidated estimates will go to the Finance Committee, the Executive Committee and finally to the Government. A firm time-table for all these stages should be laid down.

45. The present system of allocating common service charges to various units should stop. Each unit should include in its budget all items of expenditure pertaining to it. Only the residue, e.g., central library, vehicles, etc., should be included in common services. Expenditure under this head should form a separate budget and should not be proportionately allocated to other units.

46. Adequate procedures should be prescribed for periodical report of actual expenditure and its over-all control with reference to the budget allotment so that excess and deficit financing are avoided. A system of internal audit should also be introduced.

47. There should be a Finance Committee of the Executive Committee consisting of not more than five members to scrutinise the budget before it is approved by the Executive Committee.

48. Statutory Committee under section 8(1) of the Indian Statistical Institute Act should be appointed once every five years to help in the framing of the five-year programme of the Institute.

49. All funds in the Institute other than Gratuity Fund and Provident Fund should be amalgamated and merged in the general receipts of the Institute. A separate Reserve Fund may be created to permit of discretionary expenditure of an unforeseen nature relating to technical development. Accumulation in this fund should not exceed Rs. 2.5 lakhs.

50. Gratuity Fund should be registered and all borrowings from it should be repaid.

51. Provident Fund should be immediately registered and the amount borrowed by the Institute should be repaid.

52. (a) In order to enable the Institute to meet its liabilities, all claims pending with Government in regard to completed rounds should be settled by expediting the Report of the Settlement Committee;
- (b) the work in arrears relating to incomplete rounds should be transferred to the new National Sample Survey organization and payment for the work so transferred should be made on the basis proposed by the Committee on the National Sample Survey contract work appointed by the Indian Statistical Institute in 1962;
- (c) the moneys which may be available as a result of the closure of Funds as recommended by the Committee may also be utilised for the purpose; and
- (d) the balance, if any, after taking into account any possible sale of surplus land should be made up by an *ad hoc* grant by Government.
53. The system of encashment of leave should be discontinued in the Research and Training School also.
54. There should be a test audit of the accounts of the Institute by the Comptroller and Auditor General of India once in five years to commence in a year before the Statutory Committee begins its work.
55. Government must immediately give to Institute adequate funds to discharge its existing liabilities.
56. An amount equal to a quarter's expenditure should be paid in advance so that the Institute has funds to meet committed expenditure.
57. At the end of the financial year, the Institute must be given funds to enable it to meet its expenditure during the previous month.

[paras 10.9 and 10.10]

APPENDIX I

MEMORANDUM OF ASSOCIATION OF THE

INDIAN STATISTICAL INSTITUTE

1. The name of the Society shall be the Indian Statistical Institute.
2. The objects of the Institute shall be:
 - 2.1 to promote the study and dissemination of knowledge of and research on statistics and other subjects relating to planning for national development and social welfare;
 - 2.2 to provide for, and undertake, the collection of information, investigations, projects, and operational research for purposes of planning and the improvement of the efficiency of management and production;
 - 2.3 to undertake any other activities which in the opinion of the Council may be usefully carried out by the Institute in furtherance of national development and social welfare.
3. For and in connexion with the furtherance of its objects or any of them, the Institute shall have power:
 - 3.1 to hold meetings, and arrange lectures, seminars, discussions, conferences, instruction and courses of studies;
 - 3.2 to establish, maintain and manage and assist in the establishment and maintenance of schools, colleges, training institutions, education centres, laboratories, workshops, factories, experimental farms, research units, clinics, medical and biological units, libraries, reading rooms and museums;
 - 3.3 to provide facilities for advanced studies and researches in statistics and other subjects referred to in the objects of the Institute;
 - 3.4 to institute or create professorships, lectureships and other posts and to employ officers, workers, contractors and others as necessary on salary, allowance, honorarium or wages or piece-rate remuneration or without remuneration on whole or part-time or casual basis;
 - 3.5 to institute associateships and fellowships of different categories for professional workers in statistics and other subjects referred to in the objects of the Institute;
 - 3.6 to create branches, divisions, departments, faculties, sections and units for the proper and efficient conduct of the activities of the Institute in different sectors;

- 3.7 to hold examinations and to award diplomas, certificates, and other distinctions including conferment of degrees as permissible under the law for proficiency in Statistics and other subjects referred to in the objects of the Institute;
- 3.8 to undertake investigations including field work and to prepare reports on statistical and other subjects on its own behalf or on behalf of or in cooperation or collaboration with Government or other institutions, organizations, parties or persons;
- 3.9 to publish books, periodicals, reports, research and working papers and other materials at its own cost or with grants or other assistance received for the purpose and to contribute to the cost of the above classes of publications and to sell such publications, to distribute them gratuitously or at reduced prices, and for the aforesaid purpose to establish and maintain directly or in collaboration with other agencies, printing presses, units for photographic or other methods of reproduction, and other technical establishments;
- 3.10 to develop the research and teaching activities of the Institute with the approval of appropriate authorities, into an organization having the status of a university;
- 3.11 to take appropriate steps for the Institute and/or its diplomas, certificates, degrees and fellowships being registered and/or recognised in different parts of India and in foreign countries;
- 3.12 to carry on directly or in collaboration with associated or subsidized agencies research for development of and to make, construct, manufacture or produce computing and scientific instruments, machines, equipment, appliances and tools;
- 3.13 to organise and carry on directly or in collaboration with associated or subsidized agencies pilot and field experiments and operational research on subjects referred to in the objects of the Institute;
- 3.14 to organise, establish, affiliate, carry on and maintain, dissolve, disaffiliate or give up branches or associated or other institutions having objects wholly or partly similar to those of the Institute;
- 3.15 to amalgamate with the Institute any other organization having objects wholly or in part similar to those of the Institute, or to amalgamate the Institute with such organizations;
- 3.16 to cooperate with Government, universities, associations, societies, institutions and organizations and to establish outlying centres, branches and offices;
- 3.17 to establish and maintain contact with researches, studies and activities carried out in different parts of the world

in subjects referred to in the objects of the Institute and with persons working in these fields in different parts of the world through joint and cooperative studies and projects, meetings, conferences and interchange of visits and otherwise;

- 3.18 to accept endowments, gifts and donations, fees, block grants, rents and other funds and payments in lieu of goods or services rendered; to invest funds; to borrow or otherwise raise money; to purchase, take on lease or otherwise acquire, and sell, let out or give on lease or otherwise dispose of movable and immovable properties;
- 3.19 to receive security deposits in cash or otherwise in connexion with the activities of the Institute;
- 3.20 to incur expenditure and make all necessary financial arrangements for carrying on the work of the Institute;
- 3.21 to make donations and grants or give subscriptions and otherwise assist individual workers, institutions or associated bodies when this is considered desirable for the furtherance of the objects of the Institute or any of them;
- 3.22 to create trusts and appoint trustees and to vest in such trust funds, properties or assets of the Institute for such specific or general purposes as may be considered desirable for the furtherance of the objects of the Institute or any of them;
- 3.23 to establish, maintain or continue one or more Provident Fund or Superannuation Fund or similar funds for the benefit of workers of the Institute and such other persons on whom Provident Fund benefits can be conferred by the Institute;
- 3.24 to create or constitute funds under its own management or under the management of such authorities, agencies, institutions or associations as may be considered suitable for purposes of carrying out such work as may be entrusted to them in the interest of the Institute and of the Institute's workers or for the furtherance of the objects of the Institute or any of them, and to pay into such funds such amounts as may be considered necessary from time to time for carrying out the aforesaid activities;
- 3.25 to develop lands and to construct, build, alter or demolish roads, drains, waterworks, buildings, structures, and other works for the purposes of the Institute and of its workers;
- 3.26 to establish and maintain directly, or through suitable subsidized or other agencies, hostels, mess, guest houses, housing tenements and colonies, canteens, transport, organizations including night schools, adult education centres, health homes, clubs and cooperative organizations for proper and efficient performance of the activities of the Institute and/or for the welfare of its workers and their families, students and associated workers;

- 3.27 to do all or any of the above things in any part of the world as principals, agents, contractors, trustees or otherwise and either alone or in conjunction with others;
 - 3.28 to frame rules and regulations and to modify or rescind the same from time to time;
 - 3.29 to make, alter or rescind statutes, bye-laws and standing orders in such manner as may be laid down by rules and regulations, and
 - 3.30 to take such other action or actions as may be incidental or conducive to the attainment of the objects of the Institute or any of them.
4. The membership of the Institute and its constituent bodies shall be open to all persons irrespective of sex, nationality, race, creed or class.
5. The Institute shall not distribute any part of its income or profit as dividend, gift or bonus or in any other way among its members, provided, nevertheless that office-bearers, workers and other employees shall not be debarred from receiving remuneration or participating in grants because of their also being members of the Institute.
6. The Registered Office of the Institute shall be in Calcutta.

APPENDIX II

THE INDIAN STATISTICAL INSTITUTE ACT (LVII of 1959)

An Act to declare the institution known as the Indian Statistical Institute having at present its registered office in Calcutta to be an institution of national importance and to provide for certain matters connected therewith.

Be it enacted by Parliament in the Tenth Year of the Republic of India as follows:—

1. (1) This Act may be called the Indian Statistical Institute Act, 1959.

(2) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

2. In this Act, unless the context otherwise requires,—

(a) “Institute” means the Indian Statistical Institute registered under the Societies Registration Act, 1860;

(b) “memorandum” means the memorandum of association of the Institute filed with the Registrar of Joint Stock Companies under the Societies Registration Act, 1860;

(c) “rules and regulations” includes any rule or regulation (by whatever name called) which the Institute is competent to make in the exercise of the powers conferred on it under the Societies Registration Act, 1860, but shall not include any bye-laws or standing orders made under the rules and regulations for the conduct of its day-to-day administration.

3. Whereas the objects of the Institution known as the Indian Statistical Institute are such as to make it an institution of national importance, it is hereby declared that the Indian Statistical Institute is an institution of national importance.

4. Notwithstanding anything contained in the University Grants Commission Act, 1956, or in any other law for the time being in force, the Institute may hold such examinations and grant such degrees and diplomas in statistics as may be determined by the Institute from time to time.

5. For the purpose of enabling the Institute to discharge efficiently its functions, including research, education, training, project activities and statistical work relating to planning for national development, the Central Government may, after due appropriation made by Parliament by law in this behalf, pay to the Institute in each financial year such sums of money as that Government considers necessary by way of grant, loan or otherwise.

6. (1) The accounts of the Institute shall be audited by auditors duly qualified to act as auditors of companies under the Companies Act, 1956, and the Institute shall appoint such auditors as the Central Government may, after consultation with the Comptroller and Auditor General of India and the Institute, select.

(2) The Central Government may issue such directions to the auditors in the performance of their duties as it thinks fit.

(3) Every such auditor in the performance of his duties shall have at all reasonable times access to the registers, books of account, records and other documents of the Institute.

(4) The auditors shall submit their report to the Institute and shall also forward a copy thereof to the Central Government for its information.

7. Notwithstanding anything contained in the Societies Registration Act, 1860, or in the memorandum or rules and regulations, the Institute shall not, except with the previous approval of the Central Government,

(a) alter, extend or abridge any of the purposes for which it has been established or for which it is being used immediately before the commencement of this Act, or amalgamate itself either wholly or partially with any other institution or society; or

(b) alter or amend in any manner the memorandum or rules and regulations; or

(c) sell or otherwise dispose of any property acquired by the institute with money specifically provided for such acquisition by the Central Government:

Provided that no such approval shall be necessary in the case of any such movable property or class of movable property as may be specified by the Central Government in this behalf by general or special order; or

(d) be dissolved.

8. (1) The Central Government may constitute as many Committees as and when it considers necessary consisting of such number of persons as it thinks fit to appoint thereto and assign to each such Committee all or any of the following duties, namely:—

(a) the preparation and submission to the Government as far as possible before the commencement of each financial year, of statements showing programmes of work agreed to be undertaken by the Institute during that year for which the Central Government may provide funds, as well as general financial estimates in respect of such work; and

(b) the settlement on broad lines of the programme of such work.

(2) Where the Institute does not agree to undertake any work suggested by any Committee referred to in sub-section (1), it shall give to the Central Government reasons for not so agreeing.

9.(1) The Central Government may constitute a Committee consisting of such number of persons as it thinks fit to appoint thereto for the purpose of—

- (a) reviewing the work done by the Institute and the progress made by it;
- (b) inspecting its buildings, equipment and other assets;
- (c) evaluating the work done by the Institute; and
- (d) advising Government generally on any matter which in the opinion of the Central Government is of importance in connection with the work of the Institute;

and the Committee shall submit its reports thereon in such manner as the Central Government may direct.

(2) Notice shall be given in every case to the Institute of the intention to cause a review, inspection or evaluation to be made, and the Institute shall be entitled to appoint a representative who shall have the right to be present and be heard at such review, inspection or evaluation.

(3) The Central Government may address the Chairman of the Institute with reference to the result of such review, inspection or evaluation as disclosed in any report of the Committee referred to in sub-section (1), and the Chairman shall communicate to the Central Government the action, if any, taken thereon.

(4) When the Central Government has, in pursuance of sub-section (3), addressed the Chairman of the Institute in connection with any matter, and the Chairman does not within a reasonable time take action to the satisfaction of the Central Government in respect thereof, the Central Government may, after considering any explanations furnished or representations made on behalf of the Institute, issue such directions as it considers necessary in respect of any of the matters dealt with in the report.

10. The Institute shall be bound to afford all necessary facilities to any Committee constituted under section 8 or section 9 for the purpose of enabling it to carry out its duties.

11.(1) The Central Government may, if it is satisfied that it is necessary so to do in the public interest, issue, for reasons to be recorded and communicated to the Institute, such directions as it thinks fit to the Institute, and such directions may include directions requiring the Institute

- (a) to amend the memorandum or to make or amend any rule or regulation within such period as may be specified in the directions;
- (b) to give priorities to the work undertaken or to be undertaken by the Institute in such manner as the Central Government may think fit to specify in this behalf.

(2) Any directions issued under this section shall have effect, notwithstanding anything contained in any law for the time being in force or in the memorandum or rules and regulations of the Institute..

12. (1) If, in the opinion of the Central Government,

(i) the Institute without just or reasonable cause had made default in giving effect to any direction issued under sub-section (4) of section 9 or section 11; or

(ii) the Council of the Institute has exceeded or abused its power in relation to the Institute or any part thereof;

the Central Government may, by written order, direct the Institute within a period to be specified in the order to show cause to the satisfaction of the Central Government against the making of any appointment referred to in sub-section (2).

(2) If, within the period fixed by any order issued under sub-section (1), cause is not shown to the satisfaction of the Central Government, the Central Government may, by order published in the Official Gazette and stating the reasons therefor, appoint one or more persons to take charge of the Institute or any part thereof for such period not exceeding two years as may be specified in the order.

(3) Notwithstanding anything contained in any law for the time being in force or in the memorandum or rules and regulations of the Institute, on the issue of an order under sub-section (2), during the period specified in that order,—

(a) where the order provides for any person or persons being in charge of the Institute—

(i) all persons holding office as Members of the Council, including the Chairman, shall be deemed to have vacated their office as such;

(ii) the person or persons appointed under sub-section (2) to be in charge of the Institute shall exercise all the powers and perform all the duties of the Chairman or Council of the Institute, whether at a meeting or otherwise, in respect of the Institute;

(b) where the order provides for any person or persons being in charge of any part of the Institute, the person or persons so appointed shall alone be entitled to exercise all the powers and perform all the duties of the Chairman or Council in relation to that part.

APPENDIX III
GOVERNMENT OF INDIA,
CABINET SECRETARIAT
DEPARTMENT OF STATISTICS

New Delhi, 15th February 1966.

NOTIFICATION

S.O. In pursuance of sub-section (i) of section 9 of the Indian Statistical Institute Act, 1959 (57 of 1959), the Central Government hereby constitutes a Committee consisting of the following persons, namely—

- | | |
|-------------------------------------------------------------------------------------------------------------------------|------------------|
| 1. Prof. Humayun Kabir,
Member of Parliament,
New Delhi. | <i>Chairman.</i> |
| 2. Shri K. T. Chandy,
Director,
Indian Institute of Management,
Calcutta-50. | <i>Member.</i> |
| 3. Shri P. B. Chowdhury,
Chief Engineer,
Building Department,
Martin Burn Ltd.,
Calcutta-1. | <i>Member.</i> |
| 4. Shri S. Dutt,
Vigilance Commissioner,
Government of West Bengal,
9/1, Hungerford Street,
Calcutta. | <i>Member.</i> |
| 5. Dr. I. G. Patel,
Chief Economic Adviser,
Department of Economic Affairs,
Ministry of Finance,
New Delhi. | <i>Member.</i> |
| 6. Dr. S. R. Sen Gupta,
Director,
Indian Institute of Technology,
Kharagpur. | <i>Member.</i> |
| 7. Prof. S. S. Shrikhande,
Professor of Mathematics,
University of Bombay,
Bombay. | <i>Member.</i> |

8. Shri M. R. Yardi,
Adviser,
Planning Commission,
New Delhi.

Member.

for the purpose of—

- (i) reviewing the work done by the Institute and the progress made by it;
- (ii) inspecting its buildings, equipment and other assets;
- (iii) evaluating the work done by the Institute; and
- (iv) advising Government on the following matters—
 - (a) to what extent and in what manner the regional activities of the Institute should be strengthened and expanded;
 - (b) in what manner the administrative set up of and financial and budgetary control in the Institute should be improved;
 - (c) whether any changes are necessary in the manner and degree of association of the Institute with the work of National Sample Survey;
 - (d) whether in the light of the experience gained so far, any amendments to the Indian Statistical Institute Act, 1959, are necessary to facilitate the working of the Act;

which in the opinion of the Central Government are of importance in connection with the work of the Institute.

2. The Committee may settle its own procedure. It may appoint sub-committees from amongst its members and may take the advice of consultants and experts from within the country or outside.

3. The Committee shall submit its report within six months from the date of issue of this notification.

4. The headquarters of the Committee shall be at New Delhi.

5. Shri S. P. Jain, Deputy Secretary, Cabinet Secretariat, shall act as Secretary to the Committee.

(M. BALAKRISHNA MENON)

Deputy Secretary to the Govt. of India.

F.No. 10/9/64-Estt.III.

APPENDIX IV

<i>Name of the sub-committee</i>	<i>Members</i>
1. Technical Evaluation	1. Dr. D. M. Bose (Chairman) 2. Dr. I. G. Patel 3. Dr. S. R. Sen Gupta 4. Prof. S. S. Shrikhande
2. National Sample Survey work	1. Prof. S. S. Shrikhande (Chairman) 2. Dr. I. G. Patel 3. Shri M. R. Yardi
3. Buildings and Equipment	1. Shri P. B. Chowdhury (Chairman) 2. Dr. S. R. Sen Gupta
4. Administration and Finance	1. Shri S. Dutt (Chairman) 2. Shri M. R. Yardi 3. Shri K. T. Chandy

APPENDIX V

LIST OF PERSONS WHOM THE COMMITTEE MET

1. Dr. B. P. Adhikari Research and Training School,
Indian Statistical Institute.
2. Shri K. A. Antony Hony. Secy., Bombay Branch,
Indian Statistical Institute.
3. Dr. Atma Ram Director General, Council of
Scientific and Industrial Research.
4. Shri M. S. Bhatnagar Ex-Financial Adviser, Indian
Statistical Institute.
5. Dr. V. V. Bhatt Director, Division of Planning
and Special Studies, Reserve
Bank of India, Bombay.
6. Shri S. P. Bhattacharya Incharge, Development Work-
shop, Indian Statistical Institute.
7. Dr. P. K. Bose National Sample Survey Divi-
sion, Indian Statistical Institute.
8. Dr. R. C. Bose Professor of Statistics, New Car-
olina University, U.S.A.
9. Sir Harry Campion Head, Central Statistical Office,
Cabinet Office, London, U.K.
10. Shri N. Chakravarti Joint Secretary, Indian Statistical
Institute.
11. Shri S. C. Chowdhury Member-Secretary, Agricultural
Prices Commission.
12. Shri S. K. Chowdhury Ex-Joint Secretary, Indian Sta-
tistical Institute.
13. Mrs. Rhea Das Head, Psychometry Unit, Indian
Statistical Institute.
14. Prof. V. M. Dandekar Director, Gokhale Institute of
Politics and Economics, Poona.
15. Dr. C. D. Deshmukh Vice-Chancellor, Delhi Univer-
sity.
16. Shri Dharma Vira Governor of Punjab and
Haryana.

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| 17. | Shri V. V. Divatia . . . | Director, State Statistical Bureau,
Gujarat. |
| 18. | Dr. D. R. Gadgil . . . | Vice-Chancellor, Poona Univer-
sity. |
| 19. | Prof. H. C. Ghosh . . . | Member, Council of the Indian
Statistical Institute. |
| 20. | Shri N. C. Ghosh . . . | National Sample Survey Division,
Indian Statistical Institute. |
| 21. | Shri J. M. Sen Gupta . . . | Incharge, Special Study Unit,
Indian Statistical Institute. |
| 22. | Dr. Leon H. Keyserling . . . | Consulting Economist and Attor-
ney at Law, 1001, Connecticut
Avenue, N. W., Washington. |
| 23. | Prof. T. Kitagawa . . . | Department of Mathematics,
Faculty of Science, Kyushu
University, Fukuoka, Japan. |
| 24. | Prof. D. T. Lakdawala . . . | Professor of Economics, Bombay
University. |
| 25. | Shri D. B. Lahiri . . . | National Sample Survey Division,
Indian Statistical Institute. |
| 26. | Prof. K. B. Madhava . . . | Former Vice-President, Indian
Statistical Institute. |
| 27. | Prof. P. C. Mahalanobis . . . | Honorary Secretary, Indian
Statistical Institute. |
| 28. | Shri P. C. Mathew . . . | Secretary, Department of Labour
and Employment, Government
of India. |
| 29. | Shri M. Balakrishna Menon . . . | Deputy Secretary, Department of
Statistics, Government of India. |
| 30. | Shri S. Mitra . . . | Head, Electronics Division,
Indian Statistical Institute. |
| 31. | Shri Kumar Mitter . . . | Formerly Additional Secretary,
Indian Statistical Institute. |
| 32. | Prof. M. Mukherjee . . . | Head, Planning Division, Indian
Statistical Institute. |
| 33. | Shri K. P. N. Nair . . . | Director of Statistics, Reserve
Bank of India, Bombay. |

34. Dr. K. R. Nair . . . Director, Central Statistical Organisation and *ex-officio* Joint Secretary, Department of Statistics, Government of India.
35. Shri R. Natarajan . . . Chairman, Management and Industrial Consultants (P) Ltd., Bangalore.
36. Dr. V. G. Panse . . . Senior Specialist (Agriculture), Planning Commission.
37. Dr. C. R. Rao . . . Director, Research and Training School, Indian Statistical Institute.
38. Dr. J. Roy . . . Head, Computer Science Unit, Indian Statistical Institute.
39. Dr. S. K. Roy . . . Botany Department, Indian Statistical Institute.
40. Dr. N. S. R. Sastry . . . Special Officer, Reserve Bank of India, Bombay.
41. Shri J. S. Sarma . . . Economic & Statistical Adviser, Ministry of Food & Agriculture, Government of India.
42. Shri C. H. Shah . . . Reader in Agriculture Economics, Bombay University.
43. Dr. S. R. Sen . . . Additional Secretary, Planning Commission.
44. Prof. Srinagabhushana . . . Special Officer, Statistical Quality Control Division, Indian Statistical Institute.
45. Shri S. Subramanian . . . Chairman, Tariff Revision Committee, Ministry of Commerce, Government of India.
46. Dr. R. L. M. Synge . . . Noble Laureate, Rowett Research Institute, Bucksburn, Aberdeen, U.K.
47. Dr. P. V. Sukhatme . . . Director, Statistics Division, F.A.O., Rome.
48. Dr. Daniel Thorner . . . Economist, Paris University.
49. Shri Venkateswarlu . . . Officer-in-charge, Giridih Centre, Indian Statistical Institute.

50. Shri S. M. Vidwans Director, Bureau of Economics
and Statistics, Government of
Maharashtra.
51. Representatives of the I.S.I. Workers' Organization, Calcutta.
52. Representatives of the I.S.I. Workers' Organization, Giridih.

APPENDIX VI

LIST OF DEGREE AND TRAINING COURSES OF THE RESEARCH AND TRAINING SCHOOL

DEGREE COURSES

1. Pre-research Course leading to registration for Ph.D. degree.
2. M. Stat.
3. B. Stat.

TRAINING COURSES

4. Research and Advanced Studies.
5. Two-year Advanced Course.
6. One-year Apprentice Course.
7. Summer Course (Advanced) for Statisticians.
8. Statistical Officers' Course (Jointly with Central Statistical Organization, Govt. of India, New Delhi).
9. Special Short-duration Individual Training for Officers on Deputation.
10. Diploma Course on Statistical Quality Control.
11. Occasional Course on Special Subjects (Short Duration):
 - (i) Course on Linear Programming
 - (ii) Advanced Course in Demography
12. Documentation Research and Training Course at Bangalore.
13. Apprenticeship Course in Data Processing Unit.
14. Courses in Electronics:
 - (i) Trainees
 - (ii) Apprentices

EVENING COURSES

15. One-year Evening Course in Statistics at Delhi (in collaboration with Central Statistical Organization, Government of India, New Delhi).

16. One-year Evening Course in Statistics at Bombay, Hyderabad, Trivandrum, Madras and Calcutta.
17. Three-month Course on Data Processing Systems.
18. Six-month Course on Data Processing Systems.
19. Nine-month Course on Automatic Data Processing Systems.
20. Computer's Training Course at Calcutta (Junior and Senior).
21. One-year Computer's Training Course at Calcutta.

APPENDIX VII

NOTES BY PROFESSOR P. C. MAHALANOBIS

I. RESEARCH UNITS IN NON-STATISTICAL SUBJECTS

1. I gave the Chairman a draft of the present note during a discussion with him shortly before a meeting of the Review Committee which was held at Baranagar at 10 A.M. on the 29th August 1966. Copies of the draft note were also given to participants in the discussion in the Review Committee on that day. The present note is in substance a slightly revised version of the draft note.

Three points may be mentioned to prevent misconceptions. Firstly, the present note has no reference to either training or research in statistical theory and practice or to projects like the National Sample Survey, Statistical Quality Control, etc., nor to activities relating to economic planning which would require separate consideration. Secondly, the present note refers exclusively to small units for basic research in both natural and social sciences or technology which are essentially of the same type as those which are located in departments, sections or units in universities and higher technological institutions, or in general purpose research institutions. Thirdly, the present note has no reference to large research institutes in specialised fields, as such, except in connexion with possibilities of collaboration between such large establishments and small units for basic research. For example, a Central Glass and Ceramics Research Institute must have necessary equipment and facilities or pilot plants for its normal programmes which would, however, also require to be supplemented by active collaboration with industrial enterprises. The Indian Statistical Institute itself must also have necessary equipment (for example, a high power electronic computer) and also facilities for active participation in large scale sample surveys and projects, for its training and research programmes as a higher technological institute in statistical theory and practice. If statistics is to be treated as a new technology, it is necessary and desirable for the Institute to establish and maintain a number of small research units to supply a continuing flow of observational or experimental data for teaching and research purposes.

2.1 Essential conditions: Some guiding principles may be laid down regarding such units. An essential condition must be that no such unit would be started unless it is possible to secure at least one scientific worker of ability to undertake some pioneering research, or to supply suitable data for teaching and research purposes in statistics. That is, the decision to start a new unit must be made on the basis of the availability of suitable research personnel and not on the basis of the subject of study.

2.2 If a research unit loses one or more of its scientific staff through migration, retirement or other reasons, and there is no one left of sufficient calibre to undertake a research programme of real value or to supply useful data for purposes of statistical training and research, then that particular unit will have to be discontinued as a research unit. If any associated scientific assistants or auxiliary staff are left behind in the unit, attempts must be made to absorb them in other research units; or employ them under suitable guidance to collect useful data for purposes of statistical training and research in the Institute; or help them in finding employment elsewhere. Making such readjustments would take some time but should be possible over a period of several months or a year or so.

2.3 These research units may help and may participate actively in the teaching programme, primarily to offer facilities for gaining first-hand experience in the handling of live (and not "mock up") data, but not to impart any appreciable content of knowledge. So long as there are a number of research units to provide diversified experience, it is not essential to fill a vacancy in the research staff if the unit remains viable, or even to continue the research unit, unless persons of the required ability are available.

2.4 If a teacher of a compulsory part of the teaching programme leaves the Institute, it would be necessary to find some one else to do his teaching work. As explained above, there is no such need in the case of a scientific worker in a research unit. This freedom to refrain from filling a vacancy in a research unit, or from continuing research in any particular subject field (unless suitable persons of high ability or promise happen to be available), would make it possible, in principle, to maintain a high quality of research.

3. *Horizontal organization:* Each research unit should be small and independent. If suitable men are available, more than one unit may be maintained side by side in the same broad subject field, such as, botany. The different research units would thus have a horizontal organization so that each unit can function in an autonomous way with freedom to work on its own, or to take up joint studies with other research units, or work on different aspects of the same thematic programme.

4.1 *Criteria for assessment:* Starting any such unit would be necessarily a gamble. It may take some time for the unit to prove its usefulness. A periodical review in the course of, say, from three to five years would be essential to assess whether any particular unit should be continued.

4.2 Three criteria may be identified: one would be whether the unit is actually supplying, or is likely to supply in the near future, suitable observational and experimental data for teaching and research purposes. There would be full justification for the maintenance of any unit which is capable of supplying such material.

4.3 A second criterion would be the pioneering nature of the research in its own field. Pioneering need not necessarily imply

work of great significance for the advancement at science. It does, however, mean something which is not merely imitative and repetitive of what is being done elsewhere. If any unit is doing pioneering research of any type in this sense, then, in my opinion, there would be full justification for its continuation in this Institute for two reasons. Firstly, because such research is almost certain to throw up, in time, new types of data which would call for new applications of known statistical methods, or for the development of new statistical tools. Secondly, even if this does not happen for some considerable time, the maintenance of units for genuine pioneering research would be of help in building up a community of scientists and thus serve a most useful purpose for the advancement of science in India.

4.4 A third criterion would be the extent to which studies on a thematic programme can be undertaken by collaboration between two or more research units within this Institute, or in collaboration with other research institutes and universities. It is only through such co-operative studies that full advantage can be derived from a thematic approach to research. A particular unit may not by itself be capable of supplying material of great value, but in conjunction with other units, may throw new light on difficult problems. Sometimes independent research may proceed on different aspects of a subject (inter-relations between which may not be appreciated at first but) which would lead to multi-variate and multi-type observations or measurements offering special scope for the fruitful use of statistical methods.

5.1 *Continuance of research units:* The continuance of each specialised research unit in this Institute must be assessed by the extent to which one or more of these three criteria are being satisfied. Besides theoretical and applied statistics, sample surveys and economic planning which are not being considered here in this note, research in special branches of pure mathematics, agricultural crops, botany, documentation and geology have attracted a good deal of attention in recent years for work of a pioneering nature. Useful research is being done in applied economics, demography, sociology, psychometry, biometry, etc. There are unique opportunities for work on endogamous castes, tribes and communities of India by collaboration between the research units for anthropology, biometry, psychometry, haematology and sociology and also in co-operation with other universities or research institutes. I have cited only a few illustrative cases.

5.2 There would not be any justification for continuing a research unit in an auxiliary subject if its work is essentially repetitive of what is being done elsewhere but which does not supply material for teaching and research programmes, or which is unable to participate in co-operative studies with other units within the Institute or with other institutions.

6.1 *Research policy:* The success of the research policy of the Institute would depend, first, on the ability of the Institute to attract and hold scientists of promise to establish and maintain research units of real value; secondly, to make effective periodical

reviews of achievements; and, thirdly, to close down any research unit which does not satisfy one or another of the prescribed conditions.

6.2 Such a policy, if properly implemented, should ensure an adequate diversification of subject fields which would change over time. Also, the number of research units would be necessarily limited through retirement and migration of its scientific staff or the closing down of weak units; and also because of the improbability of finding persons of promise to start a large number of research units at any given time.

6.3 A financial limit may also be set for the normal grant from the Department of Statistics within which the Institute would have freedom to decide its programmes, provided that any earmarked grant from any source (government or non-government) in addition to the above normal grant would not lead to a reduction in the normal grant from the Department of Statistics. Keeping open multiple sources of support for scientific research is an indispensable condition for the advancement of science in India.

SUPPLEMENTARY OBSERVATIONS

During discussions on the 29th August 1966, some of the points in the above note were clarified by me; these points have not been mentioned here. Some important new points were raised on which supplementary observations were made at the meeting and are also given here.

7.1 *Need of wider facilities:* It was pointed out that after some progress had been made in a small research unit, there may be need of wider facilities in the way of instruments and equipment or the association of other scientific workers with the programme, either individually or as a team, to pursue further developments. It was suggested that in this situation it would be proper to transfer a research unit from the Indian Statistical Institute to some other research institute or university which could offer the required facilities.

7.2 I said it was a crucial question. The answer would depend on the particular circumstances of each case. In some subject fields it has been and it should be possible in future to organise research on a co-operative basis with the participation of two or more units within the Institute itself. In such cases there is no need of transferring any particular research unit from the Institute.

7.3 There may be need of acquiring some additional equipment from time to time. There would be no waste of resources from the national point of view if such equipment is shared not only by the research units within the I.S.I. itself but also by other institutions. Furthermore, there may be an understanding that if some of the research units in the I.S.I. are discontinued, then equipment which was being largely used by such units, may be released for use in other suitable institutions. A general policy of this type would be useful in promoting the best utilisation of available resources in the way of expensive instruments.

8.1 *Collaboration with other institutions:* In some cases it has been possible in the past, and it should continue to be possible in future, to arrange joint projects in collaboration with other institutions. The I.S.I. has been pursuing this type of collaboration for some considerable time. A few illustrative cases may be cited.

8.2 A very recent example is the design and construction of an electronic computer by joint efforts of the I.S.I. and the Jadavpur University which came into operation in March 1966.

8.3 Several years ago, I.S.I. placed funds at the disposal of the late Dr. D. N. Majumdar, Head of the Anthropology Department in the University of Lucknow, to employ two or three scientific assistants and to meet their travel and other contingent expenses for co-operative studies in anthropometry. The field work and collection of anthropometric data was done by the research unit which was located in Lucknow but was financed by I.S.I. and the statistical work was done at I.S.I. headquarters in Calcutta.

8.4 The Geological Studies Unit has taken geologists from other institutions for field work at the expense of the Institute; and has organised seminars and scientific discussions in collaboration with other institutions. The thematic programme of the Geological Studies Unit can be extended, in principle, on the field side as well as on the side of the analytic work in the laboratory, in collaboration with different institutions in Calcutta or at different places, or with the Geological Survey of India itself, provided such institutions are prepared to co-operate with the I.S.I.

8.5 The Botany Research Unit is at present carrying out field experiments in Bihar and also in West Bengal in collaboration with the Department of Agriculture. Field trials of this type or other experimental studies can be extended, in principle, to several States or over a large part of India provided appropriate institutions or Departments of Agriculture have the desire to co-operate. In principle, there is no difficulty in organising co-operative laboratory work connected with the same research programme by collaboration between two or more institutions located in Calcutta or at different places in India.

8.6 A great deal of co-operative work was done and is still being done by some or other of the research units for agricultural crops, biometry, demography, psychometry, rainfall and flood studies, regional surveys, sociology, etc. (There have also been very extensive co-operative activities in theoretical and applied statistics, sample surveys and economic planning, in collaboration with many institutions and organizations. I hope such co-operative activities would increase in volume and scope in future; but any detailed consideration of such activities would be outside the scope of the present note.)

9.1 *Collaboration with foreign scientists:* Many distinguished foreign scientists actively participated in the past and are participating at present in the work of some of the research units in this Institute. A point was raised that the foreign scientists came here

because of my connexion with this Institute. It may have been true in the early days in statistics or about ten or twelve years ago in economic planning. In recent years, visiting specialists even in statistics and economics have been generally interested in the mathematical or theoretical aspects of these subjects with which I had little or no connexion as my own scientific work has been directed mostly to practical problems. Also, I did not and could not have had any connexion with research in the natural sciences with which this note is particularly concerned.

9.2 It may be stressed that the Institute arranged extensive tours for its guest scientists to visit scientific institutions of special interest to them. It was also clearly explained to them that they were free to arrange with other institutions for second or repeated visits; some of them did make such arrangements. However, the fact remains that many distinguished natural scientists from abroad have preferred to arrange revisits to this particular Institute. Such active collaboration of scientists from many different countries of the world must be ascribed to a congenial environment for research in this Institute. Can it be assumed that they would automatically continue their collaboration if the research units with which they are associated are transferred from the I.S.I. to some other institutions?

10.1 *Collaboration with larger establishments:* Collaboration between small research units in different institutions and with larger establishments would have many advantages in underdeveloped countries. It would promote the sharing of expensive instruments and would make team work possible at low cost. Building big departments or faculties would almost always increase supervisory and overhead expenses. There would also be the danger, under Indian conditions, of the scientific spirit of the transferred unit being smothered in a large department by its big established hierarchy.

10.2 The above point deserves to be pushed further. To establish the scientific tradition in India, it is essential to make conditions favourable for the starting of small units of basic research (if I may say so, on the I.S.I. model) in a very large number of institutions all over the country and also to promote active collaboration between such units. It is also necessary to promote the active co-operation of larger research establishments in permitting the use of their expensive instruments and facilities, for a part of the time, by the small research units. This pattern of sharing of expensive equipment and facilities is well established, on grounds of economy, in the most advanced countries like U.S.A., U.S.S.R., U.K., etc. or at an international level, for example, in the case of large optical telescopes by CERN (the European Organization for Nuclear Research) in Geneva.

10.3 I may repeat the argument, in a slightly different way, because of its importance. The richest countries of the world have found that when the cost to undertake a research programme is too high for a research establishment individually, it is necessary to promote co-operative research programmes by sharing of expen-

sive equipment and facilities at national or international levels. In a rich country the absolute level of expenditure would be quite high at which the cost of a research programme becomes prohibitive for a single establishment. In a poor country like India, the logical course would be to adopt an identical pattern of co-operative research programmes but at a much lower level of absolute expenditure at which the cost would be considered to be prohibitive for single establishments at any given time. As national income increases, the level of prohibitive cost for single establishments may also be raised. The point is elementary.

11.1 *High priority of small research units:* I have given arguments in favour of co-operative research programmes for small units by collaboration with other such units or with larger establishments. The prior question is the promotion of viable small research units. The task is difficult even in most advanced countries where the scientific tradition is well established. In a recent publication* Sir Edward Bullard, F.R.S., points out:

“.....the first consideration in the organization of research.... is the fostering of the right climate of opinion. This consideration is perhaps more important even than the intellectual quality of the staff. Every one knows of men of the highest attainments who have achieved very little because they found themselves for a long period of years in an organization where they felt frustrated and unappreciated. On the other hand, the last war showed many examples of achievements by groups of very modest attainments working with improvised facilities.” (p. 263)

11.2 He also stressed that in large research establishments, a great degree of decentralization is desirable.

“The more a small group can feel that it is its own master, the better; it should feel responsible for its own progress and should get the credit for its successes. Nothing is more inimical to a good spirit in a laboratory as a feeling of interference from above by what are thought of as ill-informed but irresistible authorities.” (p. 270)

The I.S.I. policy of having a horizontal type of organization for its research units is likely to foster the growth in the sense of autonomy and responsibility described above.

11.3 In the advanced countries there is a great deal of teamwork in scientific research, and continuing collaboration between scientific workers. This co-operative spirit among scientists is itself a mark of the advanced stage of science and technology in the highly industrialised countries. In contrast, as I mentioned during discussions at the Review Committee on the 29th August 1966, it was difficult in India to secure active co-operation in scientific research even between two departments of the same

*The Organization of Research Establishments edited by Sir John Cockcroft, Cambridge University Press, 1965, las: Chapter, p. 263.

University or of the same research institute, and far more so between different institutions. It cannot be guaranteed that enthusiastic co-operation would be extended to a research unit with a good reputation which might be transferred from another institution. On the contrary, such transfer may give rise to feelings of resentment on either side.

11.4 I also stressed that it was only in a very small number of institutions in India that a congenial environment has been created for basic research, and this also in a limited number of subject fields. In this situation, an attempt to transfer (against the free choice of the scientists concerned) a research unit to another institution would not automatically solve the problem but would almost always lead to either some of the scientists migrating to an advanced country or to an almost total destruction of morale and the scientific enterprise of the transferred research group.

12.1 *Collaboration versus transfer*: There are a large number of research departments, groups or units in universities, higher educational and technological institutions and general purposes research institutes, which would be comparable in a general way with the research units in the Indian Statistical Institute. The need of wider facilities must have also arisen or would arise in future in the case of such research groups in these other institutions, in principle, in exactly the same way as in the case of research units in the I.S.I. There has never been any proposal of transferring research scientists from such other institutions to provide wider facilities. Why is this question being raised only in the case of the Indian Statistical Institute alone? Is it because of its name? Would the difficulty have been solved if the name had been changed (as was proposed in a draft official Bill which was prepared in 1955 or 1956) to Indian Statistical University in analogy with the Roorkee Engineering University? This brings us back to the heart of the problem, namely, the need of recognising "statistics as a key technology of the present age", in the words of Ronald Fisher.

12.2 I submit that the wise policy would be to encourage the research units in the Institute to continue their work with a sense of autonomy and responsibility, and foster in every possible way co-operative activities jointly with not only research units within the I.S.I., but also with research departments and establishments in universities and other scientific institutions. Another quotation from Sir Edward Bullard would be relevant:

"The work of a factory can be planned and measured and reasonable programmes enforced without a very delicate consideration of the wishes of the staff. In a laboratory if the staff are actively dissatisfied, or even if they do not identify their own wishes and ambitions with the work, the establishment will quietly and imperceptibly lapse into mediocrity. There will be no very conspicuous signs that anything is wrong, the cost per worker will not change, the bulk of published work and of unpublished reports may stay about the same; all that will happen will be the departure of a few bright young men, some difficulty in

recruiting and add an uneasy feeling among visitors that perhaps the establishment is not as it used to be." (work already cited, p. 264)

12.3 In the Institute, all workers have complete freedom to apply for posts in other institutions. Sir Edward Bullard has pointed out—"Perhaps the key to the successful organization of a research establishment is to run it so that the staff know that they can easily leave for a better job but find it so rewarding a place to work in that most of them stay." (page 272) When there is complete freedom to migrate from the Indian Statistical Institute, it would be wise to leave it to the scientists themselves to decide whether they would prefer to remain in the I.S.I., or move, individually or as a team, to other Institutions in India or abroad.

II. PLANNING DIVISION AND PLANNING UNIT

1. A brief reference was made at the meeting of the Review Committee on the 29 August 1966 to future arrangements about the Planning Division in Calcutta and the Planning Unit in New Delhi. The idea apparently was that there should be a big Division of Economic and Social Sciences in the Research and Training School but the Planning Unit in New Delhi should be discontinued.

2. There was no time for discussions. I made some brief comments. I am giving in this note some observations on the above proposals.

3. It would be desirable, of course, to strengthen training and research in economics; in my own opinion, there should be special emphasis on economic planning. As regards social sciences, I expressed the view that certain subjects like population studies and demography have been traditionally associated with statistics and can be treated as a part of applied statistics. Other subjects in social sciences, for example, social psychology, should be treated in the same way as subjects in natural sciences. That is, it would be proper to establish research units in such subjects in social sciences in the same way as in subjects in natural sciences.

4. It may be of help if I put my views in the historical context. Statistics had its origin in ancient times in connexion with administration and management of social and economic affairs, and was, therefore, considered traditionally as a part of economics for a long time. On the other hand, mathematical statistics had its origin in the theory of probability which emerged only very recently, roughly four hundred years ago, at the same time (and in my view as a matter of necessity for rational thinking) together with the emergence of modern science as an integrated system of knowledge of nature. In the eighteenth and the nineteenth centuries, mathematical statistics developed rapidly mostly in association with the physical sciences. Since the turn of the century, mathematical statistics began to have increasing association with biology. During the last

hundred years or so, practically all important developments in statistical methods took place in connection with the natural sciences with the help of the mathematical theory of probability.

5. Statistics therefore has a highly ambivalent and paradoxical position even now. On one hand, there is a traditional view (now rapidly decreasing in strength) which looks on statistics as a branch of economics or, in any case, of social sciences. On the other hand, in a recent two volume standard treatise on statistics by Hodges and Lehman, published possibly in 1964, it is stated in the very first sentence that "statistics is a branch of the theory of probability". We ourselves have taken the view that statistics is a new technology for which mathematics is indispensable for its theoretical foundations but which has its real value because of its applications in both natural and social sciences and in practical affairs of all kinds.

6. In the Indian Statistical Institute itself, for nearly twenty-five years, its teaching and research programmes and also projects and activities were largely but not exclusively associated with what is often called mathematical statistics and its applications. It was with the inauguration of studies on planning by Jawaharlal Nehru in November 1954 at the headquarters of the Institute at Baranagar—Calcutta that the Institute became involved in work on economic planning. From the history of the Institute itself (as well as from that of the subject of statistics as a whole), a reasonable view of the teaching and research responsibilities of the Institute would be as follows:—

- (a) Theoretical and applied statistics would form the "core" together with mathematics and economic planning as the most important field of applications in India at the present time. There is need of training and research in the core subjects, namely, theoretical and applied statistics, mathematics and economic planning, both in respect of methods and also in respect of content of knowledge.
- (b) It is necessary for purposes of both training and research to have large scale projects on the applied side which would serve a function similar to hospitals and clinics in connexion with teaching and research in medicine.
- (c) In addition, in order to develop statistics as a new technology, it is necessary, under Indian conditions, to have small research units in both natural and social sciences (and also in what is coming to be known as mathematical sciences) in which the emphasis would be on methods and not on the content of knowledge.

7. On the above view, if there is to be a large Division of Social Sciences in the Research and Training School (to which I have no objection), it would be logical to have a Division of Natural Sciences and also a Division of Mathematics (or Mathematical Sciences, although I should personally prefer the word Mathematics), to make two things clear. First, on the positive side, that modern statistics is equally concerned with mathematics, natural sciences and social sciences. And secondly, on the negative side, that modern statistics

is neither a branch of social sciences, nor of natural sciences, nor of mathematics.

8. *Planning Unit in New Delhi:* The Planning Unit rendered significant services without which it would not have been possible to build up a strong Division of Perspective Planning in the Planning Commission. Services rendered in the past need not be a sufficient reason for continuing the work of the Planning Unit on its present lines in future. I feel there is still need of technical studies which would not be too closely associated with, nor too detached from, the day-to-day work of the Perspective Planning Division. I am of the view that this type of work cannot be done, under existing conditions in India which are likely to continue for some considerable time, by a group of civil servants within the Planning Commission because they would not have enough academic freedom in actual practice and would also most certainly become too occupied with current activities of the Planning Commission.

9. I am also of the view that the type of work which is being done by the Planning Unit cannot, under present conditions, be done in universities or research institutes or even in the Planning Division of the Institute in Calcutta. Economists in universities can do useful work in building up general theoretical framework or criteria for assessment of efficiency of planning which however would be usually too abstract for immediate applications at a concrete level. Secondly, there is flow of essential information to the Planning Unit because of its close connection with the Planning Commission. It would be impossible to make available to the Planning Division of the Institute or to universities or research institutes similar information because of difficulties of human communication which are well recognised in all countries of the world. The experience of the Planning Division in Calcutta had corroborated the above view. It is recognised that this Division has done valuable work in applied economics, national income, analytical studies on the basis of NSS data, input-output analysis, econometric studies, etc., but its activities in recent years had very little connection with the actual work of planning. At the 79th meeting of the Board of Management (an internal committee of the Institute) held on the 23rd April 1962, that is, four years ago, a view was taken that "the planning work of the Institute should be in future based mainly at Delhi where it is in continuing touch with the Planning Commission and can concentrate on high level technical work closely related to the work of the Planning Commission."

10. To sum up, for reasons which have been indicated above, I am of the view that it would be useful to continue and strengthen the work of the Planning Unit in New Delhi. I may add that as the Planning Unit is essentially a high level research unit, any proposal to transfer it to the Planning Commission may lead to its total decay or destruction.

III. NATIONAL SAMPLE SURVEY

1. There was a brief discussion on the 29th August 1966 about future arrangements for the National Sample Survey. Three points

were mentioned relating to (a) field staff; (b) processing of data and unified control; and (c) a Division for Design of Sample Surveys.

(a) *Field staff*: It was suggested that the field staff for the collection of the standard items of information for the central sample in West Bengal and greater Bombay City now under the control of the Indian Statistical Institute should be transferred to the NSS Field Directorate under the direct control of the Department of Statistics.

(b) *Processing of data and unified control*: There was an idea that the Review Committee might recommend unified control as proposed by the Fisher Committee of 1957, and that the processing work should be done under such unified control.

(c) *Division for Design of Sample Surveys*: The idea was that the Indian Statistical Institute would have a strong Division for the Design of Sample Surveys and associated technical work for teaching and research purposes. My understanding was that this Design Division of the I.S.I. would continue to provide the design and technical services for the NSS on present lines.

2. There was no time for discussion. I said I should like to have such important questions discussed in detail. I made some brief comments which I am noting below with some amplifications.

3. The field staff for the collection of information on the standard schedule in West Bengal and in greater Bombay City may be transferred to the NSS Field Directorate. It is, however, essential for the I.S.I. to retain a field staff of adequate size for type, validity, and pilot studies and experimental surveys on a field scale. Such a field staff would form an integral part of the proposed Division for Design of Sample Surveys.

4. It will be convenient to give my comments on points (b) and (c) in an integrated form. In India and other underdeveloped countries, large scale sample surveys would remain for a very long time the most convenient and reliable method for collecting a wide variety of socio-economic information which cannot be collected as administrative byproducts or in other ways. The design of sample surveys would therefore remain the most important single subject for professional teaching and research on the applied side.

5. I agree that the Indian Statistical Institute must have a strong Division of Sample Surveys. I am firmly of the view that the Sample Survey Division must have opportunities of handling live (not "mock-up") data on a fairly large scale. As already mentioned, it must also have a field staff of an adequate size for pilot studies and experimental surveys. (A Sample Survey Division without opportunities for large scale processing of live data or making experimental surveys would, in my opinion, be as futile as teaching and research would be in medicine without any connexion with hospitals, clinics, or patients.)

6. The use of parallel samples (which was introduced by the I.S.I. in India and which is known now as the inter-penetrating network of samples, or IPNS) makes it possible to collect the primary

data in the form of a number of components of the inter-penetrating network of samples, usually called samples of IPNS design, by independent groups of investigators; and also to process such IPNS samples separately and independently by the same or different agencies.

7. In the present arrangement, the ISI-NSS Technical Wing, in consultation with the Central Statistical Organization, is responsible for the sample design; concepts, standards and definitions; structure and itemisation of the field-schedule; instructions for the field staff for collection of the primary data; clarification of difficulties in interpretation of items in the field schedule or in instructions for the collection of primary data, which are referred to the ISI-NSS Division by the field staff throughout the period of the survey from month to month; and the periodical training of the field staff in collaboration with the C.S.O., and State Statistical Bureaus. This type of work should continue to be done on existing lines.

8. The collection of primary material is done at present by two types of agencies organised on a territorial basis as shown below:

- (i) The NSS Field Directorate under the control of the Department of Statistics collects the primary data, by independent groups of investigators, in the form of parallel (or IPNS) samples A and B, each of which is divisible into, say, four sub-samples.
- (ii) Each State Government also collects within its respective territorial jurisdiction, the same information using identical field schedules, by independent groups of investigators, in the form also of parallel (IPNS) samples A and B, each divisible into, say, four sub-samples.

9. It is thus possible to speak of (i), 4A and 4B central samples collected by the NSS Field Directorate, and (ii) 4A and 4B State samples collected by the different State Governments. The tabulated results, when aggregated for all States in (ii), would have identical geographical coverage and would be statistically equivalent and comparable with the results based on (i), the central sample.

10. Each State processes the data collected by its own agency within its territorial limits, that is, of say, 4A and 4B samples. The Indian Statistical Institute at present processes (i) 4A and 4B samples or the central samples which form exactly half of the total 8A and 8B samples for NSS as a whole.

11. I stated briefly on the 29th August 1966 that in my opinion, the ISI-NSS Wing should continue to process at least 2A and 2B samples, that is, half of the central samples, or one-quarter of 8A and 8B samples for the NSS as a whole. A quota of 25 per cent of processing by the Indian Statistical Institute is indispensable, in my opinion, first, to make it possible for the I.S.I. Design Division for Sample Surveys to do work of real value for purposes of teaching and research; and secondly, as an independent control to help in maintaining the reliability of the results based on half of the total

samples which would be processed by the different State agencies, and another quarter which might be processed by other agencies.

12. The other half (2A and 2B samples) of the central sample may be processed by some commercial agency, or by a government agency which would be provided with similar equipment and funds (without hidden subsidies or overheads) on the same conditions as would be provided for the Indian Statistical Institute. It is only in this way that it would be possible to compare relative costs, speed and efficiency of processing of data by I.S.I., and by any other agency.

13. I am of the view that, in case the management of the ISI-NSS processing work can be improved and placed on a satisfactory basis in the course of a year or so, that is, by September 1967, then the 4A and 4B samples or the whole central sample should continue to be processed by the I.S.I.

14. As regards the recommendation of the Fisher Committee about unified control, it is clear that it meant unification at the level of policy, technical and administrative decisions, and could not have meant complete centralisation of all operational work. I may add that the Fisher Committee (Report, p. 27) was somewhat doubtful about the advisability of locating the unified control in a regular Government Department with direct civil service administration. In my opinion, an independent and autonomous Board with both officials and non-official experts with tenure membership, may be more suitable for the purpose in view.

15. For reasons indicated above, I submit that it may be advisable to continue present arrangements for the financial year 1967-68, keeping the question open for decision in August or September 1967, at the stage of consideration of budget proposals for 1968-69, on the basis of the performance of the processing work in the I.S.I., during the full year.

APPENDIX VIII

MEMORANDUM OF DISCUSSION BETWEEN THE CHAIRMAN AND DR. C. D. DESHMUKH.

I discussed with Dr. C. D. Deshmukh who was president of Indian Statistical Institute for almost 20 years the problems which face the Institute and the lines of its future development as envisaged by the Review Committee. Dr. Deshmukh said that the Institute has rendered outstanding service to the nation and made contributions in many fields. In making any assessment of the Institute's work, this fact should always be kept in mind.

2. Regarding the administration of the Institute, Dr. Deshmukh said that some problems arose after Professor Mahalanobis shifted his headquarters to Delhi and was no longer able to give undivided attention to the affairs of the Institute. He was not only the founder of the Institute but also its guiding spirit for the first 20 years of its life. As his interests expanded and he became involved in the work of national planning, he had to leave the administration more and more in the hands of his colleagues. Since the Constitution of the Institute vested all powers in the General Secretary, this led to a dilution of authority and the position was aggravated by the fact that a section of workers of the Institute were influenced by political parties.

3. Dr. Deshmukh said that the post of Executive Chairman had been created to fill the lacuna created by the absence of Professor Mahalanobis in Calcutta. The intention was that the Executive Chairman should ordinarily be resident in Calcutta and be available for taking on-the-spot decisions in respect of the Institute's affairs. He welcomed the Review Committee's suggestion that there should be a whole time Executive Chairman and agreed that it would be an advantage if he was a paid official. Dr. Deshmukh also welcomed generally the proposal to constitute an Executive Committee and a Governing Council on the lines indicated by the Review Committee and suggested that it would be an advantage if there was provision for the appointment of one or two Vice-Chancellors in an ex-officio capacity on the Committee and the Council. This would establish closer relations between the Institute and the Universities and if the Vice-Chancellors were appointed by rotation, the Institute would get the advantage of the experience of different universities in the country.

4. On the question of financial administration, Dr. Deshmukh said that the Government's attitude had not always been sympathetic and understanding. It is true that the Institute had often exceeded the budget approved by the Government but there is considerable force in Professor P. C. Mahalanobis's contention that it is more important to carry on work than suspend activities simply because

the funds have been exhausted. Government also do not suspend programmes only because of budgetary limitations and resort to supplementary budgets. It is wasteful from the national point of view to keep men and equipment unemployed and Government should provide for excess expenditure whenever the programmes are justified in the national interest.

5. Dr. Deshmukh also pointed out that the practice of giving grants only after expenditure had been incurred created many problems. There must always be some funds available with the Institute for carrying on current work. If this had consistently been done, the Institute would not have been forced to draw from the Provident Fund and other Special Funds for meeting urgent needs. Dr. Deshmukh said he did not approve of these withdrawals and to ensure that there was no recurrence of such action, he would recommend that one quarter's grant should always be paid in advance to ensure smooth and uninterrupted work.

6. Dr. Deshmukh agreed with the Review Committee's suggestion that there should be a Director of Finance and Accounts who would be responsible for framing the budget of the Institute on the basis of sectional budgets prepared by each Department. The Director of each Department should have a large measure of autonomy and should be responsible for control of expenditure in his own Department. Dr. Deshmukh also welcomed the Review Committee's suggestion that the Statutory Committee should be appointed, not annually, but once in five years and should prepare a broad plan for the Institute's work in the succeeding quinquennium.

7. Dr. Deshmukh also agreed with the Review Committee's suggestion that in addition to annual audit by the Institute's own auditors, there may be a test audit by the Comptroller and Auditor General once every five years. This is not provided in the Act but may be done on the basis of mutual consent as is the case for annual audit by the Comptroller and Auditor General of the accounts of CSIR, ICCR and similar bodies. Such test audit by the Comptroller and Auditor General may be in respect of the year preceding the appointment of the Statutory Committee so that the Statutory Committee may take note of the findings in making its recommendations for the five-year programme of the Institute.

8. Regarding the buildings and other assets of the Institute, Dr. Deshmukh said that his impression was that the Institute's cost of construction was considerably less than allowed by CPWD standards. He was surprised to hear that Institute buildings were in many cases shoddy and the expenses had been higher than for similar construction by CPWD.

9. Dr. Deshmukh generally agreed with the main lines of the thinking of the Review Committee in respect of the Research and Training School, the National Sample Survey and the Planning Division. He agreed that the Research and Training School was and should remain the centre for the activities of the Institute and pointed out to its outstanding record. Regarding National Sample Survey, he agreed that there should be unity of control in respect of design,

data collection, processing, evaluation and report. Some of the difficulties of National Sample Survey were due to a latent hostility between the Indian Statistical Institute and the Central Statistical Organization which was the more surprising as Professor Mahalanobis was head of both. In fact, Central Statistical Organization had been started mainly at the initiative of Professor Mahalanobis but somehow a spirit of competition and conflict had grown between the two organizations. Clear-cut allocation of work between them—West Bengal in charge of the Indian Statistical Institute and the rest of the country in charge of the new autonomous Sample Survey Organization—would help to improve matters.

10. Regarding the Planning Division, Dr. Deshmukh agreed that the present position in which the Institute was for all practical purposes a part of the Planning Commission and at the same time claimed to be an independent academic body was anomalous. This should be rectified and the suggestion that the actual responsibilities of planning should be taken over by the Commission itself appear to be correct. The Institute should at the same time have access to the material collected by the Commission and be familiar with its thinking so that it could act as an independent consultant and also have its own machinery for evaluation. This would mean strengthening the economic and social science units of the Research and Training School and would be a welcome development.

11. Regarding the various science units attached to the Institute, Dr. Deshmukh said that some of them had done very good work and each unit should be judged on merits. He generally agreed with the criteria suggested by Professor Mahalanobis for establishment and retention of such units.

12. In conclusion, Dr. Deshmukh said that he had proposed that Professor Mahalanobis should be elected the President of the Institute.

Sd/- (HUMAYUN KABIR)

Chairman

31st October, 1966.

