

## THE POST-WAR EXPANSION IN THE SUPPLY OF ECONOMIC STATISTICS ON THE LESS-DEVELOPED COUNTRIES

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Though the supply of economic statistics relating to the less developed countries of the world is still far from adequate, during the post war period - especially the last 10 years or so - the governments of these countries have markedly increased the extent of these series of data. This expansion in the supply of economic statistics resulted primarily from new requirements for data. Prior to World War II, economic statistics were wanted by the governments of the less developed countries for such purposes as measuring sources of revenue and administering the day-to-day affairs of various departments. Since the early 1950s the efforts to develop economically have furnished the major source of requirements for economic statistics. The consequences of this shift in the character of the demands for data have been not only substantial expansion in the supply of economic statistics but also marked changes in the organizational and other arrangements for gathering and compiling these data.

In this paper we will deal with the subject of economic statistics relating to the less developed countries of the world from the points of vantage that were just mentioned. The countries of Latin America, Asia and Africa will be treated as less developed. We will discuss first the changes, post-war, in the supply and character of selected economic statistics in the light of the requirements for data for purposes of furthering and assessing economic development. We will then go on to examining the changes in the arrangements for gathering and compiling economic statistics that accompanied the extension in these data.

The needs for data on the structure and interrelationships of an economy in devising plans and programmes for its development have furnished a good part of the motivation behind the economic censuses and similar inventories taken during the post-war period. The same type of requirements for data have stimulated basic inquiries into the financing of certain aspects of production, especially capital investment, into the sources of demand for goods and sources, and into the interrelationships between production, incomes, expenditures and savings.

Even broad and sketchy efforts to further development require data on the character of the economy involved. Information is needed, for example, on the contribution to production, incomes, exports, on the employment of labour and capital and on the demand for key materials and other intermediate goods of sectors of the economy such as agriculture and the various mining and manufacturing industries. Similar but, perhaps, less extensive, data are wanted on construction and transportation and similar public utilities. Such data are essential to delineating the parts of the economy on which the efforts to develop should focus, to defining the policies and instruments which might further these efforts, and to maintaining the necessary balance between the various sectors of economic activity. For these purposes, information on the supply of key goods and services

from domestic production needs to be supplemented with data on the details of imports since in the case of the less developed countries, in particular, imports are a key source of new capital equipment and substitutions of domestic production for imports furnish possible avenues for economic expansion. On the side of the demand for goods and services, data are required concerning dimensions of personal consumption, government expenditures, fixed capital formation and exports. The relative magnitudes of personal expenditures, personal and other incomes and domestic savings, on the one hand, and domestic savings, sources of external finance and capital formation, on the other, also provide needed intelligence. Information on the sources of demand for goods and sources is essential to charting realistic expansion in domestic production, which will avoid the pitfalls of deficiencies or surpluses in the supply of goods and services and the consequent inflation or deflation. Data on the interrelationships between incomes, current expenditures, capital formation and sources of capital finance are also needed for these purposes.

It is no wonder, therefore that, as part of their efforts to develop economically, the governments of the Southern Hemisphere have become forcefully aware of the importance of data on the basic characteristics of their economies. Even where they have not engaged in systematic economic development, turning to the World Bank, other international agencies, or highly industrialized countries for financial and other assistance has usually resulted in requests for such data as part of the application and justification for the aid. The works of various international organizations and bodies on the problems and means of economic development, as well as on statistics as such, has also brought home to these governments the requirements for basic economic data. It should be emphasized, however, that in a significant number of countries, awareness of the need for such statistics has not yet resulted in the taking of the pertinent statistical inquiries. This has been due, among other reasons, to the limited funds and resources for statistical work, the lack of experience and the difficulties involved in taking these inquiries. Nevertheless, concern with economic development has furnished a drive, which was missing before World War II, for engaging in the collection and compilation of economic statistics. Governments could hardly be expected to spend much effort in gathering data which were, to a considerable extent, of academic interest before.

The first six tables set out in the annex to this paper illustrate, in the case of selected countries in Latin America, Asia and Africa, the increasing prevalence during the post-war period, of certain inquiries, statistical series or sets of accounts yielding basic data on the character and structure of the economy.

Table 1 is devoted to comparing the number of countries which gathered data, in the 1940 and 1950 censuses of population, on the industrial

distribution of the economically active population. This kind of data furnishes a useful measure of the relative significance of the various kinds of economic activity which, in the case of the less developed countries, is not beset with as serious problems of concept or collection as some other broad measures of the structure of production. This is the case because, in the less developed countries, the household is the site of much production, both commercial and subsistence, and productive activity is frequently not clearly segregated from other human activities. And, censuses of population of course require enumeration of the characteristics of each individual, whether or not he is working on a farm, in a mine, factory, shop, store or some other institutionalized productive unit. The industrial distribution of the economically active population, taken in conjunction with its occupational distribution, also furnishes a useful inventory of the kinds of labour available.

It is evident from Table 1 that a marked increase took place from the 1940 round of censuses of population to the 1950 round in the number of less developed countries gathering data on the industrial distribution of the economically active. This increase was largely due to the much higher proportion of the countries taking population censuses which gathered these data. For example, among the Latin American countries analyzed, only 9 of the 16 countries participating in the 1940 round of censuses gathered data on the industrial distribution of the economically active, whereas this was the case for all of the countries taking part in the 1950 round. In the case of the Asian countries analyzed, the comparable figures were 1 of 10 in 1940 round and 10 of 10 in the 1950 round. Preliminary study also shows that all of the Latin American and Asian countries participating in the 1960 round of censuses of population have gathered, or propose to gather, data on the industrial distribution of the economically active.

Censuses of agriculture furnish inventories of the predominant economic activity in the less developed countries. Nevertheless, only 7 of 20 Latin American countries and 2 of the 18 Asian countries took censuses of agriculture during the 1930 round of these inquiries. These small numbers are especially surprising in view of the significance, in a number of these countries, of taxes on agricultural land or output as a source of governmental revenue. Under the impetus of the data required for efforts to develop, the comparable figures for the 1950 round of censuses were 19 and 7, respectively. Moreover, many more Asian and African countries are participating in the 1960 round of censuses of agriculture than in the 1950 round.

Mining, manufacturing, construction and the production of electricity and gas are a major focus of attention in programmes for economic development. Economic development often involves markedly expanding these activities shifting underemployed agricultural labour to the industrial sector, diversifying and extending the scope of manufacturing, and substantial fixed capital

formation in these industries. It is not too surprising, therefore, that all of the Latin American countries analyzed and 17 of the 18 Asian countries are participating in the 1963 World Programme of industrial censuses and similar basic inventories. Before 1948, only 6 of the Latin American countries and 2 of the Asian countries had taken such inquiries. Even half of the African countries studied are taking part in the 1963 Programme. The comparable figures for the 1953 round of these censuses were 11, 6 and 8.

Table 4, which deals with statistics of external trade, illustrates that compilation was as common in the pre-war as the post-war period in the case of data on transactions which have always been a major source of government revenue and the subject of detailed government control. Information on imports and exports were, and still are, gathered, of course, as part of the administration of the government customs. Though the raw data were as available pre-war as post war, because of post-war requirements for these data, marked changes have taken place in the way in which these figures are compiled. Almost all of the countries analyzed have added, detailed and summary tabulations of imports and exports according to classifications which are economically meaningful, usually modeled on the Standard International Trade Classification, to the detailed tabulation according to categories of varying custom duties. The demands for these data arising out of economic analysis and policy making have also resulted in much more emphasis, post-war than pre-war, on the compilation of figures of quantities, as well as values, for exports and imports.

The substantial differences, post-war and pre-war, in the availability of statements of the balance of payments, in contrast to the situation in the case of external trade, point to the stimulants to gathering economic statistics furnished by the efforts of the countries studied to develop economically. As compared to the 20 Latin American, 14 Asian and 11 African countries which had statements of this balance of payments in 1960, only 7, 4 and 2, respectively, of these countries had such statements in 1938. As we all know, the composition of the balance of payments is of fundamental importance to the less developed countries, all faced with finding the foreign exchange to finance imports of much of the capital goods strategic for economic development.

A set of national accounts on production expenditure and income furnishes an over-all view of the character and structural interrelationships of an economy. Such accounts have therefore come to be considered essential tools in plans and programmes for furthering economic growth. As a consequence, by 1960, all of the Latin American countries studied, 14 of those in Asia and 11 in Africa had devised sets of national accounts. It must be emphasized that the reliability of the figures presented in a number of the accounts, as well as the degree of articulation of these accounts, left much to be desired, since the basis for a set of adequate national accounts is

a highly developed body of economic statistics. Nevertheless, the situation, in 1960, represented a marked improvement over that existing during the early part of the post-war period. By 1948, only 15, 6 and 4, respectively, of these countries had tackled the work of compiling such accounts.

In addition to data on the character and structure of their economy, countries, in dealing with economic development, require data on the trends, in terms of quantities and prices, for such aspects of their economy as the various kinds of production, the sources of expenditures on goods and services, and external trade. An obvious part of efforts to raise the level of economic development is ascertaining the extent to which goals have been reached and detecting current imbalances and other problems requiring attention.

Some of the economic statistics discussed before, such as sets of national accounts, statements of the balance of payments and data on external trade, are as essential in measuring current developments as in delineating basic features of an economy. The last six tables of the annex to this paper are devoted to comparing the availability, post-war and pre-war, of some of the additional series of statistics which are required for assessing current developments. The figures presented in these tables suggest that in the case of annual or more frequent economic statistics, the less developed countries have not yet attained the stage that they have reached in the case of benchmark data. This seems to be due, at least in part, to the less rapid post-war expansion in the more frequent statistics.

Set out in Table 7 is a comparison, pre-war and post-war, of the number of the countries which gathered sufficient annual data on the output of important crops to construct index numbers of food production. During the post-war period utilized, twelve of the Latin American countries met this criterion; an addition of 4 over the pre-war period. The figures for Asian and African countries are 12 and 10 and 6 and 5, respectively.

The increase during the post-war period in the number of less developed countries taking annual or similar industrial inquiries is greater than that for countries gathering data on the output of crops. For example, 16 Latin American countries took such surveys during the years, 1956-1960, as compared to 2 before 1948. The contrast between the post-war and pre-war periods is about the same in the case of the Asian and African countries. Nevertheless, rather fewer countries took annual surveys of the industrial sector than censuses or similar benchmark inquiries. For example, 4 Latin American countries took the former type of surveys during the period, 1950-1955, but 11 of these countries conducted industrial censuses around 1953.

The less developed countries made even less progress, post-war, in compiling annual or more frequent index numbers of manufacturing production and employment than in taking annual indus-

trial surveys. Table 9 shows, for example, that 10 Latin American countries compiled indexes of production during the period, 1954-1958. Three of these countries produced the series before World War II. Comparable figures for Asia and Africa are 7 and 2, each. The dimensions of the increase, between the pre-war and post-war periods, in the case of index numbers of manufacturing employment was similar to that for index numbers of manufacturing production.

Somewhat more less developed countries are compiling series of index numbers on wholesale prices than on manufacturing production or employment. However, these countries have made little, if any progress, post-war, in this phase of their statistical work. This situation may be indicative of the much lesser attention devoted in work on economic development to dealing with price aspects than with the "real" aspects.

Contrary to the situation in the case of index numbers of wholesale prices, it is evident from Table 12 that index numbers of cost of living have been the subject of considerable attention on the part of the less developed countries. Perhaps this reflects the need for indexes of cost of living to ascertain the impact of development efforts on "real" levels of living.

I hope that the preceding review of the post-war expansion in the availability of selected economic statistics, has not left the impression that the less developed countries now have adequate data on their economies. As any of us who have worked on, or utilized, these data know, this is far from the case. The lack of some of the required economic statistics of a general type-annual or more frequent and benchmark has been indicated previously. The discussion has not dealt, however, with the availability of other general economic data - for example, on the distributive trade, transportation and other services - much of which is less plentiful than the series that have been discussed. Further, attention has not been devoted to the gaps of coverage and the deficiencies of detail, definition, unreliability and lateness in the data that are gathered and compiled. However, it is clear from our brief review that during the last 10 years or so, the governments of less developed countries have, on the whole, made considerable progress in widening the collection and compilation of the data required on their economies.

In many less developed countries, the introduction of the new series of data on the economy has gone, hand-in-hand, with the evolution of new arrangements for gathering and compiling economic statistics. Unlike the bulk of the economic data gathered pre-war, most of the new series could not be obtained as a by-product of governmental administrative activities. Instead, the data had to be gathered directly from businesses or households, through inquiries designed especially for this purpose. Further, in order to plan and take these inquiries effectively, it was essential to make use of the concepts, methods and techniques of statistics rather than those of governmental supervision, control or accounting.

This involved training and recruiting a corps of statistical personnel and accumulating and effectively retaining experience in such work. The organizational bases for tabulating the results of these inquiries, as well as other economic data, in ways which were most useful for statistical and economic analysis involved the same pre-requisites.

These circumstances, as well as some considerations have led the governments of many less developed countries to establish and foster special organizations and corps of personnel for statistical work. In a number of Asian countries, for example, new departments and offices have been founded which were devoted to the collection and compilation of economic and other types of statistics. And, increasingly, statisticians and other statistical personnel have been recognized as distinct corps of civil servants. The same events have already taken place in some African countries. In other countries of Africa, the setting up of statistical organizations and the development of statistical personnel has just begun. In Latin American countries where continuing statistical organizations - essentially for census taking - did not exist before, permanent agencies for statistical work have also been established. Where census offices already existed, the functions of these agencies have been extended to cover the taking of many other kinds of statistical inquiries and the compilation of other types of statistical series, including data derived from governmental administrative records. In the countries of all three regions, government units, agencies and departments which are not specialized in statistical work now play a much less important role in collecting and compiling economic statistics than they did pre-war, or during the early part of the post-war period.

The post-war emphasis on the use of economic statistics in planning and assessing economic development led to establishing special statistical organs - in particular, central statistical offices - because of some other considerations in addition to those mentioned before. As we noted earlier, arraying the various kinds of economic statistics into integrated national accounts materially facilitates the use of the data in work on the problems of economic development. Even where formal integration does not take place, it is essential to have data on each of the important aspects of the economy and to examine and analyze the various economic statistics in relation to one another. In order to meet these requirements, the statistical apparatus, activi-

ties and plans of a country have to be viewed as a whole and the concepts, classifications, definitions and techniques utilized in gathering and compiling the various economic statistics need to be co-ordinated with one another. Such an approach to the statistical activities of a government has generally involved setting up an apparatus for planning and co-ordinating these activities in the light of both the requirements for data and the circumstances under which the data have to be gathered and compiled.

These considerations, in addition to the pre-requisites mentioned earlier, have led a number of Latin American, Asian and African countries to concentrate almost all their statistical work in one central statistical organization. In the case of other countries in these regions, where statistical work is still dispersed among a number of specialized units, co-ordinating statistical units have been established, which also often compile the national accounts for the country and other over-all economic indicators. In a number of instances, the central statistical or co-ordinating agency is part of either the economic development organization or a ministry which is also responsible for economic planning and development. In a few countries, programmes for statistics have been made part of articulated plans for economic development. In any case, in most of the countries, clearly defined means and apparatus have been, or are being, established for planning and carrying out of the statistical activities of the government so that the requirements for data for purposes of work on economic development will be satisfied.

The organizational arrangements for statistical work that are evolving in the less developed countries are promising for more rapid progress in extending and improving the available economic statistics in the near future than in the past. These arrangements are conducive to the establishment of a growing corp of trained and experienced statistical personnel. Explicit and systematic study of the gaps and inconsistencies in the supply of available economic statistics in the light of the pressing requirements for these data should stimulate the rectification of these deficiencies. The increasing concerted use of the available figures in the various tasks of planning, furthering and assessing economic development should furnish real incentives for improving the supply co-ordination and quality of the economic statistics gathered and compiled and for providing the funds and resources for these purposes.

## ANNEX

Table 1. Data on the Industrial Classification of the Economically Active Population

Region	Number of Countries Analyzed	Number of Countries Compiling Data	
		During the 1940 Censuses of Population	During the 1950 Censuses of Population
Latin America	20	9	19
Asia, East and Southeast	18	1	10
Africa	36	2	11

Table 2. Censuses of Agriculture

Region	Number of Countries Analyzed	Number of Countries Taking the Census	
		During 1930 Round	During 1950 Round
Latin America	20	7	19
Asia, East and Southeast	18	2	7
Africa	36	...	17

Table 3. Industrial Censuses or Similar Inquiries

Region	Number of Countries Analyzed	Number of Countries Taking the Inquiry		
		Before 1948	During 1953 Programme	During 1963 Programme
Latin America	20	6	11	20
Asia, East and Southeast	18	2	6	17
Africa	36	2	8	18

Table 4. Data on External Trade

Region	Number of Areas Analyzed	Number of Areas Compiling Data	
		For 1938	For 1948 and thereafter
Latin America	20	20	20
Asia, East and Southeast	18	17	18
Africa	23 <sup>1/</sup>	22	23

<sup>1/</sup> British East Africa - 4 countries, former French Equatorial Africa - 3 countries, former French East Africa - 8 countries; are each counted as one.

Table 5. Statements of the Balance of Payments

Region	Number of Areas Analyzed	Number of Countries Having Statements		
		In 1938	In 1948	In 1960
Latin America	20	7	15	20
Asia, East and Southeast	18	4	6	14
Africa	36	2	4	11

Table 6. National Accounts on Product, Expenditure and Income

Region	Number of Countries Analyzed	Number of Countries Compiling the Accounts	
		In 1948 or earlier	In 1959-1960
Latin America	20	3	12
Asia, East and Southeast	18	3	13
Africa	36	2	14

Table 7. Data on Output of Agricultural Commodities for Index Numbers of Food Production

Region	Number of Countries Analyzed	Number of Countries Furnishing sufficient Data to Compile the Index Numbers on:	
		Pre-war Base (1934-1938=100)	Post-war Base (1952/1953-1956/1957=100)
Latin America	20	8	12
Asia, East and Southeast	18	10	12
Africa	36	5	6

Table 8. Annual or Somewhat Less Frequent Industrial Inquiries

Region	Number of Countries Analyzed	Number of Countries taking Inquiries		
		Before 1948	1950-1955	1956-1960
Latin America	20	2	4	16
Asia, East and Southeast	18	0	2	9
Africa	36	2	3	15

Table 9. Index Numbers of Manufacturing Production

Region	Number of Countries Analyzed	Number of Countries Compiling the Index Numbers		
		Pre-war	During 1948-1953	During 1954-1958
Latin America	20	3	8	10
Asia, East and Southeast	18	2	6	7
Africa	36	2	4	7

Table 10. Index Numbers of Manufacturing Employment

Region	Number of Countries Analyzed	Number of Countries Compiling the Index Numbers	
		Around 1948	1955-1960
Latin America	20	6	10
Asia, East and Southeast	18	2	5
Africa	36	1	7

Table 11. Index Numbers of Wholesale (Producer) Prices

Region	Number of Countries Analyzed	Number of Countries Compiling the Index Numbers	
		Around 1948	Around 1960
Latin America	20	13	13
Asia, East and Southeast	18	10	8
Africa	36	5	9

Table 12. Index Numbers of Cost of Living

Region	Number of Countries Analyzed	Number of Countries Compiling the Index Numbers	
		Around 1948	Around 1960
Latin America	20	17	19
Asia, East and Southeast	18	14	14
Africa	36	14	24