

information on international trade. The establishment of the banking system brought with it information on money and credit. The attempt to solve agricultural problems led to a large mass of data on prices and production of farm products. In the field of labor, price indexes of the cost of living and information on wages and hours were collected and published. The depression of the 1930's led to measurement of unemployment. The regulatory activities of the Government also produced a flood of data. Railroads, public utilities, security markets, and interstate commerce all were required to provide information for the public record, and to produce data for the purpose of regulation.

The establishment of the corporate and personal income taxes and the social security system put in the hands of the Government detailed records on almost every individual and business in the Nation, and although these were not made public they have been used for administrative purposes and for the development of statistical data. In the fields of health, education and welfare, large quantities of data have also been amassed. Information about births and deaths, diseases, education, and crime have been collected from a wide variety of State and local institutions.

The ever-growing body of data has found a great many uses, but it has also brought with it a great many headaches. Masses of different tabulations of interrelated but not necessarily consistent data have been published by a large number of different agencies. In trying to summarize the quantities of detail, economists first went in the direction of developing indicators which would show the level of activity in the economy. Such diverse things as steel production, freight car loadings, the wholesale price index, and stock market prices were used as general measures of what was taking place. After the great depression of the 1930's and especially in response to the needs of World War II, an attempt was made to develop a more systematic and integrated set of information for all parts of the economy. The national income accounts, initiated in the late 1930's, have now developed so that they draw on a large number of statistical sources and provide a set of internally consistent estimates of all sectors of economic activity.

However, national economic accounting is still highly aggregative. It manages to reduce the picture of the total economy to a manageable set of tables only by omitting the underlying detail and interrelationships. It is not generally possible, furthermore, to move from the national economic accounts to the more detailed tabulations on particular aspects of the economy provided by the different Government agencies. Besides the intellectual problems of comparability and consistency, the sheer mass and wide diversity of the underlying data restrict its usefulness for general statistical purposes, although, of course, to those concerned with one part of the system individual tabulations by themselves are very useful.

The first major revolution in the processing of data was the development of punchcard machines. Punchcards were useful not only because they afforded a mechanical means of handling and tabulating data, but because they forced upon the system a degree of rigor in the development of codes and classification systems. The use of punchcards on any large scale, however, introduces an unavoidable element of inflexibility. For large operations, the coding, keypunching, and tabulation have to be rigorously supervised, and scheduled in advance from the first recording of the data to final tabulation. Generally speaking, feed-