

research on consumer behavior at the University of Michigan are all examples of large-scale projects using large bodies of data processed on high-speed computers. Other institutions where computer facilities exist are also carrying out research of this type. The value and productivity of this research depend in large measure on the character and quality of data available. It is not only major research projects carried out by teams of scholars that have changed, however; individual research by specialized scholars working in a particular area has also been affected. In many universities and research institutions, there is no more than one economist for a given specialty, and for this reason he must do his research as an individual scholar. It is still true that many economists engage in research on an individual basis, but where before the computer the cost of processing data and making computations was beyond the resources available to the individual scholar, today this is not as true. The existence of bodies of data and the computer is extending the horizon of such scholars and is placing in their hands powerful research tools. An increasing number of substantial and valuable research projects is being undertaken because information is available on a highly disaggregated basis in machine readable form.

ACCESS TO DATA BY ECONOMISTS

The use of the computer as a basic tool in empirical economic research does, of course, require that there exist bodies of suitable data in machine readable form. Without appropriate data, the economist with a computer would be in the same position as a biologist with a powerful microscope but no biological specimens. With limited or inferior data he will be constrained to results of limited usefulness or doubtful reliability.

Large-scale research projects

For the most part, large-scale economic research projects have a considerable advantage in obtaining the kind of information they need. However, even in these cases, the committee has found that the situation is far from satisfactory. Federal agencies are not organized to provide data, and therefore delays and administrative difficulties may make it impossible to obtain the desired information. The problem of disclosure of basic information poses additional difficulties, and Federal agencies may use these difficulties as a convenient excuse at times when they regard themselves as fully preoccupied with their own problems, although devices could be worked out to safeguard the confidentiality of the data. Where cooperation is required between two Federal agencies for the development of interrelated data, the difficulties are generally so great that research institutions hesitate to undertake the task.

Individual research

The problems facing the individual research worker are many times greater than those faced by large-scale projects. First, it is often quite difficult for an individual to find out what information exists and what form it is in. Second, making arrangements with Federal agencies often requires substantial time and effort, and usually agencies are not receptive to the individual scholar unless he is well known. The cost of having the Government prepare data in a form suitable for research purposes is very high indeed, because it must be done on a special ad hoc basis which disrupts the agency's operations. For these reasons the individual researcher is usually not in a position to obtain specially developed bodies of material. However, tapes of standard or multipurpose information specifically designed to be sold for research purposes can be developed. As one example, the 1-in-1,000 sample of the population census prepared by the Census Bureau has provided many universities and research institutions with a set of basic information which can be used in a large variety of research projects. Over the long run, the individual research scholar may have to come to depend upon such standard bodies of data much in the same way as he previously depended upon published tabulations.

DATA ACCESS FROM THE POINT OF VIEW OF THE FEDERAL GOVERNMENT

As has already been indicated, the various agencies of the Federal Government have administrative and regulatory responsibilities which constitute their major functions, and the production of statistical information and the data underlying it is usually ancillary to these major functions. Demands for data by a large number of organizations, including not only research economists but