

CHAPTER THREE

RECOMMENDATIONS ON THE IMPROVEMENT OF DATA

3.1. The existing estimates have been arrived at, in the main, by calculation of the national product in the major fields of agriculture and organised industry. Data for estimating national product even in these fields are not completely satisfactory to-day. The main existing shortcomings in the area statistics are (a) incomplete coverage and (b) systems of compilation of varying accuracy. The merger of former princely states in the Indian Union have brought in large areas for which no reports were previously available, and where the system of reporting has not, even now, been fully extended. The statistics of yield rate are also uneven from the standpoint of reliability. The old method of a fixed standard yield and eye estimation of the annual condition of crops is unsatisfactory. Within the last decade crop cutting experiments of the ICAR and ISI have made considerable progress and now (i.e., in 1952-53) for the major cereal crops of rice and wheat, yield estimates are made as a result of the ICAR crop cutting experiments over bulk of the area under these crops. The ICAR* is steadily extending the scope of the activities of its crop cutting surveys to other crops including commercial crops. Apart from major crops, there is to-day practically no information regarding the area and out-turn of various fruits and vegetables as also condiments and spices, etc. While it is gratifying to note that separate area and out-turn statistics for potato and a few other crops are now forthcoming, the coverage of such data is yet too small in view of the tremendous importance of some of the crops now lumped up in the area statistics given for these unclassified groups in the land utilisation statistics. Also, there is some degree of uncertainty in respect of the reporting basis of these crops.

3.2. In regard to improvement of area statistics, our recommendations relate first to the unsurveyed and non-reporting areas. In our view, immediate steps should be taken firstly to survey and map the unsurveyed areas and that secondly, in the non-reporting areas and in areas where no satisfactory reporting agency exists, steps should be taken gradually to establish such an agency. We feel that the reporting of area statistics should be ordinarily done by the primary agency responsible for the administration of land revenue for there is no other agency which is either more extensive or which reaches the village level with an equally full coverage. Moreover, as a consequence of land reforms

*Now crop cutting wing of the NSS.

or of progressive changes in the administration of land revenue such agency is bound to come into existence in most areas where it does not exist to-day. This process might, however, take some time. The surveying and mapping of the unsurveyed areas might take even longer. As an interim measure, therefore, we suggest that in such areas which are either unsurveyed or where no satisfactory agency exists to report the area statistics, the statistics might be obtained on a sample basis with appropriate sampling procedure. The work might be done by the statistical bureaus, departments of agriculture or the revenue authorities of the respective State Governments. Some of the State Governments might need either technical or financial assistance in this matter; we recommend that this should be made available to them.

3.3. As regards improvement of the present area statistics, we feel that in view of the burden of multifarious administrative duties imposed on the present reporting agency, it will be a great advantage if the burden of statistical reporting is reduced in a rational way. At present in most of the temporarily settled areas, the area reporting is based, at any rate, in principle, on a complete enumeration of crops by a plot to plot inspection of all cultivable lands. While there is a certain benefit in such total field coverage, we feel that in view of the burden of work it involves, it might not be necessary or advisable to attempt full coverage every year. We, therefore, recommend that while the basis of area reporting by the revenue agency should be primarily the same as it is at present, the total coverage should be attained over a number of years, say five, so that every year, the crop areas would be reported from only say one-fifth of the villages. This procedure should be carefully distinguished from the general principle of sample surveys. The requirement of a full periodic coverage, which period ordinarily should not be more than five years, is an important one and distinguishes this procedure from the ordinary sample survey. Our recommendation will require and enable the primary land records in all villages to be kept and maintained on a uniform basis. It will also enable the work of collection of data to be combined usefully with routine administrative duties of the administrative personnel. As we have earlier noted there is a certain advantage in the statistical collection and reporting being done by the agency responsible for the related administration—in the present case the revenue agency. In the first instance, the quality of data so collected is in general likely to be superior to that of material collected through *ad hoc* statistical agency. Secondly, when statistics are collected through administrative agency, such part of the material as might be urgently required becomes immediately available to the administrative agency. For instance, statistics relating to regions of special interest are often urgently required for a variety of purposes by the Government of a State. Besides, there is often a considerable amount of experience and knowledge other than the statistics proper which accumulates during the process of the collection of statistics. This can be

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of use only when the statistics are collected by the administrative agency concerned. Another point to note is that while our proposal to spread the complete coverage over a period of say five years, will reduce the work load of area reporting to one-fifth of its present burden, it will nevertheless leave the 'sample' sufficiently large to make possible area estimates down to the tehsil level. In so far as the villages covered in any year are not exactly representative of the whole tehsil or district because the same villages will be covered in a periodic rotation, there will become apparent after two or three rotations, a periodic element in the annual estimates. It would then be possible either to revise the allocation of the villages between different years so as to reduce the periodic element or if the latter is not large to correct the annual estimates in subsequent years for the small periodic element.*

3.4. As noted earlier, the present reporting of area statistics is not done everywhere on a uniform basis. The method of accounting for mixed crops is, for example, a point regarding which there appears to be considerable variation of practice. Similar is the manner in which the areas under the bunds and boundaries of fields are accounted for. There is obvious need for uniform procedure in these matters which will be related appropriately to the procedure of yield estimation. Area under a number of vegetable and fruit crops are also not available on a satisfactory basis. It would be desirable to show them separately for each vegetable and fruit crop where such crops are important.

3.5. With regard to the estimation of yield, the unsatisfactory character of the traditional method of fixed standard or normal yields and annual estimation of the condition factor is now well recognised and the method is being replaced by the method of crop cutting experiments. The extension of this method to all crops and to all areas according to the programme of the ICAR should normally lead to the desired improvement in the yield data. Not all agricultural crops are, however, amenable to this method. For instance, the garden crops growing vegetable and fruit in small patches spread over a large area either of very short duration or of which the fruit is picked in a series of frequent instalments might need other methods to estimate their yields. In such cases the yield is likely to be more stable than that of the more extensively cultivated dry crops so that in these cases special subject studies relating to yields and costs might be more fruitful than the annual estimation of average yields.

3.6. The aim of the yield estimation should be to provide estimates of agricultural production at least down to the district level within a reasonable margin of error. It is difficult to prescribe the desirable

*The Chairman reserved his opinion on the view expressed in this paragraph.

accuracy of the district estimates. But the error variation in the district estimates should at least be less than the usual annual variation in them. It is by no means certain whether the method of the crop cutting experiments is capable of furnishing such estimates within reasonable expenditure. Until that is established, possibilities of other more expeditious and less expensive methods should be examined. From this point of view it is well worth examining the results of the traditional methods of yield estimation against the results of the crop cutting experiments. Though the traditional method has been justifiably criticised and rejected as unscientific, we are not aware of any critical examination of its results in the light of the results of the crop-cutting experiments now becoming available. Such an examination might suggest possibilities of improving the method and making it serviceable. It is worthwhile, for instance, rejecting both the notions of the standard yield and a condition factor to be estimated by the patwari, but instead asking him to estimate the crop yields directly in terms of so much per acre. It might be worthwhile attempting to supplement such official reporting by similar reports from informed cultivators. It might be for instance worthwhile to define the notion of the standard or normal yield as the crop condition in a recent year, and asking the reporters to report on the current condition with reference to that year. It is obviously possible to suggest many modifications which might be attempted in the traditional method. We wish to impress the need to have the district estimates of agricultural production within the reasonable margin of error and, of course, within reasonable costs. Therefore, if the method of crop cutting experiments is likely to prove too expensive for this purpose, there should be no objection to combining it with the traditional method with suitable modifications; for, after all, it is that method in modified forms that forms the basis of crop estimation in the United States of America and many western countries. It should also be noted that that method alone has possibilities of crop forecasting for which purpose the method of crop cutting experiments is obviously not suited.

3.7. The statistics of agricultural prices are to-day in a chaotic state. There are any number of price series, all haphazardly collected, and there are divergences in the prices collected by different agencies for the same product within the same area. While differences in prices may arise in view of product differentiation, or to some extent, in view of price inflexibilities in a country of big distances and poor communications, doubt arises about the generality or representativeness of the prices or price averages available in view of the large reported divergences. The harvest prices available in the Season and Crop Reports are known to be of doubtful validity; the Imperial Bank quotations of harvest prices are known to be wholesale prices (during the harvest period) in big market towns where the Imperial Bank has branches. Quite frequently these harvest prices are found to be higher than wholesale prices given in Government gazettes, etc.

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3.8. In the sphere of agricultural produce the best approach would be to classify markets rather than prices, i.e., instead of talking in terms of producers' prices, traders' prices, harvest prices, etc., it would be best to talk of prices at certain types of markets. No attempt to collect village prices need be made. Consumer prices at the regular weekly or other markets are the most significant and producer prices at the village level are apt to be more mixed with other transactions than those at regular markets. Also the field is extremely wide. Two main divisions of rural markets appear to be (1) markets on which the sellers are, in the main, producers and (2) markets on which the sellers are in the main intermediaries. The first category could be further divided into (a) special commodity markets and/or markets which are regulated in some way, and (b) general and unregulated markets. Category (2) could also be subdivided into large city markets, specialised commodity entrepot centres, etc. There is an enormous amount of price data collected today by a variety of agencies, the bulk of which is put to no intelligent use. A preliminary analysis of types of markets could lead to a great deal of rationalisation of the work of collection of data and, as a consequence, to a more systematic and more prompt presentation and publication of the material.

3.9. Among price data consumer prices are better covered than producer or intermediate prices. Consumer price data which enter into the urban cost of living indexes are the best organised. The chief defect in them appears to be the somewhat exclusive focusing of attention on items entering into working class consumption. It needs to be examined whether some items which do not fall within this field should not in addition be covered by the same agencies. The rural consumer prices are, however, not adequately looked after. The LB has made one systematic effort in this field, but the choice of its original centres was heavily biased by such requirements as the location at a railway station. Collection of rural consumer prices has, therefore, yet to be systematised. There would be no difficulty in combining this with collection of other rural prices.

3.10. To be useful, price statistics, as different from many other statistics, need a more frequent collection and more prompt publication. Apart from their use in national income computation, the price statistics when properly collected and promptly examined are also likely to be useful guides for day to day policy in various fields. From this point of view, an integrated examination of all price statistics, agricultural and non-agricultural, by a single body is likely to prove useful and economical. The size of the statistical mass of price data might be judged from the fact that an average of 100 commodity prices from at least one centre from each tehsil of the Indian Union would give 200,000 375 M. of Fin.

price quotations. It is obvious, therefore, that their handling and analysis would prove more difficult than their reporting. The objectives and basis of price data collection therefore need to be carefully examined.

3.11. Data regarding costs of cultivation are extremely meagre in India. Special importance also attaches in this country to the computation of inputs in physical terms. We consider the problem to be important enough to be given special attention. The data involved are, however, of a different type than those that can be collected in routine administrative collections. Data on cost of cultivation relate to what might be described as structural relations in particular economies which would naturally be more stable than the annually fluctuating items. It would be advantageous therefore to obtain such data from farm management or cost of cultivation studies undertaken on a small but intensive scale by academic bodies and research institutions.

3.12. The existing information on livestock numbers and products is very unsatisfactory. For improvement of data relating to the livestock sector, we have to improve both the quality of information on number and yield rates, and the periodicity of the availability of information. Our principal recommendation regarding the statistics of livestock is that the present quinquennial census of livestock should be converted into annual partial census with full coverage to be attained in five years*. As the census is usually carried out by the primary revenue agency, the partial annual census will distribute more evenly the burden that falls on this agency every five years. In fact the census might be undertaken every year in the same one-fifth villages in which crop inspection for area reporting would be done according to our earlier proposals. This will also make available more continuous estimates on livestock numbers.

3.13. Yields of many kinds of animal products do not share the characteristics of agricultural crops and hence need not be obtained from annual reporting on any extensive scale. Estimates of yields of products like milk, wool and eggs could be made on the basis of the relevant livestock numbers, if satisfactory yield rates per animal type are established. Similarly the estimates of products like bones, hides, blood could be made on the basis of rates of such product per animal slaughtered or dead. It would be appropriate to obtain information regarding these yield and other rates from intensive small scale periodic studies into livestock economics by academic bodies. The above does not, however, apply to such data as the annual number of livestock slaughtered for meat. Information regarding these can be made available by slaughter houses and Government should require local authorities and others responsible for the maintenance of slaughter houses to make full returns to State Governments in prescribed forms.

* The Chairman reserved his opinion on the view expressed in this sentence.

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3.14. Regarding forest area, the available forest department figures are not very unsatisfactory. There is, however, great delay in release of the figures and an effort should be made to avoid this. Moreover, a stricter definition of forest area should be introduced and the present practice of including certain lands not under forest should be avoided. Little is known about deduction necessary for the derivation of the net value of output of forestry. A few studies on forest exploitation, if undertaken, will lead to an improvement in the basis of netting adopted in this report. The Indian Forest Research Institute may fruitfully undertake some work in this direction.

3.15. As regards products of fisheries, particularly, the annual catch of fish, we understand that the ICAR is evolving a method requiring physical observation by observers posted all along the coast. We do not have the full details of these schemes nor the results thereof. Perhaps the schemes are yet in the experimental stage and it would be premature to judge their efficacy. Nevertheless, even supposing that as an experimental scheme the method gives promising results, we have some doubts as to its practicability as a routine operative procedure. Therefore, though the ICAR schemes might be continued on an experimental basis to aid evolving better techniques of measurement, we suggest that for estimating products of fisheries, two other approaches might be tried. One is a periodic census of persons, boats and nets engaged in fisheries coupled with intensive studies of their operational economies.¹ The first could be done through State departments of fisheries wherever they exist or through the State bureaus; the second could be done by fishery schools or other research institutions. The second approach would be through collecting data relating to the processing and marketing of fish and fish products. A combination of the two methods should yield, though not necessarily complete, nevertheless usable estimates of products of fisheries. Apart from the present absence of estimates of products of fisheries, there is almost complete lack of systematic knowledge of the basic practices and working of this economy. We recommend that special studies in this field should be encouraged and assisted.

3.16. While the collection of data relating to factory industries is facilitated by the comparatively better organised character of the producing units, the main defect in statistics of factory production is that the CM does not cover all of them regularly. Until recently, statistics relating to factory establishments have largely been the offshoot of labour legislation and labour welfare policy, and for a limited number of industries, of tariff and commercial policy. Hence, even while requirements of basic production data led to the collection of a variety of new statistical material relating to this sector, the data collected were restricted in scope. Under section 2j of the Factories Act of 1934, factories were defined as establishments employing 20 or more persons and using power, and while

section 5(1) of the Act also included factories employing between 10 and 20 persons and using power and those employing 20 or more persons and not using power, the notification of such factories was left to the discretion of provinces. Despite the revision of the Factories Act in 1948 (to include all factories employing 10 or more persons and using power, or employing 20 or more persons and not using power), the CM is still restricted to factories defined under section 2j of the Factories Act of 1934. The CM suffers from the further defect that it covers only 29 groups of industries out of a possible 63, leaving out some quite important industries out of its scope, and also does not extend to the entire Indian Union territory. A sample survey of manufacturing industries for 1949-50 was undertaken by the DIS to fill this gap.

3.17. While there should be no objection to sample enquiries filling gaps left by the annual census we would be opposed to any move that negatives the good beginning made by the DIS by initiating the annual census of manufacturing industries. We say this because instead of trying to make good its deficiencies in regional and subject coverage, there has been apparent, in recent years, a tendency to replace the census itself by means of a sample survey. If an annual census of manufacturing industries is not manageable, it should be made manageable by spreading it over a number of years. But it does not seem advisable to replace this systematic record by means of sample estimates. There are various ways by which the annual census may be distributed over a number of years. Firstly, there is the method of partial annual census with full coverage in three or five years, which we have mentioned in connection with the crop area statistics. In relation to the census of manufacturing industries, the method might be modified in various ways. Thus the units to be covered in any year, instead of being drawn from all groups of industries might be confined, if that appears more convenient, to only a few groups of related industries which (groups) in the particular year might be fully covered. Or preferably, only the larger units in the more important industries might be covered every year while the remainder might be covered by a partial census spread over three or five years. There are more variations and the one which is most suitable to administration might be adopted. We feel, however, that the basis of this collection should be a systematic census and not a random sample survey.*

3.18. In addition to what is available in the CM, statistics of factory employment are also furnished by the LB. These statistics are available on annual basis and it is important that they should be continued. However, it is necessary that the scope of the statistics of employment published by the LB is clearly defined, their difference, if any, from the employment data available through the CM accounted for and the two sets made comparable. This work should be done by the LB itself.

* The Chairman reserved his opinion on the view expressed in this paragraph.

3.19. The IBM is expected to collect new statistical material under the Minerals Conservation and Development Rules and this material should help to fill in deficiencies in existing minerals statistics. The most important gap in the sector from the point of view of national income estimation is the absence of any material on the purchase of goods consumed in the process of production, except for coal consumed in the collieries; and this gap will be filled only when data are forthcoming under the Minerals Conservation and Development Rules.

3.20. The official annual estimate of employment in mining industries is considerably below the 1951 census estimate of working force in mining industries. This indicates that there may be a fairly large under-estimation in mining employment statistics arising probably out of inadequate coverage of unorganised quarries, etc. We recommend that efforts may be made by the IBM to examine the discrepancy and to take adequate measures to fill up the gap.

3.21. The whole field of small scale industry is inadequately covered or almost not covered at all today. This happens in relation to all aspects, employment, cost structure, income, output, etc. Even in the important field of handloom weaving of cloth, the estimated production is based, for the major part, on estimates of yarn consumed by the handloom industry rather than on direct data relating to the production of the industry. Our present estimational procedure makes use of decennial census occupation figures, for an estimate of employment in industry, from which employment in small enterprises is derived as a residual after factory employment is taken out. Apart from the usual defects of census data, namely, timeless character of the estimates and vagueness and changing character of the definitions, these data tell nothing about actual employment. While this defect would not significantly affect household enterprises producing mainly for self-consumption, it is particularly important in respect of industries like handloom weaving where price disbalance or shortage of yarn can put the entire industry out of gear. Unfortunately we have no evidence on which to adjust for such situations; we have only got a few case studies which indicate to us the nature of the problem and consequently, the rough character of our estimates in this sector. The Planning Commission in its draft outline report has considered the possibility of dividing markets or spheres of production in major industries as between the artisan or cottage and the machine or factory industry. Any satisfactory way of effecting this would involve considerable control and periodic collection of information about the two activities within which a division is made. In this case it is apparent that data will be available for all those sectors between which a division of markets or spheres of production is attempted. Such data may not, however, fully cover employment and the attempt, if made, will be concerned with only a small number of industries. The improve-

ment of data relating to employment and production in small scale industry thus constitutes a difficult problem. Nevertheless in view of the importance of this sector from many points of view, it is necessary that systematic attempts be made to collect information relating to it. We recommend that State bureaus should pay particular attention to this field, especially in relation to employment and earnings therein. Our recommendation applies both to the urban and rural sections of small scale industry.

3.22. With regard to the data relating to the cost structure of this sector, it will of course be more stable. These data should therefore be collected as part of special studies to be undertaken by academic bodies or research institutions. Nevertheless, in view of the extent and variety of economic activity in this sector, we recommend the following course of action. Each year, the Government should initiate, through State bureaus and non-official agencies, an integrated programme of special studies all over the country directed towards one or two selected industries. Thus in one year, studies might be initiated all over the country, to study the economy of handloom weaving or oilpressing. Such studies should be planned and directed by a central committee of direction and a comprehensive report prepared. Apart from their value to national income computation, such studies will furnish an integrated knowledge of the working of various small scale industries and of the problems associated with them. It is likely that all-India organisations specially set up to encourage or protect small scale industries will actively interest themselves in such a programme.

3.23. The trading sector is another field where information is scanty in regard to both employment and income. In recent times, a new source of information appears to have become available. The sales tax has now become an important fiscal instrument in every State; and the sales tax administration should be capable of providing very valuable statistics relating to trading activity. The information yielded would, of course, depend very largely on the type of the sales tax imposed. However, certain possibilities may be indicated in a broad way. Whenever any stage of transaction is exempted from the tax it should be possible to ascertain the numbers exempted at each such stage and possibly also the volume of transactions at that stage. Wherever there are any categories who pay the tax in fixed lump sums without a calculation of turnovers, statistics relating to these categories could be separated from those of others. Statistics relating to commodities subject to special rates could as far as possible, be presented separately for each such item. The general data may be presented in relation to a classification of types of shops or establishments and in relation to classes of turnover of the assesseees. The classification both in respect of types of shops and the ranges for classes of turnover should be adopted on a uniform basis for all States in India. The commodities in which trading

is specially licensed, as for example, petroleum, should also yield useful data. In order to ensure that suitable action is taken for making possible such utilisation of sales tax data, we recommend that this item be taken up by the Central Government with the State Governments at the next conference to be convened by them of State sales tax administrators. As regards trade margins and distributive costs, we recommend that structural studies of the type we have indicated in respect of agriculture, livestock and small industries be also undertaken in this field.

3.24. Another sphere in which the present regulatory systems should yield important data relate to producers' durable goods and capital equipment, especially where it is imported. Import data are available by fine break-downs, and give a reasonably complete picture of imports of durable producers' goods, except in certain cases where it is difficult to separate statistics of consumer use from those of use for business capital expenditure, e.g., purchases of, say, automobiles, typewriters, etc. Even when capital equipment is not imported, the present capital issue control and the control that might be exercised through the Regulation of Industries Act should require and enable information to be collected on capital investment in plant and machinery and capital expenditure on replacements which should be useful for framing estimates in relation to important aspects of capital formation. The difficulty of combining the two sets of data would, however, be that while the former relates to flow of commodities, the latter will supply only financial statistics of industrial investment. To complete the picture of the commodity flow for investment purposes, one requires information about the domestic output of commodities with detailed break-downs. These are not yet available, although an attempt is being made to collect information regarding industrial output and sales directly from producers by the Development Wing of the Ministry of Commerce and Industry. When further progress is made in this direction, information on total sales in the country of particular types of capital goods may not be difficult to compile. In the meantime, we recommend that existing material on such capital formation should be brought together and suitably processed for publication by the NIU.

3.25. Another sphere in which some improvement of present practices would make useful data on economic or production activity available is that of building construction. House construction within many municipal, etc., areas is regulated. However, the system of regulation does not yet yield useful statistical data. For this to happen it would be necessary to introduce certain broad divisions within the field of permits granted for building operations. A tentative classification may be suggested, as follows (1) construction of independent structures (2) major alterations in or additions to existing structures (3) repairs and minor alterations in or additions to existing structures. Estimates of costs of the work permitted, whenever such information is asked for under the

regulations, should also be included with the statistics tabulated so that under each broad head the number of entries in the different classes could be noted. Wherever there is provision for the issue of a completion certificate in addition to that of building permits similar statistics may be maintained regarding these certificates. This would not only serve as a check on the permits data but may also yield valuable indications regarding the pace of building activity from period to period.

3.26. As regards transport, data regarding employment and income are available only in regard to railways. Similar data are not available even in regard to motor transport undertakings of State Governments. Further, no information is available regarding privately owned motor transport as well as other forms of rural and urban transport. It is important to get adequate information about this field not only for more correctly assessing the contribution of the transport sector to the national income but also for more correctly calculating trading incomes. We recommend therefore that (a) an annual report should be prepared by the Central Ministry of Transport bringing together all available statistical data regarding State transport undertakings and (b) structural studies of the type we have indicated in regard to agriculture, livestock, small industry, and trade should also be undertaken in respect of all forms of urban and rural transport.

3.27. It has been pointed out that in the national income estimates compiled by us certain gaps left by product estimates are filled in by estimates regarding income. An attempt has been made so far to indicate how in some directions the product estimates could be extended or be further improved. We shall now turn to the possibility of compiling adequate estimates on the income side so that ultimately a double set of figures, comparatively independent of each other may be obtained for national income estimation. In income estimation great reliance has to be placed at present on the classification of occupations. This classification of occupations is unsatisfactory and the need to rely on it for the basic occupational division of the population must be considered as one of the weakest links in Indian national income estimation. The Census of 1951 has attempted some improvements in occupational classification. Thus the census is now designed to give a rural-urban breakdown and also a classification by employment status of the employed population. In the latter classification the category of the 'employees' persons is likely to be useful. As a first step, we recommend that an attempt should be made to muster together all statistics of wage or salaried employment from all possible sources for the period approximating the census period and compare them with the corresponding census statistics. An examination of the resulting discrepancies will throw light firstly on the limitations of the census data and secondly on the coverage of the other sources. Secondly it should be examined as to which of these sources are available or can be made available with moderate effort

on a continuing basis. A number of such series should be possible. The first one would be the statistics of factory employment covered by the Factories Act and which in one way or the other should be covered by the CM and/or by the LB. For industries covered by the workers provident schemes, more intensive employment statistics should become available. The second would be the employment in all corporate businesses governed by the Company Act. It might be considered whether statistics of employment could be included in their annual returns. The third is the employment in the public sector consisting of the Union and State Governments, district and local boards, municipalities and other local governments as also the public corporations. When Government obtains so much from the commercial and industrial concerns in the form of statistical returns, it would not be too much if the statistics of employment in all these bodies are also expected. Next is the employment in all forms of cooperative institutions, schools, charitable institutions and other non-profit making bodies governed by registration of societies. Lastly is the employment in shops and other establishments requiring licensing or other regulation such as of conditions of employment by the State and local governments. If these categories cover a substantial number of the employee population, the residue might be estimated by statistical adjustments and a satisfactory series of employee statistics would result.

3.28. Certain classes in the category of 'self-employed' in the census classification would also be of interest. An attempt may be made in the same way as above to muster corresponding statistics from all possible sources and compare them with the census categories. Important among these are professions requiring licensing, such as the medical and the legal. The registers of the licensing bodies might be examined from the point of view of their comparability with the census returns. Other important source material would be from the licensing of certain minor professions and shops and establishments by the State and local bodies. The objective would be to try to build employment series from independent sources and to indicate their coverage in relation to the census coverage and classification so that the occupational structure during the inter-census period might with some approximation be judged. This is a field which requires considerable analytical work and we anticipate many difficulties.

3.29. In relation to the employee population statistics of employee compensation, that is payment of wages, salaries and wage supplements, should be comparatively easy to obtain and establish on a continuing basis. In the above, we have classified the employee population in a number of principal categories in which the statistics of employment might be made available. If this is found difficult, it might be considered whether at least the annual statistics of total wage and salary payments together with other constituents of employee compensation

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such as provident fund, pension and social security contributions might be called for in the annual returns of various types of establishments. We recommend that these statistics should be obtained in the form of regular returns from all bodies we have mentioned in the above and any others which can be so regulated. Apart from their use in the computation of personal income component of the national income, these statistics would be of considerable interest in themselves. For instance, it would be of great interest to know what part of the total employee compensation is covered by pension, provident fund, insurance and other social security schemes. It would be desirable to entrust the handling of the collection and analysis of all these statistics of employment and wages to a single body. Among the existing statistical offices of the Union Government, it appears to us that the LB would be the best suited for this purpose. We recommend therefore that the scope of the LB statistics should be extended to all employees.

3.30. The principal categories of employee compensations left out so far are the payments to farm labour and to domestic servants. Payments to farm labour are important both in their magnitude and in their economic bearing. They include salaries, and wages paid in cash and kind supplemented by all kinds of wage supplements to a large body of employees often employed for very short durations and under very irregular conditions. A routine collection of these statistics on an annual and continuing basis does not seem therefore possible. It is also not certain that such payments would bear any stable relation to other factors in farm economies which might be evaluated by intensive studies. In this connection we may refer to the idea of the agricultural census that was mooted at the time of the census of 1951. The contemplated census might have afforded information on a number of important points that have to be covered for estimating employment and output in agriculture. However, on account of the large measure of annual variation in this activity a decennial census would not have proved of much help in annual estimations. For this purpose a more continuous collection of data is necessary. A satisfactory solution might be the institution of an annual rotational agricultural census on lines recommended by us for crop reporting and livestock numbers. However, this must, under present conditions, be considered a somewhat distant ideal. In the meanwhile, it would be desirable to encourage efforts by State departments of revenue or agriculture or State bureau of economics and statistics which seek to gather continuous information regarding the tempo of agricultural activity. We would draw attention to the survey of employment and earnings in rural areas conducted for some time by me Bombay Bureau, which unfortunately seems to have been discontinued. All such work is important from the point of view of State authorities being in touch with current variations and developments and any data that throw light on current variations in employment, output

and earnings will prove of the greatest value in national income estimation. We recommend therefore that State Governments should collect annual data on the subject by conducting surveys of employment and earnings in rural areas. As regards domestic servants we recommend that income studies should be undertaken in different regions of the country in both urban and rural areas on the lines of the structural studies we have recommended for other sectors.

3.31. Statistics of personal incomes of the self-employed are more difficult to obtain. The income of the self-employed, namely, the farm operators will have to be obtained from the production end for some time. Reference has also to be made to small scale industries. Incomes of the self-employed in these can only be obtained as special type studies. The two together, will cover a large majority of the self-employed in the rural areas. In the urban areas, there will be a large component of independent professional practitioners. Besides these, there will be traders who will be found in all areas. We do not think that any systematic data collection is possible in respect of incomes accruing to these. The national income computation in these respects must make use of miscellaneous and fragmentary data such as the income-tax returns, trade margins indicated by wholesale and retail prices, etc. We have, therefore, no specific recommendations to make for collection of new data in these fields except that special studies should be encouraged and assisted, especially socio-economic surveys of selected families in rural and urban areas.

3.32. Other components of personal income are interest, dividends and rentals. Payments of interest and dividends by corporate businesses should be available from their annual returns. Interest payments in relation to rural debt constitute an important aspect relating to which estimates are not usually made. During the last 15 years considerable data have accumulated in this regard. There have been many schemes of debt adjustment which ask for full returns regarding debt and legislation regarding registration or licensing of moneylenders with provisions for inspection of their operations. Many debt enquiries have also been undertaken, on a large or a small scale. The sphere of co-operative finance is increasing in most States. All these should help in estimation. Interest receipts of private moneylenders might be obtained by adjustments from the bench mark data largely furnished by previous credit surveys. Co-operative society operations could be studied from annual returns. Estimates of rental incomes obtained by land owners may now become available in a more extended measure through operation of the various laws regulating the status of tenants and rental charges that can be imposed on them. As regards rentals of houses, there is need for systematisation and regular compilation of the municipal returns. Special studies might also be undertaken to study the relation of the property

tax returns of the municipalities and the income from real estate, actual and imputed, accruing to the property owners. We recommend that the NIU should pay early attention to the implementation of the suggestions made in the paragraph.

3.33. Improvement of income tax data, both in respect of coverage (i.e., by elimination of evasion, lags between tax accruing and tax paid, etc.) and presentation (i.e., total income rather than income assessed to tax; distribution of personal income), will fill a major gap in income statistics. We understand that efforts have already been made to present the available data in a more useful form; but the income tax data, as at present collated, cannot be as useful as, say, in the United Kingdom owing to certain aspects of the Income Tax Act. Apart from the complete omission of agricultural incomes and all incomes below the minimum exemption level, our present income tax statistics can only tell us about the distribution of earnings by assesseees which include not only joint families but partnerships and businesses. Thus distribution of personal income cannot be estimated from the present tax data. A not often noticed handicap in using the existing income tax data is the omission from income tax returns of agricultural income accruing to assesseees; to the extent any important part of income assessed to income tax is in respect of agricultural incomes, a distribution of incomes based on the present returns of income would be misleading. Agricultural income tax is levied in a few States. An important tax reform which is likely to be generally undertaken is that of the imposition of an agricultural income tax in all States. The imposition of income tax on agricultural incomes in all States would remove this defect to a considerable extent especially if its administration is related to that of ordinary income tax. It would further make available data relating to income and further details presumably relating to gross and net receipts in a field of economic activity which though important in India is one in which the least amount of statistical data of this sort is available.

3.34. We have estimated the income originating in public sector from an analysis of the published accounts. The procedure enabled us not only to estimate the contribution to national income but also to give a somewhat detailed presentation of various transactions of these sectors. Available data, in general, proved adequate for our purpose. Certain minor difficulties encountered relate to (a) delay of release and lack of detailed breakdown in respect of summary statements on the accounts of various local authorities and (b) lack of details in the published accounts of the public enterprises (including construction) and also in the fund accounts. We recommend that the CSO should take suitable steps to rectify the former shortcoming. Regarding the latter, the possibility of improvement should be explored by the Ministry of Finance in collaboration with the NIU.

3.35. It would be observed that we rely for the major part in the improvement of national income data on the existing reporting systems or the extensions of such systems as a result of further activities by the State. Apart from the elaboration of work of special agencies such as the ICAR or the DIS or any extension of work or special surveys undertaken by them or other organizations like the RBI or academic bodies and research institutions, it is our opinion that it is safest to look to the data arising out of normal administrative working and normal reporting by establishments or persons themselves. Apart from what we expect to be the extensions of such a reporting system, the rationalisation and co-ordination of even the data at present reported would in our opinion lead to considerable progress in the field of national income estimation. As supplementary to the data arising from normal governmental activity we would lay emphasis, in the particular context of national income estimation, on planned intensive studies which would enable students to process the data and to provide the necessary break-downs and to make an analytical study of concepts, procedures, etc.

3.36. We have attempted in the above to cover the entire field of statistics required for national income estimation and made various recommendations for their improvement. We recommend that the NIU should prepare a periodic report on the progress made in the matter of this improvement and submit it to the Advisory Committee which we recommend should be set up in chapter 4.

3.37. The subsequent paragraphs of this chapter are devoted to the NSS which was established in 1950 as a continuing sampling organisation. The major objective of the NSS is stated to be the quick collection and tabulation of data needed by Government. We are, however, not concerned with examining this aspect of the survey, nor are we concerned with its organisational problems. We are concerned solely with the statistics made available by the NSS for the compilation of national income estimates and our examination of the survey is limited to this aspect only.

3.38. So far it has not been possible to make any significant use of the material thrown up by the survey for national income estimation purposes. While our income estimates are computed partly by evaluation of production and partly by estimation of income, the NSS data on these broad fields collected during the first round are neither adequate nor are considered sufficiently reliable; data collected in subsequent rounds have not yet been fully processed. Thus, at present apart from some minor items, the survey data which could be utilised for our purpose relate either to certain estimates of cost structures, or to certain values and prices.

3.39. It should be pointed out that in future also a large part of the requirements of national income estimation will have to be met through the data normally collected by the various organs of the Government at the State and at the local authority levels. The NSS by its very nature cannot replace this process. Moreover, estimates of variation in employment, production, etc., will be required at the level of tehsil or taluqa or a small group of comparatively homogenous tehsils or taluqas for current administrative purposes and for the implementation of detailed physical planning by State and local authorities.

3.40. It is therefore necessary to build up sufficient field agencies of State Governments. A number of State Governments already have their own statistical bureaus. We think it is a matter of high priority that States which do not have such bureaus should institute them. The CSO should play an important part in helping to raise the activities of the State statistical agencies up to a minimum standard of performance and in securing the required measure of uniformity. Central aid, technical and financial, for achieving this objective should have high priority. The normal collection of statistics as by-products of administrative activities should be left with the appropriate departments of State and Union Governments. The advice of the CSO and the NIU will of course be available to all these agencies. In all this work due attention should be paid to the needs of estimation of national income and related totals.

3.41. Consumer expenditure, on which the NSS has in the beginning laid so much stress, is a field of study where much more experience needs to be obtained before one can pass any definite judgment on either the reliability or the utility of the material for national income estimation and analysis. One view of the matter is that, under Indian conditions, it would be very difficult to obtain reliable data on a subject like this where, even in countries with advanced industrialised and monetised economies with ample financial resources and fully literate populations, no attempt has been made so far on a national scale either to collect data on consumer expenditure or use them for national income purpose. According to the same view, it is also difficult to see what precise use could be made of such data for policy purposes in India and it is contended that more useful results could be obtained by incurring the same expenditure on other types of investigation. Another view is that, in spite of all its limitations, consumer expenditure data collected by the NSS could, with increasing experience, be used as a check on national income data obtained by the product and income approach; and also that it could be used, perhaps at a later stage, for estimating social accounting flows and for macro-economic analysis useful for policy purposes. The Committee as a whole does not express any opinion on this question. If, however, the NSS is going to continue to collect such data, we feel that the investigations are planned and the data collected are processed in such a manner as to yield maximum advantage for purposes of economic analysis.

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3.42. The NSS, if continued, can also be used for collecting data on a number of items in the national income field on which at present but little information is available. Thus, for example, capital formation in rural areas, involving as it does physically observable data, can be one such item. The extent of the non-monetary sector, income of artisans and other non-agricultural workers, income of agriculturists from subsidiary occupations, analysis of earners and working dependents, duration of employment for both agricultural and non-agricultural workers, rural housing, harvest prices and village trade margins, income from rural transport, all these are subjects on which, with careful planning of investigation and analysis of data, some light can be thrown by the NSS with advantage to national income work. Moreover, there is at present a very inadequate understanding of the structure of the Indian economy; and if different items are taken up one by one for national investigation or if a concentrated attempt is made at investigating regional economies, the resulting material properly analysed, would be useful not only in improving national income estimation but also in the vital field of national income research and analysis.

3.43. We would, however, emphasise one aspect in which we feel the NSS needs considerable strengthening if it is to continue and be made useful for national income work. National income work is essentially a part and an important part of applied economics. The type of data that needs to be collected, the manner of its collection, the planning of the investigation and the processing of the data collected are all matters which fall as much within the technical competence of the economist as of the statistician; while an economist is almost exclusively concerned with the analysis and use that is to be made of the material. It is therefore essential that in the planning, conduct, processing, and analysis of the national income work to be carried on by the NSS, the economist's services must be drawn upon to a large extent. Indeed, what is needed is an integrated approach; and the collective and co-ordinated functioning of economists and statisticians at all levels, if the NSS is to be successfully used for assistance in national income work. At present, however, the NSS is carried on by the ISI, which is primarily a statistical organization. We would suggest therefore that, in respect at any rate of national income work, the NSS should be planned and operated under the guidance of a strong technical committee which would include economists of proved competence. In fact the Planning Commission has already set up a Research Programme Committee which consists of statisticians, economists and other social scientists; and this body is engaged in planning and guiding research work that is connected at various points with the national income work of the type we have been discussing in connection with the NSS. We recommend therefore that close liaison should be established between the NSS and the Research Programme Committee

of the Planning Commission: and that a joint body drawn from this committee and the ISI should be set up to look after the work of the NSS in connection with national income work. This joint body should make periodic reports to the Research Programme Committee and through them, to the Planning Commission who will then determine how and to what extent this work should be modified, strengthened and expanded. In this manner, full use could be made by the country of sampling techniques and statistical and economic organisations in improving the coverage and quality of national income data, strengthening the field of fruitful economic analysis, and enabling its use for purposes of planning and economic development*.

* The Chairman reserved his opinion on the view expressed in this paragraph.