# NATIONAL INCOME ACCOUNTING IN PAKISTAN

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IN Pakistan, the Central Statistical Office is charged with the responsibility of preparing national income estimates of the country. These estimates are required for the measurement of the performance of the economy during the Plan periods and for the evaluation of the effects of specific policy measures. The work which has so far gone into the production of reliable income estimates and other related sub-totals has already brought to light a number of deficiencies in economic and financial statistics. Efforts are now under way to fill in the gaps in information under a system of priorities which ensure a most economic and judicious use of the available resources. The availability of the required data would enable us to improve the present estimates. This paper presents some of the difficulties which we have faced in compiling the national income estimates of Pakistan.

Up to now, three sets of national income estimates have been prepared by the Central Statistical Office in Pakistan. The first of these was prepared in 1950 for the year 1948–9 in current prices and utilized the concept of net domestic product at factor cost.<sup>2</sup> Subsequently, with the availability of more data, estimates for 1949–50 to 1952–3 in terms of current prices were computed and published in the February 1955 issue of the *Statistical Bulletin*. These were then revised and published in the 1955 *Statistical Year Book* together with 1953–4 national income estimates also in current prices (see Table I). Estimates for subsequent years at current prices have not yet been computed. However, in accordance with the recommendations of the United Nations,<sup>3</sup> and the emphasis laid in the First Five-Year Plan<sup>4</sup> on the measurement of economic growth in real terms, a third set of

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<sup>3</sup> See Statistical Bulletin, Vo. I, No. 3 of May 1952. Since, in order to fill in the many gaps in statistical data, a number of expedients and assumptions were employed, these estimates are rough calculations of the goods and services produced in the country, and are no longer used by the Government of Pakistan. <sup>3</sup> United Nations, A System of National Accounts and Supporting Tables, New

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York, 1953, p. vii. <sup>4</sup> The First Five Year Plan, Karachi, 1958, p. 125. national income estimates has been developed in terms of constant prices, which have been continued to date (see Table II). This new series at constant prices is not comparable with the previous series at current prices and is the only table published at present.

# Conceptual Difficulties and Limitations of Available Data

In line with other underdeveloped countries, Pakistan shares the difficulty in applying some of the concepts and methods of national accounting used in the industrialized economies. Another major difficulty consists in the complete absence of some data and unreliability of the available data. A distinct feature of the Pakistan economy is that it lacks a

A distinct feature of the Pakistan economy is that it lacks a clear-cut differentiation in economic functions inasmuch as a large portion of its economy consists of household enterprises performing functions which would normally fall under different industrial categories. Sizeable groups, especially among agricultural producers, pursue other occupations, often in urban areas, outside the main industry in which they are supposed to be engaged. Hence, the customary classification of national income by industrial origin, which is based on the concept of income originating in each single branch of economic activity, cannot be applied except possibly as a broad and rough approximation to a classification of the population into different groups whose main income is derived from one single industry.

The problem of measurability is further complicated in Pakistan by the fact that a considerable portion of output is either consumed by the producer himself or bartered away for other commodities and services. It simply does not enter the market for exchange into money through the usual commercial channels. 'This raises a problem of including the whole of such product in the national income estimate and of evaluating it in terms of money.'<sup>1</sup> Even in industrialized countries, where the problem is relatively insignificant, statisticians have often complained of this difficulty,<sup>2</sup> which presents a formidable job for the income estimator. Moreover, the resulting under-valuation of national income imposes a serious limitation on international

<sup>1</sup> V.K.R.V. Rao, 'Some Reflections on the Comparability of Real National Income of Industralized and Underdeveloped Countries', in *Income and Wealth*, I.A.R.I.W., 1953, p. 181.

<sup>2</sup> See 'Treatment of Government Economic Activity in the National Accounts' by Ingvar Ohlson in: *Income and Wealth*, Series III, I.A.R.I.W., 1953, p. 224. comparisons, particularly between the underdeveloped and the industrialized countries.

Many producers have only a very vague idea of the quantity and value of their output. Book-keeping is very rare among producers and consumers, the vast majority of whom are illiterate. Even in western countries, most households and many firms do not keep any accounts. For households, family budget enquiries can be conducted but for business enterprises case study may be the only practical solution. In absence of these, only guesswork remains.

Apart from the conceptual difficulties mentioned above, there is a much larger problem of the non-availability of comprehensive statistical data regarding almost all sectors of the economy for the estimation of national income and related accounts in Pakistan. Comparatively few economic data are collected according to the requirements and specifications of the national income estimator; and the gaps in technical information and statistical data are particularly glaring, especially in the case of complex economic structures and activities. Where the available information is conceptually adequate, it may be inaccurate due to the limitations of the collection process. There are errors in observation, reporting and recording. Thus, for example, price and cost data, especially for agriculture and related activities, are very unsatisfactory; manufacturing data are available only for large-scale industry; there is no adequate information on the structure of costs, or on consumer expenditures and savings; some of the items in the international balance of payments are rough estimates; there are no satisfactory data on distribution of income or capital formation.

Whereas the general lack of statistical data may continue for some time, it is also true that there have been some improvements. The population censuses of 1951 and 1961, censuses of manufacturing industries and several family budget enquiries have provided much of the needed information. There are six main sources for national income estimation in Pakistan:

- (i) Data on agricultural production and prices.
- (ii) Data on large-scale manufacturing industry, including the volume of output and cost structure.
- (iii) Some very inadequate information on the working population, which permits derivations, in some cases as

residuals, of persons engaged in cottage and small-scale industries, professional and related services, domestic servants, etc.

- (iv) Information on the revenue and expenditure of government and Government enterprises.
- (v) Data on exports, imports and the international balance of payments. However, even these data are not complete and are often inaccurate.
- (vi) Information on income and expenditure, rural indebtedness and cottage industries in rural areas made available by the National Family Expenditure Survey 1955–6 for twenty-one urban centres, and by the Family Expenditure Survey 1960–1 for rural areas.

The two parts of Pakistan, namely, East and West Pakistan, have somewhat different economies with different habits of consumption and somewhat different production patterns. Inadequacy of data therefore cannot easily be overcome by extending data for one region to another. This necessitates the compilation of data on a regional basis.

### The Present Estimates

Admittedly the existing methods of national income accounting in Pakistan require substantial improvement. The main table published by the Central Statistical Office is entitled National Income of Pakistan (see Table II), and it gives the distribution of national product by industrial origin at constant (1949–50 to 1952–3) prices. This table is unsatisfactory in many respects. For instance, the classification of sectors given in this table does not conform to the U.N. procedure. It is an obsolete classification introduced some twelve years ago and needs change and further elaboration of its contents.

The income concept at present used in Pakistan is that of net national product at factor cost. It equals the net aggregate output of all the goods and services produced in various sectors of the economy during the year. It has been valued exclusive of indirect taxes, and subsequently adjusted for net factor income payments. The estimates are further adjusted for the effects of the terms of trade and indirect taxes on exports.

About 65 per cent of the total national income has been estimated by means of the product approach, and the rest with the aid of the income method. Except for some minor improve-

the aid of appropriate deflators. current prices and subsequently reduced to constant prices with nothing but guesses. In due course, estimates will be made at sequently adjusted. Many of the component estimates are often involves the use of current prices which have not been subestimates. In fact, the procedure of estimation in certain sectors and in some aspects less reliable than the earlier current-price ments, the new constant-price estimates are no more accurate

structural changes in the economy. any meaningful indication of the rate of economic growth and of 30 per cent. It is doubtful, therefore, whether such estimates give are highly unreliable and the margin of error may be 20 to of essentially weak benchmarks. As a result, the existing estimates out-of-date statistics or obtained through a crude extrapolation More than half of the present estimates are either based on

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A. Agriculture

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methods of estimation and are rather subjective in character. have to be improved. Production data are not based on scientific acreage figures are available, the estimates of crop production Although a good recording system exists and fairly accurate

tarm buildings, etc. tenance, repair and depreciation of agricultural implements, I per cent for other crops for wastage; and 5 per cent for maindeduction of 5 per cent for seeds; 3 per cent for cereal crops and gross value. The net value added has been estimated after multiplied by district-wide production in each year to obtain district-wide average (1949-50 to 1952-3) harvest prices<sup>2</sup> are based on physical output of data and harvest prices.<sup>1</sup> The At present estimates of value added by crop production are

One of the serious limitations of the price data in Pakistan is

T Harvest prices are usually the wholesale prices in the rural markets at the

these prices, which is difficult to separate. are collected from the nearest local markets, an element of transport cost gets into time of harvest. <sup>2</sup> For many crops, harvest prices are not available. In such cases, wholesale prices have been used after deflating by certain percentages. Since wholesale prices the lack of clear-cut definition. The definition of harvest prices differs from region to region. Although it represents prices prevailing during the harvest period, analysis has shown that harvest prices are frequently higher than the average of wholesale prices for the corresponding period in small market towns or primary 'mundis' (i.e. the nearest points of sales from the farms). Thus, a standard definition of harvest prices needs to be evolved and utilized for such official statistics.

Since no firm basis is yet available for netting the agricultural products, information on the cost structure of various crop items needs to be obtained through a series of case studies of carefully selected representative farms engaged, as exclusively as possible, in single crop production. Relevant studies in other Asian countries may provide a check.

#### (ii) Livestock

At present, the income originating in the livestock sector constitutes slightly more than 10 per cent of the national income and is estimated on the basis of production of major livestock products.

Using the 1945 (pre-partition) and the abbreviated 1949 livestock census data, the Central Department of Co-operation and Marketing compiled province-wide figures of major livestock products for 1948–9 and on an all-Pakistan basis for 1952–3. The figures of 1952–3 were broken down by provinces on the basis of ratios exhibited in the 1948–9 figures. The figures for intervening years were obtained by interpolation and for the subsequent years were either available in the aforesaid department or repeated from previous years.

Total output figures are obtained by applying factors of yield per animal. None of this information appears to be valid and the estimates should be regarded as very rough approximations as they are based on old and out-of-date surveys. At present, in addition to this, some data are available on the number of animals from the abbreviated 1955 Agricultural Census Report. More complete counts and breakdowns will be published in the 1960 Agricultural Census Report. Interpolation between 1955 and 1960 as well as extrapolation after 1960 will be thus possible. It will, however, be desirable that an Agricultural Sample Survey should be taken every five years to provide benchmarks. Quick sample surveys of consumption and sales can be used as a check on the quantity estimates obtained from the interpolation and extrapolation of the Census data.

Monthly wholesale prices of livestock products are available from the Central Department of Co-operation and Marketing. In order to obtain annual average producers' prices, the wholesale prices by commodity were deflated by ratios varying from 20 to 25 per cent by kinds of livestock products, determined through some partial surveys and in consultation with governmental authorities. Until some scientific case studies are made on the markup of producers' prices to wholesalers on an area sample basis it is difficult to ascertain the validity of the present technique. Since no information is available on the maintenance of livestock and the cost of materials and depreciation of implements, no attempt has so far been made to arrive at the net value added of livestock products, which constitutes a serious shortcoming in the present estimates.

### (iii) Forestry

Present estimates for forestry are based on the value of forest products reported by the Ministry of Agriculture and by the Chief Conservators of Forests, East and West Pakistan; but the figures as available from the Ministry of Agriculture and the Chief Conservators of Forests are at variance. No information regarding the value of products of private forests is available and therefore the contribution of forestry is an underestimate. Aerial photographs recently taken may help to provide information for private forests in due course.

Auction prices are used for the evaluation of forest products and do not include cost of cutting and transporting to the nearest railhead. To bring it in line with other agricultural sectors, it is necessary to add the value of these activities to the auction prices.

# (iv) Fisheries

Production figures for both marine fish and inland fisheries are supplied by the Central and Provincial Fisheries Departments. In the estimates of inland fisheries output of East Pakistan especially, widely diverging figures have been reported by the Provincial Fisheries Department. These divergencies between the two sets of estimates need to be removed. The facts probably can best be estimated from surveys of household expenditure and consumption both in the rural and urban areas. Perhaps the present National Sample Survey programme carried on by the Central Statistical Office will produce reliable measures in a few years time.

For estimating the contribution of fisheries, only the retail prices were available in the case of East Pakistan. These were arbitrarily reduced to obtain prices received by the fishermen in rural and urban areas. In the case of West Pakistan, wholesale prices were available and were reduced by varying appropriate ratios for individual areas to obtain producers' prices. To obtain the prices actually realized by the fishermen, mark-ups between wholesale and retail sale prices and between producers' and fishermen's prices need be estimated. At present, to obtain the net income of this sub-sector a 5 per cent deduction has been made from the gross value for depreciation. Satisfactory estimates for depreciation of boats, nets, etc., are necessary for the evaluation of fish products.

#### B. Mining

Till now, production and price data of all minerals, except rock-salt, were collected by the Bureau of Mineral Resources. The statistics of rock-salt are compiled by the Central Board of Revenue. The official data on mining refer only to West Pakistan. Mining products are not commercially exploited in East Pakistan, hence they are not included in the official statistics. For estimation of the contribution of the mining sector to national income, data for major mining items only are processed. Since the commercial exploitation of certain minor items started late, constant pit-head/well-head prices to be used could not be ascertained. Hence, their contribution has not been included in the national income estimates. The estimates are valid only to the extent that the prices are relevant. These prices must be scrutinized and, in any case, estimates for intermediate products consumed in the process of producing minerals need to be worked out. A study of cost structure of mining enterprises needs to be undertaken and the results of this study should be used for the estimation of gross and net value added in the mining sector.

# C. Manufacturing Industries

The estimates for large-scale industries rest primarily on the 1954 Census of Manufacturing Industries carried out in respect of factories employing twenty or more persons.<sup>1</sup> This Census provided benchmark value added data<sup>2</sup> in current prices, and had wider coverage than the 1953 or 1955 censuses. A wholesale price index of selected domestic manufactured goods was prepared to deflate the benchmark figures in order to convert them into constant prices. In order to provide a series in constant prices for earlier and later years, the interpolation and extrapolation of the benchmark data is carried on with a quantum index of industrial production. However, no satisfactory price index exists, nor have adequate prices been collected with which to convert the constant-price measure to a current-price measure.

The Census of Manufacturing Industries at present excludes one of the major segments of Pakistan's industrial economy, i.e. small-scale and cottage industries. Although it constitutes a little more than 5 per cent of the national income, from the standpoint of number of persons engaged, this sector is second only to agriculture. The present benchmark figure which is based on the 1951 Population Census is little more than a guess as it has been extrapolated by the annual increase in the population under the assumption that growth in small-scale industries has been in proportion to the increase in population. Hence reliable annual estimates for various types of small-scale or cottage industries are badly needed to estimate their production value, profits, wage bill, etc.

# D. Transport and Communication

At present, income from transport and communication constitutes about 3 per cent of the national income. Transport other than railways is estimated from the product side on the basis of assigning annual receipts to taxis, trucks, buses, lorries, victorias, tongas,<sup>3</sup> etc., the number of which is obtained from the Ministry of Communications, as well as from scattered and partial data. The average net income per vehicle has been calculated on the basis of information from various sources after deducting intermediate expenses. Net income has been obtained by multiplying average net income per vehicle by the number of vehicles. Country transport by animal-drawn vehicles is treated as part of

<sup>&</sup>lt;sup>1</sup> No such census was held for 1956; and those held for 1955, 1957, 1958 and 1959-60 although an improvement over the last censuses, contained an unknown amount of undercoverage.

<sup>&</sup>lt;sup>2</sup> Due allowance was made for non-reporting industries.

<sup>&</sup>lt;sup>3</sup> Victorias and tongas are local horse-drawn vehicles.

agriculture and no attempt is made to estimate it independently. Valid estimates for cost of maintenance and depreciation of vehicles in addition to the monthly wages paid to the drivers and conductors, etc., are not wholly available. The major shortcoming appears to be in water transport, especially that provided by water boats in East Pakistan. Except for those mechanically propelled, no information of any kind relating to river transport is available. The net income of other transport services, composed of transport managers, road vehicle drivers, air transport workers, and sea and river craft workers, was therefore calculated on the basis of the number of persons engaged in such services as derived from the 1951 Population Census and their assumed income for each category. Projection for back and subsequent years was made on the basis of the rate of change of population, which, however, is not the correct measure of their contribution. In the case of mechanized vehicles the estimates can be improved with the help of sample surveys with special reference to cost structure. For non-mechanical vehicles in urban areas, comprehensive sample surveys are the only possible method of estimation. For water-transport the reports of the Inland Water-Transport Authority in East Pakistan which provide information on the number of employees, passengers carried, boats, etc., need be utilized. Moreover, these estimates can further be improved as and when further information is made available from the 1961 Population Census.

The income originating in rail transport and communication has been estimated from the income side on the basis of wages and salaries paid to the employees engaged in these services as derived from the budgetary reports of the Pakistan Railways and Post and Telegraph Administration, and these data are reliable. However, Railways and Post and Telegraph should be treated as commercial enterprises and operating surpluses of railways and postal and telegraph services (excluding broadcasting) should be included in the relevant estimates, which is not being done at present.

Virtually all other industries have been estimated from the income side. That is, wages and other personal earnings have been estimated for a benchmark year (normally 1951) by assigning to each industry average annual earnings per person engaged and expanding this by the number engaged according to the 1951 Population Census. This method places heavy reliance on the accuracy of the occupational classification in the Census, as well as on the estimates of their average annual earnings. The latter, while essentially rough estimates, no doubt take into account such information as has been obtained in various surveys. This cannot be regarded as a reliable benchmark for the trade and services sector, especially since these are dominated by very small concerns in which entrepreneurial profit income predominates. No usable information on profit exists, data from the income-tax statistics are not satisfactorily classified for this purpose and have inadequate coverage.<sup>1</sup>

#### E. Trade and Services

In the case of services, the extrapolation of the benchmark mentioned above has been carried out on the estimated annual increase in the population. The number of persons engaged in services for 1950-1 was derived from the figures of occupational distribution as provided by the 1951 Population Census. Incometax data and other sources were utilized to determine an average annual income for each of the various categories of services. Income for this sector was computed with the help of the above data which were projected backward and forward for earlier and subsequent years. There is ample room for improvement. For instance, it is doubtful that the personal services have increased at the actual rate of growth of the population. Details of occupational distribution from the 1961 Census when made available will provide better benchmark data. At least, to start with, income originating in broad sub-groups like (a) education; (b) medical, public and private health services; (c) recreation and entertainments and (d) domestic services, etc., need be computed for better understanding of the estimates.

Figures on persons employed in wholesale and retail trade have been obtained from the 1951 Census of Population. A rough figure of average annual income separately for each category was determined with the help of income-tax returns. The total income for this sector (1950–1) was obtained by multiplying average annual income by the number of persons by categories. The year to year variation in the total income has been adjusted by the changes in the value of production of agriculture, manufacturing and mining all in constant prices. The use of estimated changes in the commodity producing sectors for extrapolating the bench-

<sup>1</sup> At present, tax receipts are about 8 per cent of the national income. M.E.S.-C marks for trade neglect the changes in the proportion of the products of agriculture that pass through trading channels, as well as omitting changes in the volume and gross margins of imports. For these reasons the trade and services estimates are weak and cannot be much relied upon as indicators of the level of income or changes therein.

At present, construction, electricity, gas, water and sanitary services are included in the services sector. Some data are available for public construction, but there are practically no data on private construction. The estimates of income for construction have, therefore, been computed on the basis of the number of persons engaged in this industry as reported in the 1951 Population Census and the estimated annual income determined on the basis of income-tax data and some wage surveys. The benchmark for 1950–1 has been projected backward and forward in relation to the change in population growth. This is not a satisfactory basis for evaluating the income originating in construction. These do not correspond to the present day conditions and cannot therefore be regarded as sufficiently reliable or accurate to be useful.<sup>1</sup>

In the absence of any system of reporting construction data for rural areas, the Central Statistical Office has recently decided to undertake a rural construction survey. Such surveys should be conducted every five years to provide necessary benchmarks. For the intervening years intercensal rates of growth should be used. Besides these, the material on construction available in other agencies needs to be examined and used, if found suitable.

# F. Rental Income

Estimates of rental income are based on the number of dwellings as shown in the 1951 Census and estimated annual rents for rural and urban areas. In order to arrive at net rental income in urban areas 50 per cent of the gross income was allowed for depreciation and the rest was further deflated by 10 per cent for maintenance and repairs. For rental income of rural areas, only 10 per cent of the total rental income was deducted for maintenance and repairs. These represent net rentals for urban and rural areas for the year 1950–1. The benchmark figures so obtained have been projected backward and forward on the

<sup>1</sup> The same criticism applied to electricity, gas, water and sanitary services which should be shown as a separate sector.

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basis of the rate of change in population. These estimates do not correspond to the present day conditions and, therefore, cannot be regarded as sufficiently reliable. Municipalities levy a tax on rental income in urban areas. With the help of these records the aggregate rent can be estimated on the basis of the tax assessed. Conducting a sample survey of rents paid and imputed in rural and urban areas will provide satisfactory information on ownership of dwellings. At present, plans are in hand for conducting surveys of rural rental paid or imputed and the results when available will help improve the estimates.

### G. Government

It has been assumed that the real output in this sector is measured by money wages paid. Income originating in this sector is drawn from the final accounts of the central, provincial, and local authorities' budgets. The estimates are probably the best that can be made at present. Since Government budgets are classified in a manner which requires adjustment for use in national income estimation, there is a possibility that certain items, like transfer payments, subsidies, capital formation, etc., may not receive a proper treatment. The two major difficulties are the lack of sufficient details in the budgets and the continuous inability to obtain adequate coverage of local authorities' budgets.

### H. Banking and Insurance

# (i) Banking

Income originating in banking is derived from the financial reports of the major concerns in this field and is computed on the basis of wages and salaries of the employees of the State Bank and the wages and salaries and the operating surplus of the scheduled banks. No imputed charges for banking services from other sectors are deducted. At present, no reporting system exists for non-scheduled banks. Relevant ratios, however, can be determined on the basis of information concerning wages, profits and deposits in the scheduled banks. This is being taken in hand and will be introduced soon. Furthermore, no information exists on the volume of income arising from professional money lenders who play an important role in the supply of credit in the country's rural economy. Moreover, at present, semigovernmental banking institutions which are not scheduled by

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the State Bank such as P.I.C.I.C., Industrial Development Bank, etc., are not included in the present estimates. These should also be included together with the various statutory bodies for public development, e.g. P.I.D.C., W.A.P.D.A., K.D.A., etc. At present, very little information is available on transactions concerning the sale of land and buildings. This calls for a study of the subject by a research institute in order to introduce an estimate for the real estate sub-sector.

The contribution of co-operative societies is also based on the wages and salaries paid to their employees. This information was obtained from the Central Co-operation and Marketing Department. No up-to-date information on Co-operative Credit Societies is available at present.

### (ii) Insurance

At present, the contribution of insurance is also estimated on the basis of wages and salaries paid to employees and commissions paid to commission agents. At present, the operating surplus of the insurance companies, has not been included in the estimate which is therefore too low. The contribution of postal insurance at present is included in the communications sub-sector instead of the insurance sector.

# I. Rest of the World

At present, this sector consists of several sub-categories: (i) factor income payments, (ii) adjustment for indirect taxes on exports, and (iii) effects of terms of trade. Net investment income is taken from the Balance of Payments statements. For estimating factor income payments at constant prices, net investment is deflated by the adjusted import price index for the current year. But the calculation of 'net factor income payments' is limited only to investments; other factor income should also be included. For the adjustment of indirect taxes on exports, average export taxes during the base years 1949-50 to 1952-3 have been extrapolated by changes in the physical volume of exports. The adjustment for indirect taxes on exports does not seem to be meaningful. All indirect taxes should be included in order to move from factor cost to market price estimates. The effect of changes in the terms of trade has been computed by deflating the value of exports in the current year by the import price index and by the export price index. The difference between the two deflated values represents the effect of terms of trade.

Detailed official statements on transactions with the rest of the world are available. There are large differences between the commodity data from the balance of payments and from the trade statistics. Otherwise the rest of the world sector does not present any substantial problem. Delays in the publication of the official estimates often make it impossible to correctly assign the factor income receipts or payments to the year in which transactions actually took place.

### Conclusion

It will be seen that the greatest limitation in the way of improvement of these estimates is the paucity and unreliability of data and the lack of adequate reporting systems. In order to meet the growing needs of planners, research workers and other users of national income data, these accounts must be prepared in a comprehensive form. Efforts are now being made to improve the estimates as far as possible. Collection of statistics is a timeconsuming process and will take its own time. However, it is strongly felt that unless the Central Statistical Organizations in the developing countries are equipped with legal authority to collect all types of statistics it is difficult to obtain adequate and reliable basic information. In order to achieve quick and cheaper results in these countries, sampling techniques will have to be applied more and more to collect the needed statistics. It may also be emphasized that the national accounting units in these countries should serve as the clearing houses for all sorts of statistics. No statistical data collection programme should be planned or undertaken without the consultation of such units so that the statistics collected can be used for national income accounting as well. Moreover, competent personnel possessing sound knowledge of economics and statistics should be attached to the field of national income accounting for skilful handling, processing and analysis of data. It is also most desirable that adequate training facilities should be provided to the national income workers so that they may acquaint themselves with the procedures and techniques of national income accounting in the advanced countries.

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