

288 288

89th Congress }
1st Session }

JOINT COMMITTEE PRINT

IMPROVED STATISTICS FOR
ECONOMIC GROWTH

A COMPENDIUM OF VIEWS AND SUGGESTIONS
FROM INDIVIDUALS, ORGANIZATIONS,
AND STATISTICS USERS

MATERIALS SUBMITTED TO THE
SUBCOMMITTEE ON ECONOMIC STATISTICS
OF THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES



JULY 1965

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE

49-055

WASHINGTON : 1965

JOINT ECONOMIC COMMITTEE

(Created pursuant to sec. 5(a) of Public Law 304, 79th Cong.)

WRIGHT PATMAN, Texas, *Chairman*

PAUL H. DOUGLAS, Illinois, *Vice Chairman*

HOUSE OF REPRESENTATIVES

RICHARD BOLLING, Missouri
HALE BOGGS, Louisiana
HENRY S. REUSS, Wisconsin
MARTHA W. GRIFFITHS, Michigan
THOMAS B. CURTIS, Missouri
WILLIAM B. WIDNALL, New Jersey
ROBERT F. ELLSWORTH, Kansas

SENATE

JOHN SPARKMAN, Alabama
J. W. FULBRIGHT, Arkansas
WILLIAM PROXMIRE, Wisconsin
HERMAN E. TALMADGE, Georgia
JACOB K. JAVITS, New York
JACK MILLER, Iowa
LEN B. JORDAN, Idaho

JAMES W. KNOWLES, *Executive Director*

JOHN R. STARK, *Deputy Director*

MARIAN T. TRACY, *Financial Clerk*

HAMILTON D. GEWEBER, *Administrative Clerk*

ECONOMISTS

WILLIAM H. MOORE
GERALD A. POLLACK

NELSON D. MCCLUNG
DONALD A. WEBSTER (Minority)

SUBCOMMITTEE ON ECONOMIC STATISTICS

WILLIAM PROXMIRE, Wisconsin, *Chairman*

SENATE

PAUL H. DOUGLAS, Illinois
J. W. FULBRIGHT, Arkansas
HERMAN E. TALMADGE, Georgia
JACK MILLER, Iowa

HOUSE OF REPRESENTATIVES

RICHARD BOLLING, Missouri
THOMAS B. CURTIS, Missouri
ROBERT F. ELLSWORTH, Kansas

LETTERS OF TRANSMITTAL

JULY 1, 1965.

To the Members of the Joint Economic Committee:

Transmitted herewith for the use of the members of the Joint Economic Committee and other Members of Congress is a compendium of statements by economists and statisticians on measures to strengthen the Federal Government's contribution to statistical and diagnostic tools for dealing with economic policy.

The statements, of course, do not necessarily reflect the views of the committee or any of its members, but are being made available as a focus for further discussion and review.

WRIGHT PATMAN,
Chairman, Joint Economic Committee.

JUNE 30, 1965.

HON. WRIGHT PATMAN,
*Chairman, Joint Economic Committee,
U.S. Congress, Washington, D.C.*

DEAR MR. CHAIRMAN: Transmitted herewith is a compendium of statements received from individual economists and representatives of interested private organizations and statistics users in response to an invitation of the Subcommittee on Economic Statistics. These are part of a general review by the subcommittee of the statistical requirements of the Nation in the light of present and future needs and capabilities.

The impressive advances of economic policy in recent years have been largely the consequence of greatly improved economic statistical information. Under the Employment Act of 1946, a declared policy of the Government is to use its resources and means in the interests of economic stability, growth, and the stimulation of job opportunities. It is not surprising that interest has tended to concentrate primarily on the active, discretionary programs, such as monetary, fiscal, public works, trade policy, and the like.

One consequence of this concern for policy has been that the important role which Government plays in the area of diagnosing economic conditions through the collection and dissemination of economic statistics is frequently overlooked or less fully appreciated. It well may be, nevertheless, that the availability of these diagnostic tools is our main assurance against the recurrence of economic depression. This in no way belittles the contribution of built-in stabilizers, such as deposit insurance, social security, stock market controls, and, of course, our better understanding of economic tools and policies. But it does mean that important corrective policy steps may be taken at an advanced stage of an economic downturn or threatened inflation as a result of our early awareness of the economic facts of what is happening in the economy. We no longer have to sit innocently by, eventu-

ally to be overwhelmed with unemployment or the cumulative liquidation of inventories and the backwash of an undue tightening of credit.

It is hard to realize what progress we have made in this respect in the past generation. Let us consider several of the series contained in Economic Indicators, prepared for the Joint Economic Committee, the Congress, and others, which we now take for granted as available currently and accurately.

Before the great depression, neither the Federal Government authorities nor businessmen had available to them the present series on national income and gross national product. We now have come to rely on and continually use these estimates, available and issued regularly a few weeks after the close of each quarter year.

The Consumer Price Index, upon which we rely for much of our understanding of what is going on in the economy, and which is used as a "trigger figure" in certain wage contracts, was in 1929 computed only twice a year and then reported only with a very substantial lag between the fact and the date of publication.

Information on department store sales was not then available until about 30 days after the close of a month; we now have weekly series available within 3 to 4 days. Statistics on consumer credit were not established until 1942.

Even such a basic monetary statistic as the total money supply, of which we now have many indications weekly and substantially complete revised data within a month was, in 1929, not available until after a 3 months' lag.

Employment, unemployment, and work force statistics, which all of us watch closely through the newspapers and published compilations of business indicators, were for all practical purposes not available on a nationwide basis before the great depression.

Sales, inventory, industrial production, and construction figures—while constructed by either the Government or private agencies in the period before 1929—have been greatly improved in the last 25 years. Above all, they now give us information promptly instead of after a lapse of 3 to 6 months. Small wonder it might almost be said that in the 1920's the stock market average dominated economic thinking and thereby added to the cumulative optimism before 1929 and the ensuing pessimism after October of that year. Stock market prices and the Dow-Jones average had the merits, and demerits, of being one currently and readily available index of economic activity.

Surveys developed in the past decade of business and consumer plans for the coming years are monumental contributions to policy-making and to economic stability and growth. The Commerce-SEC survey of business investment plans, the McGraw-Hill survey of plant and equipment outlays, the Michigan Research Center surveys of consumer intentions are indispensable working tools today. We must also note the tremendous strides in Government budgeting—Federal, State, and local—and the value to all policymakers generating from the availability of such information on Government fiscal plans.

The comments and criticisms set forth in the accompanying compendium of statements suggest how far we have come in our current knowledge, but they leave no doubt that we can still further sharpen and refine these tools, good as they now are. One thing that seems conspicuous from even a cursory view of the statements is the extent to

which the respondents today accept and welcome the large role of Government as the responsible party in the collection of statistics. It seems to be taken for granted that the Government is the most efficient and impartial collector not only of demographic and social data but of much business information on such intimate competitive matters as inventories, new orders, profits, and costs. It is a testimonial to the impartiality of Government.

Most of the data are, of course, byproducts of performing regular governmental functions. Our knowledge of trends in corporate profits becomes available, for example, through the routine activities of the Bureau of Internal Revenue and the Securities and Exchange Commission. Our statistics on money supply and banking developments, so essential to guiding monetary policy, are in large part incidental to the regulation of bank assets and the insurance of bank deposits. Data on building permits are the foundation of our housing and construction information, and our bankruptcy data are founded upon court records.

It is significant that instead of a tone of complaint or irritation which one might have feared over the burden and cost of supplying Government agencies with the raw material upon which the published governmentally collected statistics are based, one finds throughout these statements a recurrent urging that Government statistics be expanded and improved by adding more detail rather than less. There are recurrent suggestions, for example, that the statistics include more detailed breakdowns by areas, regions, products, and industrial classifications.

One comment voiced by several correspondents on available inventory information cites the "lack of adequate product detail." Another observation urges more detailed classification of establishments and companies with diversified products and operations. On occasion these criticisms cite the problems arising from apparent differences in the industrial classification assigned to a company by various Government agencies and to the coding of products and commodities for the different census programs among these agencies.

One cannot help but be impressed from such comments by the extent to which these statistics are used and relied on by business in day-to-day competitive decisions, investment, and market planning.

These comments are especially significant to the subcommittee's overall review of the methods of collecting, compiling, and presenting the data and the need for coordinated effort to make them more useful without duplication, or adding to the reporting burden.

Another recurring comment relates to the timely release of the collected material. Since we can no longer be content with the long-delayed publication which we have cited as existing several decades ago, agencies of the Government are urged by many of the respondents to a constant striving toward more timely release, to bring event and fact into as near a realtime basis as feasible. The arrival on the business scene of the so-called second and third generation computers and modern techniques offering realtime data on many fronts not only challenges any laggard fronts in reporting but offers tremendous potentials for greater timeliness.

Another thing which the statements point out, noting the availability today of computers, is that we can now hope for more improved seasonal adjustments in the published data. While the problem of seasonal adjustment continues to present a variety of theoretical and conceptual difficulties, it is now possible, for example, for the experts to interpret better the significance of differences in banking and commercial figures arising from variable feast dates; such as, Easter, the grouping of holidays on a long weekend, and even the hazards of bad weather with their effect upon such diverse elements as construction activity, bank "float," and shopping activity.

Several of the papers comment upon the inadequacy of our construction statistics, a deficiency which has been rather generally recognized for some time. Our subcommittee will try to inquire into this and make recommendations to ascertain what can be done with a minimum burden upon respondents and at a reasonable cost to the Government's overall statistical program.

Aware of the ever-pressing need for improvement, the subcommittee solicited the views of a large number of economists and statisticians on such matters as improvements needed in the quantity and quality of economic statistics, new data projects which should be undertaken, identification of deficiencies in the present statistical data, and specifically on the needs for corrective measures and means of coordinating the Federal economic and business statistical program.

We did not place limitations upon the expression of views or criticism, but sought expert opinion upon the present state of the Federal statistical program in the light both of the needs for policy-making—public and private—and the constantly improving technology and techniques available in the area of compilation and interpretation.

The compendium contains statements from some 75 individual economists, many of them associated with colleges, universities, business firms, labor unions, and research organizations. In the interests of getting the best technical advice, we have, however, asked that the statements represent individual professional views and hence need not reflect the views of the organizations or statistical users with which the individuals may be affiliated.

Formal statements were not requested and, indeed, it was specifically indicated that concise statements unaccompanied by extensive documentation would be quite acceptable. The replies thus varied considerably as to length, method of presentation, and organization. Some were submitted in the form of a brief letter, others as more formal statements of greater length. To achieve a degree of uniformity in the presentation of these statements, some editing by the committee staff was necessary. By and large, this editing consisted of the deletion of those portions of the replies which had no bearing on the principal statement; such as, the letterhead and signature. In a few cases, it was necessary because of space considerations to omit supplementary or previously prepared material submitted along with or in lieu of a letter or statement.

The subcommittee's program contemplates a further analysis of these replies by subjecting the comments, especially those upon deficiencies and improvements, to the consideration of these and other

experts, as well as Members of the Congress, by panel discussions and public hearings. As a step in this programed analysis in depth of the suggestions and comments, the subcommittee believes that making the submitted observations available at this time will be both useful and stimulating in focusing further thought on and review of these economic tools.

The subcommittee wishes to express its appreciation to the individuals who have contributed to this compendium. We feel that the views expressed will be helpful and of interest to all members of the committee and the public concerned with statistics and public policy. The statements, of course, do not necessarily reflect the views of the subcommittee or its individual members.

WILLIAM PROXMIRE,
Chairman, Subcommittee on Economic Statistics.

Senator Proxmire's letter to the individuals who participated in this study appears below :

MARCH 2, 1965.

DEAR ——— : The Subcommittee on Economic Statistics is undertaking a review of statistical requirements in the light of present and future needs in our growing economy. As chairman of this subcommittee, I invite you to participate.

Much of the recent progress in economic policy has come from availability of newly developed economic statistics. The Joint Economic Committee has a long history of concern for adequate and accurate economic data so necessary for policymaking, both public and private. Soon after the committee was established, a staff report on gaps in our statistical knowledge was made in 1948. Since then our interest has increased as the character and pace of economic change have made possible and necessary an expanded Federal statistical program.

We, therefore, would like your views on present economic statistics and future needs, including discussion of: improvements needed in the quantity and quality of data in present Federal statistical programs; new data-collection projects which should be undertaken; deficiencies in present statistical data together with specific corrective measures; and improvements in the coordination of statistics programs. These issues are guidelines and not limitations on your comments.

Lengthy documented responses are not required. Since we may publish these responses, you should keep this in kind in framing your comments. If you do not wish your comments published, please indicate this in your reply.

Your participation in this project will be greatly appreciated. It will help the subcommittee develop an agenda for future investigations. Please address your reply to William Proxmire, U.S. Senate, Washington, D.C., 20510.

Sincerely yours,

WILLIAM PROXMIRE,
Chairman, Subcommittee on Economic Statistics.

CONTENTS

	Page
Letters of transmittal.....	III
Reprint of letter dated March 2, 1965, from Chairman Proxmire to individual statisticians inviting suggestions and comments.....	VII
Arthur, Henry B., Moffett professor of agriculture and business, Graduate School of Business Administration, Harvard University, Cambridge, Mass.....	1
Backman, Jules, research professor of economics, New York University, New York, N.Y.....	2
Barber, Richard J., visiting associate professor of law, Yale Law School, New Haven, Conn.....	4
Barnathan, Julius, vice president, American Broadcasting Co., New York, N.Y.....	6
Benedict, Murray R., visiting professor, the University of Arizona, Tucson, Ariz.....	7
Bongard, Gerald J., supervising statistician, The Pacific Telephone & Telegraph Co., San Francisco, Calif.....	10
Brinberg, Herbert R., director of marketing research and planning, American Can Co., New York, N.Y.....	11
Bronaugh, J. Stewart, vice president, Genesco, Nashville, Tenn.....	13
Burns, Arthur F., National Bureau of Economic Research, Inc., New York, N.Y.....	14
Butler, William F., vice president, The Chase Manhattan Bank, New York, N.Y.....	16
Cleveland, J. A., manager, sales analysis and forecasting, American Standard Plumbing & Heating Division, New York, N.Y.....	21
Coale, Ansley J., director, Office of Population Research, Princeton University, Princeton, N.J.....	22
Copeland, Morris A., professor of economics, Cornell University, Ithaca, N.Y.....	23
Du Brul, Stephen McK., Detroit, Mich.....	25
Edwards, Arthur V., manager of marketing services, Home State Farm Publications, Inc., Cleveland, Ohio.....	27
Elgass, G. A., director of business research, Chrysler Corp., Detroit, Mich.....	28
Ellis, Ira T., E. I. du Pont de Nemours & Co., Wilmington, Del.....	29
Erickson, Donald, Arthur Andersen & Co., Chicago, Ill.....	32
Everson, J. William, manager of marketing research, The Dow Chemical Co., Midland, Mich.....	33
Ferber, Robert, Bureau of Economic and Business Research, University of Illinois, Champaign, Ill.....	34
Ferguson, David L., director of marketing research, Investors Diversified Services, Inc., Minneapolis, Minn.....	39
Fox, Karl A., head of Department of Economics and Sociology, Iowa State University, Ames, Iowa.....	40
Friend, Irwin, professor of economics and finance, University of Pennsylvania, Philadelphia, Pa.....	44
Gershenson, Maurice L., chief, Department of Industrial Relations, State of California, San Francisco, Calif.....	47
Gillen, Ralph L., McKinsey & Co., Inc., Cleveland, Ohio.....	49
Glidden, Robert T., International Harvester Co., Chicago, Ill.....	51
Goddard, Marshall, The Celotex Corp., Chicago, Ill.....	53
Goldsmith, Raymond W., professor of economics, Yale University, New Haven, Conn.....	54
Gould, Jay M., research director for "Survey of Buying Power," New York, N.Y.....	55

	Page
Greenwald, Douglas, chief economist, McGraw-Hill publications, New York, N. Y.	57
Griffin, Jack C., marketing research director, Gerber Baby Foods, Fremont, Mich.	59
Halbert, Michael H., technical director, Marketing Science Institute, Philadelphia, Pa.	60
Hamburg, Morris, professor of statistics and operations research, and John H. Norton, instructor, Wharton School of Finance, University of Pennsylvania, Philadelphia, Pa.	61
Hamilton, W. E., director of research, American Farm Bureau Federation, Chicago, Ill.	67
Harding, R. A., manager of corporate planning, Campbell Soup Co., Camden, N. J.	70
Hoadley, Walter E., vice president, Armstrong Cork Co., Lancaster, Pa.	71
Holran, Virginia T., director, Division of Statistics and Research, Institute of Life Insurance, New York, N. Y.	73
Houthakker, Hendrik S., professor of economics, Harvard University, Cambridge, Mass.	76
Jaffe, A. J., director of manpower and population program, Bureau of Applied Social Research, Columbia University, New York, N. Y.	78
Katona, George, Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, Mich.	80
Keenan, Joseph D., international secretary, International Brotherhood of Electrical Workers, Washington, D. C.	84
Kellogg, Lester S., director of economic research, Deere & Co., Moline, Ill.	85
Knight, Stephen G., director of sales coordination, Johnson & Johnson, New Brunswick, N. J.	87
Koponen, Arthur, director of market research, Colgate-Palmolive Co., New York, N. Y.	88
Kruse, Richard H., Investors Diversified Services, Inc., Minneapolis, Minn.	89
Leontief, Wassily, professor of economics, Harvard University, Cambridge, Mass.	90
McKinley, Gordon W., vice president, McGraw-Hill, Inc., New York, N. Y.	92
Mandel, Howard, vice president, National Association of Broadcasters, New York, N. Y.	93
Messing, Richard F., Arthur D. Little, Inc., Cambridge, Mass.	94
Miller, Robert C., president, Techno-Economic Services, Inc., for Leslie Salt Co., San Francisco, Calif.	95
Morgenstern, Oskar, Department of Economics, Princeton University, Princeton, N. J.	96
Neal, Alfred C., (See Stein, Herbert, p. 129.)	
Nelson, Raymond O., manager, Survey Research Division, Chilton Research Services, Philadelphia, Pa.	99
Norton, John H., (See Hamburg, Morris, p. 61.)	
Notestein, Frank W., president, the Population Council, New York, N. Y.	101
Orcutt, Guy H., chairman, Social Systems Research Institute, the University of Wisconsin, Madison, Wis.	102
Plain, U. L., chairman, statistics committee, Insulation Board Institute, Minneapolis, Minn.	108
Powers, E. T., director of market planning, Chemstrand Co., New York, N. Y.	114
Rastall, W. H., Asheville, N. C.	116
Robinson, Morris R., manager, Bureau of Building Marketing Research, Chicago, Ill.	117
Roche, George S., chief of research and statistics, Department of Employment, State of California, Sacramento, Calif.	118
Rubin, Edward P., Selected American Shares, Inc., Chicago, Ill.	119
Schmidt, Richard N., professor of statistics, State University of New York, Buffalo, N. Y.	121
Scriggins, Thomas D., director of corporate development, Martin Marietta Corp., New York, N. Y.	124
Shank, M. E., manager, industrial market planning, The Goodyear Tire & Rubber Co., Akron, Ohio.	125
Sholes, Dever, director, research and statistics division, Chicago Association of Commerce & Industry, Chicago, Ill.	126
Simpson, Paul B., professor of economics, University of Oregon, Eugene, Oreg.	128

CONTENTS

XI

	Page
Stein, Herbert, director of research, Committee for Economic Development, Washington, D.C.-----	129
Toof, Fred O., Agricultural Publishers Association, Chicago, Ill.-----	134
Walsh, Loretta M., industrial marketing research, Kimberly-Clark Corp., Neenah, Wis.-----	136
Watkins, Ralph J., vice president, Surveys & Research Corp., Washington, D.C.-----	138
Winemiller, Tom, market development manager, Hess & Clark, Ashland, Ohio.-----	140
Wiuff, Robert, market research consultant, Thomas J. Lipton, Inc., Englewood Cliffs, N.J.-----	141

A COMPENDIUM OF VIEWS AND SUGGESTIONS FROM INDIVIDUALS, ORGANIZATIONS, AND STATISTICS USERS

STATEMENT BY HENRY B. ARTHUR, MOFFETT PROFESSOR OF AGRICULTURE AND BUSINESS, GRADUATE SCHOOL OF BUSINESS ADMINISTRATION, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

I would like to point out one area in which further analysis and development seems to me to be of considerable importance, although it is fraught with great difficulties. This area concerns the contingent or implied commitments which are very real obligations of individual businesses but which are seldom reflected in financial statements. I am referring to some of the subjects which have received explicit attention such as sale-leasebacks and other firm-lease obligations. I would include, however, a consideration of inventory purchases which may be formally hedged in futures markets, or net at-risk purchases after taking into account advances, procurement commitments, and undelivered sales obligations.

I believe that this area is presently at a stage where individual analytical studies are required before any general statistical reporting service can hope to provide meaningful information. I know that the accounting fraternity has given attention to the ways in which generally accepted accounting practices should deal with this general area. It is indeed a complex one but it is a major consideration for many firms and represents an area in which the actual strength of companies may vary greatly without showing up in the usual financial and economic analyses. Perhaps the global summaries are not as severely affected by the lack of this contingency information as are the affairs of individual economic units, since these contingencies usually have matching commitments in a compensating direction which have been assumed by other firms or economic units. Nevertheless, in the dynamics of our very active economy, the location of obligations and the motivation of business executives and other administrators is deeply affected by such items as I have mentioned. I suspect that progress in the direction of better information will have to be made through the accounting fraternity and hope that they will continue and expand their various committee projects that have been underway during recent years.

"STATEMENT OF JULES BACKMAN, RESEARCH PROFESSOR OF ECONOMICS,
NEW YORK UNIVERSITY, NEW YORK, N.Y.

In response to your inquiry of March 2, 1965, I should like to propose the following changes:

USE OF IDENTICAL CLASSIFICATION

Statistical data should be compiled within the framework of the standard industrial classification. Currently, the U.S. Bureau of the Census and BLS use this classification. However, the Federal Reserve Board's indexes of production vary to some extent from the SIC and hence the FRB data and those of the Census and BLS are not always fully comparable. For example, the SIC for chemicals includes:

SIC	
281	Basic chemicals.
282	Fibers, plastics, rubbers.
283	Drugs.
284	Cleaning and toilet goods.
285	Paints and varnishes.
286	Gum and wood chemicals.
287	Agricultural chemicals.
289	Miscellaneous chemical products.

However, the FRB uses a different classification so that SIC-281 is divided among inorganic chemicals, organic chemicals, paints, toiletries, and miscellaneous. Similarly, SIC-287 is divided between fertilizers and toiletries and miscellaneous.

On the other hand, the Internal Revenue Service in its annual Statistics of Income, Corporation Income Tax Returns attempts to classify corporations within the framework of the SIC but only succeeds in obtaining meaningless totals. IRS reports that:

Industrial divisions and groups were used as a basis for classifying tax return data according to the principal business activity of the corporation. Returns were classified in that industry which accounted for the largest portion of business receipts even though the return may have been for a company engaged in many business activities or may have been a consolidated return filed for members of an affiliated group of corporations undertaking different business activities. (Statistics of Income, 1961-62, Corporation Income Tax Returns, U.S. Treasury Department, Internal Revenue Service, p. 22.)

In my recent studies of the chemical industry I concluded that because of this procedure:

* * * some industrial chemical companies are classified under "industrial inorganic and organic chemicals" (SIC-281) while others are included under "plastics materials, synthetic resins, synthetic rubber, synthetic and other man-made fibers, except glass" (SIC-282). Since most companies manufacture both categories of products, a more meaningful and realistic picture of the industrial chemical industry profits is obtained by combining the data for the two groups rather than examining them separately. (Jules Backman, Chemical Prices, Productivity, Wages, and Profits, Manufacturing Chemists' Association, Inc., 1964, p. 84.)

Under these circumstances, it would be desirable for IRS to compile data only for two-digit groups instead of using the more detailed three-digit classification. Even the two-digit classifications would be impure since many companies have operations in more than one major industry.

Nonwage benefits

Various fringe benefits have been growing in relative importance so that average hourly and weekly earnings no longer adequately reflect labor costs. Moreover, in some negotiations most of the gains have taken the form of nonwage benefits so that the trend of average hourly earnings do not reflect the trend of labor costs. BLS now reports such nonwage data periodically but only long after the year covered. For example, it was not until August 1964 that a preliminary report was made for the year 1962. (See Employer Expenditures for Selected Supplementary Compensation Practices for Production and Related Workers, Manufacturing Industries, 1962, August 1964.) Moreover, such data are reported only for very broad industry groups and hence are not comparable to the regularly reported data for average hourly earnings, average weekly earnings, and hours worked.

Since many of these nonwage benefits are incurred irregularly during the year, it would be necessary to report such estimates only once a year rather than monthly. They could be collected early in a year for the preceding year. In addition, they should be reported for industry breakdowns comparable to those used for the earnings and employment reports.

Productivity data

Output per man-hour data are reported for a limited number of industries. The number should be extended and where possible the coverage should be comparable to the hourly labor cost data which could be derived if the previous recommendation concerning fringe benefits were adopted. It would then be possible to estimate unit labor costs for a larger number of industries and, hence, it would become possible to identify the extent to which cost pressures develop because of higher labor costs and conversely.

Employment and unemployment data

The availability of a large number of job opportunities simultaneously with large-scale unemployment suggests the desirability of data which would indicate more completely the number and types of job vacancies. Similarly, more comprehensive occupational statistics are required. (See Recommendations of the President's Committee to Appraise Employment and Unemployment Statistics, Measuring Employment and Unemployment, 1962, ch. VIII.)

STATEMENT OF RICHARD J. BARBER, VISITING ASSOCIATE PROFESSOR OF
LAW, YALE LAW SCHOOL, NEW HAVEN, CONN.

In the process of doing some recently published research dealing with the transportation sector of the American economy, I reached the conclusion that the Federal Government's transport statistics are seriously deficient and in distinct need of a thorough reexamination. In my view, however, the deficiencies are so many and attributable to such basic causes as to require a complete overhaul—not just a few changes in style or some minor modifications in technique.

In another place I said that as things now stand "the Government's statistical data as they pertain to transportation are inconsistent, misleading, and inadequate for the purposes they are designed to fulfill." Perhaps this should not be surprising, given the fact that so many agencies and departments are involved in the process, something which does not keep them from duplicating one another's labor at the same time as they leave large gaps unfilled. A great deal of information pertaining to key transportation industries (e.g., maritime) is not now published at all, or in such limited amounts as to be of little value. As for the information which is released, all too often there is inadequate disclosure of the concepts employed or the meaning of certain critical terminology. What makes the matter worse is that a number of agencies release inconsistent information pertaining, supposedly, to the same subject; e.g., in the case of air transport, Commerce data differ from those of the Federal Aviation Agency—and from those made available by the Civil Aeronautics Board—and, to complicate the matter still more, the major industry source, the Air Transport Association, publishes material which does not conform with any of the Government statistics. In many instances the data released by a Government agency are largely useless because of the form in which they are presented; e.g., the Interstate Commerce Commission publishes information dealing with the number of days worked by railroad employees but it is impossible to determine the number of hours worked, hence, making any judgments as to productivity necessarily the product of estimate. As well, even where the Government data are helpful, commonly they are published so late that they are of limited utility.

Given the importance of the transport sector in the economy, the Government's statistical information for transportation should be far more comprehensive and of much higher quality than is now the case. Until such data are available, judgments in transportation calling for an understanding of labor and capital productivity, yields of factors, changes in output, etc., cannot wisely be made. The importance of better information to industry, labor, the academic community, and to the Government itself should be obvious.

The time has long since come, it seems to me, for a thorough, objective reappraisal of the Federal Government's statistical programs as they pertain to transportation. Conducted by a committee of experts

drawn from the academic, Government, and private realms, such a study could yield immense returns in the form of better data and, with some coordination of effort and the elimination of duplicative labor, might even do so with an overall reduction in cost.

In view of your familiarity with and interest in improved Government statistical programs, I suggest that this is another area in which you could make a valuable contribution.

STATEMENT OF JULIUS BARNATHAN, VICE PRESIDENT, AMERICAN
BROADCASTING Co., NEW YORK, N.Y.

To communicate adequately, broadcasters need to know their potential audiences. To secure sponsorship for their programs, broadcasters need to know the socioeconomic characteristics of the markets they reach. Some of these data are supplied by commercial research organizations but on demographic benchmarks our network and its individual stations depend upon the statistics produced by the Bureau of the Census.

Our analyses require small-area data. County-by-county statistics are most useful in that such data can be combined to represent the area a particular station serves. But data by metropolitan areas could fill this need. Even though their boundaries do not coincide with station areas, estimates for the station area could be extrapolated. In addition to population and household counts, these area data should include their socioeconomic characteristics, particularly education, age, sex, color, occupation, and income distributions.

In 1961, I appeared before this committee in support of a mid-decade census. Shifts in population with corresponding shifts in its characteristics are occurring so rapidly that the 1960 census data are already dated. Initiating a mid-decade census at this time does not appear expedient. Its planning would of necessity be hurried, its results not available much before those of the 1970 census, and its operation might interfere with the next decennial census as well as other programs of the Bureau of the Census. This does not negate our need for such data and I would urge that plans be made early for a census in 1975. In the interim, annual population and household data by metropolitan areas would serve for current descriptions of our mobile population.

STATEMENT OF MURRAY R. BENEDICT, VISITING PROFESSOR, THE
UNIVERSITY OF ARIZONA, TUCSON, ARIZ.

This is in reply to your letter of March 2 inviting comments on the adequacy of the Federal statistical services. I am aware of the interest the Joint Economic Committee has long had in this problem and of its continuing efforts to strengthen the statistical program of the Federal Government. As a former member both of the Committee on Government Statistics and Information Services set up in 1933 and the Intensive Review Committee established by Secretary Weeks in 1953, and also as a longtime member of the American Statistical Association's Advisory Committee to the Director of the Census, I have followed with great interest the remarkable improvement in Federal statistical activities over the past 30 years.

Progress has been so striking, especially in the past 15 years, that it is not easy to put a finger on a specific phase of statistical activity and say here is where strengthening or broader coverage is most needed. Improvement has been general nearly all across the board. Actually, strong statistical work in some of the more progressive agencies tend to stimulate emulation and upgrading in the others. This forward movement has, of course, been strengthened and made more general through the work of the Office of Statistical Standards, and its predecessors, which grew out of the work of the Committee on Government Statistics and Information Services that worked on this problem in the mid-1930's.

Almost all of the major statistical services are now too complex, and too competent technically, to justify anyone in offering criticisms or suggestions without intensive study of the particular phase or activity concerned. It would be presumptuous to attempt detailed comment on so broad a problem in the space of a letter. I shall, therefore, limit my remarks to two aspects which may merit consideration.

One of these is the problem of maintaining an adequate flow of data on foreign trade. This is an extremely difficult area of statistical activity, but one which is of growing importance and complexity. The Bureau of the Census has been for some time endeavoring to improve its processing of foreign trade data but I think the matter calls for additional study. There is not only the problem of routine reporting of imports and exports along traditional lines, which in itself is a very difficult task. There is, in addition, the very confusing array of special export programs, notably those of the Department of Agriculture and the Defense Department, which makes it very difficult for the users of data to get a clear view of U.S. foreign trade, especially on the export side. Commodities move out on a gift basis, under subsidized export programs, on the basis of sales for foreign currencies, in the form of military assistance, and probably in other ways. One can seldom be sure, on the basis of the data as now published, that he has the whole picture, together with appropriate breakdowns

as to what it means in respect to balance of payments, impact on U.S. supplies, and so on.

On the other side, there is some relatively small reverse flow of goods and services, purchased with U.S.-owned foreign currencies, that has some slight resemblance to a flow of imports, though they may not actually come into the United States. All of these activities have a bearing on the balance-of-payments problem which has come to be of such large importance. A logically categorized, well-coordinated assembling of data of this kind would be of very great assistance to many of the Federal agencies, to researchers outside the Government, and to many business groups. There are in addition a number of difficult problems pertaining to the processing of the traditional types of foreign trade data; such as, the amount of detailed breakdown warranted in reporting by commodity and by country, the adjustment of reporting operations to perhaps illogical or at least inconvenient tariff classifications, and the extent to which sampling as against complete coverage may be warranted. This latter group of problems is, I believe, under study at the present time.

This whole area seems to me to be of such wide interest and to affect so many agencies, both governmental and nongovernmental, that it might well warrant assignment to a special committee of well-qualified technical experts, probably on a mixed governmental and nongovernmental basis, though it might work better to have the committee proper composed of nongovernmental people with arrangement for close collaboration by appropriate Government personnel. That was the procedure used in setting up the Intensive Review Committee which studied the work of the Bureau of the Census in 1953-54. That operation proved very effective. Out of some 40 or 50 recommendations made by the Committee the great majority were accepted and put into effect, some at Bureau level, some by the Department, and some through legislative action by the Congress itself. Some study is being given to this problem of foreign trade data but I am not entirely familiar with the arrangements. It probably covers part of the ground indicated above but I think not all of it.

The other matter which may merit consideration by your committee has to do with the Office of Statistical Standards itself. This agency is a key unit in the whole program for improvement of Federal data collection and analysis. It has done a great deal of excellent work. I think with some modest addition of resources and manpower, and some shifts in emphasis, it could do more. It is my impression that it is doing a good job in the reviewing of programs for budgeting purposes, and in aiding and encouraging the various agencies to improve and strengthen their statistical activities. It has not, at least in the past, done as much on the coordination of interagency relationships as was contemplated in the original efforts of the Committee on Government Statistics which led to its establishment.

This is a difficult and touchy phase of its assigned activity, but a very important one. Some progress has been made but not as much as I think might be done from the standpoint of maximum efficiency and economy in governmental statistical activity. Coordination of the work of the various statistical agencies is peculiarly a function of the Office of Statistical Standards. Individual agencies cannot, as a rule, initiate adjustments of that kind and, generally speaking, inter-

agency committees made up of agency representatives are not likely to take a strong lead in bringing about needed changes. Even the Office of Statistical Standards itself operates under some handicaps in this realm. It is not in a strong position to push vigorously for rearrangements and coordination that interagency committees are reluctant to take a stand on. This, I think, points to a need for more use of nongovernmental committees established by OSS and, of course, working in cordial cooperation with it and the statistical agencies concerned.

This type of governmental-nongovernmental cooperation was, in my opinion, the reason for the very wide influence exerted by the Committee on Government Statistics and Information Services in the 1930's. That Committee was unofficial (appointed by the American Statistical Association and financed by the Rockefeller Foundation) but worked in very close collaboration with the Secretaries of Agriculture, Commerce, Interior, and Labor, and their staffs. It could, after study and consultation, propose changes without the restraints of agency connection. Action on such proposals, either positive or negative, was, of course, the responsibility of the appropriate Government officials, not of the Committee. It is my impression that many of the individuals in the statistical agencies welcomed this type of outside initiation of reforms which they themselves could not well propose.

STATEMENT OF GERALD J. BONGARD, SUPERVISING STATISTICIAN, THE
PACIFIC TELEPHONE & TELEGRAPH Co., SAN FRANCISCO, CALIF.

I certainly would agree with you that much of our progress in economic policy over the years has come from our increased store of economic statistics. In fact, we have made such progress in this area that I sometimes think that our biggest problem now is to increase our skill and experience in using the data which are available rather than adding to the amounts of data gathered. In this regard, may I take this opportunity to commend the many Government employees who work in this area for the great deal of help which they give us from time to time over and above the publication of statistics. The aid which they provide in interpreting, evaluating, and understanding the data which are published contributes greatly to their value.

There are, of course, some sectors of the economy for which the present economic statistics could be improved. Perhaps this is most true of construction, especially in the residential area, where the great number of builders and local governments involved make comprehensive data on starts and costs very difficult to obtain. However, any steps taken to improve these statistics, or any other statistical series, would have to also be considered from the point of view of the additional costs involved to the Government and industry. Many of these costs tend to be hidden, and it would be possible to go beyond the point of diminishing returns in gathering economic statistics.

STATEMENT OF HERBERT R. BRINBERG, DIRECTOR OF MARKETING RESEARCH & PLANNING, AMERICAN CAN Co., NEW YORK, N.Y.

At the outset, I would like to emphasize that the various Federal agencies have done an excellent job of preparing economic data, even though we all recognize that there are a number of areas where improvements can and should be made. I have listed these below.

1. Since reported economic data invariably are not as precise as they seem, they should not be released without an accompanying statement of their margin of error. Moreover, since very often the reported data are based on a sample, there are certain limitations to their use which the reporting agency should state clearly in all their reports.

2. Reports should also clearly stipulate whether the reported data reflect 100 percent industry coverage or less.

3. Although the Federal Government has made rapid strides in improving definitions of the reported data, further work is needed in this area. Many of the definitions remain vague and ambiguous.

4. Within the limits of the Government's resources, it would be highly desirable to receive monthly data for major industries, such as reported in the "Current Industrial Report," both in terms of physical volume of output and dollar value of shipment. Most of these reports cover only one set of numbers. The companion series would give us a better understanding of changes within selected industry categories.

5. Now that computers are being used increasingly by the Federal Government, it would be desirable if major industry monthly data were adjusted for seasonal variations. This would be of particular value to us in studying month-to-month movements within a given year.

6. There is a need for great consistency in data reporting. For example, the demographic data reported by the Census Bureau rarely report a continuing series on age, sex, location, and other characteristics. Series at times refer to total population, or population excluding Armed Forces overseas, or resident population, or civilian population. Every effort should be made to use a constant reporting base for these detailed statistics.

7. There is a need for reporting data more frequently and more completely on the major geographic areas of the United States. To date, the regional data have been reported during census years—once every 4 or 5 years—and rarely go beyond reporting value of shipments and the value added by manufacture. To the extent possible, additional information should be issued on the physical volume of output and, if applicable, selected container sizes.

More comprehensive regional data should help in regional planning and poverty programs, as well as in our own research effort on plant location studies.

8. The data reported in the Annual Survey of Manufactures would be more meaningful if the SIC code numbers covered five-digit industries for the Nation as a whole, instead of four. To date, only three-digit SIC codes are used in reporting regional information, and this is hardly sufficient.

9. Although forward steps have been made in the past decade to report data as rapidly as possible, many major statistical series still lay anywhere from a month to a month and a half behind the actual reporting period. Continued effort should be made to expedite the issuance of economic statistics.

10. In the international area, most readers are presently misled by the comparative income per capita statistics reported on all countries in the world. The present method of using the foreign exchange conversion factor is not valid in calculating a nation's consumer purchasing power in terms of U.S. dollars. For example, a dollar or 360 yen in Japan will probably buy a larger basket of goods than the same dollar in the United States. This is applicable to many other countries in the world. A special study should be undertaken to determine a technique for equating dollars of income around the world. Until this is done, all Government reports should caution readers against drawing hasty conclusions on the comparative economic well-being of various nations.

STATEMENT OF J. STEWART BRONAUGH, VICE PRESIDENT, GENESCO,
NASHVILLE, TENN.

1. Under "Retail trade," the categorical breakdown under the general merchandise group includes department stores, mail-order houses, and variety stores. Growth in recent years of the discount department group seems to point out a need for including them as a separate category. This information would prove quite helpful to marketing people in the shoe and apparel manufacturing field.

2. Again referring to the general merchandise group, are the figures shown under "Mail-order houses" complete? Do they represent figures of retailers dealing exclusively with mail-order business or do these figures include that portion of regular department store business that is obtained through mail-order channels? A number of large department store groups obtain a large part of their volume through mail-order methods and these figures should be included under "Mail order" rather than the "Department store" category. I really am not certain how this breakdown is made at present.

3. Is there any relationship between figures on "Personal consumption expenditures" and those shown under "Industrial production?" For example, personal consumption expenditure statistics show a total of \$29.8 billion for 1962 (clothing and shoes) while under industrial production figures "apparel" (include knit goods and shoes) shows an average of \$114.5 billion for 1962. It would appear that there should be a relationship between these two figures. However, allowing for regular retail mark-on, there is still a wide variation.

STATEMENT OF ARTHUR F. BURNS, NATIONAL BUREAU OF ECONOMIC
RESEARCH, NEW YORK, N.Y.

In response to your letter of March 2 to several members of the national bureau, my colleagues and I have put our heads together and present the following suggestions for your consideration in developing an agenda for future investigations by the Subcommittee on Economic Statistics:

1. Improvement of price information bearing on the international competitive position of the United States. (The National Bureau is now engaged in an investigation of this question, and we shall be pleased to make our findings available to you and your colleagues.)

2. Critical examination of concepts and definitions employed in statistics on the U.S. balance of payments. (This examination should include questions discussed in app. A of the national bureau's study, "Problems of the United States as World Trader and Banker," and also those discussed in the forthcoming report of the Bernstein committee on the balance of payments.)

3. Improvement of statistical information bearing on industries in the so-called service sector, which now accounts for about half of the employment and output of the American economy. (The national bureau has underway a study of this sector, and information on our investigation can be made available to your committee.)

4. Restoration to the census of population of reports dealing with the economic aspects of the population and the labor force. (For example, the 1960 census failed to include the usual volume on industry statistics. This has been greatly missed by economists.)

5. Statistics on job vacancies need to be developed in satisfactory form. (A recent conference of the national bureau, held in cooperation with OMAT, has stimulated a good deal of interest in this aspect of information on the labor market. Copies of the papers presented at this conference are available.)

6. Statistics of hourly earnings still fail to take account of fringe benefits, which are a large and increasing part of labor compensation. A regular, rather than sporadic, compilation of information on fringe benefits is desirable.

At the present time no governmental agency publishes current, periodic, and comprehensive data on the average hourly earnings, including fringe benefits, of employees in the United States. The most comprehensive set of figures published by the Bureau of Labor Statistics pertains to hourly earnings of production workers in manufacturing industries. But these figures pertain to hours paid for, not hours actually worked, and, hence, do not allow for the increasing number of hours paid for but not worked. Moreover, they do not include fringe benefits, an element that has become of major importance to employees and employers alike. Besides, a sizable and increasing fraction of employees in industry are classified as "nonproduction" workers, and they are not covered in the wage statistics at

all. Finally, one must observe that employees in goods-producing industries are now outnumbered by those in service industries, and that the statistical coverage of wage rates and earnings in the service industries is meager indeed.

The need for better wage data deserves, I believe, the attention of your committee.

7. Statistics on profits, which constitute a crucial item in assessing current business conditions and prospects, are still much too tardy.

8. Comparable monthly or quarterly data on prices and unit costs of production in major individual industries, which also have a significant bearing on the course of business conditions, are lacking.

9. Systematic and comparable records for different stages of the investment process—that is, for the volume of investment initiated, the volume executed, and the volume completed—are not available.

10. Further improvements are needed of the vital estimates of the gross national product; for example, with respect to the Government sector. Also, estimates of GNP viewed from the expenditure side are significantly different from estimates viewed from the income side, particularly with regard to short-term changes.

11. Productive capacity needs to be measured both in major industries and in the economy as a whole more adequately than is done at present.

12. Information on national wealth and its various components is not collected systematically or regularly, but would be valuable in dealing with many problems of growth. (The Joint Economic Committee will be holding hearings on a recent report, "Measuring the Nation's Wealth," submitted by the national bureau's conference on research in income and wealth. We hope that these hearings will open up various possibilities of improving the available information.)

13. Data on credit quality are far more important than most people realize. What is needed is reliable and current information on the volume and terms of credit extension, whether to business, consumers, or State and local governments.

14. Too frequently, statistics on wholesale prices represent list prices rather than actual prices charged.

STATEMENT OF WILLIAM F. BUTLER, VICE PRESIDENT, THE CHASE
MANHATTAN BANK, NEW YORK, N.Y.

I attach a memorandum on improving Federal statistics which was prepared by Miss Justine Rodriguez with suggestions from other members of our economic research division.

Mr. John D. Wilson to whom you also wrote for suggestions joins me in submitting the attached memorandum which we hope you will find helpful.

MEMORANDUM PREPARED BY MISS JUSTINE RODRIGUEZ

A massive improvement in the quantity, quality, and sophistication of our economic data has taken place during the postwar period. Due to the continuing, effective efforts of the various Federal agencies engaged in compiling statistics, coordinated by the Budget Bureau, and importantly, to the very helpful evaluations of the Joint Economic Committee of the Congress, the Federal economic data reporting system has been raised to a new level of achievement. As a result, knowledge has been significantly advanced, and both business and Government have acquired the basis for better policymaking.

Of course, there are possibilities for further improvement—in fact, quite a few such possibilities. Our first and broadest suggestion is that more attention be paid to the presentation of the data in publications and releases.

There could be more explanation for the nontechnical reader. Brief reminders, for example, that the Consumer Price Index does not measure the cost of living or that the unemployment rate is not synonymous with penniless, laid-off breadwinners, might save some misinterpretation. Likewise, there should be some notation that the numbers cannot be taken seriously down to the last decimal place, and some indication of the range of uncertainty even if the statement is necessarily imprecise.

More explanation for the professional reader is needed, too. The last definitions of the balance-of-payments items came out more than a decade ago. The procedures in computing some of the components of the national income and product accounts are difficult to fathom, and those for the input-output cells may well be impossible for some time. Another form of assistance which is unduly scarce is discussion of the similarities, differences, and relationships among series.

It should be general practice to publish blocks of back data with the current figures, and to cite the precise sources where the series can be most easily traced back to their origin. Most series are or should be available in two or three places; no one should have to go searching at random through back issues, perhaps missing revisions.

Breaks in the series should be kept to a minimum. When, for regulatory or other reasons, such changes are necessary, clear warnings should be footnoted, and every effort should be made to obtain consistent back data, or at least, by overlap and discussion, to make some adjustment possible.

Consideration should be given to consolidating publications. For information on some subjects, there are too many places to search.

Turning to specific types of statistics, the discussion is organized to cover five major areas: the supply side of the economy, the components of demand, industry statistics, financial statistics, and regional data.

Statistics relating to the supply side of the economy deserve some priority. These are essential for decisions which affect the growth and stability of the whole economy. Moreover, data in this area have lagged behind need, potential, and the advance of economic statistics generally.

Job vacancy data, now under study, should be developed as rapidly as proves feasible. And the recent acceleration of work on labor mobility should be continued. In addition, it would probably be both possible and valuable to inventory the skills possessed by the labor force (within and among occupational categories) and the skills which are needed now as well as those which will be needed in the future. These lines of inquiry should be pursued with diligence, for they will assist in formulating policies which would result in the lowest possible unemployment consistent with free choice and the highest growth without inflation.

Capacity and operating rate figures should be attempted. There are two concepts. One, a limit-of-physical-capability concept, is applicable to defense requirements, for example. The other, an increasing cost concept, is relevant to decisions to expand capacity, and, at present, is probably the more important.

Additional study should be devoted to productivity, and more attention should be paid to publishing what is known about this subject. In particular, intrayear figures other than those in "Business Cycle Developments" are needed. So are continuing measures of capital stock, and a "total productivity" series to supplement the data on output per man-hour.

Some study should be given to collecting information on the quality of education. And there could be better information, some on an opinion basis, about the impact and types of research in progress and the size of the "technological backlog."

The statistics on the components of demand are further along in development. Here, there are specific areas where quality could be improved.

Strange as it may seem, there is relatively little information on Government purchases from business. This is so in terms of kinds of goods and services purchased, and the rate of expenditures from quarter to quarter by the Federal as well as the State and local governments. There are apparently some unpublished figures on Federal obligations, monthly, and on State and local expenditures, quarterly, but more data are needed on both type and rate of purchase.

Housing statistics need further improvement. Probably this should start with a census of construction, including material for the study of the value put in place per dollar of payroll for the different kinds of building at different stages of construction. With this information and payroll data already being collected, perhaps better construction figures could be computed.

The figures on net change in inventory in the GNP accounts are often revised by significant amounts, and little is known until considerably after the fact. There is room for improvement here.

In the area of industry statistics, some very basic long-term planning is necessary. The new input-output table for 1958, though it has added to our knowledge, has also revealed flaws in concepts and data collection which will be increasingly irksome in the future and which will take some time to correct.

The old problem of finding meaningful industry definitions, heavily compounded by the large and growing number of multiple-product companies, must receive some new thinking. Perhaps the answer is product groupings for some statistics and company groupings for others, or multiple coding of the same company. The new computing capacity would make such a possibility more feasible than heretofore.

The second basic inquiry is: Are the right questions being asked in the industry censuses? There is little direct knowledge of suppliers or customers; such information is pieced together in very precarious fashion in the input-output table. Some of the supply side data discussed above might be collected via the censuses. The timelags involved here are tremendous; investigation of the new questionnaire should begin immediately in order to be adopted for the 1968 Census of Manufacturers which will be out about 1970.

These suggestions involve reevaluation of the whole system of collecting industry information. Perhaps there should be separate hearings on this subject. Are the sectors, industries, and products currently receiving attention from Federal statisticians and economists in proportion to the need? Industry size, volatility, and the availability of information elsewhere are all factors to be considered. Consistent data which add up to broader sectors have advantages. The viewpoints of economists and financial analysts as well as those of the individual industries deserve consideration.

Two aspects of industry are of interest. One requires organization of data by product lines—categorizing activities according to common supplies, production methods, and/or markets. This is the valid organization for input-output table use, for discussions of changing technology, tastes, resource consumption, and so forth. The other requires organization of data by common ownership and/or control. This is the valid organization for all types of financial analysis. In this connection, it should be noted that better data are needed on profits, corporate equity, and the number of independent business firms by size.

Financial statistics are, comparatively, plentiful and good. There are several specific suggestions, however. The prime one is that the flow of funds matrix be published more promptly. Data for many of the cells are available long before the table is issued. A preliminary table could be put out even if much information were missing and the

issued figures were subject to revision. Though the checks supplied by the matrix form would not be possible, such a table would still be useful. It would also be helpful to issue the actual figures right along with the seasonally adjusted ones.

Another problem is consistency. In particular, the flow of funds tables should be brought into alinement with the national income and product accounts by mutual adjustment. And the tables on net sales of securities compiled by the SEC could have minor variations removed.

What about additional data? It would be very helpful to have some breakdown of the other mortgages, not on 1- to 4-family residential property. And it would be timesaving to have some information on mortgage rates and terms in the Federal Reserve Bulletin. Two sets of statistics could be usefully collected on weekly reporting member banks: the maturity distribution of municipal bonds held, and foreign branch loans and deposits.

As for regional statistics, the Federal Government could not possibly fill all of the demands. It sometimes costs nearly as much to get figures for one locality as for the Nation as a whole. Still, efficient administration would seem to require consistency in the way regions present their statistics. The Federal Government would not necessarily collect the statistics; rather it would provide the methodology for uniform estimating procedures, and sometimes the localities could contract for the Federal Government's assistance.

Incentive to develop statistics at a local level could come from direct financial aid or the tying of aid under other programs to the proviso that the region supply the necessary uniform statistics. Incentives specifically should provide for historical continuity. Often local statistics are collected as offshoots of government activities such as unemployment insurance. When these programs change, the back statistics are not revised. Federal advice and possible withholding of funds could prod them into providing the necessary perspective.

First priority in terms of subjects for better local statistics should go to measures of total output or income. Providing a model from which a region could estimate its gross product would be highly desirable. Barring this as costly and fraught with the possibility of large statistical errors, other measures of regional economic activity can be devised. The Federal Government, which now provides annual data on personal income by States, could provide the statistical framework to enable regions to estimate personal income from the State aggregates. Some States (New York) already do this, but there should be a model to insure comparability between areas. More timely estimates could be made from the insured payroll data. Man-hours and electric energy consumption are another possible measure of the level of economic activity. Several regions are experimenting with this type of data now; the Federal Government could be helpful in appraising these and recommending a uniform procedure.

Two other types of statistics are particularly needed. One is better measures of the unemployed. Regions currently provide aggregate unemployment data, but—aside from the decennial censuses with their long publication time—there are no figures on the composition of the unemployed. This material is not needed monthly, but it could be estimated at intervals of 1 to 3 years, perhaps from unemployment insur-

ance claims. The other is comparative intercity cost-of-living information. The Bureau of Labor Statistics has the raw data to provide up-to-date statistics in the survey for the 1960-61 revision of the Consumer Price Index. This program should be pushed through quickly if it is to have value.

One remaining thought: The United States should support efforts to develop comparable statistics in the other nations such as those being carried on by the U.N.

With the gradual formalization of supervising organization, through Presidential action and through legislation, this particular feature, in my opinion a valuable one, was lost. It could in large measure be restored at relatively small cost by more use of outside, highly competent technical committees on specific interagency problems, operating without specific agency connections. I do not pretend to be fully informed as to how far devices of this kind are now being used, but I think not as much as was contemplated by the Committee on Government Statistics in fostering the type of development that has eventually come into being.

Aside from the kinds of action outlined above it seems to me the best and soundest progress will be made through continuing guidance, encouragement, and pressure on the part of the Office of Statistical Standards. In a statistical organization so complex and sophisticated as that the Federal Government now has, few specific and short-run proposals for change can be useful. It is a matter of continuing evolution, brought about through vigorous, constructive leadership. Important in that connection is adequate financial support and strong staffing for the Office of Statistical Standards and the provision of strong leadership in the various statistical agencies.

STATEMENT OF J. A. CLEVELAND, MANAGER, SALES ANALYSIS AND FORECASTING, AMERICAN-STANDARD PLUMBING & HEATING DIVISION, NEW YORK, N.Y.

We realize the difficulty of centering the responsibilities, Government as opposed to private industry, in the gathering and publishing of economic statistics. However, it is our belief that the following types of information would fall under the responsibility of Government:

1. *Census of housing and population.*—With the acceleration of changing conditions it seems that 10 years is too long a period to wait for updating of census data on housing and population. This is particularly true in the area of housing. It is concluded that many of our citizens are inadequately housed, but this assumption is usually based on outdated information. This lack of a more frequent measurement of existing housing leaves a void, particularly when we take into account the shifting nature of our population. We would recommend the reestablishment of the mid-decade survey of housing.

2. *Housing starts.*—Although much concern is expressed by the users of construction statistics as to the accuracy of the housing start series, we at American-Standard find this series a very valuable indicator.

3. *Housing characteristics.*—Improvements to the housing start series would be periodic studies showing the characteristics of new housing on a national and geographical area basis. Such studies, indicating type of structure, size, cost range, number of rooms, facilities, etc., would afford better judgment in determining whether new home construction is meeting the changing requirements of our housing needs. However, we do not believe that such a characteristic of housing series, developed by the Government, should necessarily be a material usage series which we feel falls more under the responsibilities of private industry.

4. *Vacancy rates.*—Construction is one of the Nation's largest industries, accounting for more than \$66 billion in 1964, or 10.6 percent of gross national product. The participants of this industry are not a few manufacturers but untold thousands of individuals consisting of contractors, suppliers, and manufacturers. Because of the complex makeup of the industry there is no control for balancing supply against demand. Therefore, it would be very important that the industry have better knowledge of its inventory which we feel is best expressed through residential and nonresidential vacancy rates. The accuracy of existing residential data on vacancy rates is highly suspect and only available on a very broad geographic basis. Also, there is virtually no adequate information on nonresidential vacancy rates. We recommend that improvement be made in this area.

5. *Demolitions.*—Another void relative to construction demand is a statistical series on demolition. With so much emphasis today on urban renewal, measurement of this activity increases in importance.

STATEMENT OF ANSLEY J. COALE, DIRECTOR, OFFICE OF POPULATION
RESEARCH, PRINCETON UNIVERSITY, PRINCETON, N.J.

Under the time constraints that I face, all I can do is to make two specific suggestions in areas most closely connected to my professional work:

1. Current data obtained from households, at present by the current population survey, should be collected at no more than yearly intervals from a much larger sample. Both economic and social data (on the labor force, on occupations, on the distribution of family incomes, etc.) can be estimated from the current sample only for the national population. No reliable inferences can be made about small groups and the deficiency is greatest for geographical subdivisions of the country. Annual coverage of a really large sample of households, perhaps a million, would provide much of the detailed information at a cost that I should think would be much less than the quinquennial census program that some authorities have proposed.

2. A much less costly suggestion is to incorporate a question or rather a series of questions on plans to marry for single persons, and intentions to have children for married couples where the wife is less than 45 years of age in the current population survey at least one a year. Information of this sort was collected in 1955 and again in 1960 in studies carried out by the Survey Research Center at the University of Michigan. The sample in each case was less than 3,000 couples, but nevertheless, the data collected promised to be very helpful in improving our predictions of future developments in population. More frequent data from a larger sample would be very valuable indeed.

STATEMENT OF MORRIS A. COPELAND, PROFESSOR OF ECONOMICS, CORNELL UNIVERSITY, ITHACA, N. Y.

It is evident from your letter that you want discussion of areas where improvements in available economic statistics are needed, although just how to bring about the improvements is by no means clear. I would like to indicate four areas where some steps forward are particularly urgent.

1. *Total nonagricultural employment.*—We have two current monthly reports on total nonagricultural employment; one based on employer surveys, the other on household surveys. The difference between them is substantial. Further, this difference has varied significantly from time to time. The Gordon Committee gave us something of a reconciliation for December 1960, but it left an unexplained difference between the two reports of a million persons. Presumably most of this unexplained difference represents an error in one of the reports, possibly errors in both. It seems to me the agencies responsible for these reports could and should give us on a regular annual basis a reconciliation, and that each year they should give us for some definition of total nonagricultural employment their best guess as to the correct total annual figure.

2. *Capacity.*—A good deal of progress has been made during the last several years toward developing measures of the relation between the actual level of operations and the capacity level, at least for important segments of our economy. There is urgent need for an annual comprehensive measure, an estimate of the capacity level for GNP that we can compare with the level actually achieved. If a series of such estimates could be started I think it is reasonable to expect that with time and experience it would gradually improve.

3. *Credit conditions.*—There is need for a current summary of credit conditions that would enable us to trace somewhat more precisely than we can today changes in the tightness or easiness of credit. Just what form this summary should take I will not attempt to say. Mortgage interest rate information is sketchy. We have no regular summary covering terms such as downpayments and loan maturity periods, and no good way of tracing changes in the degree of severity with which creditmen rate the credit worthiness of would-be borrowers.

4. *Areas of high unemployment.*—At present both Economic Indicators and the Survey of Current Business are confined to national time series. There is one kind of information that I think is urgently needed on a locality basis—information on unemployment. The BES area reports should be tightened up (the Gordon Committee has emphasized particularly the need for standard seasonally adjusted unemployment percentage figures). It would be desirable to have improved reports compiled for at least 150 areas, and to have published in some general business information journal on a quarterly basis unemployment percentage figures for all those areas in which more than 6 percent of the labor force is unemployed.

SUGGESTIONS FOR ADDITIONAL ECONOMIC INDICATORS AND FOR
SUPPLEMENTS TO EXISTING SERIES

1. *Unliquidated obligations incurred.*—Current figures at the end of each quarter for the entire Federal Government. It would be helpful also to have separate figures each quarter for (a) Army; (b) Navy; (c) Air Force; and (d) all other, if this is feasible.*

2. *Budget projections.*—Quarterly estimates of Federal fiscal operations on a national income and product account basis running three to six quarters into the future. I suggest separate figures for (a) total receipts (exclusive of receipts from borrowing and loan repayments); (b) GNP expenditures; (c) interest and transfer payments; and (d) surplus equals (a) minus (b) minus (c). Each January it should be possible to have quarterly projections running through the following fiscal year. Figures for the last two quarters of that year would reflect the President's budget estimates. Figures for the first quarter of the calendar year just beginning would reflect both appropriations (and other new obligational authority), and obligations incurred. Presumably these projections should be revised quarterly.*

3. *Asset computations from the flow of funds accounts.*—Quarter-end figures on the depreciated value of fixed capital investment for (a) the consumer and nonprofit sector; (b) farm business; (c) other-noncorporate business; and (d) nonfinancial corporations. It would be desirable to have separate figures for residential structures in the cases of (a) and (d) and for durable goods in the case of (a).

4. Various recommendations have been made that the national income and product accounts (Department of Commerce NID) and the flow of funds accounts (Board of Governors of the Federal Reserve System FOF) be put together into a single comprehensive set of social accounts. The problem seems to be how to implement these recommendations. As a modest step toward putting these two sets of accounts together I suggest that the Government issue, at least on a current annual basis, reconciliations for the following three pairs of items:

- (1) Personal saving (NID) and gross saving of the consumer and nonprofit organization sector (FOF).
- (2) Excess of Federal Government receipts over expenditures (NID) and current surplus of the Federal Government (FOF).
- (3) Excess of State and local government receipts over expenditures (NID) and current surplus of the State and local government sector (FOF).

In each case currently published figures explain part, but only part, of the difference. Perhaps the National Income Division and the Federal Reserve's Division of Research and Statistics could issue these reconciliation releases jointly. Alternatively the Office of Statistical Standards might issue them.

*NOTE.—Some figures of this sort have been published but current data are not conveniently available shortly after the end of each quarter.

STATEMENT OF STEPHEN McK. DU BRUL, DETROIT, MICH.

This is in response to your invitation of March 2, 1965, to participate in your subcommittee's review of Government statistical requirements.

Since receiving your letter I have also received the recommendations contained in House Committee Report No. 52, "Federal Paperwork Requirements," dated February 19, 1965. I find myself largely in agreement with these recommendations. However, I would add some comments to some of them, as follows:

In respect to recommendation No. 4; namely, that the estimated cost of the program be weighed against the potential value of each report or program, I would add that the estimated cost should include the cost to the respondents in responding, not just the cost of the Government in compiling the data.

This raises another issue; namely, why American citizens should be required arbitrarily to supply figures at considerable expense to themselves from which they cannot conceivably derive any commercial benefit. Many surveys and other statistical programs undertaken by various Federal agencies are solely for the use of the agencies themselves and have no conceivable commercial value to the respondent. Under these circumstances, the least the respondents are entitled to is a reimbursement for the out-of-pocket expenses incurred in compiling and reporting such data. If the agencies were compelled to pay such expenses out of their regular budgets, requests for authorization to conduct surveys would receive much more careful consideration by the agencies themselves. The judgment as to whether the respondents will not derive sufficient commercial value from the information sought and, accordingly, should not be required to report without compensation, is a judgment that could readily be made by the reviewing authorities in the Bureau of the Budget when considering the authorization of the survey in the first instance.

Also, I would suggest that the duties of the Advisory Council should be spelled out in the law rather than be left to administrative determination. Only then will the members of the Council feel that their position is more than one of bureaucratic favoritism. In addition to the items contained in House Report No. 52, I recommend that your committee review the recommendations contained in the report of a Committee of which I was the Chairman which was established in 1954 at the request of the Bureau of the Budget to review the deficiencies of the census of manufactures and to make recommendations for its improvement. That report was later incorporated in the record of your main committee, the Joint Committee on the Economic Report, on February 9, 1955 (see copy attached). All of the recommendations of that report were accepted by the Bureau of the Budget and in principle by the Census Bureau. However, as a practical matter, little, if anything, has been done to implement them, and yet the census of manufactures is the foundation for many of the most important statistical computations. Hence, the basic errors con-

tained in its classifications and in its compilations are repeated thereafter throughout the entire subsequent series bottomed thereon. Accordingly, the reform of the census of manufacturers is basic to any effort to improve the overall quality of Federal economic statistics. In order to accomplish this, it will be necessary to reconsider the standard industrial classification (SIC) which has become a "procrustean bed," by which the various Federal agencies are compelled to classify products and establishments in wholly arbitrary and frequently grossly inadequate single classifications. The use of such a single classification system for thousands of industrial products, processes, materials, and establishments, each of which should be cross-classified under as many as five or six different cross-classifications, is at the root of the difficulties encountered in reforming the census of manufactures itself. Under the Federal Reports Act, the responsibility for this is squarely in the Bureau of the Budget and they have ample authority to deal with this problem. I recommend that Congress direct the Bureau to tackle this immensely important task, and then require that the census of manufactures be reorganized in accordance therewith, as recommended in our committee report of February 9, 1955, referred to above.

As to improvements that could be obtained in the coordination of Government statistical programs, the recommendations of House Report No. 52, above referred to, would deal with this matter quite satisfactorily.

With these reforms set in motion, I am satisfied that great progress will be made in the quality of Federal statistics while material economies will be effected in their preparation and publications both for the Federal Government and the business respondents.

STATEMENT OF ARTHUR V. EDWARDS, MANAGER OF MARKETING SERVICES,
HOME STATE FARM PUBLICATIONS, INC., CLEVELAND, OHIO

We find the Federal statistical program in the field of economics very helpful to our company in a number of ways. In fact, we are quite happy with the information as it is now being provided.

Naturally, as I am sure is true of other publishers in the farm field, we occasionally find that we would like some farm data that is not readily available. Specific listings regarding the number of beef cattle farms, livestock operators, number of farms selling grain-fed cattle, number of beef cattle sold per year per farm, expenditures for fertilizers, expenditures for farm chemicals used, and the use of animal health products, by product, would be helpful. However, I am quite sure that it is not practical to provide all the information we might make use of in these various categories.

STATEMENT OF G. A. ELGASS, DIRECTOR OF BUSINESS RESEARCH,
CHRYSLER CORP., DETROIT, MICH.

Chrysler is, of course, always interested in more accurate and more timely statistics. The corporation is a member of the Federal Statistical Users Council, the American Statistical Association, and other groups which seek to foster improvement in Federal statistical programs. At the same time, we are always concerned that the costs of such programs, both in public funds and in private reporting man-hours, be kept within reasonable limits.

These two concerns are not necessarily contradictory, as you well know. We have noted over the past several years great improvements in Federal statistics, and we feel that these have been due not only to the work of user groups and highly competent Government technicians, but to the interest that you and other members of Congress have taken in the programs.

Again, in general, we think the greatest opportunity for continued improvement rests in the area of timeliness, especially in the statistics which measure growth or lack of it in cities and metropolitan areas.

STATEMENT OF IRA T. ELLIS, E. I. DU PONT DE NEMOURS & Co.,
WILMINGTON, DEL.

The Du Pont Co. has found that, except for a few broad economic studies, statistical data on foreign trade published by the Department of Commerce are, for the part, far too general to provide helpful information. The basic problem in our view, is that present foreign trade statistics are classified according to a system which utilizes product categories which are very broad. Such categories include so many products that any information about a particular product, which is generally what would be of interest to a business such as ours, is usually buried and not available.

It is possible under some conditions to purchase from the Bureau of the Census statistical data on a specific product included in a category. However, in many cases this cannot be done. We would like to suggest that the Department of Commerce consider making foreign trade data available for individual products to the fullest possible extent. The Department of Commerce or some other Government agency could be a repository for individual product foreign trade data. There would be no need to publish or distribute such data widely on an individual product basis, however, it would be available to those who wanted it for a specific product. If this Government service were widely known, it could well result in elimination of many reports presently prepared and widely distributed which are of little value.

We realize that, in some cases, for the Department of Commerce to provide more detailed information about a specific product may be difficult or even impossible because of the practice of the Department of not revealing data which might be advantageous to competitive enterprises, domestic or foreign. However, in our opinion this inability to provide specific product detail would be confined to a limited number of situations and would not seriously impair the overall usefulness of such a service.

Finally, we are also concerned about the makeup of the U.S. chemical balance of trade, particularly insofar as the U.S. chemical balance is compared from time to time with the chemical balances of other nations. This becomes important when efforts are made to assess the world trade position of the U.S. chemical industry. Today, the result is a comparison of unlike product groupings with the inference being that the comparison is a proper one. This results, for practical purposes, in no comparison at all. To a lesser extent we believe the same situation exists when the foreign trade position of the U.S. chemical industry is placed alongside that of other U.S. industries. In this case, we believe that some items are included in the U.S. chemical balance which should not be included and which properly belong in another industry. We suggest that the makeup—i.e., the items going into the U.S. chemical balance—be reexamined and reassessed in light of these considerations.

Further suggestions for improving the census of manufactures are the following:

Improve the indexing of reports, specifically "Synthetic Organic Chemical" and the "Census of Manufactures."

Publish a comprehensive catalog or index to the statistical data compiled by all U.S. governmental agencies.

Publish a list of personnel in various collecting agencies who can be contacted for answers to questions concerning data.

Expand the amount of data given for many products in the so-called basket categories, especially in "Synthetic Organic Chemicals" and various tariff reports without, of course, revealing production of any individual companies.

In more general areas, we believe there would be improvement in construction statistics, including housing starts, additions and alterations to residential structures, etc. While, admittedly, it is difficult to get data in such broad areas that will be meaningful for the entire country, we believe the present data could be substantially improved.

Data on retail sales should be similarly improved. The early data released on retail sales are later revised substantially. Could not a sampling method be devised to arrive at a firm figure sooner than those now available?

The wholesale price index of the chemical and allied products industry should be expanded to cover a broader sample of commodities actually moving in the industry. The composition of this index has not been revised for several years and many new products have become important during this time.

Employment and unemployment data should be prepared in a form which would stress unemployment among adult male members of the labor force rather than combining them with teenagers, working wives, etc., when many of these latter groups are looking only for part-time work. In addition, could we not provide data on unfilled job opportunities, particularly for semiskilled and unskilled workers? The magnitude of normal seasonal unemployment should be available from the data; i.e., construction workers in northern areas during the winter months, schoolteachers in summer, etc. Finally, I believe the unemployment statistics should provide data on educational levels of the unemployed, since a low level of education is an important cause of insufficient employment. In short, should not the unemployment data point more clearly to desirable solutions to the unemployment problem, rather than merely providing facts?

The Federal budget should be presented in a more meaningful way, to show the magnitude and variety of activities being described. It is difficult now, for example, to determine the cost of various agricultural programs, or the extent of Federal lending agencies, or the extent of Federal participation in business-type activities, etc.

A similar statement could be made about the Nation's balance-of-payments problem. The experts should agree on what is to be included and how it is to be presented. For example, should Government giveaways under Public Law 480 be included as exports? Of course, the goods are shipped abroad, but their inclusion in exports gives a false picture of the number of dollars generated by our export trade.

We need faster data on corporate profits. It is now the end of the first calendar quarter of 1965, and very little corporate profit data are yet available for the fourth quarter of 1964. Could not a sampling plan be developed to provide useful estimates of corporate profits in a period in less than 3 months after the close of the period?

Finally, I believe it would be more desirable for Government agencies to attempt to provide more and better data desired by business and to be less concerned to develop data to show changes in the concentration ratios of industry.

STATEMENT OF DONALD ERICKSON, ARTHUR ANDERSEN & Co.,
CHICAGO, ILL.

Contemplating the statistical requirements of our country, I would like to make two observations. The first one concerns the coordination of statistical requirements by Federal agencies so as to minimize any duplication and overlapping that might exist.

My next point would relate to the quality of statistics, and a great deal of attention ought to be given to whether or not the statistical information required to be supplied meets real needs at reasonable costs of procurement. Many business organizations today are faced with an increasing number of governmental information demands which are costly to secure. If it were feasible, some attempt should be made that, when demands for economic information are made, the estimated cost of securing it be determined also. Perhaps, some organizations like the General Accounting Office could audit the statistical policies of each Government agency in connection with their existing responsibilities.

I think it is important that statistical programs be reviewed constantly so that obsolete statistical demands are weeded out and eliminated. So often statistical programs are started, and the need disappears without a recognition at the same time that the statistical program should be discontinued.

STATEMENT OF J. WILLIAM EVERSON, MANAGER OF MARKETING RESEARCH, THE DOW CHEMICAL CO., MIDLAND, MICH.

The following comments on general data adequacy and possible future needs for statistics are by no means exhaustive but represent some of the aspects of data availability of interest to us.

1. Certain groups of data are of considerable use in understanding general business conditions—seasonal and cyclical swings in business. Increasing use of such data by computer techniques may have influence on moderating and hopefully eliminating business downturns. Increased timeliness and accuracy of such data improves their utility. Such data include inventory in the several channels of distribution by major industries, levels of employment and unemployment, business sales by major industries, price levels, etc.

2. Further regional data will be of increasing utility to business. Federal Reserve Board indexes of industrial production by major industry, by region, would be useful.

3. It is to be hoped that improved methods of collating, analyzing, and publishing data could speed up the availability of certain very useful product and industry information. We understand that industry is also often to blame for slowing the collection process.

4. Programs for the elimination of useless data and consideration of duplicate data should improve concentration on the accuracy and timeliness of more necessary information.

5. The further use of influential organizations within the several industries to determine relative utility of data, modifications and improvements, and future requirements might be increasingly helpful. For example, in the chemical industry the Manufacturing Chemists Association, Synthetic Organic Chemicals Manufacturers Association, and Chemical Marketing Research Association, are all concerned about the availability of necessary data.

6. Users of data in industry are also cognizant of the mounting cost of data availability both within the Federal statistics program and within industry. It is to be hoped that programs can be carefully related to present and future needs.

STATEMENT OF ROBERT FERBER, BUREAU OF ECONOMIC & BUSINESS
RESEARCH, UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILL.

At the outset, let me say that there is no question that the economic statistics programs of the Federal Government are among the best in the world and that they are being operated by highly capable people. This is something which can only be appreciated after one has had the experience of working with statistical programs in other countries. The coverage and the quality of our programs have been improving virtually from year to year. Future efforts are, therefore, perhaps best directed along three lines: the further improvement of the quality of existing programs; the addition of whatever new programs may be needed; and the coordination of these programs. My comments are accordingly organized along this three-way division.

IMPROVEMENTS IN EXISTING PROGRAMS

Perhaps because of the multitude of data currently being published on economic conditions, there seems to be some tendency for laymen to overlook the fact that all data contained errors of one sort or another. The people preparing the data are well aware of the sources of error but, except for the publication of sampling error tables in appendixes, relatively little effort is devoted to the measurement of these errors. For example, the periodic surveys of consumer expenditures, which are based on consumer surveys, contain without question numerous errors of reporting and of nonreporting. Such errors are inevitable in survey data because few families are both able and willing to report expenditures with much accuracy over the period of a year or more. In an aggregative sense, the magnitude of these errors can sometimes be ascertained by comparing totals for particular products with corresponding totals obtained from business and other sources. Such comparisons, however, conceal errors in the individual reports and can be highly misleading in the interpretation of economic welfare. For example, if it is true that for certain types of expenditure small spenders tend to overreport while large spenders tend to underreport, as is true for some types of savings, inferences regarding levels of living based on such data can be greatly in error.

To take another example, the Consumer Price Index usually varies by one-tenth or two-tenths of 1 percent from one month to the next. In some cases, this variation may be due to sampling fluctuations in the data while in other cases this variation may reflect a real shift in prices. Under the present program, such a differentiation cannot be made. Clearly, therefore, practical methods are needed for attaching estimates of sampling errors to fluctuations in the Consumer Price Index.

To take a third example, we do not currently know how much of the reported unemployment is real and how much is spurious in the sense that the interviewee is imposing unrealistic conditions for

employment. In some cases, it is not even clear how seriously the unemployed person is looking for a job. Work is needed to introduce methods for distinguishing such instances.

Essentially, all of these examples point to the need for setting up experimental programs to evaluate the adequacy of some of our key economic statistics. These programs are undoubtedly more difficult to justify because they result not in additional tangible data but in the intangible form of data with higher quality or of data with realistic error estimates attached. With the exception of sampling errors in the Consumer Price Index, my feeling is that the main orientation of such programs should be toward the study of means of estimating the magnitude of biases and nonsampling errors in the data. Such biases are particularly likely in any data collected from consumers, but may also exist in data collected from other sources.

With regard to the improvement of existing series of data, other than those already mentioned, I would like to stress particularly the need for better estimates of consumer saving. At the present time, as you may know, saving in the national income estimates are obtained as a residual, as the difference between disposable income and total expenditures. Since both of the latter magnitudes are very large relative to saving, small errors in income or in expenditures can produce substantial errors in the estimate of saving. To be sure, some check on the saving estimate is available from the data provided by the SEC, but this check is not exact and leaves considerable margin for error.

NEW DATA PROGRAMS

Four such programs are suggested here, though three are not new, since I believe that work in these areas is currently either being considered or is underway on a limited scale. Nevertheless, such programs would seem worth mentioning as deserving high priority.

First, there is need for comprehensive data on the demand for labor by detailed occupational breakdowns and by local areas. Our statistics on this subject have badly lagged behind that of other countries despite the fact that information on the demand for labor is increasingly important as a society becomes more industrialized and approaches peak operations. The situation is particularly anomalous because on the supply side—labor force, including unemployment—we have probably the best statistics in the world. Yet, we know very little of the extent to which jobs are going unfilled, the duration and characteristics of such vacancies, and their effect on production and general economic activity.

As was brought out in a recent conference of the National Bureau of Economic Research, such data are used by other countries for a variety of purposes, ranging from the design of work-training programs, to the pinpointing of structural imbalances in different labor markets, to business cycle analysis. The current experimental program of the U.S. Department of Labor represents a first step in the direction of obtaining such data, but it is only a first step. We need information on job vacancies on a scale corresponding to the presently available information on unemployment and on the labor force. Moreover, these different sets of statistics on human labor need to be brought together, as is mentioned in the following section.

Second, the marked differences in economic activity among different areas highlight the need for more comprehensive data by States and by local areas. Indeed, this is perhaps the most important major gap in our current estimates of unemployment. The available estimates of unemployment as prepared by the Bureau of Employment Security are admittedly not very accurate and are not comparable with the national unemployment estimates published by the BLS and the Bureau of the Census. More broadly, data are needed relating to income and product accounts for local areas.

Clearly, such data are not developed quickly and are obtained sometimes only at relatively high cost. Yet, some data could be obtained at very nominal cost. For example, the addition of a location code to the IRS statistics-of-income sample, with perhaps some expansion of sample size, would enable such data to be provided to users by States and even smaller areas.

Third, more complete and comprehensive data are needed on consumer expenditures, saving, and income. The surveys of consumer expenditures conducted by the BLS, roughly every 10 years, are virtually the only data available on the subject and, as noted previously, the accuracy of much of these data remains to be established. With the growing interests in improving the living standards of the population, data on the expenditure and saving practices of different segments of the population, and how these practices change over time and with cyclical fluctuations, are badly needed. The only way to obtain such data is to establish a series of annual or biennial national consumer surveys, coupled with a program of methodological research, to obtain such data on a continuous basis and with a known degree of accuracy.

Related to the need for consumer expenditure and saving data is the gap currently existing in our Nation's wealth estimates. Such information would not seem to be required on a frequent basis, but periodic studies to estimate the Nation's wealth by type of wealth and by type of holder would seem desirable. The suggested program of consumer surveys could be used to provide much of the necessary information of this sort for consumers.

My final suggestion is for a radically new approach to data collection. The philosophy underlying the past approach is to establish a need for a particular type of data, and then to design a data-collection program for obtaining such data. Such an approach is fine for attaining limited objectives but may not be most appropriate for our present-day economy, which is characterized by very high interdependence of economic activities and by the need in both business and government for information that would enable allowance for this interdependence to be made in forecasting and in policymaking. The answer to this problem would seem to be a multipurpose, long-term data-collection program designed not to obtain particular bits of information but rather to obtain a comprehensive and continuing picture of the activity of different sectors of the economy.

What I have in mind is the concept of what may be called lifetime panel operations. This concept could be applied to consumers, to business, or to government. To illustrate how it would work in the consumer field, a panel would be established initially of individuals either in their teens or at the start of their working careers. Information

would be obtained initially from each member of this panel on all aspects of his (or her) economic life, including expenditures, saving, income, wealth, employment, and working conditions. Each member would be reinterviewed periodically for the rest of his life to obtain current information on living arrangements, family composition, and migration. Periodically, say every 5 years, a new panel would be established, selected from that part of the population which had by that time reached the eligible age group.

The data obtained in this manner would provide a comprehensive picture of the economic experiences of individuals over their lifetimes, and for different generations. It would document the manner in which the expenditure and saving patterns of individuals vary with age, with their changing personal circumstances, and with changing economic and technological conditions. By doing so, this information would bring out, for example, the extent to which individuals' activities are being hampered by environmental circumstances and the extent to which Government programs might or might not be of assistance.

Much the same information could be obtained from samples of business firms and of governmental bodies. In either case, such data would provide a comprehensive picture of how individual economic units react to changes in the environment and the problems which are encountered in the course of these reactions.

Implementation of such a program could be begun on a relatively modest scale—in the consumer area with a sample of, say, 300 to 500 individuals at the start—partly because of the need for experience with the use of such data and partly because of the need for coping with the data-collection problems connected with such an operation.

IMPROVED COORDINATION OF STATISTICAL PROBLEMS

Three areas in which better and more complete data could result from improved coordination of statistical programs are, as follows:

1. The current developmental period in the collection of job vacancy data would be an excellent time to consider how to design an integrated set of statistics that would present a clear picture of the supply and demand for labor in different occupations and in different labor market areas. This would entail some modification of current programs for collecting employment and unemployment data to make sure that these data are comparable with job vacancy data. This would also mean revision of publications so that a complete picture of labor supply and labor demand at particular times in particular occupations and areas could be obtained from a single printed source.

2. Coordination and expansion are also needed in the present survey programs for obtaining estimates of consumer expenditures and savings. Such data are presently being obtained by four agencies—the BLS (consumer surveys of expenditures), the FRB (consumer surveys of savings), the SEC (aggregate estimates of individuals' saving), OBE (aggregate residual estimates of consumer saving). There is need for coordination, on the one hand, of the two different survey programs, and on the other hand, of the survey programs with the procedures for obtaining aggregative estimates.

3. Coordination would also be of great value with regard to transportation statistics. Statistics on passenger travel and commodity shipments are published currently by the regulatory agency responsible for each form of transportation. At the statewide and local level, where we have recently been attempting to put together such figures, there seems to be no coordination between such agencies, with the result that it is virtually impossible to obtain comparable data on, say, commodity shipments within a State by form of transportation. Such information is of major importance to the study of the economy of local areas, and the Federal Government would be doing a considerable service to the States if such data could be provided. Such information would also be of considerable use to the resolution of public transportation policy—a major domestic issue.

No doubt other areas exist where coordination would also be highly beneficial; those listed represent areas in which I have had recent experience. Indeed, a separate comprehensive study of this aspect of the subject might well be considered, and could produce major improvements at relatively little cost.

STATEMENT OF DAVID L. FERGUSON, DIRECTOR OF MARKETING RESEARCH,
INVESTORS DIVERSIFIED SERVICES, INC., MINNEAPOLIS, MINN.

Rather than comment in great detail on one part or another on the program, I would like to make one rather strong plea. That plea is to develop demographic information on a geographic basis more frequently than once every decade. Rapid changes are taking place in this country in terms of population shifts and business and industrial development. These are taking place at such a pace that the information collected one year is frequently out of date the next, to say nothing of 10 years later. At the same time, computer technology and statistical sampling theory have progressed to a point where it should be possible, economically, to gather much of this information every year or two.

STATEMENT OF KARL A. FOX, DEPARTMENT OF ECONOMICS AND
SOCIOLOGY, IOWA STATE UNIVERSITY, AMES, IOWA

Since 1960, I have written a number of invited papers and articles, mostly for conferences on such subjects as area development, explaining the concept of a functional economic area. In these papers and articles I have been trying to stimulate thinking (and action) along two principal lines: (1) improving the national network of economic and demographic data; and (2) increasing the effectiveness of action agencies which are responsible for people-oriented programs on an area basis.

The functional economic area is approximately coextensive with (1) a labor market or commuting area; and (2) a retail trade area for certain types of major shopping goods and services that are seldom available in adequate variety in cities of less than 25,000. You are doubtless familiar with the U.S. Census Bureau's delineation of standard metropolitan statistical areas (SMSA's), each of which includes a central city of 50,000 population or more. In my view, each of these central cities may be regarded as the center of a functional economic area (FEA) which includes the SMSA itself and, also (as a first approximation), any additional area within a commuting radius of 60 minutes from the central city.

After delineating such areas around each city of 50,000 people or more, I would propose that we examine those cities of 25,000 to 50,000 population which lie outside of the 60-minute commuting zones surrounding the SMSA central cities. Most of these smaller cities (but perhaps not all) will prove to be the central cities of labor market and major retail trade areas containing total populations of 100,000 to 200,000 people and labor forces of perhaps 40,000 to 80,000. The population of such a functional economic area is from two to four times as large as the minimum population (50,000) which currently establishes an individual city as member of the SMSA data system.

There are at present more than 200 SMSA's. The total number of functional economic areas would include these SMSA's (and their environs) and also perhaps 150 to 200 areas centered on cities of less than 50,000—in all, something like 400 areas.

I believe that a system of labor market and major retail trade and service areas delineated on these principles will, without further modifications or adjustments, include perhaps 90 percent of the population of the United States. Actually, adjustments of the following sorts would probably be necessary to complete the delineation of a set of labor market and trade areas the data for which would add up to national totals on employment and unemployment, disposable personal income, wage and salary payments, and the like.

The 60-minute commuting zones around adjacent central cities should be studied carefully, with the help of State highway commission personnel and others who are well acquainted with the particular

areas. In the more densely populated parts of the United States it may be that the 60-minute commuting zones of two cities will overlap. This simply means that persons living intermediate between the two cities could take a job in either one of them without commuting as much as 60 minutes each way. However, relatively few people will be living in such locations that they will be completely indifferent between the two cities as places to work and shop. Attempts to draw reasonable boundaries between Washington, D.C., and Baltimore, or perhaps between Salt Lake City and Ogden to the north or Salt Lake City and Provo to the south, should be reassuring on this score.

In the more sparsely populated parts of the United States, some "open places" will be found between the 60-minute commuting zones around the central cities of 25,000 and up. These "open places" need special study by knowledgeable people. In some cases, a town having as few as 10,000 people may be providing most of the goods and services ordinarily expected of an FEA central city. However, some of these "open places" do not have any strong employment or trade center. Some people living in these areas are commuting as much as 90 minutes to work in or near a central city. Also, large numbers of young adults are moving out of such areas to the nearby central cities where jobs are to be found. (One county in such an "open place" near the Iowa-Missouri border showed a decline of 40 percent between the 1950 and the 1960 censuses in the number of adult males aged 25 to 34.)

The problem of allocating such "open places" in a national system of labor market and major shopping areas needs further study. One possibility is simply to recognize the de facto situation based on a limited amount of extremely long-distance commuting and extend the commuting zones outward from the two or three nearest central cities until they exhaust the open territory, even though this may occur at commuting-time distances of 80, 90, or 100 minutes from each central city.

In the Mountain States, large gaps between central cities and their 60-minute commuting zones will appear for obvious reasons. Places like Salt Lake City are hemmed in between mountains and desert (and a large lake). If a territory is completely unpopulated it is of little or no consequence for labor market and national income statistics. For statistical purposes, people living in small mountain or desert villages could be allocated to whichever central city of 25,000 or more they were closest to or most generally frequented for major shopping goods and entertainment.

I believe that this pattern of area delineation for purposes of national statistics on population, national income and product, employment and perhaps other items has a good deal of commonsense appeal. Some of the elements are:

1. The vast majority (perhaps 90 percent) of the U.S. population and labor force would be included in statistical reporting units every resident of which is within 60 minutes commuting radius of a central city of 25,000 people or more.

2. The "minimum commuting time" principle would be used in dealing with such areas as did not lie within 60 minutes commuting radius of a city. And, in very sparsely populated areas, certain towns as small as 10,000 or 15,000 people could (on the basis of additional

criteria) be treated as statistical reporting units to complete a set of areas which would add up to U.S. totals.

3. At the center of each functional economic area would be the city or town which contains the largest cluster of economic activities (including those of a national or large-region orientation) and a large proportion of the highly educated professional and managerial personnel of the area. These areas recognize existing labor market and shopping patterns which have resulted from the free locational decisions of business firms and individuals, each taking account of those locational factors which seemed important to him. It seems to me that these "minimum commuting time" areas would be logical units for planning a possible postattack recovery strategy or for administering resources in a situation which called for conservation of rubber, gasoline, and transportation facilities and in general, efficient organization of the local movement of goods and people.

4. It may be that every Federal action agency and statistical reporting service is taking proper account of those locational and area delineation factors which are most important for its own work. It is clear that the Defense Establishment must take account of the location of major population centers, factories, and other important resources. It is equally clear that the Bureau of Public Roads must take account of traffic patterns between major cities. The Department of Labor necessarily takes account of major labor markets in deploying its field staff and organizing its statistical reports.

Different action programs may indeed call for different area delineations. However, I think the functional economic area or "minimum-commuting-time" area can serve a very important purpose in consolidating many different elements of the Federal data system on a basis which will be found to be a useful building block for nearly all of them. These areas are relatively self-contained from the standpoint of commuting and shopping—that is, almost all persons residing in an FEA are also working in that FEA. This is a practical advantage for labor market analysis and for purposes of regional income and product accounts.

5. I believe that some important issues of economic policy, including both stabilization and growth aspects of employment, labor mobility, public education, and vocational training and retraining, will be illuminated by this kind of area delineation. It will be found also that a great many of the young people who have left the farms in recent years are residing in the same functional economic area, the central city, suburbs and satellites of which are the fastest-growing components of the area—sometimes the only growing components. For example, 80 percent of the residents of Fort Dodge and Mason City, Iowa (cities of about 30,000 population each) as of 1960 had been born in Iowa. The age, occupational, and educational distributions of the population of a functional economic area will almost always be more promising from the standpoint of area economic development than will those of the strictly rural counties in the same vicinity.

It may be that no one Federal agency will feel that its own work would be significantly improved by adopting the functional economic area pattern for either statistical or action purposes. However, I believe very strongly that collectively the Federal statistical and program

agencies would do a better job if they seriously studied this pattern of area delineation and its implications. I believe that serious inter-agency study of its implications for the Federal statistical data system might also suggest some opportunities for improving the planning, the strategy, and perhaps the deployment of field personnel of some of the Federal program agencies.

STATEMENT OF IRWIN FRIEND, PROFESSOR OF ECONOMICS AND FINANCE,
UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

In reply to your letter of March 2 asking for my views about the more pressing statistical requirements for economic analysis and policy, I had hoped to be able to submit a full statement on this subject, but my work schedule has not made this possible. I should like, however, to comment briefly on two serious gaps in the Federal statistical program which seem to have been overlooked in recent discussions of needs for additional economic data. Both gaps are in the area of individuals' or household saving and consumption statistics. We do not have satisfactory answers to such elementary and important questions as: (1) Who saves, how much, in what forms? and (2) How do consumption as a whole (which is simply income less saving) or the major components of consumption vary with income and other relevant variables? I shall attempt to outline below the nature of each problem and to propose a solution.

1. Most economists ascribe a central role to individuals' saving (or consumption) propensities in both cyclical and secular fluctuations in the national income. Yet the sad fact is that we have no reliable data on the distribution of individuals' saving (or wealth) among different groups in the population. Virtually all available information of this type has been obtained from sample surveys of individual consumer units or families (including single persons). However, in view of major deficiencies in the survey data, few definitive statements can be made about the saving behavior or structure of wealth of different economic groups. These deficiencies have been described at length elsewhere and are evidenced by serious discrepancies between blown-up survey results of certain components of saving—particularly cash and deposits—and reasonably reliable external aggregates.¹ To illustrate the magnitude of the problem, whereas the Federal Reserve-Michigan survey data implied dissaving in cash and deposits by individuals as a whole amounting to \$6.9 billion in 1950, the last year for which such information is available, reasonably reliable aggregate statistics indicate a figure of +\$3.9 billion. This difference alone is as large as the external SEC-Commerce total for saving in that year. Such discrepancies cannot be explained by sampling errors and are sufficiently large so that almost any reliance on consumer survey data for analysis of saving and wealth involves the assumption that the very substantial biases which are known to exist are distributed among individuals or economic groups in some convenient fashion. It is a testimonial to the importance of distributional information on saving and wealth that analysts have been so willing to make this assumption. In the present state of the arts, nearly all saving analysts will agree that consumer surveys have not provided satisfactory information on

¹ See Irwin Friend and Stanley Schor, "Who Saves?" Review of Economics and Statistics, May 1959, pt. 2.

aggregate saving by different groups in the population; so the needs for such data in a system of social accounts have not been filled.

The situation is even worse than is generally recognized. Given the very large biases in the aggregate saving (and wealth) estimates derived from survey data, there can be no assurance that any distributional or trend estimates from such data, or any measure of the degree of association between saving and other variables, may not be similarly afflicted. Thus both the high propensity to save and the high proportion of total saving which consumer surveys attribute to entrepreneurs might in large part simply reflect deficiencies in the data.

Institutional data which have a high degree of reliability can be used to provide the first satisfactory estimates of the distribution of a high proportion of assets and liabilities and of current saving among different groups in the population. By an appropriate sampling of accounts on the books of financial institutions, corporations, and Government units, it should be possible to derive reliable estimates of the distribution among economic and other groups of most items of assets, and liabilities, and saving—such as demand and time deposits (including those in saving and loan associations), insurance, a high proportion of Government and corporate securities held by individuals, mortgages, other debt, and housing. It would not be feasible through this approach to cover one component of saving and wealth—viz currency—and, what is a more serious deficiency, net investment in non-farm farm business would continue to be inadequately estimated, though some important improvements could be made in the available data. According to the SEC-Commerce estimates, the components of saving which can be covered in this manner have accounted for virtually all of the total net individuals' or personal saving in recent years. I have spelled out elsewhere the details of the techniques and procedures that can be used to obtain this information classified by occupation, income, and if desired, other groups.²

2. While both the Federal Government and private organizations collect an extensive and impressive set of statistics on consumption, both as part of the national accounts and through consumer surveys, these statistics do not fulfill one of the most basic reasons for their collection, especially for survey data. They do not make possible a satisfactory estimate of the income elasticity of the demand for total consumption (or the marginal propensity to consume) or for individual items of consumer goods and services. Such information is basic to economic forecasting and to projections of future demand and is commonly used both for Government and business policy purposes. Yet the range of perfectly respectable estimates of the response of the total and composition of consumption to changes in income is enormous. The deficiencies of the aggregate time-series data and the usual survey data (such as the BLS Consumer Expenditures Surveys) for this purpose are well known, but relatively little has been done to remedy this situation.³

Many of these deficiencies can be avoided by the use of continuous cross-section or panel data where the response of household economic

² "Institutional Data as a Source of New Information for Use in Social Accounting Systems," *Studies in Income and Wealth*, vol. 26, Princeton, 1962.

³ See Jean Crockett and Irwin Friend, "Determinants of Consumer Investment Behavior," National Bureau-Universities Conference on Investment Behavior, 1965, pt. II.

behavior to changes in relevant variables can be traced as these variables change over time, permitting the analyst to distinguish among the effects of different types of changes in income, to hold tastes constant, etc. While some interesting attempts along these lines have been initiated by private research organizations, nothing very comprehensive has been carried out, and the Federal Government has continued to collect household consumption data in the same old way, perpetuating the same old difficulties of analysis. The panel approach is especially promising for the many consumption items which unlike saving as a whole are estimated with a rather small margin of error. However, even saving analysis could be greatly improved through this approach.

Great progress in the analysis of saving and consumption could be accomplished through initiating either of these programs. The initiation of both would offer very fruitful possibilities of integration.

STATEMENT OF MAURICE I. GERSHENSON, CHIEF, DEPARTMENT OF INDUSTRIAL RELATIONS, STATE OF CALIFORNIA, SAN FRANCISCO, CALIF.

I would like to outline a few of the needs which I believe are particularly acute:

1. There is need for current information on intercity differences in the cost of living. The Bureau of Labor Statistics should update the contents of the City Worker's Family Budget, and price it regularly in as many cities as possible. According to my records this budget has not been priced since 1959.

2. In addition to the City Worker's Family Budget there is need for a wide variety of budgets to measure the living costs of families of different size and age composition. I have in mind such budgets as for a single person and an elderly couple, priced for large and small cities and in rural communities in different parts of the country.

3. The Bureau of the Census should expand the sample of households in the current population survey so that statistics for States and selected metropolitan areas can be derived, similar to those now compiled for the country as a whole, on labor force, income distribution, educational attainment, occupation, migration, et cetera. Such statistics for States and areas would constitute a major contribution to economic data for policymaking, both public and private, since trends for the Nation as a whole are not necessarily representative of those for individual States and areas.

4. Our occupational statistics are entirely inadequate. The need for detailed current statistics of employment by occupation was pointed up by the Gordon committee report, "Measuring Employment and Unemployment" (pp. 202-205). I endorse the recommendations of the committee for better occupational statistics, and urge these recommendations be implemented as soon as possible.

5. The lack of current statistics on income distribution for individual States and areas represents a serious gap in our economic data. The need for such statistics is particularly great for both the administration and evaluation of the Economic Opportunity Act.

6. Statistics of expenditures for new plant and equipment, compiled by the Office of Business Economics of the Department of Commerce, are published for the Nation as a whole. A distribution of the national total by States would be very useful for regional economic analysis.

7. Important gaps continue in existing statistics on both the cost and volume of construction. Particularly acute is the lack of adequate data for the States and areas on construction other than building construction. We need for individual States the kinds of construction information available for the Nation as a whole, compiled by the Bureau of the Census, similar to that contained in tables B-36 and B-37 in the Economic Report of the President, January 1965.

8. There is need for statistics of short and intermediate consumer credit outstanding for individual States such as is now available for the Nation as a whole.

9. In the field of consumer credit, including home mortgages, we need statistics classified by the characteristics of the borrowers. We need to know more than the aggregate amounts of consumer credit outstanding in the various categories as now published. We should have distributions of the amounts owed by type of credit, by family size, by income, and by other characteristics. We should be able to answer such questions as who owes, how much, to whom, for what.

You will note that for the most part I have stressed the need for State and area statistics now generally available only for the Nation as a whole. No two States are alike. No two areas within any States are alike. Policy decisions, both public and private, must take into account State and area differentials.

The availability of the kinds of data I have outlined above would constitute a major contribution to economic data for policymaking purposes.

It may be desirable to explore the possibility of Federal-State cooperation in the development of State and area breakdowns of the national totals in the fields I have listed. As you know, there are at present a number of cooperative Federal-State statistical programs. My own agency has two such programs with the Bureau of Labor Statistics of the U.S. Department of Labor, one extending back to 1924. These have proven highly successful both in reducing costs to the respective agencies and in producing high quality data.

I commend your committee for undertaking to review statistical requirements for our present and future needs. I am certain you will find that we need more economic facts than we now have to assist policymakers in finding solutions for the complex problems that face the Nation.

STATEMENT OF RALPH L. GILLEN, MCKINSEY & CO., INC., CLEVELAND,
OHIO

Basically, my concern is less with the quantity and quality of Federal data and more with the way in which data assembled by Federal agencies is used or can be used. Three thoughts are worth special mention:

1. Even though present policies already permit special tabulations drawn from Federal data sources and paid for by the requesting user, I have the impression that far more could be done along these lines. Business and institutional users of all kinds, the smaller ones in particular, need to be made more aware of the opportunities for special analyses which can be obtained at modest cost. I recognize that if demands of this kind were to increase to many times their present level, it would be difficult for Federal agencies to respond on a timely basis. But at the same time, we should regard the kinds of information available through the periodic censuses and the regular activities of the Bureau of Labor Statistics and other agencies as "natural resources" and seek to exploit them far more effectively than we have heretofore.

2. A related area of concern involves the limited degree of understanding of the availability of published information. While it may be inappropriate to suggest that Federal agencies need to do a lot more advertising and merchandising of the materials they produce, those agencies that assemble and publish statistics could go much further than they have to help insure that a larger proportion of prospective users know about the availability and usefulness of the data being generated. A number of recent efforts (for example, the Guide to Industrial Statistics) are excellent steps in the right direction. But much more should be done in this way, and dissemination should become a much more important part of the Federal program.

3. Sophisticated users of Federal statistics, in many instances, have a full understanding of the limitations under which they were collected and the care which must be exercised in their use. But if more is done to insure wider dissemination and application of data from Federal agencies, parallel steps must be taken to insure that people understand the limitations of the material and the extent of the threat of misinterpretation. Certainly this is essential in the case of business managers who are not professional economists or statisticians. Yet, the comment applies as well to the use of Federal data by economists, some of whom may place inordinate weight on a piece of information in the absence of a clearer picture of the range of interpretations that might be attached to it as a result of its limited statistical accuracy or other qualifications.

These several observations, I fear, are not as pointed as I suspect you had hoped they might be. Through the Federal Statistics Users' Conference I will be involved in efforts to consider more specifically

the scope and utility of present and future Government statistical programs. It seemed appropriate, however, in response to your inquiry, to make these several observations which I am firmly convinced represent opportunities to get far more value from our statistical expenditures.

STATEMENT OF ROBERT T. GLIDDEN, INTERNATIONAL HARVESTER Co.,
CHICAGO, ILL.

The task of reviewing current and future statistical needs would seem to be particularly timely at this stage of the country's growth. We appear to be in the initial phase of a rather far-reaching change in the cultural and economic structure of our society and a current appraisal as to the adequacy of the measures of such a change is especially important.

Naturally, the observations and opinions which I express in these comments are my own and do not necessarily reflect the position of the International Harvester Co. or the views of its management.

During the past 20 years I have had occasion to use a variety of data developed and compiled by different statistical agencies of the Government and in examining this experience in its total perspective I have the impression that much of the "new" statistics effort represented a kind of "patch on" series without reference to a total conceptual objective. This observation does not imply any criticism of the work of any statistical agency, but rather it recognizes the pressures both internal and external which often have an overriding influence in the fulfillment of an assignment. This type of problem is perennial, but at some place it is frequently desirable to examine the roads which have been recently traveled as an orientation to the planned destination.

In view of the vast economic changes which have taken place since World War II and the fact that we appear to be on the threshold of others which could have greater depth in their nature, it would seem to be pertinent that the concept of statistical programs in their totality be examined for a possible redefining as to their purposes.

In some areas of statistics, and I refer especially to agricultural data, the emphasis on output information is not balanced adequately with the capital inputs side. Reference is made to this lack of input information in the report of the wealth inventory planning study of the George Washington University and in which I completely agree. It is suggested that the wealth study report might well represent the focal point on which to base a concept for future statistical needs and serve as a guide for the direction of future statistical programs.

Another area of consideration which might be examined by your subcommittee is concerned with the coordination of State and Federal Government statistical programs to the achievement of a defined objective. There is an increasing need for local, State, and regional data and much of this requirement might be realized through an expanded cooperative program with State statistical agencies. In this connection it is possible that more attention to the compilation of data on the basis of "economic areas" would serve to meet many of the anticipated statistical requirements. The "economic area" approach would overcome the many limitations associated with State information and at the same time keep the sheer volume of more detailed

data within manageable bounds. Some information is currently available on this basis, but it has not been published in this form. It is conceivable that in some cases "economic area" data could be more useful than information compiled by counties from a sample.

The spreading use of computers has opened further areas of coordination possibilities as to the form of respondent reporting. These devices provide a means to relieve the "burden" of filing Government reports, a complaint which I'm sure you have heard many times. The establishment of a plan with respect to Federal statistics programs in terms of an overall concept, yet sufficiently detailed for programing purposes, would enable respondents to anticipate reporting requirements.

In these comments I have deliberately avoided reference to any particular data series since material of this nature has been called to the attention of your committee by any number of interested groups and individuals. Further, I believe that such items would pretty much fall into place once a total conceptual purpose for the gathering of statistical information has been developed in some detailed form. In this connection I again suggest that the study referred to previously and published by the National Bureau of Economic Research under the title of "Measuring the Nation's Wealth" represents an excellent basis for the information of such a concept.

STATEMENT OF MARSHALL GODDARD, THE CELOTEX CORP., CHICAGO, ILL.

It would seem to us that Government statistical programs should primarily be directed toward gathering and publishing basic statistics of broad general interest which are of value to many different users or which, by their nature, can best be gathered by the Government. We realize that there are increasing requests for data from the Government, and that trend will undoubtedly continue. It would seem advisable, however, to make a distinction between statistics of general interest which should be prepared by the Government and those which should be privately gathered where they are obtainable by and used by relatively few and are primarily for the benefit of the few. Such a policy might permit a reduction in some Government statistics and avoid duplication of Government and privately gathered data.

It would also seem that there are areas where correlation might be improved between Government statistics and privately gathered statistics through programs whereby the Government incorporates the privately gathered data, as from trade associations, for use in its data, rather than going to the individual sources. Aside from improved correlation, this would permit a reduction in number of reports by the individual. This actually would only apply to the type of data properly gathered by trade associations or other private groups and which could satisfactorily be incorporated in Government statistics.

Assistance by the Government in formulating uniform definitions and bases for certain statistical programs would be helpful. In our industry—and by that we mean the overall building industry—the very basis of measuring building activity at a local or regional level is quite varied. While the U.S. Government departments preparing and issuing statistics apply uniform terms, the basic local data is rather suspect. We know this is of concern to Government departments involved in building industry statistics and would endorse any assistance the subcommittee can give them in their efforts to improve such data.

STATEMENT OF RAYMOND W. GOLDSMITH, PROFESSOR OF ECONOMICS,
YALE UNIVERSITY, NEW HAVEN, CONN.

In view of the immense scope and the high quality of the statistics prepared by the U.S. Government, it is impossible to make broad suggestions for additions and improvements "in the light of present and future needs in our growing economy" without protracted study. I shall, therefore, limit my remarks, made in reply to your letter of March 2, to one field with which I happen to be somewhat more familiar and which occupies a crucial position in our system of economic statistics, namely the national accounts. Even here, all I can do at this moment is to list a few suggestions without spelling them out in detail or providing the reasons for them.

1. All our statistics in this field should be reviewed from the point of view of ultimately bringing them together into a unified comprehensive system of national accounts including national income and product accounts, input-output tables, flow-of-funds statistics, and national balance sheets. This recommendation underlay the report on "The National Economic Accounts of the U.S.," submitted to your committee in 1957. While some progress has been made in this direction during the past 8 years, most of the decisive steps still remain to be taken.

2. The regular, though not necessarily annual, compilation of national and sectoral balance sheets which constitute an important and hitherto unavailable component—at least as far as official statistics go—of our system of national accounts.

3. The development of statistics of national wealth, in detail for benchmark dates and more summarily on an annual basis. Detailed recommendations in this direction have recently been made to your committee in "Measuring the Nation's Wealth."

4. Turning to more restricted fields (a) the improvement of the accounts for nonincorporated nonfarm enterprises; (b) the treatment of expenditures on consumer durables and on Government structures and equipment as capital rather than current outlays; and (c) experimentation with measures of investment in the labor force.

STATEMENT OF JAY M. GOULD, RESEARCH DIRECTOR FOR "SURVEY OF BUYING POWER," NEW YORK, N.Y.

The main emphasis in our studies is the establishment and forecasting of marketing potentials for the complete range of consumer industrial goods and services.

We are therefore heavy and fairly sophisticated users of governmental statistics, including even those statistics that come to us as by-products of such administrative procedures as collecting taxes. We are struck by the fact that in our own work, the availability of high-speed computers had made for dramatic increases in the quality of statistics that can be processed and analyzed, but that as yet relatively little has been done with regard to the improvement of the quality of Government statistics. We are not referring to adequacy of sampling techniques, which can be fairly precisely evaluated, but rather to the fact that many Government statistics are collected and reported because they are the product of long-established bureaucratic procedures and are not subject to a periodic review of their usefulness to statisticians and business economists. On the other hand, it is well known that in such fields as construction and transportation there are painful statistical gaps precisely because there has been insufficient coordination of all Federal statistical gathering activities, from the standpoint of what figures are really necessary for the efficient management of business enterprise.

One example is the fact that the input-output study for 1958 recently published by the Office of Business Economics turned out to be a stripped-down study with only half as much detail as had been provided by the first input-output study for 1947. Such studies can be enormously helpful in industrial marketing, but only if Government agencies take the job seriously, and greatly expand the underlying detail. Our experience in translating and adapting such material to the business user is that the latter is extremely sensitive to the potential embodied in good, well-organized, and practical statistics, which increasingly underlie modern scientific management. But statistics gathered just for the sake of collection can also be a source of frustration, and can generate the kind of resentment which periodically results in the unfortunate scuttling of some extremely useful Governments statistical programs, because of uniformed budget-slashing drives.

It seems to us that the work of the Census Bureau is consistently of the highest possible level, although not nearly enough is done by way of interpreting the significance of Census data or making full use of all data collected by the Bureau. More could be done by way of offering census tapes to business users for special runs. Other Government agencies in the Labor and Commerce Departments, however, which are in a better position to perform more analytical functions frequently, as in the case of the input-output studies, suffer from insuffi-

cient resources and staffing. The most important statistics are frequently the end product of a long chain of collection, tabulation, and interpretation. Businessmen will increasingly expect the Federal Government to provide the high-level sophisticated sets of statistics necessary to evaluate business projects in the present and the future.

STATEMENT OF DOUGLAS GREENWALD, CHIEF ECONOMIST, MCGRAW-HILL PUBLICATIONS, NEW YORK, N.Y.

Timeliness of reporting economic statistics has improved considerably in recent years. Nevertheless, there seem to be many areas where more timely data could be produced. For example, the censuses of business are important as benchmarks for both economists and market researchers in helping to make business decisions for their companies. Yet these data are very late in coming in even though they are all on electronic computers.

Another statistical area which has bothered me particularly, because I work for a publishing company which has publications in the aerospace and electronics fields, is standard industrial classification. It seems to me that in this dynamic computerized economy, our economic data should be available for industrial groupings other than the so-called standard industries which may or may not be in existence only a short time from now. How can businessmen be expected to interpret trends of their business if they really don't know what the total volume of their business is? We often see reports, not necessarily emanating from the Federal Government, but using Federal Government statistics, saying that the future of aerospace or electronics is bright or grim solely because of different definitions or coverage of the industry. I believe that a more flexible classification system should be adopted and work should soon begin to alter the current fixed system of classification.

Now I would offer some comments about improving primary sources of the national income accounts:

a. Inventory information continues to be a matter of concern to many of us. The lack of adequate product detail limits the value of the data.

b. Housing starts data are no longer proving very useful as a forecaster of residential construction activity. Some examination of these data relative to information on permits should be undertaken.

c. Price indexes used in deflating the gross national product should be examined in detail. In particular the deflators for capital goods should be examined with a view to their improvement.

d. The concept of profits needs our reexamination. Changes in depreciation and other provisions of the new tax law make it difficult to compare profit statistics for two different time periods.

e. A major shortcoming in the national income accounts is the lack of data on Government purchases by commodity group; and I feel that perhaps anticipatory data for Federal, State, and local government programs should also be urged. This would round out an important area of the economy for which forecasters have some difficulty in projecting future trends.

f. Another area of anticipatory data which should be explored is that of anticipations on inventories of nonmanufacturing business.

The series on manufacturing business appears to be relatively useful in making short-run estimates of inventory change in the national income accounts. Here too, if we could get additional information on the nonmanufacturing business sector, an improvement in the accuracy of forecasters might result. Naturally, I realize that the Government is attempting to limit surveys, but obviously some surveys would have more value than others.

Finally, I would like to suggest a realistic approach to the collection of various local and regional economic statistics which will no doubt be needed to carry out the Great Society program. My suggestion is that some control on the comparability and the consistency of regional data be part of the basic program. Whether this control is centered in the Budget Bureau or elsewhere, it seems important, for business users of local or regional data that the meaning and quality of the statistical series for one area versus another should be roughly the same.

STATEMENT OF JACK C. GRIFFIN, MARKETING RESEARCH DIRECTOR,
GERBER BABY FOODS, FREMONT, MICH.

Perhaps understandably, we are keenly interested in figures on births and we put the Federal statistics on births by county to considerable use. It would be helpful if the present timelag of 16 months could be shortened. That is, 1963 births for U.S. counties were not available before April 1965. If this delay could be lessened, at a reasonable cost, the utility of these data would be increased.

A similar delay problem exists in connection with the other area of Federal statistics which we also use—the census of business. We are informed that the calendar year of 1963 data was obtained by the Census Bureau in 1964, but will not be available until at least mid-1965.

STATEMENT OF MICHAEL H. HALBERT, TECHNICAL DIRECTOR,
MARKETING SCIENCE INSTITUTE, PHILADELPHIA, PA.

Rather than comment on specific additions or modifications for the current program, I should like to follow the point of view expressed in your second paragraph and relate economic data to public and private policymaking.

It is clear that any adequate Federal statistical program must effect a reasonable compromise among three sets of conflicting factors. The first of these sets deals with the techniques and methodology of data collection and analysis. In this respect, the various Federal departments probably represent the highest level of expertise in the state of the art.

The second set of factors represents the cost of these collection and analysis programs. This, of course, includes the frequency and timeliness of the reports. Again, the experience generated by the Federal Government is probably the best available base for estimating the cost of current or future programs.

The third set of factors are equally important, but much less adequately treated in the management of most statistical programs. These are the factors that measure the value and use of the tables and reports that are generated. Obviously, if one knows only how to collect data and how much they will cost, but cannot estimate the value of the data, there is no basis for rational management policies.

Within the last several years, techniques in statistical decisionmaking (e.g., Bayesian theory, risk analysis) have been developed to a point where they permit preevaluation of information with respect to its use in decisionmaking. I would recommend for your consideration, therefore, a serious, extensive and continuing program that would develop and use measures of value for current and proposed statistical programs. As you have said, there is increasing dynamism, both in the economy as a whole and in the efforts of policymakers to control and direct it. Thus, there is also increased need for continual, rapid, sensitive, and accurate adjustment of the program. This adjustment can only be brought about with the aid of a broadly conceived, serious commitment to the difficult but feasible task of measuring the concrete and specific impact of actual or proposed statistical programs on private and public policymaking.

Let me emphasize that I am not suggesting judgmental or attitudinal measures, but rather recommending techniques that are already in limited but effective use in government and industry to design and measure the effectiveness of information systems.

STATEMENT OF MORRIS HAMBURG, PROFESSOR OF STATISTICS AND OPERATIONS RESEARCH, AND JOHN H. NORTON, INSTRUCTOR, WHARTON SCHOOL OF FINANCE, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

RECOMMENDATIONS FOR A COORDINATED FEDERAL-STATE-LOCAL PROGRAM OF SMALL AREA DATA ON POPULATION, LABOR, AND INCOME

Any study of the needs for economic statistics risks the possibility of bogging down in the enormous variety of current analytical and operational requirements for data. The authors of the present statement, therefore, found it necessary, in a recent survey of the needs for, and adequacy of, small area data for Pennsylvania, to concentrate their attentions on three major categories of information: population, labor force, and personal income. These categories seemed of chief importance in the investigation of the economic structure and potential of a given area, since they provide the characteristics of its human resources, its economic activity as reflected by employment, and its economic well-being as represented by the incomes of its residents. The recommendations here offered are based in large part on the findings of the Pennsylvania studies and are limited to the three categories cited.

There is no doubt that anyone attempting economic analysis for a small area faces serious problems with existing data. Usually he must work with statistics of questionable accuracy which are neither strictly comparable nor sufficiently current or available in adequate detail. He finds that the only regular comprehensive measurements of State and local area population, labor force, and income, are furnished by the censuses of population taken only once every 10 years. Considering the rapidity of population and economic change in many areas, such data are usually obsolete for many purposes by the time they are published. The alternatives are estimates—made by Federal, State, and local agencies—which are based partly on projections of information from the censuses and partly on current data related to, but not measures of, the characteristics of interest. For relatively small areas and small groups in the population, both the census figures and the local estimates may be seriously in error. As a somewhat extreme illustration of the problem, the 1960 census indicated 2,726 unemployed persons in the Altoona, Pa., metropolitan area while the best local estimate for the same period showed 4,900, a difference of 80 percent using the census figure as base. Even for the eight-county Philadelphia area, the corresponding disparity was of the order of 28 percent. No one can say with any real assurance in these cases whether the census figures or the estimates are the more accurate, although many believe the estimates to be better.

As pointed out by the President's Committee To Appraise Employment and Unemployment Statistics, the ideal solution to the small area data problem ". . . would be to have monthly household surveys

taken for each State and labor-market area, using the model of the present National Current Population Survey." Of course, this is impossible at present for reasons of cost, as would also be the case for frequent repetitions of the census of population. Yet detailed data on the characteristics of an area's residents, by age, sex, race, employment, and income status and many other classifications, seem essential to the implementation and evaluation of government programs dealing with education, unemployment, poverty, urban renewal, and area economic development, as well as for other government and private activity.

Since direct measurements in a comprehensive Federal program would be too costly on a scale commensurate with the data needs, it seems clear that some sort of intermediate solution must be provided. The answer to the problem, would appear to lie in Federal initiative and major financial support for expansion, improvement, and coordination of existing programs of data estimation by the various agencies now attempting to fill the data gaps. A joint Federal-State-local program for population, labor, and income statistics is indicated with participating agencies operating at each level of government, to provide current estimates, projections, and analyses of economic conditions. Some financial support of the program by the States and smaller areas would be desirable, but the major contribution must obviously be Federal, by reasoning analogous to that requiring Federal support of the construction of interstate highways.

A prototype for the organization of such a system of statistical services already exists in the cooperative program for employment data, organized by the U.S. Department of Labor and the State employment security agencies, a soundly conceived program in serious need of immediate improvements. Moreover, since many States currently possess units producing population and income estimates, it would seem appropriate to expand financial backing for these activities and to develop closer liaison with their counterpart activities in the Bureau of the Census and the Office of Business Economics of the Department of Commerce. Given the expansion of staff and financial support, many possibilities exist for Federal-State coordination and cooperation, especially the possibility of a liaison between the Office of Statistical Standards of the Bureau of the Budget and the State agencies for statistical coordination and control modeled after that Office. Coordination of activities is critical, considering the need to build a system using existing agencies, and the requirements for data comparable not only among areas within States but also across State lines so as to permit analyses for economic regions.

Even with adequate financial support, proper organization, and competent staffing of such a system as outlined, an adequate program of estimates and analyses would be impossible without a substantial simultaneous expansion of existing Federal programs for data collection. Means must be found to provide both periodic checks on the level of estimates and current information for the construction of further estimates and projections. A mid-decade population census is one alternative. In this connection, there is need for a permanent expansion of the Census Bureau staff and budget, partly to improve the quality of the census small area data and partly to prevent interference with other programs of the Bureau. The only other suitable alternative to additional censuses would be area surveys using probability

samples after the model of the Current Population Survey. These, in any case, will at times be necessary for selected areas to provide information on seasonal and cyclical variation which censuses cannot determine because of their infrequent nature. One important aspect of sample surveys should not be overlooked: their potential for providing information outside the scope of the regular program for the evaluation of specific area problems.

A continuing evaluation and research program also seems of critical importance. The availability of small area data has been so limited in the past that knowledge of data quality and of the adequacy of methods of estimation and projection is at present almost nonexistent. Evaluation and research should extend, moreover, to questions of adequacy of data for analytical uses and to the development of measurement concepts, procedures, and relevant theory. The establishment of regional centers for economic analysis, such as those for manpower analysis proposed under the Manpower Development and Training Act, seems an appropriate, and perhaps necessary, concomitant of a comprehensive data program. Also necessary is some provision for review of the adequacy of the program by independent groups, and for periodic reassessment and followup of their recommendations.

A final point that requires emphasis is the immediacy of the need for better State and local information. Expansion of the current Federal programs for provision of State and metropolitan area estimates and projections must not be postponed in anticipation of the development of a comprehensive data system. Immediate expansion of existing programs should, where possible, be initiated as rapidly as funds and facilities can be made available.

APPENDIX

A summary of certain of the recommendations made for Pennsylvania in the authors' monograph, "An Evaluation of Selected Data Requirements and Availability for Urban Economic Planning and Development in Pennsylvania" (Department of Internal Affairs, Commonwealth of Pennsylvania, Harrisburg, December 1963), is offered here as an indication of the variety of activity necessary in a program for small area data and related analysis. In view of the magnitude of the proposed program, and considering Pennsylvania resources for statistical activity, priorities of action were included in the recommendations. Emphasis was placed on estimates for counties as the smallest political unit for which data could reasonably be provided and as a suitable unit for aggregating the data into totals for regional economic analysis.

SUMMARY OF RECOMMENDATIONS FOR RESEARCH AND DATA DEVELOPMENT IN A PROGRAM FOR SMALL AREA POPULATION, EMPLOYMENT, AND INCOME STATISTICS

I. POPULATION ESTIMATES AND PROJECTIONS

A. *First priority items*

1. Intensive research should be carried out on annual estimation of net migration for standard metropolitan statistical areas, counties, and municipalities. Even the timely provision of annual county net migration rates alone would provide very useful and sorely needed information.

2. An expanded current population estimation program should be developed for standard metropolitan statistical areas, counties, and municipalities with emphasis upon experimentation with different methods of estimating total population, military and institutional population on an annual basis. A more formal program of testing and evaluation should be evolved for estimation techniques used at State levels and by local analysts. In connection with this program, considerable study is needed on the best method of utilizing the information sources and resources of local areas and of coordination with local personnel.

3. An integrated system of population projections should be developed for standard metropolitan statistical areas, counties, and municipalities. The real need here is for a continuing program of short-term and long-term projections monitored and adjusted on the basis of assessment of the effects of new factors or changing underlying conditions. Projections are needed which have been interrelated with the nature, timing, and magnitude of expectations concerning economic and physical development.

B. Second priority items

1. A careful investigation should be carried out to determine what improvements can be made in methods, procedures, and administration of school censuses to overcome admitted present inadequacies and thus make these data useful in population analysis and estimation.

2. Research should be initiated on the feasibility of estimation of postcensal population of standard metropolitan statistical areas, counties, and large municipalities by characteristics such as age, sex, and race or color and experimentation should be carried out on the estimation of specific birth and death rates by these characteristics.

3. Research should be initiated on the feasibility of current population estimation and projection of total population and migration for small areas such as selected census tracts within the larger municipalities.

4. A research program should be undertaken on possible symptomatic indicators of population change. One real need in this area is for the standardization and improvement of building permit data to make feasible a program of estimation of change in number of dwelling units as one basis of measurement of population change.

C. Third priority items

1. Research should be undertaken into the improvement of historical series on population primarily by counties and municipalities. In particular, the desirability of a continuation and extension of work in obtaining comparable time series of births and deaths on a residence basis should be examined.

2. Research should be undertaken on such matters as characteristics of migrants, the relationship between shifts in employment patterns and migration and similar subjects.

II. LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT DATA

A. First priority items

1. A program should be initiated to provide annual county estimates of total employment by occupation and by industry. These should be provided by residence and by place of work, and eventually, for sex and age groups, and for nonwhite where major differences exist between patterns of activity of whites and nonwhites.

2. A program should be initiated to explore the causes and economic impact of unemployment in both counties and labor market areas. Where presently constituted labor market areas, as, for instance, that of Philadelphia, show wide variation in unemployment within subregions of the area; then there must also be investigation of these subregions. Information on the characteristics of the unemployed should be obtained separately for those entering unemployed status by layoff and for new entrants or reentrants to the labor force.

3. Systems should be instituted for more adequate benchmark data and for improved data quality in general.

4. Present programs of analysis and adjustment of series for comparability should be extended to include studies of cyclical and seasonal influences, and increased use and publication of seasonally adjusted series should be made. Where data are produced annually as of a specific short reference period, information should be developed to permit their adjustment to annual average levels.

5. A projections unit should be organized to provide current estimates for types of data not normally available, particularly, where appropriate, for areas so small as not to be included in the regular data program. Other activities of this unit should include long-term projections, special labor force studies and programs to evaluate the adequacy of projection methods and to revise both projections and methods in the light of experience and new information.

6. Action should be taken to strengthen existing State data programs. In particular, the sampling procedures in the Bureau of Employment Security employer survey should be improved through increased representation for industries inadequately covered in the present sample. Studies should also be conducted of other means for improving the adequacy of the sampling and estimation procedures of this system.

B. Second priority items

1. A program of data collection and research on labor mobility should be initiated. Only practical considerations place this in second rather than first priority since it is particularly dependent upon the availability of trained researchers and an operating sample survey program. In the meantime, encouragement should be given to university research on labor mobility.

2. Studies of the need for changes in concepts should be undertaken, to include investigation of the need for distinctions between full-time and part-time employment, the nature and extent of multiple job holding, gross versus net change in employment and unemployment, and similar problems of identification of the magnitudes of employment and unemployment.

3. State initiative should be taken to collaborate with the Federal Government in the development of new programs such as that proposed for job vacancies.

4. Studies should be conducted to further the contributions of the State system of labor information to programs in regional economic research such as those currently underway in the Pittsburgh and Philadelphia regions. Personnel and facilities should be available at the State level to permit more active collaboration in these programs and greater interchange of information.

5. Appropriate action should be taken to implement the findings of the above studies.

C. Third priority items

1. Provision should be made for more detailed analysis of current and potential labor supply. Included should be the procurement of additional information on persons not in the labor force but constituting a potential source of labor supply and the study of long- and short-run changes in labor supply and their causes.

2. Research on the demand for labor should extend to studies of primary and secondary industry employment, allocation of employment by sectors of demand, the occupational structure of industry, and other problems on the borderline between labor force and industrial research, and to the consequent collection of data as required. The prospects of inter-industry and other models for regional economic analysis, and the possible data systems for them, are among other topics suitable for an extended program of research in industry economics.

3. As resources permit and the value of such data warrants, existing and newly developed programs of labor statistics should be extended to provide increasingly finer geographic detail.

III. PERSONAL INCOME ESTIMATION

1. Increased effort and resources should be devoted to the estimation of personal income by counties. These income estimates should be developed on a continuing basis, with current revisions and estimates, particularly with the longrun view toward generating comparable county time series data.

2. Further research should be instituted into the sources of available data, into the improvement of these sources and into the possibilities of utilizing different types of data than are currently used in income estimation.

3. A close coordination should be effected between the county personal income estimation program and the proposed development of sets of regional accounts by the Pennsylvania State Planning Board.

4. Further study should be given to the difficult commutation problem and alternative methods of obtaining income estimates on a "where received" and "where earned" basis should be investigated. The utilization of occasional sample surveys is particularly appropriate in this connection.

5. Research on and testing of alternative methods of allocation of State components should be carried out with the aim of reflecting as accurately as possible the county distribution of personal income. Further research, including experimentation with regression methods and other statistical techniques, should be undertaken.

STATEMENT OF W. E. HAMILTON, DIRECTOR OF RESEARCH, AMERICAN
FARM BUREAU FEDERATION, CHICAGO, ILL.

Our specific comments and suggestions are as follows:

1. *Administrative coordination.*—One of the major problems of statistical agencies arises out of the fact that users constantly ask for new data, but seldom recommend the elimination of obsolete series. A thorough review of existing agricultural statistics undoubtedly would uncover opportunities to make savings by eliminating reports of limited usefulness, as well as some real needs for additional data. On the other hand, there are many requests for statistics that probably have very little significance from a national standpoint.

Responsibility for agricultural statistics is divided between the Bureau of the Census of the Department of Commerce and the Department of Agriculture. In general, the two appear to have a good working relationship; however, the subcommittee might find it profitable to review the respective roles of these agencies in the production of agricultural statistics and the possibilities of achieving a more coordinated approach.

2. *Income comparisons.*—From our standpoint, the major problems in agricultural statistics are those that arise out of the diversity of agricultural operations and the difficulty of comparing the earnings of farm people with those in nonfarm groups.

A great deal of confusion has resulted from the publication of statistical averages which group farm operators with hired farm labor or full-time operators with individuals who are engaged in farming on an incidental, or part-time, basis.

The USDA's per capita estimates of the income of farm people from farm and nonfarm sources are a good example of this problem.

Since this series includes the residents of noncommercial farms with incidental sales of farm products (which may be as low as \$50 per year)—and farmworkers who live on farms, it is not representative of the income situation on commercial farms. Furthermore, nonresident operators are not considered a part of the farm population, and their income is excluded from the estimate of the personal income of the farm population.

It is estimated that the net farm income of nonresident farm operators was 10 percent of the total for all farm operators in 1961.

It would be a major improvement if separate per capita income estimates could be prepared for operator families on commercial farms, operator families on noncommercial farms, and farmworkers. If this is done, consideration should be given to the possibility of including the income of nonresident, as well as resident, farm operator families in the statistics for commercial farm operator families.

Another example of a confusing average is to be found in the Department's computations of the average gross hourly earnings of "all farm labor and management." In making these computations the Depart-

ment allocates a portion of farm income to capital by applying an assumed interest rate to the current market value of capital assets. While this procedure is defensible from a statistical standpoint, the resulting estimates of "per hour earnings" are a very inadequate indication of how farm operators are doing in comparison with factory workers, particularly in a period of rising land prices.

The importance of capital gains to farmowners raises serious questions as to the desirability of attempting to compute a national figure on hourly earnings of all farmworkers. As a minimum, separate estimates should be computed for farm operator families and hired farmworkers if this type of computation is to be continued.

3. *Census definitions and classifications.*—The Census Bureau has attempted to make its statistics more meaningful by changing the definition of a "farm" and by dividing farms into economic classes. While progress has been made, the problem of defining, and classifying "farms" should be thoroughly reviewed prior to the next census of agriculture.

The census currently defines a "farm" as a place with (1) gross annual farm product sales of \$250 or more, or (2) 10 acres and gross annual farm product sales of \$50 or more. As a result, something like 250,000 places with annual sales of less than \$250 were classed as "farms" in the 1959 Census of Agriculture. The use of dual criteria which provide special treatment for places of 10 acres or more is inconsistent and confusing. In view of the current trend toward larger and more productive farms, it certainly is not unreasonable to require that a place have annual sales of at least \$250 in order to be counted as a farm. A strong case could be made for a much higher minimum sales requirement.

The Census Bureau divides all farms into two major classifications: (1) commercial and (2) noncommercial. These terms are arbitrary and misleading. In one sense the regular production of any product for sale is a "commercial" operation, regardless of the volume of such sales.

Since the objective of the present breakdown apparently is to distinguish between farms that are operated primarily to produce products for sale and those that are primarily subsistence farms or residential units with small incidental production of farm products, we believe that "commercial scale" and "low production" are more descriptive terms and more realistic than "commercial" and "noncommercial."

Aside from the question of terminology, there is a need to improve the classification of farms. At present farms with gross annual sales of \$2,500 or more are classified as "commercial farms." Farms with sales of less than \$2,500 are also classed as commercial farms if the operator was under 65 years of age, worked off the farm less than 100 days and had farm sales greater than other family income. In our opinion it is inappropriate and undesirable to divide farms with gross sales of less than \$2,500 between the "commercial" and "noncommercial" classes.

As a minimum, all farms with sales of \$2,500 or less should be classed as "noncommercial farms" if present terminology is retained; however, the dividing line between what we have referred to as "low-production" and "commercial-scale" farms probably should be annual sales of \$5,000 or perhaps \$10,000.

4. *The need for annual estimates by economic class of farm.*—While progress has been made in the classification of farms in census reports, the classification principle has not been extended to the USDA's annual estimates of farm operator income. This is, at least in part, a reflection of the fact that the data necessary to make income estimates by economic class of farm are not collected in noncensus years.

If the cost is not too great, we should attempt to develop annual estimates of farm income by economic class of farm.

5. *Census use of sampling procedures.*—A recurring problem is the extent to which the Census Bureau should use sampling procedures in the census of agriculture. There is a strong demand for complete enumeration of a great many items. For the most part this demand comes from groups that desire small area data—often for commercial purposes.

In many cases a sample enumeration would produce data that are adequate for public purposes. Greater use of sampling would reduce both the number of questions that must be answered by the individual farmer and the cost of taking the census. We believe that it would be well for the subcommittee to look into this issue.

6. *Retail meat prices.*—There is a widespread feeling that the retail meat prices published by the Bureau of Labor Statistics do not adequately reflect the effect of weekend specials on the average prices actually paid by consumers.

STATEMENT OF R. A. HARDING, MANAGER OF CORPORATE PLANNING,
CAMPBELL SOUP CO., CAMDEN, N.J.

We appreciate the opportunity to participate in your review of the statistical requirements of our growing economy. The statistical reports of our Government are far superior to those of any other country, and are of infinite value to our business community. The review and improvement of these statistics is necessary to keep them in line with our future needs.

We feel there are many areas in which the present Federal Government statistical programs could be improved. Increased quantity of data in the following areas are greatly needed to allow our population to understand the problems and potentials of the future.

(a) *Balance of payments.*—The attainment and maintenance of the proper balance-of-payment position requires close cooperation between business and Government. Therefore, balance-of-payment statistics must be clearly presented in a more understandable and timely basis in order to maximize our accomplishments.

(b) *Labor statistics.*—Data on unemployment would be more effective if it would be accompanied by a profile of the unemployed. Such a profile should include information on age, sex, color, educational attainment, number employed in household and hours of work desired.

(c) *Personal savings and national wealth.*—The data on these items could be expanded to enhance the analysis of consumer credit and spending.

(d) *Productivity.*—There is a great need for expanding the data to allow the determination of capital productivity and managerial productivity as well as labor productivity.

(e) *National economic accounts.*—The published breakdown of these accounts should be reviewed and updated to more closely represent the current importance of the faster growing elements.

We feel there should be a central clearing area for all statistics published by the various Government agencies. This would allow the users of these data to go to one source for the information rather than maintaining a file of numerous publications. This would also tend to make the information released consistent.

There is a definite need for making economic statistics more timely. Even if the data is released in preliminary form, it is certainly much more valuable than no information at all.

At the present time the 1957-59 period is the common base period for most indices. However, it is not the only base period used. If one base period were used for all indices, the data would be less confusing.

STATEMENT OF WALTER E. HOADLEY, VICE PRESIDENT, ARMSTRONG
CORK CO., LANCASTER, PA.

Thank you for your recent letters requesting my opinion and that of my associate, Dr. A. G. Matamoros, with regard to our Nation's present and future needs for economic statistics. As a member of the Advisory Committee on Statistical Policy to the U.S. Office of Statistical Standards, I share with you the view that, in recent years, improved and expanded statistical programs have contributed to economic growth and stability by constructively influencing public and private policies. Accordingly, we are pleased to share our thoughts with you for whatever value they may have.

Among the greatest statistical gaps which today plague policy formulators are (1) employment and unemployment; (2) the giant, but fragmented, construction industry; and (3) the U.S. balance of payments.

Carefully collected data are required to measure the demand side of the labor market equation. The evidence is overwhelming that, against the background of an unsatisfactory unemployment rate, American business is suffering severe shortages of certain skilled technical workers, and many others are seeking competent employees. The further development of job vacancy data would have the obvious merit of providing guidance for public and private training and retraining programs as well as wage levels.

Despite a lot of hard work on the part of a dedicated group of Government technicians, data on construction activity are still quantitatively and qualitatively highly inadequate for the needs of policy-makers. Monthly housing starts statistics, for example, continue to show so much volatility as to make them substantially unusable for decisionmaking. Moreover, the elimination from consideration of a mid-decade housing inventory indicates that critically important changes in the housing stock since the last census in 1960 will not be known until well after the 1970 census is taken. Meanwhile, public and private programs are being developed and pursued to meet vague housing needs with major hazards to the Nation and the building industry. To complicate the housing quality evaluation process still further, the vast repair and modernization market is virtually unmeasured, especially since the U.S. Bureau of the Census has suspended its "Survey of Residential Additions, Alterations, Maintenance and Repairs, and Replacements." With the rebuilding of the core of American cities the greatest single economic potential for improvement in national growth, employment, and public welfare for the next generation, it is tragic that better housing data are not being aggressively pursued.

Other building and related series where considerable improvement is needed include those which purport to measure total construction put in place, housing vacancies, and construction costs.

As a member of the White House Review Committee for Balance of Payments Statistics, I want to emphasize the important data deficiencies spelled out in our report which will be released in a few weeks. Public policy in this critical area cannot be pursued properly without much more attention to, and action to solve, underlying statistical problems.

None of the foregoing suggestions is new, but then the problem of improving the accuracy of currently available economic statistics and broadening statistical coverage is not new either. There is a never-ending goal to strengthen the basis for sound policy decisions. You and your associates are to be commended for your interest and concern. Thank you very much.

STATEMENT OF VIRGINIA T. HOLRAN, DIRECTOR, DIVISION OF STATISTICS
AND RESEARCH, INSTITUTE OF LIFE INSURANCE, NEW YORK, N. Y.

The Institute of Life Insurance is an organization of legal reserve life insurance companies serving the public as a central source of information about life insurance. Its objectives are two:

To make available basic information about the business, its operations, and its services in order to broaden the public's understanding of life insurance.

To translate public attitudes about life insurance back to the business so that companies and agents can render better and more effective services.

Because the institute carries on a continuing program of its own to collect, tabulate, and analyze life insurance statistics as well as to carry out or sponsor research on life insurance and related topics, it is in the position of being both a provider of life insurance statistics to Federal agencies and a user of statistics produced by them.

It seems appropriate, therefore, to consider the relationship of the institute's statistical activities and the Federal statistical programs in both these lights.

The data supplied by the institute to the Federal Government, excluding the reports required by the Government for income tax or social security purposes from the institute as a nonprofit organization and an employer, are as follows:

Life insurance company assets and investments (used by Department of Commerce, Securities and Exchange Commission, Federal Reserve System, Federal National Mortgage Association, Home Loan Bank Board).

Insured pension plans (used by Social Security Administration, Securities and Exchange Commission).

Farm mortgage holdings of life insurance companies (used by the Department of Agriculture).

Accumulated long-term savings in life insurance (used by Federal National Mortgage Association, Home Loan Bank Board, Federal Reserve System).

Life insurance data required in computing the national income accounts (used by National Income Division of Department of Commerce).

Miscellaneous life insurance statistics taken from the Life Insurance Fact Book and other publications (used by Department of Commerce; Agriculture; Health, Education, and Welfare; Treasury; and Labor; and by various commissions and agencies).

In all these areas, there has been built up a relationship that we believe helps eliminate duplication of effort and may result in a reduction of statistical requests from the Government to the separate

life insurance companies. Our recommendations with regard to these activities are:

1. That this two-way cooperation be continued and strengthened with the aim of more effective use of both business and Government manpower where our statistical needs coincide.

2. That the Federal agencies consider the possibility of eliminating certain questionnaires to insurance companies if similar to ones already being processed within the industry.

3. That when Federal agencies contemplate compiling new statistics on life insurance they be encouraged to consult first with the appropriate life insurance organizations to determine if such data are already available or if they can be acquired through the industry organizations themselves.

Federal Government statistics that are used by the institute are the following:

Periodic censuses: Census of Population; Census of Housing; Census of Agriculture; Census of Manufactures; Census of Governments.

Department of Commerce data on GNP, personal income, corporate profits, private domestic investment, housing, expenditures for new plant and equipment, exports and imports, balance of payments.

Department of Labor data on employment, unemployment and wages, consumer and wholesale prices.

Federal Reserve System data on industrial production, money supply, savings, credit, interest rates, capital markets.

Treasury Department data on statistics of income, Federal finances.

Department of Health, Education, and Welfare data on vital statistics, health, education, social security.

Housing and Home Finance Agency data on mortgages, FHA and VA housing, urban renewal, community facilities.

Federal Home Loan Bank System data on housing, mortgages, interest rates.

The results of special consumer surveys such as the Social Security Administration's 1963 Survey of the Aged, the Federal Reserve Board's 1963 Survey of Financial Characteristics of Consumers and the Bureau of Labor Statistics' 1960-61 Survey of Consumer Expenditures.

Our recommendations with regard to these fundamental statistics are:

1. That the importance of timeliness be continually kept in mind and that further efforts to shorten the time between collection and publication of data be made. This is especially true in the case of the Treasury Department's Statistics of Income.

2. That when the Federal Government publishes statistics on life insurance the concept or coverage be clearly defined. If the data differ from other similar statistics available to users, sufficient explanation should be given to avoid confusion. An example of this need arises in the material published from the Welfare and Pension Plans Disclosure Act reports. These data refer only to certain portions of the pension business and are easily misinterpreted as covering more than they do.

3. That in the case of consumer surveys covering life insurance topics, more consideration be given to the details and explanation of the insurance data requested and tabulated. We are particularly interested in all surveys of the consumer type wherein life insurance plays a part, but the lack of detail or the combining of items sometimes make the data less valuable than they otherwise would be.

As might be expected, the institute makes constant use of many of the statistics provided through the Federal Government's statistical programs. It goes without saying that these programs form the basic and vital core of data so essential to operating, planning, and studying our national as well as individual business and family economies.

Since life insurance is an important element in the overall patterns of consumption expenditures, savings, investments, and net worth, studies dealing with any of these topics can produce information valuable both to the life insurance business and to the Nation.

STATEMENT OF HENDRIK S. HOUTHAKKER, PROFESSOR OF ECONOMICS,
HARVARD UNIVERSITY, CAMBRIDGE, MASS.

I have no doubt that other economists whom you have approached will point out existing gaps in the statistical system of the United States, and I will therefore not try to do so. In my opinion the overall system is now in very good shape, thanks in part to the efforts of your subcommittee. Recently your committee has made important studies of neglected areas, such as the measurement of national wealth, and I fully endorse your efforts in this direction.

What I should like to stress instead is the necessity for increased coordination and integration of various statistical activities of the Federal Government, including the regulatory commissions. There is some merit in duplication, especially in the early stages of statistical work when the basic concepts and methods remain to be worked out. Duplication may then lead to the more rapid discovery of suitable procedures; after a point, however, such duplication becomes a waste of resources both to the producer and to the user of statistics. In my opinion this point has been reached in certain important parts of economic statistics, especially in the national accounts and related financial analyses.

There are now three major resources of national accounting and financial data: the Department of Commerce, the Securities and Exchange Commission, and the Federal Reserve Board [flow of funds]. Coordination between these three sources still leaves much to be desired. In particular, the savings data produced by the Commerce Department and by the Securities and Exchange Commission are often at variance with each other. When in 1958, a wholesale revision of the Commerce Department data was undertaken, an effort was made to make them consistent with the SEC savings data, but since then new discrepancies have developed. To some extent such discrepancies are inherent in the different approaches followed by the agencies in question, but it should be possible to develop systematic procedures in which the different sources used by the two agencies are taken into account simultaneously. The Federal Reserve Board starts out from the Commerce Department data on savings, but proceeds to make various adjustments which are of considerable interest in themselves. For instance, it is very useful to have estimates of the depreciation of consumer durables even though such estimates are inherently difficult.

The goal in this area should be a completely unified system of macro-economic statistics, which would greatly increase the usefulness of the existing data sources. In this connection it should also be mentioned that the U.S. national accounts frequently diverge from the conceptual systems set up by the United Nations and by OECD. If the national accounts are reorganized, it would be highly desirable to keep those international systems firmly in mind. The international comparison of economic statistics, and especially of national accounts data, has

turned out to be a very useful type of economic analysis; it is now impeded by unnecessary differences in definitions.

Another area in which greater coordination is necessary is the statistics of Government expenditures and revenues. On the expenditure side, two things are especially necessary: (a) a clear distinction into current and capital expenditures, so that it will become possible to determine Government investment and saving and (b) a further development of the program concept, which will permit a better evaluation of the efficiency of various Government activities. As an example of the latter type, I may mention the Federal farm programs. The U.S. Department of Agriculture spends large amounts on statistical work of various sorts, but little or nothing has been done that permits an evaluation of farm programs in terms of farm income, consumer expenditures, changes in Government assets and taxation.

On the revenue side of the Federal budget, it is desirable to make a distinction of tax collections according to the period when the tax liability was incurred. Such a distinction is made in internal data of the Treasury Department, but it has not been published. As a result, it is very difficult to relate the movement of tax collections to the underlying movements of individual income, corporate profits, the consumption of commodities subject to excise tax and similar factors. One effect of a classification of revenues by liability period would be to give a clearer picture of the Government as a debtor or creditor of the provided economy. Much of the current confusion about over-withholding could have been avoided if data of this kind had been available for analysis in the past.

A further aspect of revenue data has to do with Statistics of Income, published by the Internal Revenue Service. This is not the place to go into the various problems connected with this important publication, but it should be mentioned that the income data from this source are conceptually different from the national accounts data. Since these differences are conceptually minor it would be perfectly possible to relate the data obtained from its returns to the published data in the national accounts. Such a reconciliation would greatly increase the usefulness of income data from tax returns and provide a check on the national accounts data.

Finally, I want to mention one other area in which more coordination appears to be indicated, namely, in consumer expenditures. The U.S. Bureau of Labor Statistics organizes periodic surveys of households, which produce a great deal of information on income and expenditure, but which are hard to bring in line with the data from the national accounts. In view of the large cost of the surveys, it would be desirable to design them in such a way that they will reinforce the Commerce Department time series on consumers' expenditures, now largely derived from other sources.

STATEMENT OF A. J. JAFFE, DIRECTOR OF MANPOWER AND POPULATION PROGRAM, BUREAU OF APPLIED SOCIAL RESEARCH, COLUMBIA UNIVERSITY, NEW YORK, N.Y.

1. All manner of information is needed for small areas, i.e., counties and cities, especially for the years between decennial population censuses. At present it is impossible to obtain reliable statistics about economic and social conditions in these areas. Depressed areas can be ascertained only with extreme difficulty, and then only the approximate economic level can be estimated.

In some measure these data for small areas are already in existence, but unobtainable for all practical purposes. For example, if one wishes to determine the amounts of money paid to farmers in specific counties under the various agricultural programs, this cannot be done except with enormous difficulty. The Department of Agriculture knows and publishes the amounts paid out in each State, but only the State people know where the money goes within the State. Another example is that of the Federal income tax. Since all taxpayers must give their home address, tabulations by county of residence can be made. As far as I know, such tabulations are not made.

There are many other items of information theoretically available. The problem is to make them actually available. I suggest, then, as a first step, that some Government office review as many sources of data as possible and try to assemble them in one library, so to speak. Some items can be assembled by writing to State and county personnel. Other items can be obtained by tabulating statistics already available in Federal files. Some may have to be purchased from private sources, as Dodge's construction data by counties. I have no idea about how large such a library job might be. But it should be undertaken. Any agency or individual in need of such data could then, presumably, buy photostat copies from the library.

2. One part of this small area problem is the metropolitan area which crosses State and county lines. The New York metropolitan area, for example, includes some 20 counties in the States of New York, New Jersey, and Connecticut. The only labor force and other economic items available for the entire area are those provided by the decennial censuses. For intercensal periods statistics can be had only for parts of each metropolitan area. For example, we cannot compare the growth of manufacturing employment since 1960 in Manhattan and Bergen County, N.J.; if the statistics are available someone is carefully secreting them.

3. Employment, hours, and earnings statistics for nonmanufacturing industries are badly needed. At present the Department of Labor provides a fair amount of such statistics for detailed manufacturing industries, monthly. For the nonmanufacturing sector, however, where the large majority of all employees earn their living, there is comparatively little detailed information. In the Department of

Labor publication, *Employment and Earnings Statistics for the United States, 1909 to 1962*, there are at least 50 percent more entries of detailed manufacturing industries than of nonmanufacturing. Yet in 1962 manufacturing industries accounted for only 30 percent of all employees. In justice to the Department of Labor I should emphasize that they have made considerable progress in the last several years in expanding their series, but far more expansion is needed.

4. A large expansion in the current population survey (now being conducted monthly by the Bureau of the Census) is needed. At present 35,000 households are interviewed each month. At least once a year—perhaps in April—the sample should be expanded to provide as a minimum, data for States on employment, unemployment, hours worked, class of worker, occupations, and related labor force aspects. Possibly the sample should be increased tenfold; I do not know but the Census statisticians do know. In addition, on the fifth year (halfway between the decennial censuses) we should have an adequate sample population census which would provide labor force statistics for States, standard metropolitan areas, and the larger counties. Perhaps this can be accomplished with a 5-percent sample.

5. Statistics and other information on technological change, and the rates of change in output per worker, are badly needed. The United States may now have more information on this topic than has any other country. Nevertheless, we have so little that we do not know what is transpiring now, let alone be able to evaluate developments so as to plan for the future.

STATEMENT OF GEORGE KATONA, SURVEY RESEARCH CENTER, INSTITUTE
FOR SOCIAL RESEARCH, UNIVERSITY OF MICHIGAN, ANN ARBOR,
MICH.

This memorandum deals exclusively with economic statistics obtained through sample interview surveys. Sample survey data represent a relatively small part of available economic statistics, but are of special importance because they alone provide information on the size distribution of major aggregate statistics (e.g., of personal income, asset holdings, debts, etc.) and they alone serve the purpose of relating economic-financial data to demographic and attitudinal data (e.g., to age and education, or to motives and expectations).

A question of some importance regarding survey statistics is expressed by the query, Who should conduct the surveys? Even though a very large part of survey statistics is financed by funds of various Federal bureaus, it does not follow that a Federal survey agency (e.g., Bureau of the Census, Bureau of Labor statistics, must collect all the data. In the past, non-Federal organizations, partly on contract with Federal bureaus, carried out much of the pioneering and experimental work required during periods of social change and specialized in data collection in a variety of fields. The expression "non-Federal organizations" is used in this memorandum rather than the expression "private organizations" because survey organizations of nonprofit State universities are included among the non-Federal organizations. During the last few years the Census Bureau has expanded its operations in a number of areas; the question must be raised whether a further expansion is warranted and would serve to improve the Federal statistical programs.

A division of labor between U.S. Federal survey agencies and other survey organizations may be justified along two different lines. The first one is based on the size of the operations of Census Bureau and the size of the samples used by it and the second on areas of specialization by different agencies.

These considerations suggest that the primary responsibility of Federal survey agencies should include continuous data collection of a routine nature, especially of the kind in which large samples are needed for the sake of providing State and city data, as well as the continuation of established major survey programs. Time series obtained through standardized procedures, as well as concern with sampling errors and the completeness of enumeration, characterize these operations, even though concern with improvements in the programs should never be absent.

On the other hand, non-Federal survey organizations should concentrate primarily on innovations and explorations of new areas of research and of new methods, and should be encouraged to continue with those of their programs for which they are uniquely suited (and in which interviewing by non-Federal employees offers advantages).

Readiness to use a variety of approaches, concern with reporting errors, open-ended interviewing methods, and a specially trained interviewing staff characterize many of these operations.

It follows from these principles that, among other areas, those involving data collection on the labor force (employment-unemployment), prices, and incomes belong in the province of Federal survey agencies. Without attempting to list all areas in which operations by Federal survey agencies are required or provide advantages, this memorandum concentrates on discussing certain fields in which non-federal survey organizations have had extensive experience. Since no researcher and no research group can be fully familiar with all aspects of economic statistics, the following discussion is limited to some aspects of the experience of the Survey Research Center of the University of Michigan, a nonprofit institution which forms part of a State University.

1. *Financial assets and amounts saved.*—Data shedding light on the important questions of the distribution of financial assets or debts and amounts saved, as well as on changes in these distributions and the concentration rates, can be obtained only through the survey method. This area of investigation is fraught with very great methodological problems because of the prevalence of reporting errors and memory errors. Surveys concerned with the distribution of assets (of checking and savings accounts, bonds, personal holdings of common stocks, as well as mortgage and installment debt) have been conducted by the Survey Research Center for approximately 20 years. (The Census Bureau entered this field during the last few years.) Methodological studies conducted by the Inter-University Committee for Research on Consumer Behavior (partly with the cooperation of the Survey Research Center) have provided some insights into the factors responsible for reporting errors and the methods needed to improve the available data. Further progress in the methods used appears feasible and is most desirable. It requires special interviewing techniques and the cooperation of financial institutions.

The study of the distribution of asset holdings and of amounts saved is closely linked with the study of motives to save, attitudes toward various forms of savings, attitudes toward security and retirement (including the impact of social security and private pension plans on savings), and attitudes toward liquidity. There are great advantages in obtaining savings data in conjunction with data on motives for saving and attitudes toward saving, and different methods need to be used in studying the saving practices of the general public and the investment policies of the "wealthy."

2. *Consumer motives, attitudes, expectations, and intentions to buy.*—Information from consumer surveys serves not only the function of providing data on the past or current situation (e.g., on the relation of amounts held in savings accounts to income), but also yields data that project into the future and data that help to answer the crucial question of why the Survey Research Center pioneered approximately 20 years ago by inserting questions on buying plans as well as questions on income expectations and the general economic outlook into consumer surveys. Extensive research proved the usefulness of these studies. Similarly, in the last two decades the Center attempted to

clarify, through indirect questions on consumers' motives and attitudes, the factors that induce consumers to either step up certain activities or to postpone them (especially purchases of automobiles, household appliances, and additions to and repairs of homes. Over the last few years the Census Bureau has conducted large-scale surveys on buying plans, but has hardly touched on the other related areas mentioned in this paragraph.

Intense efforts in this field are needed and promise additional contributions to forecasting. Information on changes of consumer sentiment and on the factors responsible for those changes are of increasing usefulness to the Federal Government and the business community, primarily for fiscal and monetary policy as well as for marketing efforts.

3. *Leisure time and travel expenditures.*—While the first extensive consumer surveys had concentrated on expenditures on food, clothing, and other everyday expenditures, and the second set of consumer surveys have been directed toward expenditures on housing, automobiles, and other durable goods, as well as savings; with growing affluence, other discretionary expenditures became increasingly important to the American public. What is done in leisure time—in the evenings, on weekends, and during vacations—requires today substantial parts of consumer budgets, is greatly cherished, and is highly discretionary (lumpy and postponable). Survey research on travel, vacations, recreation, the purchase of hobby and sports equipment, as well as on “cultural” activities (including education) needs to be expanded and should include research on the factors contributing to an increase or decrease of such expenditures. The most extensive past efforts in this area on the part of the Survey Research Center have concerned travel and vacation expenditures as well as preferences among different modes of travel.

4. *Special studies occasioned by new developments.*—New developments on the economic scene frequently create the need for statistical data which provide information on the impact of these developments on the behavior of businessmen and consumers. Collection of such data may be a one-time operation, but may also consist of repeated studies. A few examples may clarify the need for such special studies. After the enactment of a substantial cut in income taxes in February 1964, the need and the opportunity arose to study the impact of the increase in disposable income on consumer spending and saving—not just in the aggregate, but on the timing of the behavior of different groups of people. Following substantial changes in interest rates, or large upward or downward movements in the stock market, there was a need to collect data on consumer behavior (spending, saving, borrowing, etc.). In view of the recent rapid spread of private pension plans, information on the impact of improved retirement prospects on individual saving was required. The influence of automation, of numerous aspects of poverty as well as the antipoverty program, may also be cited in this connection. Undoubtedly, similar opportunities in which new and complex survey data will be needed will arise in the future as well.

The areas of research described in this memorandum offer great challenges to the researcher. When the task of data collection in such areas is added to established, routine inquiries, no justice is done to

the complexity of the problems. Flexibility of methods (sampling and interviewing techniques) and ingenuity in the construction of hypotheses and in the analyses are required for such studies. Rather than setting up definite standards of data collection, innovations and exploration must be carried out along diverse avenues on the part of several research groups and survey organizations. Collaboration of Federal bureaus with non-Federal organizations is needed to make progress in these areas, and perhaps even competition among different survey agencies.

BIBLIOGRAPHY ON THE STATISTICAL PROGRAMS OF THE SURVEY RESEARCH CENTER

- George Katona. "The Mass Consumption Society." New York, McGraw-Hill, 1964.
- George Katona. "Psychological Analysis of Economic Behavior." New York, McGraw-Hill, 1951.
- George Katona. "Private Pension Plans and Individual Saving." To be published by the Survey Research Center in 1965.
- George Katona and John B. Lansing. "The Wealth of the Wealthy," Review of Economics and Statistics, XLVI, February 1964, 1-13.
- John B. Lansing and Wright M. Blood. "The Changing Travel Market." Ann Arbor, Mich., Survey Research Center, 1964.
- James N. Morgan, Martin H. David, Wilbur J. Cohen, and Harvey E. Brazer. "Income and Welfare in the United States." New York, McGraw-Hill, 1962.
- James Morgan. "Repeated Surveys of Consumer Finances in the United States." In Family Living Studies. Geneva, International Labour Office, 1961.
- James N. Morgan, Robin Barlow, and Harvey E. Brazer. "A Survey of Investment Management and Working Behavior Among High-Income Individuals." To appear in American Economic Review, Proceedings, 1965.
- Eva Mueller and Gerald Gurin. "Participation in Outdoor Recreation: Factors Affecting Demand Among American Adults." Report to the Outdoor Recreation Resources Review Commission. Washington, D.C.: U.S. Government Printing Office, 1962.
- Eva Mueller. "Ten Years of Consumer Attitude Surveys: Their Forecasting Record." Journal of the American Statistical Association, 58, December 1963, 899-917.
- Eva Mueller and Harlow Osborn. "Consumer Time and Savings Balances: Their Role in Family Liquidity and in Monetary Policy." To appear in American Economic Review, Proceedings, 1965.
- "Survey of Consumer Finances." Monographs published by the Survey Research Center in 1960, 1961, 1962, 1963, and 1964.
- "Consumer Behavior of Individual Families Over 2 and 3 Years." A monograph published by the Survey Research Center, 1964 (edited by R. F. Kosobud and J. N. Morgan).

STATEMENT OF JOSEPH D. KEENAN, INTERNATIONAL SECRETARY, INTERNATIONAL BROTHERHOOD, OF ELECTRICAL WORKERS, WASHINGTON, D.C.

Our union is a member of the Federal Statistics Users Conference and as such we are kept informed about revised and proposed statistical material. In addition, we are members of the Labor Research Advisory Council of the Department of Labor. This gives us an opportunity to learn about changes in the BLS programs and to date we have been fairly well satisfied with what they have offered.

We do feel that there is a great need for construction statistics. Although we appreciate those that the Bureau of the Census offers, they are totally inadequate for the needs of the construction industry. The building trades unions, through the Construction Industry Joint Conference, have made this point very clear to both the Commerce and Labor Departments. We need more thorough basic construction statistics by type of construction and dollar value of each type, better employment data (at this time there is no accurate estimate of the number of electricians employed and/or unemployed), and a breakdown of construction statistics by area (preferably major cities). Also needed is a good indicator of productivity and finally we would desire that work begin on a comprehensive census of construction.

Regarding the statistical program of the BLS, we feel there is a lack of opportunity for unions to have vital programs put into operation. We feel there is a great waste of time and money publishing data on foreign countries, on industries with little or no impact on the economy, and detailed business cycle data. While the above is undoubtedly valuable to some, we have practically no use for them.

We do use occupational counseling material, employment data, consumer price data, productivity figures, occupational and major industry surveys and wage chronologies. We would like improvements in unemployment statistics (by occupation if possible). We also would appreciate additional statistics on the impact of automation, in particular individual industry studies.

Perhaps the best program and the one we use the most, is the Labor Department's program on collective bargaining clauses and fringe benefit studies. Both of these have immediate and direct benefits to the unions and are constantly used by us and our locals.

It is difficult for us to be fully cognizant of the deficiencies and liabilities in any statistical program as broad as the Government's, or to use all of the material available since it does not contribute itself to the aims of a labor union. For these reasons, we can only express general approval or disapproval of the programs in the Government. We do, however, appreciate this opportunity to comment on these programs and wish that the unions could receive more pertinent and more usable information in the future.

STATEMENT OF LESTER S. KELLOGG, DIRECTOR OF ECONOMIC RESEARCH,
DEERE & Co., MOLINE, ILL.

The work of the staff of the joint committee in initiating the "gaps" study in 1948, and indirectly in its many reports, has, I am sure, greatly stimulated improvements in the range and quality of our statistics.

To the extent that gaps listed in the 1948 study have not been closed and recommendations of the intensive review committee to the Secretary of Commerce in its "Appraisal of Census Programs" in February 1954 have not been carried out, there exists a current backlog of work to be considered. In connection with the latter, it is important that work in connection with restructuring the standard industrial classification and the related commodity classification be pushed ahead at full speed. The recently published input-output tables based on 1958 data are essentially meaningless for some industries because of the classification of information on the current inadequate standard industrial classification and, incidentally, on their delay. That I think this problem is important is indicated by the following quotation from a speech I made recently at the University of Illinois:

Capital expenditures by productive agriculturists in the future will increasingly be made for equipment produced by manufacturers who have not heretofore and are not currently classified as manufacturers of farm machinery and equipment. Components of equipment used on farms will come from the electronics and computer industries, from materials-handling, equipment-producing manufacturers, and from industrial suppliers of such conditioning equipment as humidifying, dehumidifying, cooling, etc. To the extent that these trends develop, it is clear that we will have more difficulty than ever in obtaining well-defined records of capital expenditures related to agricultural production. Agricultural product-producers' records may be helpful, but they will record such diversity as to be very difficult to consolidate.

For many years most of my work has been in the general area of prices and agricultural statistics.

Our country's price statistics are deficient in a number of ways and provided in too much detail in some cases. The Consumer Price Index, for instance, has recently been revised along lines as recommended by a special committee established to review Government price indexes. It is inadequate, however, as a retail price index, which would be helpful for policy purposes, and is probably not necessary for as many cities for which it is published. Ten to twenty years from now separate city indexes will probably not be necessary; some regional indexes may be helpful.

The index of prices paid by farmers for cost-of-living items has probably outlived its usefulness and could be supplanted by regional consumer price indexes. Indexes of prices of imports and of exports not now available will be helpful in the years ahead.

A great many statistics, including those collected and disseminated by the Bureau of the Census and the Department of Agriculture should be examined and modified in the light of future needs rather than maintained so strongly in the context of the criteria of historical con-

sistency. A parity index, for instance, based on 1910-14 is anachronistic. A definition of farms as "commercial" which sell as little as \$50 worth of products is scarcely a useful definition in the modern world, especially when census publications provide no breakdowns in the economic classification of farms selling products with a value of \$40,000 or more.

Farm incomes, as measured by the Department of Agriculture and the Bureau of Internal Revenue, vary because of differences in the purposes of the data collection. A study of the differences might result in better guides to future policy or administrative decisions.

Many Government statistical reports that summarize activity in industry or product groups are published so late that the reports have little value, even though businesses bear the burdensome costs of reporting. These kinds of observations and suggestions can be extended almost endlessly. Your committee might get its greatest assistance, however, from extending the context of your current review by asking your staff to describe in broad-brush strokes what our economy will be like by 1985, and then asking representatives of various professions to present papers discussing such questions as: "What kinds of policy problems and administrative needs will we then face for which foundation statistical data should be laid now? What kinds of data are we now collecting or presenting that can and should be greatly modified or even discontinued?"

STATEMENT OF STEPHEN G. KNIGHT, DIRECTOR OF SALES COORDINATION,
JOHNSON & JOHNSON, NEW BRUNSWICK, N.J.

First, and obviously, there has been tremendous improvement in the quality and quantity of data for Federal statistical programs available today as compared with 10 years ago. Also, the amount of cooperation volunteered by Federal agencies has increased noticeably in the recent past.

Second, we feel that there might be some improvement made in a couple of areas:

1. Statistics in the health, education, welfare areas, particularly with regard to health statistics.

2. An acceleration of the retail census which last was taken in 1963 and which should be made available shortly.

Finally, we wonder about the duplication of some series of statistics and along with this the difficulty in obtaining certain series because of the proliferation of agencies and bureaus. This leads us to wonder whether there could be some centralization of the development of Federal statistics as well as their availability. Could we, for example, communicate with a central office of statistics which could interpret our requirements and direct us to the necessary data?

STATEMENT OF ARTHUR KOPONEN, DIRECTOR OF MARKET RESEARCH,
COLGATE-PALMOLIVE Co., NEW YORK, N.Y.

The active interest you are demonstrating as chairman of the Economic Statistics Subcommittee is very much appreciated. The statistical needs both of Government and industry can only be met with the kind of active support you and your committee members are providing.

My primary recommendation to your committee is to urge the support of more frequent use of sample surveys in the collection of information. A full census is not always necessary and in fact can be wasteful in the sense that virtually the same statistical estimates and much more information can be gained for far less cost through sample surveys.

The \$50 million cost of mid-decade census providing a direct count of household units is not as efficient as sample surveys would be in providing not only the head count but a great deal more of vital household geographic and metropolitan area detail on an annual trend basis.

The practice of sampling, based upon the science of probability statistics, has been developed to such a degree that there should be little quibbling about the practical accuracy, within definable error margins, of surveys. The sampling experts employed by the Federal Government have played a significant role in these developments and would, I am sure, testify to their validity. Also the use of surveys by the Federal Government such as the employment surveys by the Bureau of Labor Statistics have demonstrated their value.

The informational needs of our Nation are so great that they cannot practically be met by a costly census for every detail of information. The advent of computers and the complex relationships which are being explored to solve problems of society and industry clearly indicate that these informational needs will grow even faster. These needs will have to be met for the country's welfare. The only overall practical way to meet the many and diverse needs is through the greater use of sample surveys.

In our industry the monthly report of Retail Sales, Grocery, and Drug Geographic Area Surveys are particularly valuable. We would like to add our support to the continued reporting of this information.

STATEMENT OF RICHARD H. KRUSE, INVESTORS DIVERSIFIED SERVICES,
INC., MINNEAPOLIS, MINN.

I am honored by your invitation to participate in the review of statistical requirements for the present and future needs of our economy. Speaking as a user of Federal statistics, I am continually impressed with the wealth of useful data available. I am, however, most concerned with demographic statistics so cannot offer much comment on other areas.

Looking to the future, I feel there is need for improvement in two specific areas. First, there is a need for more and better data on a county and metropolitan area basis. Second, I would like to suggest a population census every 5 years rather than the present 10-year span. I submit that, with a rapidly changing society, the useful life of census data has shortened to the point that more frequent censuses are needed.

STATEMENT OF WASSILY LEONTIEF, PROFESSOR OF ECONOMICS, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

The postwar revolution in economic programing and management techniques reinforced by unprecedented advances in data-processing technology has made the traditional approach to collection, organization, and dissemination of facts and figures describing the operation of the American economy and the social conditions of the public and private life of the 180 millions of American citizens completely obsolete.

Driven by enlightened self-interest, large private business organizations have taken drastic steps to modernize their internal information systems thus making possible effective practical application of modern scientific management techniques to all aspects of internal corporate planning, particularly production scheduling and inventory planning of the short-run kind.

In contrast from that the equally and possibly even more important business decisions requiring correct and comprehensive assessment of external factors such as development of new markets, introduction of new methods of production and of new goods and involving effective adaptation to new configurations of labor skills and shifting patterns of demand for various natural resources, are being reached now essentially in the same way as they were 30 years ago.

Modern analytical and data-processing procedures could be applied in the solution of these problems as effectively and profitably as they have been now applied to the solution of problems of internal management. The development of these potential possibilities is, however, being prevented by the lack of an up-to-date information and data system.

One cannot deny the obvious fact that the Federal statistics are gradually improving. This is unfortunately a slow piecemeal progress. At the present pace it will take 15 or 20 years to bring the statistical organization of this country in the shape in which we should and could have it 3 years from now.

The so-called systems approach which proved to be so successful in many other fields should be applied in this instance, too. What this country possesses now is not a statistical system but an ever-growing loosely structured heap of facts and figures. A minimal and occasionally even quite high level of internal interpretation and consistency has already been achieved in the organization of its separate blocs, such for example as the system of social accounts, the foreign trade statistics, financial and banking statistics, employment statistics and so on. These blocs do not make up, however, a systematics whole. Hence, for the purpose of practical applications requiring consistent sets of data much of the valuable information proves to be unusable. Moreover, many ingenious and determined attempts to widen the coverage and improve the quality of such separate sets of data turn out to be ineffective.

A radical modernization of Federal, State, and local statistics—based as I have suggested above on a well-articulated systems approach—should be aimed at—

Supplying to private business, Government, and, last but not least, to the community of scholars and researchers, a fully integrated picture of all the various aspects of the social and economic life and structure of the United States.

That picture should be fully integrated, comprehensive, and detailed. Experience of the recent years has conclusively demonstrated that summary, aggregative information has only a very limited usefulness as a basis for practical decisionmaking, particularly in the private business sphere.

In our age of rapid changes, obsolete information is for many practical purposes useless information. The output of the statistical system must be not only fully integrated and detailed, it must be up to date. The statistical agencies of the Federal Government have made undeniable progress in the application of modern data-gathering and data-processing techniques. The progress is, however, all too slow.

The time elapsing now between the actual occurrence of events described by the governmental statisticians and the release as publication of their reports is all too long. It can and should be cut by one-half across the board and in many instances it could be reduced by 60, 70, or even 80 percent.

The traditional separation of factual descriptions from interpretive analysis should be maintained. At the same time the analysis and interpretation of fact and figures collected by governmental statisticians should be encouraged not only outside but also inside of the Government, particularly in those areas in which a meaningful interpretation of the observed facts requires provisions of supplemental data of nonstatistical kind. A most immediate example of such a need is offered by the important area of technological innovation and structural change.

I am, of course, fully aware of the fact that any attempt to embark on a practical realization of the program of reform outlined above is bound to come up against strong, determined resistance of political, administrative, and intellectual kind, both inside the Government and from the outside. The situation is in this respect not unlike to that in which the present Secretary of Defense found himself when he was about to embark on the now successfully completed reorganization of our Defense Establishment. I believe, however, that the beneficial results of the proposed modernization of the Federal statistical system will turn out to be not less gratifying than the results of Mr. McNamara's reorganization of the Pentagon. Statistics is too important a field to be left entirely to the statisticians.

STATEMENT OF GORDON W. MCKINLEY, Vice President, MCGRAW-HILL, INC., NEW YORK, N.Y.

In point of urgency, I believe the most seriously needed improvement in Federal statistical programs is more adequate data on who are the "poor" in our society. The Federal Government has recognized the need for a large-scale effort to lessen poverty in the United States. Some programs are already underway and others are just beginning. The American people have become more acutely aware that there are segments of the population who have been and are being left behind in a generally prosperous society. Yet information regarding the characteristics of the poor is so pitifully inadequate that there is a real danger that the war on poverty may pass the poor by, or may fail to get at the reasons for the poverty.

An example of the need for more adequate and more scientific data in this field is the Council of Economic Advisers inability to produce a more meaningful definition of poverty than to classify as "poor" all those with a family income under \$3,000 or an individual income under \$1,500. Quite apart from being inaccurate and unscientific, this is the sort of definition of the problem least likely to lead to an intelligent solution. In the first place, the definition should obviously take account of variations in geographic and urban-nonurban costs of living, family size, age of members of the family, homeownership and other assets, and extent of income in kind. In the second place, even if allowances are made for these variations, the definition becomes meaningful in terms of a solution only when the characteristics of the poor are described. Are they poor because they are old, unemployed, nonwhite, sick or disabled, uneducated, deserted by the family head? Is their poverty of long standing? Is poverty continued in successive generations? Is poverty regional, urban, farm, or prevalent in particular occupations?

The less we know about the poor and the reasons for their poverty the more certain will it be that the war on poverty will waste money and effort and fail to really help the poor. The more data and information we have in this question the more effectively can we move to eliminate poverty. Surely this problem is real enough to warrant the expenditure of enough money on adequate information to guide us toward intelligent solutions.

In this connection, may I call your attention to a report entitled "The Concept of Poverty," recently published by the Task Force on Economic Growth and Opportunity of the U.S. Chamber of Commerce. This report includes research papers by scholars in universities and the Government discussing the meaning of poverty and the need for more adequate data and information to insure an effective and properly oriented antipoverty program.

STATEMENT OF HOWARD MANDEL, VICE PRESIDENT, NATIONAL
ASSOCIATION OF BROADCASTERS, NEW YORK, N.Y.

In reviewing this situation with members of our industry who are concerned with this area, there has been agreement on the need for several types of information not currently secured and disseminated by Government agencies:

1. There is a lack of sufficient detail on small geographic units. Particularly pressing is the need for more population information on a county-by-county basis, including data on education, age, sex, color, occupation, and income.

Additionally, it would be of great value to have such information for key economic indicators, such as building permits and bank debits. While some of these data can be obtained from local sources and Federal Reserve reports, it would be most helpful if these could be consolidated and related to the national figures.

2. There is a vital need by our industry for continuing and timely data on the ownership of radio and television sets. The National Association of Broadcasters and several other broadcasting industry groups are currently financing a special study by the Census Bureau to secure information on television set ownership, including UHF and color set data.

However, we feel that the industry could make excellent use of more current and more detailed data on the number and character of radio sets now in use, including information on ownership of AM, FM, and FM-stereo sets.

A special need here is for figures on radio and television set ownership for farm homes (with rural farm and rural nonfarm tabulated separately). This could be included in the census of agriculture.

STATEMENT OF RICHARD F. MESSING, ARTHUR D. LITTLE, INC.,
CAMBRIDGE, MASS.

I would like to place before you and your group some thoughts on this subject in light of our own requirements and those that we observe in the business community. Perhaps one of the most critical aspects in improving the quality of Government statistics lies in the area of timeliness. While I am aware of the problems in developing and collating statistics quickly, I feel that the Federal bureaus should continue to devote efforts to producing useful statistics more quickly after the time period to which they pertain. This is a general observation, but would apply particularly to the activities of the Bureau of the Census, Bureau of Mines, the U.S. Tariff Commission, and the other agencies of the Department of Commerce, including the Office of Business Economics.

The second point is the desirability of supplying information which can serve as a useful guide to the planning of business expansion. While we now receive a good deal of information relative to prices, employment, shipments, profitability, and the like, it seems to me that there is relatively little emphasis given to the question of the relationship between available plant capacity and demand, subdivided on a meaningful basis, whether that be geography, by product type, or whatever. Some of the inputs necessary to establish this relationship can be interpreted from figures on production, sales, and similar measures which are now reported, but I am wondering whether we cannot do a better job in relating these to available capacity, or derive other measures which would be useful in better programing business expansion.

Another issue which may be worth noting is the desirability of reviewing at periodic intervals the classifications in which statistical information is grouped, especially in import-export data. Many times the groupings are out of date in relation to current industry practice, whereas other important categories are eliminated.

STATEMENT OF ROBERT C. MILLER, PRESIDENT, TECHNO-ECONOMIC SERVICES, INC., FOR LESLIE SALT CO., SAN FRANCISCO, CALIF.

From my point of view, there are several areas where both the quantity and quality of data in present Federal statistical programs could be improved:

1. *Timeliness.*—The time lag in data from many Federal sources has been improved somewhat in recent years; however, we are still waiting for the release of 1963 census of manufactures data on specific industries such as chemicals and allied products. We need this information in connection with a survey of western chemical opportunities we have underway for a group of clients. The 1962 survey of manufactures data are available, but the latest complete census of manufactures available today presents 1958 data. As many of the regional data are not reported in the 1962 survey, we are forced to work with approximations derived from information 7 years old. Similarly, the recent input-output analysis presented in the November 1964 issue of the Survey of Current Business by the Department of Commerce is based on 1958 data. Put another way, we are nearly halfway through the decade of the 1960's and are forced to rely on data reported in the last half of the previous decade.

2. *Accuracy.*—Over the past 20 years we have encountered many inconsistencies and inaccuracies in Government statistics. Sometimes these apparent inaccuracies are the result of inadequate or improper definition of the industry or product. Continued efforts to improve industry definitions and to verify the accuracy of statistics are needed.

3. *More detail.*—Although national statistics on many industries and products are available, many gaps exist in the regional breakdown of these data. For example, although the Federal Reserve Bank of San Francisco publishes reports of weekly department store sales by metropolitan area or center including percentage changes from the corresponding period a year ago, no data are directly available on the consumption of sulphuric acid by major uses on a regional basis.

You will no doubt recall the statistical problem we encountered in a study of the western market for salt in the animal feeds, canning, and meatpacking industries we conducted for you in 1963. We found that the amount of salt Morton Salt Co. ships out of State from its Alameda refinery (an indeterminate amount) was included in Bureau of Mines data for California.

STATEMENT OF OSKAR MORGENSTERN, DEPARTMENT OF ECONOMICS,
PRINCETON UNIVERSITY, PRINCETON, N.J.

The following remarks are only a very general nature and touch problems without any possibility of detailed suggestions. However, we will suggest broad directions of further possible increases in the value and meaning of Government statistics.

1. ON DATA-COLLECTING AGENCIES OF THE U.S. GOVERNMENT

As things now stand, there exists a considerable amount of duplication of economic data collection by U.S. Government agencies, not accounting for duplications with private efforts in many fields.

Even a brief investigation shows that about 10 different U.S. Government agencies collect economic data. Many of their series overlap or are estimates of one and the same phenomenon. Some of this duplication may be valuable if it is intelligently used to improve the accuracy of the duplicated observations. Unfortunately, this seems seldom to be the case. Each of these agencies has by now established its own vitality, and a reorganization (aggregation) of economic data collecting would certainly encounter many obstacles. Nevertheless, this idea should be seriously considered.

To outline only two major fields where repeatedly duplicate work is done we may cite:

(a) Data collected on manufacturing by U.S. Government agencies:

1. The Bureau of the Census.
2. The Office of Business Economics.
3. The Federal Trade Commission.
4. The Agricultural Marketing Service.
5. The Internal Revenue Service.
6. The Security and Exchange Commission.
7. The Tariff Commission.

(b) Data on Labor Statistics collected by:

1. The Bureau of the Census.
2. The Bureau of Employment Security.
3. The Bureau of Labor Statistics.
4. The Agricultural Marketing Service.
5. The Business and Defense Service Administration.
6. The Interstate Commerce Commission.
7. The Women's Bureau.

ON THE DATA

(a) It is not possible to make a general statement concerning what data ought to be collected. In certain fields publications are overabundant in quantity if not in quality and reliability. Examples of the divergence between concept and observation are to be found in O. Morgenstern's book "On the Accuracy of Economic Observations."

Data on employment and unemployment statistics might be singled out. Recommendations to improve them go back at least to the 1955 report of your committee. There a strong interest in better and more reliable employment and unemployment statistics had been outlined. To quote, "It is imperative that these series be as sound as possible and that there be a maximum of confidence in their reliability." But the situation today is still unsatisfactory.

(b) In order that the data be most useful, a high degree of international comparability should be achieved. As far as possible U.S. agencies should cooperate in the implementation of international standards and adjust their work if such adjustment is possible.

A memorandum on "International Economic Statistics" was presented in 1957 for the Subcommittee on Economic Statistics by the Office of Statistical Standards of the Bureau of the Budget. But continuous changes in this field have taken place and after 8 years an up-to-date report would be desirable. Of some interest might be the work of the newly created Statistical Office of the European Economic Community in Brussels. International standard classifications are available; among others.¹

SITC (Standard International Trade Classification).

ISIC (International Standard Industrial Classification of All Economic Activities).

NICI (Nomenclature of Industries in the European Communities).

ISBIS (International Standards on Basic Industrial Statistics).

ISDTS (International Standard Definitions for Transport Statistics).

This does not mean that those classifications are always superior to or more suitable for the United States.

(c) Efforts should be made to establish reliable input-output tables for the United States. Such tables should be revised regularly and possibly in accordance with similar work done in other countries. Such tables would constitute a very useful basis of economic policy decisions. Input-output tables would provide information that goes beyond simple national accounts data, these tables being to a great extent more sophisticated. Again, emphasis should be put also on the international comparability of those tables. Very considerable difficulties rise in that respect and as example we may take the U.S.-EEC "comparability":

1. The "new" U.S. tables choose 1958 as their basis year while the current EEC input-output tables will have 1959 as their basis.

2. The U.S. sectors are defined by a mixture of commodity, establishment, and activity principles, whereas the EEC tables realized as far as possible the commodity principle in all six countries.

3. The U.S. tables will be classified approximately into 80 classes (a rather high number of classifications), while the EEC tables will only contain 36 classifications. Individual EEC countries will have classifications between 70 and 80 classes.

4. The treatment of subsidiary products differs widely.

¹ See also U.N. Statistical Papers, Series M, No. 11, "List of Statistical Series Collected by International Organizations."

The work done in the above-mentioned paper in 1957 on national accounts statistics could be extended in an analogous way to input-output tables. Such a study would certainly yield fruitful results and perspectives.

(d) General statements (classifications) on the accuracy of the data presented should be given in the statistics presented by U.S. Government agencies. This does not mean that each single number should be tested with regard to its degree of accuracy. It would suffice if at least the more important tables would state the degree of accuracy of the numbers given, e.g. ± 5 percent, ± 10 percent, or more. This should prevent to some extent misuses or misinterpretations of those official data by decision makers or newspaper writers. This might have a beneficial effect on the public press which advertises 0.1 percent and 0.2 percent monthly variations in employment or unemployment figures, changes which are completely insignificant and are likely to create nothing but unwarranted confusion and uncertainty.

As an example of analysis in this area one might cite the publication in 1956 by the Central Statistical Office of the United Kingdom on "National Income Statistics." This publication gave three ratings of those statistics with A ± 3 percent, B ± 10 percent, C \pm more percent—likely deviations from the true figures. Similar U.S. evaluations might prove to be highly desirable.

STATEMENT OF RAYMOND O. NELSON, MANAGER, SURVEY RESEARCH
DIVISION, CHILTON RESEARCH SERVICES, PHILADELPHIA, PA.

The following outline contains some suggestions that I hope will prove to be of some help in your search for further excellence in your statistical program.

CENSUS OF MANUFACTURERS

The census constitutes an indispensable reference for industrial market data. However, since this census is only taken every 5 years, it is imperative that these reports be released on schedule. Any efforts that can be made to hasten their publication and release would be greatly appreciated.

In general the census is extremely comprehensive and thorough. There are still some areas, however, which could be improved. With reference to selected materials consumed, the census now provides a breakdown of certain raw materials and primary products by consuming industries. An increased number of these "selected materials" (with 5-, 6-, or 7-digit SIC codes) would be particularly useful. For example we would welcome data on consumption of such products as valves, tubing, motors, pumps, etc. by industries (4-digit SIC) or by industry groups (2-3-digit SIC).

Another helpful addition would be general statistics (employment size, number of establishments, capital expenditures, etc.) for plants secondarily engaged in manufacturing a product.

CENSUS OF BUSINESS

A very important addition to the 1963 census should be subject reports covering the sales of selected merchandise lines through major retail outlets. Annual or even quarterly reports of these statistics would be invaluable, especially to such Chilton publications as Department Store Economist, Hardware Age, and Boot and Shoe Recorder.

Chief complaints leveled against the census generate from the standard industrial classification codes used in certain industries. In particular, industry group number 36 appears to need some serious revision. One of our publications, Electronic Industries, has created its own classification system (EIC product list) to remedy this problem. We submit a copy of the EIC product list to you as an example of the type of detailed classification needed.

Other more specific suggestions for SIC revision include the following:

1. A new SIC for powdered metal parts, formerly SIC 3463;
2. A reclassification of pistons, piston rings, carburetors, etc. from SIC 3599 to SIC 3714—"automotive parts";

3. A separate classification for automotive stampings now grouped with metal stampings in 3461.

ANNUAL SURVEY OF MANUFACTURERS

During the intercensal years, the annual survey of manufacturers is a singular source of reliable, up-to-date industrial statistics. It is our opinion that the value of the annual survey could be considerably increased if it were to cover a 6- or 7-digit SIC—specifically for value-of-shipments data. The accuracy of certain statistics in the annual survey might well be reviewed. In the specific case of metal cutting tools, SIC 35451, annual survey figures run consistently higher than comparable BDSA figures (\$467,136,000 versus \$362,000,000 estimated value of shipments for 1962). If such discrepancies are due to different methods of classification, then perhaps some standardization is in order. Extending the annual survey to a 6- or 7-digit SIC might also help to eliminate these disparities.

CURRENT INDUSTRIAL EFFORTS

These reports are extremely useful in providing current statistics, however, a broader range of products covered would make them more valuable. Quarterly and monthly reports are less important to us than annual ones. If the annual survey cannot be extended to cover a 6- or 7-digit SIC, then we would like to see more current industrial reports in the following industry groups:

- 25—Furniture and Fixtures.
- 34—Fabricated Metal Products.
- 35—Machinery, Except Electrical.
- 36—Electrical Machinery.
- 37—Transportation Equipment.
- 38—Instruments and Related Products.

STATEMENT OF FRANK W. NOTESTEIN, PRESIDENT, THE POPULATION
COUNCIL, NEW YORK, N.Y.

It seems to me we still need the quinquennial census, whatever our annual sampling programs may be. Our baselines are entirely inadequate when the fundamental data are collected only once every 10 years.

Our information concerning marriage and divorce is wholly inadequate. Basic data on formation and family function have never been adequately obtained, and much of the social pathology of our time lies in this area. It is hard to overstress the importance of building the record in these areas.

Finally, we need, by sampling procedures, to secure much more depth in our knowledge about the factors affecting demographic behavior. Today, for example, we know almost nothing about the prevalence of various forms of contraception which are of major importance to both the health and the economy of the Nation. Information in this field ought not to be collected on the compulsory basis that underlies the regular census procedures. There is, however, a world of experience to show that accurate reports can be obtained from a sampling system in which the respondents are providing information on a voluntary basis. Some of this information has been obtained from surveys conducted with private funds, but the time has come in which this sort of activity might well be regularized.

The field of religious preference represents a similar delicate subject with which we have been properly reluctant to deal on a compulsory basis. The fact remains, however, that a number of private efforts have demonstrated that people are glad to respond to questions in this field. There is every indication, as for example, the fertility studies conducted in Princeton University, that no single variable is more important, at least in the early years of family formation. Personally, I hope very much that in the foregoing two areas, at least, the voluntary inquiry made on a sampling basis can be utilized by the Government as a means of enriching our knowledge concerning developments that are clearly of major significance in both the economic and social fields.

STATEMENT OF GUY H. ORCUTT, CHAIRMAN, SOCIAL SYSTEMS RESEARCH INSTITUTE, THE UNIVERSITY OF WISCONSIN, MADISON, WIS.

1. INTRODUCTION

Our society recognizes that information is essential to the sound operation of government as well as of business. It backs up this recognition by spending substantial sums for the collection, storage, use, and dissemination of data relating to the condition and behavior of individuals, households, enterprises, governmental units, industries, markets, and natural and manmade resources. However, despite these substantial expenditures, the present procedures, relating to the collection and handling of data, are grossly ineffective for obtaining those benefits to policymaking that could flow from research use of data in learning how our economy functions and in simulating its behavior, including its response to governmental policy.

The primary purpose of the following comments is to point out some of the benefits that might flow from greater research use of data collected by the Federal Government and to indicate some of the data requirements for effective research on and simulation of our economy.

While it is evident that we are squandering our data resources, insofar as research on our economy is concerned, it is less clear what steps could or should be taken to reduce or halt this waste. Nevertheless, a secondary purpose of the following remarks is to point out that creation of an adequately financed, national, data library-computation center could prevent much of the tragic destruction of irreplaceable data which frequently takes place. It also is to be noted that such a data library-computation center could prevent the equally effective loss of data which follows from our archaic and inadequate provision for data storage and retrieval. In addition it could provide a useful link between data users and data collectors, it could greatly enhance the value of existing data by providing for the merger of separately collected bodies of data, and it could facilitate effective research uses of data without disclosure of confidential information about individuals or enterprises.

2. POLICY IMPLICATIONS OF SIMULATION

To simulate an economy is to achieve a dynamic representation of its functioning by the operation of a model of the economy. Each such model embodies a set of relationships which are intended to represent how the state of the economy at any arbitrary time is related to the past history of the economy and to other variables which are to be specified or predicted prior to use of the model. Given an actual or assumed past history, as well as time series of policy variables and other variables treated as independent, or exogenous, such a model is repeatedly applied to generate the values of dependent, or endogenous, variables for successive time periods. It is these resulting time series which comprise the simulated behavior of the economy.

One important and widely recognized goal behind efforts to simulate the economy is forecasting. Clearly, insofar as it is feasible to accurately predict the future course of economic variables, it would be valuable to do so. This follows directly from the fact that most actions have consequences which are significantly delayed in time. If the future could be more accurately forecast, then present actions could be more effectively tailored to conditions which will exist while they are having their effect.

A second and more important goal behind the growing effort to simulate the economy is conditional prediction. Forecasts are unconditional predictions made on the basis of a given past history. They may indicate what to prepare for, but they offer little guidance about how the future might be modified. Conditional predictions are intended to furnish the policymaker with information about how things would be different if one policy course were followed rather than another. Thus, given a suitable model of the economy, it would be possible to run it with different assumed tax and spending policies of the Government. The attractiveness of substituting experiments on models for experiments on the real economy is similar to that of substituting experiments on model aircraft for experiments on real aircraft. It is expensive in terms of both human and physical capital to try out untested ideas on real airplanes. It is infinitely more expensive to try them out on the whole economy. Effective simulation of the economy would not reduce the need for human choices. It would permit policymakers to at least sample the fruit of alternative policies before applying them to us.

Other significant objectives that motivate efforts to simulate the economy relate to the achievement and dissemination of a more basic understanding of how our economy functions. And just as business games are playing a growing role in the training of executives, it seems reasonable to look forward to the day when would-be governmental policymakers will first exercise their skills on realistic models of the economy.

The development of useful models of our economy is a major undertaking and poses many research and technical problems. Of these, the most important and most difficult have to do with the discovery and verification of reasonably stable behavioral relations. To build models, which would usefully predict the way in which our economy would respond to possible governmental actions, requires a more basic knowledge than we now possess about how households and enterprises respond to changes in such variables as incomes, prices, wage rates, credit terms, capital gains, and taxes. Achievement of a more basic understanding of the functioning of our economy will require a more appropriate mobilization of our data resources.

3. THE NEED FOR RELATED TIME SERIES DATA

A necessary condition for satisfactory estimation and testing of a relationship is the availability of time series for both the output variables and the input variables of the relationship. The output and input variables must relate to the same component or components and each variable must relate to an appropriate timespan. Uncoordinated

measurements are likely to be of little or no value for estimation of relationships.

Responses of behavioral components are typically distributed over time and lag the situation that gives rise to them. The form and average lag of responses are typically part of what must be estimated. Cross-sectional data are useful but are unsuitable for estimation of lagged responses. The observed responses may well relate to earlier unmeasured stimuli. Observed stimuli may well relate to future unmeasured responses. Recall data may help some, but errors are likely to be larger for longer than for shorter recalls, and systematic biases are likely to be substantial. Cross-sectional data are useful for establishing appropriate initial conditions and may provide a variety of possibilities for testing hypotheses. Nevertheless, related time series are essential if the dynamic behavior of the economy is to be studied.

4. THE NEED FOR TIME DATA ABOUT HOUSEHOLDS AND FIRMS

Insofar as availability of data permits, a proper study of the economy should have its foundations in research on the microcomponents out of which it is formed. This is so for the following reasons, despite the fact that many uses of models of economic systems are likely to revolve around predictions of aggregates.

4.1 *Hypothesis formation.*—The essence of any model are the hypotheses embedded in its relationships and structure. The social scientist can invent hypotheses relating to components of any desired level of aggregation just as the physicist may promulgate hypotheses about the behavior of gases as well as about the behavior of molecules or components of molecules. However, the social scientist has a peculiar advantage in producing hypotheses about the behavior of individuals, families, and firms that he does not have at other levels of aggregation. He is an individual, and he lives at a microlevel. Introspection and personal observation cannot be relied upon to be unbiased and free of gross distortion. Nevertheless, fruitful hypotheses about human behavior are rare enough that social scientists should fully exploit whatever advantages may accrue from being the most important type of component in the systems we wish to simulate. This does not mean completely avoiding hypotheses about macrobehavior, but it does mean being willing to work with models based upon or derived in large part from hypotheses about the behavior of microcomponents.

4.2 *Specification of causality.*—We want models of social systems which will enable policymakers to predict consequences of alternative actions and we want models which say more than that certain things have been associated in historical periods or even that, in the absence of policy actions, they will be associated in the future. We do want models which will predict how the future will be different if particular actions are taken in preference to other alternative actions. Successful induction from past experience about even the immediate impact of actions is difficult enough in any case but seems most attainable in situations in which we can at least clearly identify the action, observe many repetitions of the action in varying circumstances, and observe developments in terms of many selected variables at closely spaced points in time both preceding and following the action. All of the

above requirements can frequently be met in studying the behavior of microcomponents. They are almost never met at highly aggregative levels.

4.3. *Estimation and testing.*—Social scientists do not yet possess a body of theory sufficiently developed and tested to permit the confident specification of variables to be included, form of equations to be used, and appropriate lags for each variable prior to the estimation of parameters entering into equations. Existing theory offers some guidance, but it is the most fanciful kind of wishful thinking to believe that it offers much guidance in the above respects. This being the case, it is obvious that any effective testing and estimation does require very large numbers of observations. This would be true even if the observations to be used were generated by experiments arranged according to the best available knowledge about experimental design.

Highly aggregative time series simply do not begin to contain enough observations to permit extensive testing and estimation. This would be true even if the observations in such series resulted from well-planned experiments. The fact that the available aggregative series are autocorrelated, multicollinear, frequently poor measures of what we want to measure, often do not measure short-run developments, and are embedded in an operating system involving many relatively rapid feedbacks, only compounds the already apparent drawbacks of estimation and testing based only on highly aggregative time series.

Since much of the hoped for payoff is at the highly aggregative level, it is of course reasonable to fully exploit the testing and estimation possibilities that exist at this level. However, anyone who recommends primary reliance upon estimation and testing based solely on the use of times series aggregated all the way up to a single set of series for the national economy is surely one of the world's greatest optimists. Estimation and testing problems still abound even if observations on microunits are used, but at least one can have an enormous body of unplanned experiments to work with. These unplanned experiments may be observed in great detail at very frequent intervals and they do involve wide ranges of variation in the variables. At the microlevel, there frequently are cases in which variables we would have liked to vary do in fact vary and in which other variables we would have liked to hold constant do remain constant.

If it were available, the best data base would include an extensive supply of appropriately selected time series for each member of large panels of households, firms, and other basic behavioral components of our economy. Ideally, such time series would contain frequent measurement over long periods of time.

5. THE NEED FOR TIME SERIES DATA ON MATCHED GROUPS

During the next 10 years we can expect some progress in the collection of time series data about microcomponents. Nevertheless, in view of some well-known and formidable problems, it is unlikely that an adequate supply of such data will be secured.

Because the present supply of time series about microcomponents are grossly inadequate and likely to remain so, other possibilities of increasing the effective data base must be exploited. One such possibility, which appears to be of major significance, is the systematic

development of time series data for parallel and approximately matched groups of behavioral components.

The typical situation currently faced in efforts to simulate the U.S. economy is that there exists at best but one set of time series for testing and estimating each relationship. By securing parallel sets of time series of the same variables for 10 or a hundred subgroups of the population the number of observational points available for estimation would be increased by a factor of 10 or a hundred. If the groups were selected so as to be approximately matched, then the same equations should apply to each of the groups and no increase need take place in the number of parameters to be estimated.

The multiplication of observations with little or no increase in parameters permits large gains in testing power and corresponding reductions in standard errors of estimated coefficients. Furthermore, an additional opportunity would then present itself.

With a single set of time series, relating to what might be thought of as a single experimental subject, the only kind of controls that are possible are of the before-after variety. It is thus always extremely difficult to know whether any observed behavior is a response to a potential stimulus or interest or to one or more of the large number of other aggregate time series which are highly correlated with the explanatory variable of interest. By using parallel sets of observations on approximately matched groups it becomes possible to relate differential behavior to differential stimuli and so achieve more effective controls. In the first case, average responses are related to average treatments and most of the available evidence is not brought to bear. In the second case, all other subgroups may be thought of as potential control groups for each subgroup. Among other things, this would permit the effective suppression or balancing out of major feedbacks. This in turn might well permit appropriate and effective use of simple techniques for estimating and testing along with far fewer assumptions about parts of the economy not under immediate investigation.

Since the population, of households for example, could be divided into approximately matched groups in many ways, the question arises as to which groups should be used. However, it is easily seen that a single optimal grouping is not to be expected. Therefore, insofar as is feasible, provision should be made for use of more than one basis of grouping.

The general objective in selecting groups should be to achieve groups that are as heterogenous as possible internally with respect to variables the researcher wants to balance out and as homogenous as possible internally with respect to variables the researcher wishes to consider as potential explanatory variables.

A prime and obvious attraction of the use of data aggregated or averaged over a group of microbehavioral components is that disclosure problems are greatly reduced or even eliminated. If the groups are small, appropriately selected and numerous, then it is possible that the loss of information inherent in aggregation could be kept small. A significant effort in this direction is now being made by Edgar Feige of the Social Systems Research Institute with the cooperation and support of the Board of Governors of the Federal Reserve System. In this approach each set of time series would relate to three or four banks.

A second very important attraction of seeking time series which measure average or aggregate stimuli and behavior of groups is that, if the groups are large, it permits deriving sets of time series from a succession of unlinked cross-sectional samples. The basic idea of this approach is simply that since each nationwide cross-section sample actually draws a sample from many subgroups of interest, it is possible to estimate the mean value of each measured variable for each subgroup. This can be done even though the successive samples are unlinked and consequently time series for individual microcomponents could not be derived. Since the sampling variance of sample means depends primarily on sample size, it is important to have sizable subsamples from within each subgroup of the population. The large total sample size of the Current Population Surveys of the Bureau of the Census makes it an ideal candidate for this kind of use.

Another important advantage of seeking time series which measure average stimuli and behavior of groups is that extensive sets of time series related to the same groups can be built up by merger of data from different microcomponents. All that is necessary is that each source secure the minimal amount of information needed to classify the selected microcomponents into the same set of selected groups. This variant of the general approach also requires the use of sizable samples if direct matching is impossible.

Sets of time series on matched groups probably cannot provide as good a data base as would adequate sets of time series on large numbers of individual microcomponents. However, they would enable us to increase the effectiveness of our present data base by several orders of magnitude and they are obtainable.

6. THE NEED FOR A NATIONAL DATA LIBRARY

Establishment of a national data library by the U.S. Government would substantially increase the value of data now collected by facilitating both Government and non-Government research. Such a center would store data and facilitate their rapid retrieval and use without disclosure of confidential information about individuals or enterprises. It could provide for essential linkage and merger of separate bodies of data now collected by both governmental and nongovernmental collecting agencies. It could prevent the tragic loss of irreplaceable data which now frequently takes place. It could make possible the construction of improved models of the economy for use in testing policy alternatives by means of simulation studies. In short, if adequately organized, staffed, and financed such a center could be of inestimable social value.

STATEMENT OF U. L. PLAIN, CHAIRMAN, STATISTICS COMMITTEE,
INSULATION BOARD INSTITUTE, MINNEAPOLIS, MINN.

This letter is in response to your request of the Insulation Board Institute to submit ideas and opinions on the quantity and quality of data in the Federal statistics program.

We fully support the recommendations outlined in the attached excerpt from the Federal Construction and Housing Statistics Committee report for the Federal Statistics Users' Conference annual meeting held October 1-2, 1964 for improvements in building construction statistics and especially in the following areas:

NEW RESIDENTIAL CONSTRUCTION STARTS AND ADDITIONS, ALTERATIONS,
MAINTENANCE AND REPAIRS, AND REPLACEMENT

Breakdown into:

- (a) Types of housing:
 - Single family
 - Multifamily:
 - Up to three stories
 - Four or more stories
- (b) Types of structure:
 - Wood frame
 - Metal frame
 - Solid masonry
- (c) Types of materials used:
 - Interior walls and ceilings
 - Exteriors of walls and roofs
- (d) Geographic distribution
- (e) Renew C50 report series: Segregate complete re-roofing and re-siding as in table H, page 7 of report C50-7 including geographic distribution at least as fine as in table 3 and 4 on page 11.

For some time there has been a problem with the type of statistics published concerning new residential housing construction activity, in that no breakdown of one and two family and multifamily housing starts by geographical regions other than four broad regions (North-east, North Central, West, and South) is published. The closest approximation to this are the housing permit statistics printed in the following publications:

CONSTRUCTION REPORTS

Series C40: Housing Authorized in Individual Building Permit-Issuing Places.

Series C42: Housing Authorized in Permit-Issuing Places: Summary statistics.

Housing starts statistics are, however, a much more current and realistic measure of the level of activity than building permits, primarily because—

(1) Many housing units are built without a permit being required (particularly in the South and in rural areas).

(2) There are varying delays between the issuance of permits and the actual starting of construction.

(3) Permits are issued for many housing units that are subsequently not actually built.

We would suggest that the Department of Commerce consider publishing estimates of housing starts broken down statistically as tabulated on page 1.

Geographical breakdowns should preferably be by States, cities, and towns, and counties; but broader geographic detail such as the regular census regions would be a very welcome improvement if consistently followed.

This could perhaps be accomplished by statistically developing numerical coefficients or ratios for each geographical area to convert presently available permit data into estimated housing start data.

This information would be extremely useful not only for building product companies for use in—

- (a) Economic and distribution planning;
- (b) Plant location studies;
- (c) Deployment of marketing organization;
- (d) Evaluating market potential, etc.—

but for governmental units as well, and could be expected to result in housing and building materials better designed to fit consumer needs.

As an example of the need for geographic detail, the National Association of Home Builders attempted in 1962 to estimate housing starts by State.

NAHB estimates listed below for the following States illustrate the very large difference between permit data and housing start data.

	1962 NAHB total hous- ing starts estimated	1962 Bureau of Census total hous- ing permits
Arkansas.....	22,000	4,854
Coiorado.....	22,500	18,614
Kansas.....	11,600	8,619
Louisiana.....	22,800	12,092
Mississippi.....	19,200	4,202
Missouri.....	24,200	16,136
New Mexico.....	7,900	4,986
Oklahoma.....	23,100	10,902
Texas.....	108,400	77,654
Total.....	261,700	155,959

This shows that permit statistics have very questionable value in some regions as an indicator of residential construction activity.

The publication of more meaningful and usable building construction statistics as suggested in the foregoing could well supplant several of the current series which would then likely not be needed, partly or entirely compensating for the cost of the improved service.

The Insulation Board Institute is made up of many of the leading U.S. manufacturers of building materials, as identified at the foot of the IBI letterhead on which manager Charles M. Gray's letter of March 8, 1965, to you was written.

We hope that you will find our suggestions useful; and we want to extend our appreciation for being afforded the opportunity to present our views on Federal economic statistics.

REPORT OF THE FEDERAL CONSTRUCTION AND HOUSING STATISTICS COMMITTEE

The Federal Construction and Housing Statistics Committee wishes to draw the attention of the membership of FSUC to the present crisis in Federal construction and housing statistics. Although such developments as carrying the new housing starts series back to 1945 and revising the value put in place series for the same period to take account of the revised housing starts series have taken place, the year has recorded more losses than gains in Federal statistical information on construction and housing.

The National Housing Inventory has been eliminated and, as a result, there will be no mid-decade benchmarks of the size and condition of the Nation's housing inventory. The Census survey of additions, alteration, repair and rehabilitation of residential properties has been discontinued, and this important part of construction activity will once again be reported by some kind of calculated figures.

The revised series on private nonresidential construction put in place has not yet appeared even though the Census Bureau has been working on it for 5 years. Other aspects of the long-range program for the improvement of construction statistics have similarly taken longer to develop than anyone anticipated.

Budget proposals to improve housing statistics have received almost no support in Congress. Elaborate statistical and research programs from HHFA which have contained important proposals for new measures of housing demand have almost uniformly failed to get off the ground. The only positive regular feature to be approved has been the monthly report on sales and inventories of new single-family homes.

This committee and the conference have indicated priority needs for improvements in Federal housing and construction statistics on a number of occasions and in a number of places, notably the long range program for the Improvement of Federal statistics and in the report of the Conference on Federal Statistics Related to Housing held on January 24-25, 1963.

A list of these priority needs as expressed in these earlier reports follows:

LONG RANGE PROGRAM FOR THE IMPROVEMENT OF FEDERAL STATISTICS

First priority

- (a) Regular survey of the characteristics of new housing.
- (b) Series on expenditures for maintenance and repairs, additions and alterations until adequate data are developed for all major categories of construction.
- (c) The elimination, insofar as possible, of inconsistencies between current housing starts data and benchmark data of the Census of Housing and the National Housing Inventory.
- (d) Continuation of the National Housing Inventory as a regular feature of the Federal statistics program.
- (e) Development of an adequate cost of construction index.

Second priority

- (a) Additional geographic detail in construction activity data.
- (b) Development of more adequate measures of employment in construction.
- (c) Development of anticipatory data relating to planned expenditures for construction.

Third priority

(a) Development of interindustry studies to provide benchmark information on the use of materials in construction.

(b) Inauguration of a quarterly survey of State and local government expenditures as a vehicle for improving estimates of State and local government construction.

CONFERENCE ON FEDERAL STATISTICS RELATED TO HOUSING

Benchmark data

(a) Benchmark housing information, especially components of change, is needed more frequently than every 10 years.

(b) The national housing inventory is not perfect, but it is the only proven vehicle at hand for developing this kind of information.

(c) The idea of perpetual inventory deserves careful exploration to see whether it might be a practical alternative.

(d) There is a need for research to find out whether more meaningful measures and means of collecting data can be developed.

(e) Geographic detail is of vital importance. In addition to providing detail in Federal programs, technical assistance to States and localities bears promise of being an economical way of meeting many user needs at least in part without overloading the Federal budget.

(f) The lack of timeliness is an old complaint, but it is still a factor of considerable importance in reducing the value of existing data, or of proposed new data.

(g) The elimination of residential financing data from the national housing inventory is no essential loss.

(h) At the present time, the lack of user understanding makes it possible to evaluate the extent to which a census of wealth or a census of construction would help meet essential informational needs.

Statistics about housing and people

(a) Statistics, even in great detail, cannot provide all the answers. Important sociological factors, for example, are not measured by statistics as generally gathered by Federal statistics programs.

(b) Federal programs should give first priority to "strengthening the bones" which would be necessary prerequisite for any more penetrating analysis.

(c) Information of analytical value derived from existing materials in other areas is very important, i.e., data on family formation, characteristics of families, and the like.

(d) Employment and income data can be important as a proxy for more complex sociological information.

(e) Geographic detail in current statistics is required for a proper understanding of phenomena related to housing. Short-run decisionmaking as well as long-range planning requires local area data. Local area data on population, employment, and income are of paramount importance.

(f) The amount of local area data supplied by Federal statistics programs will be arbitrary to some extent. Proposals to provide technical assistance to States and localities to develop or improve their own data are important.

Existing housing

(a) The usefulness of vacancy data would be greatly improved by the addition of local area data.

(b) The proposed development of vacancy information for 35-40 metropolitan areas would be a major improvement.

(c) Technical assistance to localities to enable them to develop data to meet their needs is desirable and may be the best way of getting more and better local data.

(d) Vacancy data must be used carefully in any event. Superficial acceptance of raw data without careful analysis can lead to wrong conclusions.

(e) Although refinements are desirable in data relating to expenditures, for repair and alteration of residential properties, the first priority should be to place the present series on an operation basis as a regular and reliable source of information.

(f) The proposed program designed to produce information on housing market activity seems to be a promising way of getting some of the socioeconomic information necessary to an understanding of housing matters.

Statistics on new housing

(a) A major and early effort should be made to develop a seasonal adjustment factor appropriate to the new housing starts series. This important economic indicator is used by many people who are not well acquainted either with the housing industry or with the statistical underpinnings of the series. As a result, entirely inappropriate conclusions may be drawn from the month-to-month variations as indicated in the present data.

(b) The housing starts series should be improved by adding breakdowns which distinguish between single-family home construction and apartment construction as between garden-type apartment construction and high-rise-type apartment construction. This appears to be entirely feasible.

(c) A series reporting sales inventory ratios of new housing would be a valuable indicator in improving understanding of cyclical changes in housing construction activity.

(d) More and more users are turning away from the value put in place series because of its continued inadequacies as a tool for their purposes. The importance of this series as a measure of construction activity is recognized, and even the most disappointed users would not wish to see it abandoned unless it were replaced by something better.

(e) Materials use information is of great importance and value to non-governmental users as well as to governmental users.

Financial information

(a) There is a major need to develop a consistent set of definitions and classifications for use in financial statistics relating to housing.

(b) Completeness should be a major goal in the improvement of financial data. Data on mortgage debt outstanding, on mortgage transactions, on interest rates, etc., should be descriptive of the universe in each case, not just some part of it. The ultimate goal of completeness should be the development of information on the gross flow of funds into and out of the mortgage market.

(c) Federal statistics producers should take a close look at what others are doing in these areas. Cooperation with private groups and local area groups should be thoroughly explored as a means of increasing available information economically.

It is apparent that many of these needs will not be met in this decade. Three adverse factors which will limit possible achievements for the balance of the 1960's are: (1) the administration's "tight" budget program as applied to Federal statistics, (2) the unfavorable congressional attitude toward housing statistics in particular, and (3) the difficulties encountered in developing ways of measuring some of the phenomena on which statistical information is sought.

It is time to take a new look at where we are and time to make a new appraisal of user needs for information in order to focus attention on and channel support to those informational needs which will be most urgently felt over the next 5 or 6 years.

Since 1959, appropriations to the Bureau of the Census for current housing and construction statistics have increased from \$627,197 to \$1,646,000. Much of this increase can be laid at the door of higher costs, especially higher pay costs. However, the increase in program costs have been well over three-quarters of a million dollars and something over \$3 million have been expended on program improvements in the years since the long-range program began.

Compared to other major statistical programs, the amounts spent on construction and housing statistics are extremely modest. Because of the decentralized character and farflung nature of construction activity, statistical programs which seek to get direct measures of current activity are bound to be expensive. Moreover, because they are likely to be new and untried in technique they are likely to have more teething troubles than anyone is likely to anticipate in advance. Taken together, this spells frustration for the statistics producer who is trying to turn out a reasonably good product and frustration for the statistics user who supports statistical improvements but feels vaguely dissatisfied with the results he has seen so far.

As users we cannot afford to yield to this kind of frustration. We must, however, face the reality that improvements in these statistics are extremely

hard to achieve, that they are expensive, and that, under existing and foreseeable circumstances, it seems likely that the increments which might be expected in appropriations are going to be rather limited. If, over the next 5 years, programs in the amount of \$1 million or \$1,250,000 (today's prices) could be added to those now existing what would be our choice?

These would be hard choices, for a program expansion of this magnitude would not meet the priority needs for information as users have previously described them. To make such choices does not preclude users from continuing to urge recognition of the broader range of priority needs already identified, but does involve a further pinpointing of the most urgent necessities for better statistical information.

Generally, it might be expected that the Census Bureau will be making every effort to bring those programs on which it is now working to a fully operational level. Thus, we may reasonably look forward to completion of work on the value put in place series, the release of a construction price index, at least for residential construction, and a revised survey of additions, alterations, repair and rehabilitation of residential property. Census will probably seek to give first call for additional funds to these programs.

FEDERAL CONSTRUCTION AND HOUSING STATISTICS COMMITTEE

Harrison W. Cole, manager, market analysis, Johns-Manville Corp.

Miles L. Colean, chairman—consultant, Mortgage Bankers Association of America.

Ralph L. Gillen, principal, McKinsey & Co., Inc.

Leon T. Kendall, economist, United States Savings & Loan League.

Albert G. Matamoros, general manager, economic and marketing research, Armstrong Cork Co.

U. L. Plain, chairman, statistics committee, Insulation Board Institute.

Nathaniel H. Rogg, director, economics department, National Association of Home Builders.

Marvin Friedman, economist, AFL-CIO.

Turrell Uleman, director, market research department, Pittsburgh Plate Glass Co.

Roger A. Vonland, research assistant, International Brotherhood of Electrical Workers.

STATEMENT OF E. T. POWERS, DIRECTOR OF MARKET PLANNING, CHEM-
STRAND CO., NEW YORK, N.Y.

We have made great use of Federal statistics since the beginning of our company and we may add that our experience with the statistical output of the Government has been favorable.

Since the main objective of any statistical program is to provide general economic tools, to most of the users it is fairly simple to find some inadequacies in terms of one's own specific use for these.

Our main use of the Federal statistical program relates to the current industrial reports that pertain to the textile industry. Overall, the information supplied from these statistics usually cover 75 percent of the universe. This means that the quantitative data reported has to be adjusted for the missing values. The particular areas that need improvement relate to the data that describe fiber consumption in the woolen and worsted industry, and its specific type of fabric output.

The statistics produced by the various agencies relate only to a degree (possible large) of the total production output of a particular industry. The main point of this discussion deals with the census definition of the textile industry (textile mill products). This definition implies that the industry deals only with the conversion of fiber into yarn and fabric. It excludes the raw material producer (the fiber supplier who can be either the cottongrower, the woolgrower, or the synthetic fiber producer) as well as the various wholesale textile distributors, such as converters and jobbers, and the garment manufacturers. The statistical information should be collected here so that it will represent a complete coverage of the input-output relationship within a specific industry. The objective is to enable anyone to trace, with a fair degree of accuracy, the complete statistical inflow within a given industry.

The problem of timing the reports always presents difficulties. Some reports come out nearly 3 months after calendar date, thus diminishing to a degree their usefulness.

Innovation is a critical factor in the growth of our economy. Even though there are serious problems in the measurement of innovative effort it has to be tackled eventually. In the years ahead, it will be necessary to attempt to quantify the degree of innovation in various industries. Some measurements of innovative efforts are the number of patents issued within a given industry and the research dollar expended by the same industry. Both these methods present some problems which cannot be discussed in my present letter, however, an approach has to be made to measure such effort.

Statistical measurements of consumer purchases of the specific output of a given industry has not been made readily available to the industry. The Department of Labor originally has carried out such surveys; however, the time coverage of the most recent survey is already 5 years old. Also, the detail output of the data is not avail-

able with the exception of special reports at the industry's expense, and even under those circumstances they involve 1 to 2 years' wait. In our time, a 2-year lag in decision information seems unnecessary and reduces the effectiveness of the information.

It is our opinion, Senator, that the Government-generated statistics in this country are the best in the world. We feel, also, that the Joint Economic Committee and its subcommittees have contributed a great deal to this success. Therefore, we are pleased at your continuing efforts to improve on what is already a good program.

STATEMENT OF W. H. RASTALL, ASHEVILLE, N.C.

When scientists present a statistic, it is their custom to place after the figure "plus or minus" so-and-so.

When a Federal statistic for the gross national product is given as say \$60 billion, should we assume that we should infer it is "plus or minus 10 percent"? Or what? And for unemployment; what? And for the deficit; what? And for the administrative budget; what? And for the "balance of payments"; what?

STATEMENT OF MORRIS R. ROBINSON, MANAGER, BUREAU OF BUILDING
MARKETING RESEARCH, CHICAGO, ILL.

Over the past decade a genuine interest in the betterment of construction statistics has taken place. The result is that we have seen a greater Government interest and improvement in the statistical programs of this vital industry.

However, even with the improvements which have taken place, it is the feeling of myself, as well as other analysts in this field—considering the importance of this segment of our economy—that the Federal statistical programs in the construction industry are very weak when compared to other industries.

During 1965 the construction industry will grow to \$90 billion, or approximately 13 percent of our gross national product. Yet very little is known about the industry or its segments. It is almost impossible to believe that the last census of construction was for the year 1939—26 years ago!

During the past 26 years the industry has changed many times—in fact, today we have little or no accurate data as to the number of builders, the number of structures, the value of their production, etc., to use in making major industry decisions.

Today, throughout the Nation and its economy, one fact stands out—changes are occurring constantly. With all the changes that have, that are, and that will take place, the construction industry virtually has little or no benchmarks to use for planning purposes.

Much of today's economic growth, and I'm sure more of the economic growth in the future, will depend on how well we can accurately develop input-output series for major industries. Yet, apparently, we are not in the position to do this for the construction industry, because of the lack of adequate statistical programs.

The accurate measurement of the industry and its impact is vital to economic growth and planning. It is my strong conviction that programs that can develop data on input-output industry structure, and their relationship will do much to evaluate the impact of changes in the construction industry and its relationship to the expansion, or lack of expansion, in our gross national product.

Input statistics pertaining to materials, labor, equipment, and capital are important Government economic planning tools. Output statistics pertaining to the kinds of structures and facilities which are constructed and where such construction takes place, I believe would do much to alleviate any overproduction, or underproduction of the industry.

The above is only one of several major statistical gaps in the construction industry—and, it is felt by many to be the most important program need for future economic and industry planning.

STATEMENT OF GEORGE S. ROCHE, CHIEF OF RESEARCH AND STATISTICS,
DEPARTMENT OF EMPLOYMENT, STATE OF CALIFORNIA, SACRAMENTO,
CALIF.

We in California have been able to establish many series of data from State sources which allow us to evaluate current economic developments. A number of important gaps remain, however. I would expect that the same thing is true in other parts of the country, but I believe our economic structure differs sufficiently from that of the other large States to make us feel that some of these gaps are more critical.

It would be a very great help to anyone concerned with economic problems on the west coast if the Federal statistical agencies could expand their programs to provide State or major metropolitan area series on (a) labor force, employment, and unemployment, with at least occasional benchmark measures of the situation of youth and major occupational groups; (b) consumer credit outstanding; and (c) capital investment.

If data of this kind were available in series of the level of reliability we are accustomed to find in existing Federal reports, our understanding of the economy of both the Nation and its important geographical segments would be enhanced tremendously.

STATEMENT OF EDWARD P. RUBIN, SELECTED AMERICAN SHARES, INC.,
CHICAGO, ILL.

In the first place, I do agree that the wider and more accurate coverage of economic statistics has made it possible for all of us, whether in Government, or out of Government in private industry, to reach more satisfactory conclusions as to the underlying facts and trends. Anything that can be done to promote greater coverage in valuable areas and great accuracy or coverage will certainly be of material assistance in the progress of the country.

Among the things which occur to me on first thought are the following:

1. If it is possible to reach a definition of unemployment which will be acceptable not only to the statistician, but also to management and labor and "the man on the street," I think this would be useful. Certainly an accurate employment and unemployment series are of vital importance to national policymaking, and it is unfortunate that many straight-thinking people are still materially dissatisfied with the definitions now used and with the result in statistics being derived from those definitions.

2. At the moment, we are once again dealing with the problem of possible over accumulation of inventories, particularly in the steel industry. Anything that can be done to make the steel inventory figures more reliable would probably be a material aid to forward planning, not only in the steel and steel-consuming industries, but even at Federal planning levels and in general economic and financial forecasts.

3. From time to time, various organizations make statements with respect to the percentage of manufacturing capacity being used in current production. I have been unable to locate any continuous source of such estimate,¹ and in those cases where I have examined the estimates, they vary in concept to a considerable degree. If such figures were available, they could be quite an important guide to planning in those industries which perhaps are approaching inadequate capacity, or the reverse. They certainly would be useful in estimating potential price pressures.

4. An export price series, not only for our own country, but for other industrialized nations, would be a desirable tool if it could be so devised as to indicate actual competitive conditions in international trade. Those export price figures which I have examined from time to time seem to me not to be realistic in terms of what actually happens in international trade. In other words, there seem to be periods in which the export price figures would indicate the United States is pricing itself out of the market," and yet in the very year in which this appears to be the case as well as in subsequent years when the conditions seems to persist, nevertheless, U.S. exports and its merchan-

¹ The Federal Reserve Bank of Chicago never seems to have figures like those on p. 231 of the 1965 Economic Report of President Johnson.

dise balance of trade continue to defy the laws of gravity and move upward despite an adverse price situation. There have been times in recent years when it seemed to me that the overall wholesale-price indices of the various industrial companies, including our own, gave a better guide as to what was really happening in prices in international trade than did the so-called export prices which are available.

STATEMENT OF RICHARD N. SCHMIDT, PROFESSOR OF STATISTICS, STATE UNIVERSITY OF NEW YORK, BUFFALO, N.Y.

The following sections are numbered 1 to 7 to cover general concepts relevant to the Government's role in collecting and disseminating business and economic data.

1. *Computers.*—With the cost of computers falling to the range where even small companies can benefit from their use, it would seem appropriate that all future decisionmaking relevant to economic data be formulated with reference to computer systems. Within 10 years it is likely that almost all significant companies and other organizations will either have computers within their organization or will use service bureaus for processing their data.

2. *Rigid flexibility.*—If we assume that data-reporting systems will involve company and organization records on electronic-computer media, then we must anticipate the rigidity of this flexible machine. By this I mean that, before the programs are written and before the data forms are prepared, an organization has almost complete flexibility in designing the forms and in collecting and recording the desired data. However, as soon as the forms are standardized and fixed in format, then any addition or alteration becomes a lengthy, costly, and an involved problem. For this reason, one of the objectives of your present study should be to establish the objectives of the data to be collected. After that, all organizations should be informed sufficiently in advance so that they can design and redesign their data collecting systems. They will then be in a position to provide the information without the staggering cost that could result from unanticipated and unplanned requests for information. It is my feeling that an organization will not be reluctant to provide data, provided it is given ample time to anticipate the request and thus to build a satisfactory "information reservoir" from which the data can later be retrieved upon request. At present, whenever an organization is asked to furnish data which it had not planned for properly, it is almost impossible for it to do so even though the person making the request might think the information is readily available. The hard fact is that information retrieved from manual or mechanical record systems is extremely difficult and costly, and in most cases the data are neither accurate nor reliable.

3. *Zip codes.*—For the benefit of businessmen, it would seem to me that data classified by zip code would be an extremely valuable addition to the present data available to him. As the use of zip codes spreads, it is becoming more and more evident that the files of almost all organizations will contain zip codes as a fundamental classification. Consequently, if businessmen could obtain overall business and economic information classified by zip code, they would be in an excellent position to use published data more effectively and more wisely in making decisions regarding business operations. In the

past I have used postal zones and census tracts for collecting and analyzing data but I have found census tracts very inconvenient because companies simply do not collect or classify their own data in this manner. However, the advent of zip codes has made them a part of many files and, thus, zip codes are automatically available for classification and analysis purposes. If the Government were to provide data by zip code, these data probably would be used far more effectively and extensively than the data now provided by census tracts and blocks.

4. *Cost versus value.*—Data collected and sent to the Government represents a cost. If the data are collected automatically as a normal operation from a computer run, then the cost is minimum. However, if the information has to be obtained specially, then the cost can reach unnecessary heights. The purpose of data is that their collection, classification, publication, and general use by organizations should provide them with greater value than the cost. It is a problem of marginal value, however, at one extreme, if no data were collected and published, business and other organizations would be in an unhappy position of having no information on which to base decisions. At the other extreme, if too much data are collected, then the mere cost of collecting and publishing them would exceed the value that could be obtained from their use. Between these two extremes is a point at which the marginal cost and the marginal value balance each other. Since there is no present way of measuring either the marginal value or the marginal cost, a kind of intuitive rule is used in which the Government tries to obtain and publish the maximum amount of information at the lowest cost. It would now seem appropriate for a study to be made to determine some measure of efficiency to minimize cost and to maximize value.

5. *Continuous information.*—One possible way to reduce some of the cost and yet to improve the value of data is to utilize the present large computer storage capacity available for data storage. The Government could build a national information reservoir into which all of the basic data are stored in such a form that they are continually being updated as information is obtained from organizations. Rather than analyzing the data and preparing many kinds of ratios, the Government could provide a request service. An information dictionary could be furnished so that organizations would know the kinds of data the reservoir contained. Then they could request data reports with specific combinations of the basic data. These public data could be combined with the organization's private data in a manner appropriate to the kind of problem to be solved. As a consequence, organizations would not have to wait for special publication dates but could obtain information currently and continually.

6. *An "administrative sputnik"?*—For the past few years Russia has been establishing a national control and communications computer network. Overall, it is setting up some 150 local computer centers. Primarily the function of these centers will be to collect local data which will then be condensed and transmitted to a large central computer center which will use the local data to prepare national data. Definitive details are not available, but it is clear that their purpose is to provide a continuous flow of statistical data to a central headquarters. The data are to be of such a nature that they can be used

for overall decisionmaking, planning, and control purposes. Americans concerned with this problem certainly must anticipate a similar action in this country, even though the specific methodology in accomplishing the purposes will necessarily have to be different from Russia's. Therefore, any future planning should envision some kind of automatic data generating, collecting, and disseminating mechanism. I realize that such an overall plan is going to be very difficult to promote and bring to fruition because of the democratic way in which we wish to do things. However, unless we take definitive steps in this direction we shall one day be started to read the headlines of Russia's "administrative sputnik" made possible by a computer network system.

7. *Summary.*—Overall the Government should establish objectives and policies so that definitive kinds of business and economic data can be planned by all organizations that must furnish the data. In the data-planning stages these organizations have complete flexibility in designing data forms and in preparing computer programs. However, once established, the data collecting and reporting system becomes very rigid, and a change, however simple it may seem, can become a very costly operation. Thus, objectives and forward planning are critical.

Any future planning certainly should be based on the concept of the computer because the cost of computers is now low enough that even small companies can use them.

A study should be undertaken in a respective sample of organizations to determine the cost of data collection and reporting compared with the value of receiving published data from the Government.

A Federal information reservoir containing basic public data should be used to provide organizations with data on request and in the form appropriate for the organization's purposes.

A network of business and economic information computer centers should be established for collecting data at the local level and for sending appropriate information and data to a central Federal headquarters. The same network could be used in disseminating information to the proper people at the proper time at their request and in a form suitable for their purposes.

STATEMENT OF THOMAS D. SCRIGGINS, DIRECTOR OF CORPORATE DEVELOPMENT, MARTIN MARIETTA CORP., NEW YORK, N. Y.

Our comments are qualified to the extent that they reflect our awareness of utilization of Federal statistics primarily by functional staff members here at our corporate offices. Due to the diversity and geographical dispersion of our business, we are not fully cognizant of the extent to which our various organizations utilize the data available to them through the Federal statistics program.

Here in New York, we are currently receiving certain selective Federal publications in the fields of labor and business statistics. These publications contain data which provide a significant contribution to various analyses incident to the development of current, midterm, and long range planning.

We are appreciative of the tremendous task involved in gathering, correlating, and publishing the various statistical data and the inherent problems of timely availability of such information. It is felt that the sources of data we have used are excellent in keeping us apprised of the availability of data in these areas.

We anticipate expanding our use of Federal statistics and in this regard, an updating of John L. Andriot's "Guide to U.S. Government Statistics, 1961" would be helpful.

STATEMENT OF M. E. SHANK, MANAGER, INDUSTRIAL MARKET
PLANNING, THE GOODYEAR TIRE & RUBBER CO., AKRON, OHIO

This is in reply to your letter of March 2, requesting our views on "present economic statistics and future needs." Here are our views on some of the issues raised, and areas where we believe improvements might be effective.

A. Timeliness of the availability of Federal statistics is always a critical issue. For example, we are just now receiving the preliminary reports from the 1963 census. We're sure that this problem has been raised before, but because it is so important, it bears repeating.

B. Greater compatibility of coding systems and procedures would be helpful. I'm told, for example, that the old-age and survivor group uses one geographical coding system; Census uses a different one. This makes it difficult to use data from these two sources in our computer programs.

I'm also told that some private firms have developed common compatible techniques. Reuben H. Donnelley, Service Bureau Corp., and Sales Management are cited as examples.

C. More details in Census reports would be helpful. Here we recognize the part that reporting firms play in making it possible for Census to give more details. For example, under SIC code 3011333 on the 1963 census, solid tires are grouped into an "Industrial and highway" description. In the 1958 and 1954 censuses, this was divided into "Pressed-on" and "Molded-on" solids. These later groupings are more useful to us, particularly since bogie, idler, and support rollers (SIC 3011335) are not really tires but have been combined with tires on 1963 report.

This is a brief commentary on where we believe improvements in the statistical programs might be made. In addition, consideration might be given to a more centralized statistical reference bureau. For example, we may draw from Census data, Bureau of Mines, Agriculture, HEW, etc., in the course of a few weeks' time. The question could still be asked, how many other agencies may have had useful data about which we have no knowledge? Certainly it is our responsibility to seek out all these sources, but the seeking many times is very tedious and difficult to accomplish. When these various data are found, they may not then be compatible. One source may use constant dollars, another changing dollars.

STATEMENT OF DEVER SHOLES, DIRECTOR, RESEARCH AND STATISTICS
DIVISION, CHICAGO ASSOCIATION OF COMMERCE AND INDUSTRY, CHI-
CAGO, ILL.

Some of the particular areas in which additions or changes in statistical reporting would be helpful are the following:

1. In data on exports and imports, this organization retabulates and publishes, six times a year, data on waterborne traffic for all Great Lakes ports. This is a cooperative effort for all major Great Lakes ports. This tabulation takes Census Bureau data and puts it in a usable form for the analysis of these statistics. What is really needed, in this particular field, is data for States and metropolitan areas on the origin and destination of all exports and imports, by commodity, so that these commodities can be traced to internal points within the United States instead of being recorded at points of lading or unloading on the sea coast. At the present time, there is no way of securing the total export and import movement from and to the interior U.S. points. This could be remedied to a large extent by including origin or destination on the export or import declarations.

2. The statistics on income from the Internal Revenue Service have been improved immensely within the last few years. One further improvement that could be made would be to make the material more currently available. The data now being produced is approximately 3 to 4 years old. Another service which I believe the Internal Revenue Service could provide would be a current listing of withholding tax payments as a measure of income, by county on either a current annual basis or on a monthly basis, for large counties or metropolitan areas. Withholding taxes thus reported would reflect the current income figures for each of the metropolitan areas much more accurately and timely than at present.

3. The Internal Revenue Service regularly publishes statistics for business partnerships by major industry in each State. Of immense value to States and lesser areas would be a similar report of statistics of sole proprietorships by industry in each State. Such information would enable the States to determine the relative importance of their proprietorships, partnerships, and corporations to the wages and salaries paid by private business in the State. For obvious reasons, the Internal Revenue Service is reluctant to attempt to identify statistics of corporate enterprise within each State. However, if the information for proprietorships and partnerships were made available, local State departments of labor and other organizations can subtract the wages and salaries of the proprietorships and partnerships from total wages and salaries, which they can estimate. The residual wages and salaries pertain to business corporations. Naturally, such information would have tremendous importance to the taxing structure of the State. In order to legislate a State corporate income tax, for example, the State government would like to be able to estimate the volume of business they are talking about. In like fashion, they

try to estimate the importance of payroll taxes to each of these divisions of private enterprise.

4. The Census Bureau has tremendous problems with which we are acquainted, and they publish the most informative statistical analysis of the U.S. economy of any country in the world. However, their timing leaves something to be desired. The economic censuses seem to become worse rather than better in meeting schedules during the past few years. They set up their own deadlines, unerringly too ambitious, and then proceed to miss these deadlines by a wide margin. Publications which are supposed to be available from November 1964 to January 1965 have not appeared. This is a source of constant irritation for people who are waiting for these figures and it seems that they could correct this deficiency by better scheduling.

5. The association feels strongly that the Department of Commerce should publish its annual person-income series for each of the major metropolitan areas in the United States. These statistics normally appear for each of the States and regions of the United States in the August issue of the Survey of Current Business. Because of the size and complexity of metropolitan areas, it is difficult to determine the precise extent of their personal income. The Department of Commerce has already indicated, in correspondence to the association, that it has intended to publish personal income for areas. So far nothing has been forthcoming.

6. A further area of improvement which would appear to be more easily remedied is the inclusion of the number of apartment buildings in the areas covered in the Census of Housing. Currently, the census only reports the number of units which are in apartment buildings, but no where can one find the number of apartment buildings in the State, country, municipality, or metropolitan areas.

7. Job opening data are just now starting to be collected on a comprehensive basis. These data are difficult to obtain, and we believe it will be possible to couple these data with data for recent new hires for a better picture of the current opportunities in the labor market.

STATEMENT OF PAUL B. SIMPSON, PROFESSOR OF ECONOMICS, UNIVERSITY
OF OREGON, EUGENE, OREG.

A great improvement in many types of economic statistics is needed. Among needed expansions, I believe the following are most urgent:

1. State totals for construction statistics and payrolls in manufacturing industries. These are available locally generally, and a Federal system for standardizing and distributing them is what is needed most.

2. Wage and salary rates by types of jobs.

3. More detail and more prompt collections of expenditure data of State and local governments.

STATEMENT OF HERBERT STEIN, DIRECTOR OF RESEARCH, COMMITTEE
FOR ECONOMIC DEVELOPMENT, WASHINGTON, D.C.

I am not able to make any systematic reply to your query about needed statistics. However, the speech by Dr. A. C. Neal may be of interest in your current review.

SPEECH OF ALFRED C. NEAL, PRESIDENT OF COMMITTEE FOR ECONOMIC DEVELOPMENT, BEFORE THE FEDERAL STATISTICS USERS' CONFERENCE, OCTOBER 2, 1964

I think it can be fairly said that this country is and has been much more aware of the need for comprehensive economic statistics than most other countries of the world. It has led in developing information about how economic systems operate. But every now and then we need to remind ourselves how late in the game it was that we developed some of the much-needed measures of performance. We went through the great depression of the thirties without knowing even roughly how many people were out of work. It was not until World War II that we developed an adequate comprehensive dollar measure of the level of current activity. It was only 6 short years ago that quarterly data on the movement of total real output was given official sanction, so that we could see what part of the change of GNP was due to a change in output and what part to a change in prices.

Our official producers of statistics obviously work under certain constraints—perhaps the principal one of which is budgetary limitations. But it should be noted that Congress has been increasingly aware of the need for more and better economic information; the budget for current programs has just about doubled in the past 5 years, to a sum of \$94 million in the 1965 budget.

The relatively small sum spent on this function of Federal Government is, in my opinion, one of our wisest of investments, one on which the returns far exceed the costs. Postwar statistical backstopping of economic developments has been a significant factor in ameliorating business cycle swings because it has provided both business and Government policymakers with guides to correct policies—from inventory control to the present tax cut.

The effort of the Federal Government in this area must be a cooperative one involving State and local units of government and business and other private institutions. I think that our superior economic information program has stemmed as much from suggestions coming from below as from above. You need look only at the weakness in data collection in a few less-developed countries to find out why a statistical program run from the top down is hardly worth the effort. In practical terms, cooperation means mutual education. It also means that the interests of all concerned, not just those of statisticians, must be served by a statistical program.

We in CED are primarily interested in the study of broad issues of national policy with a view to arriving at and publishing statements on the issues which will be informative and influential in shaping policymakers' decisions. In the course of developing these statements, we need reliable, comprehensive, and detailed measures of economic performance. I am going to mention some of the projects on which we have recently been or are currently at work and then single out a few of our needs for information. By doing this, I think you will see what a blessing it is to have the existing arsenal of Federal information and also some of the trouble we have had because of the gaps in our present Federal statistical program.

1. *High employment.*—From its inception CED has had a continuing overriding interest in the study of policies aimed at achievement of high employment under conditions of stable prices and an adequate rate of growth. Obviously, the Federal statistical program provides us invaluable information on this subject. We have used not only the overall figures on output, employment, prices, and productivity, but also a wide range of detail which permits pin-

pointing of trouble spots such as depressed areas, special price pressure areas, and area of accelerating or decelerating productivity advance.

But with all the increased quantity and quality of Federal statistical information we cannot feel confident about many of the "facts" on which to make adequate policy decisions. Just to cite a few examples: How high is high employment under conditions of continuing price stability? You are all familiar with the controversy over the causes of the excessively high unemployment rates of the last several years, with some economists lining up on the structural side and others stressing demand deficiency. Events may soon tell us who is right. We would do well in the future to know more than we have known about the nature and causes of unemployment that persists even in good times and the extent of any developing tendency for such unemployment to change.

In this context, I want to stress the great need for more and better information on job vacancies. Time and again the argument has been made that, while unemployment remained high, jobs went begging. Undoubtedly there are job vacancies, and lots of them. Where are they? In what occupations and industries? How many? I am happy to hear that research is now being carried out by the Labor Department testing the feasibility of collecting such information and that the National Industrial Conference Board is engaged in some pilot studies.

Even when job vacancy information is available, we will not have very good answers unless we also have better profiles of our unemployed and underemployed and some system for better matching of jobseekers and jobs. In this connection I feel strongly that we need a truly national system of employment exchanges. Such a system can include both USES and private employment agencies. However, it would seem to me that at a minimum, the USES has the potential of being a national information agency on openings and those seeking jobs.

I mentioned that CED's interest (and the Nation's interest) is in high employment with price stability. You are familiar with the arguments about whether we have been having price inflation even in a period of slow growth. Those who point to inflation note the continuing rise in the cost of living index. Those who argue on the stability side point to the failure of the index to catch quality changes in a satisfactory fashion and that perhaps as much as 1 or 1½ percent rise in the index in a year might simply reflect improved quality rather than price inflation. No doubt this group is familiar with the NBER report on this subject. All I want to say is that this is one of the most pressing areas where improvement is needed for an adequate assessment of inflationary pressures and structural changes taking place in the economy. Apart from the study of the treatment of quality changes, I would urge support for the report's recommendation to establish a more comprehensive consumer price index.

In the area of wholesale prices, I am inclined to place at the top of the priorities an attempt to obtain data on actual prices paid by the buyer, not the price supplied by sellers as is currently done. We all know that sellers' price data tend to be sticky, not taking into accounts discounts, special services, bonuses, allowances, credit, and a host of other flexible terms.

Also, we need more adequate foreign trade prices. Changes in these prices affect the volume, composition, and direction of trade, and hence are not only important to the traders involved, but are critical for an understanding of changes in our balance-of-payments position. In this field we should like to see indexes for industrial groupings by SITC categories and possibly for major geographic areas important in U.S. trade.

We would also heartily support the development of more adequate price indexes in the construction field. Price work in this area has been almost as neglected as in the foreign trade area, yet total construction activity constitutes one-eighth of total GNP. I recognize this is a particularly difficult area to get adequate price statistics because of changing product and "quality" mixes, even within relatively homogeneous subclasses.

Finally, I want to record the support of our research workers for more and better price deflators for use in establishing trends in real output. These deflators are in large part (but not wholly) based on data supplied from price collecting agencies. To the extent that these agencies are able to provide improved price statistics, the deflators will benefit, such as, for example, from the development of a more comprehensive consumer price index, better construction prices, and improved prices of foreign trade. However, there are a number of important areas—particularly in the services and Government sectors—where

the price data available are either unavailable, too scanty, or poorly representative of the true price movements, and here we believe there should be a concerted effort to gain additional information.

Still in the "aggregate" area (and as indicated in our high employment, price stability, and growth field), let me mention our debt to the Federal statistics program for our understanding of growth. I doubt that there is anyone in this room unfamiliar with the contribution made by Ed Denison, our former co-worker, to an understanding of the growth process in the American economy. His work is now a standard text in the field, and any wild-eyed suggestions that we can raise our long-term growth rate to 4, 5, or 6 percent must pass the tests he has laid down. He would be the first to stress that, but for the advances made in the Federal statistical programs in the postwar period, such basic cautionary prescriptions would have been impossible.

We need to know much more than we now do about productivity changes and their causes. I have a personal view in this respect which I hope you would pardon my presenting. I am quite disturbed that such a major sector of total activity as that of the Government is measured in terms of constant productivity. We are carrying on a series of studies aimed at improving management in Government, and we know that management has been improved in many ways. We had better find some ways to measure changes in the productivity of Government activity. And I include in that category education, an area where we are on the threshold of enormous productivity improvement.

2. *Structural adjustments.*—CED has long recognized that, while an adequate aggregative policy for high employment should have top priority in a free enterprise market economy, structural changes are constantly occurring that may vitiate part of an aggregative policy. The Federal statistical program can be shown to have made many important advances in recent years in measuring structural change. Measures of industrial, occupational, and geographic changes in employment and unemployment are vastly improved over what they were, say, a decade ago. Yet much remains to be done. Let me cite a few of these in the context of some of our other policy statement work.

We are now in the final stages of a statement on economic adaptation to change. This statement is confined essentially to policies aimed at improving the adaptability of the labor force so that people all along the line can improve their productivity and find work in jobs making the fullest use of their potential. The focal point of our most recent work in this area was to find the ways and means to improve the productivity and employability of the low-income worker. One does not have to work long in this area before realizing that the basic need is for more and better education and training, especially in those segments of the population who either have suffered from past neglect or who are potentially liable to suffer a similar fate now or in the future.

Our research in this area has been hampered by lack of adequate statistical knowledge.

For example, a great deal of research effort is now concentrated on the relationship of education to income and productivity. Current research efforts in this area are greatly hampered by the past lack of attention. Much of the detail needed is dependent on decennial census material and even this is marred by incomparabilities and even total lack of past data.

We would hope and expect that even when time series are lacking, the fullest use could be made of cross-sectional data, say from the 1960 census. With the machine tabulation facilities now available, it would seem to us that there may be a mine of information made available from tabulations using cross classification of income-education-sex-age characteristics with other variables such as place, industry, and occupation of work.

We would also hope and expect that the planners of future censuses have uppermost in mind the prime importance of more and better knowledge on this vitally important subject of education and income relationships.

While we have much still to learn about returns from past and current investment in formal education, we know even less about the more informal kinds of ways of adding to the training base, particularly in on-the-job training. Several surveys have recently been made in connection with the newer Federal manpower programs but as yet we are merely starting to derive information which will place this important process in the overall perspective of a rounded national educational effort.

When one starts advocating programs aimed at improving the adaptability of our people, one is immediately faced with the question, adapting to what? We

must make sure—as we too often have not made sure in the past—that programs are not obsolete or obsolescent from the beginning. (For many years we have been on the one hand training people to be farmers while it has been almost self-evident that we should have been training farmers to take jobs where their abilities could be used to better advantage.)

This means that we should try to improve on our ability to predict occupational trends. We are all aware of the many pitfalls in an area such as this and of our past failures. I am not convinced that we should be trying to gage occupational demands 10 or 20 years from now. If this is so, it is all the more important to review our educational programs with this in mind; in other words, see that we provide a training background such that when we find our efforts leading in the wrong direction, our people will be adaptive enough to be retrainable.

I think that most reasonable persons will readily grant that education has a tremendous payoff, and that some additional resources devoted to the education process will be a wise investment. But how much is “some”? And what lines have the highest payoff? Here we have a wide field of cost-benefit analysis for which additional information is sorely needed, and to which researchers have just begun to turn their attention. There is a fairly substantial body of statistics on school costs available, but it is my belief that we have yet to approach it in systematic fashion (as, say, we did when we began to establish the national income accounts). Moreover, on the benefit side much of theorizing has been of the “surmise” variety. We must now make a serious effort at quantification and here again the Federal Government could provide leadership and financial help. I might add that studies which would provide guidance to less-developed countries, which have so little to spend on education, are sorely needed. General studies showing that more education pays off are hardly enough.

Another type of CED work on structural adjustment has concentrated on problems of distressed areas and of urban areas. Here, too, good policy is hampered by data gaps. For designating areas eligible for assistance under the Area Redevelopment Act, one of the criteria is low income. But the Area Redevelopment Administration has to rely on income figures from the population census of 1960 to designate such areas. Economic conditions have changed so much since 1960 that some of the counties eligible for assistance under this criterion undoubtedly should not now be. Other areas, however, may have suffered sufficient economic setbacks so that they should be eligible for assistance. More frequent data on income for counties, therefore, would certainly be helpful in carrying out the area redevelopment program. It would also assist many business firms in selecting locations for facilities and in their marketing programs.

Development of urban policies dealing with housing, urban renewal and redevelopment, education, land use, and transportation requires knowledge on a block-by-block basis about population, various types of land uses, and transportation patterns. Greater intensity of metropolitan land use, more transportation planning, and the availability of the computer have combined to create new demands for data on small areas. Private and public policy decisions over the next decade will involve the investment of hundreds of billions of dollars in residential, commercial, and industrial developments and in such community facilities as schools, parks, and highways. Policymakers increasingly require small area data that is timely, accurate, and understandable.

In metropolitan land use and transportation planning, for example, decision-makers need accurate data and a reliable method of relating this data to each part of the metropolitan area in a meaningful way. Certainly one of the better tools is the map. Computer technology has now produced an electronic data plotter. This machine works from tapes or punchcards and can plot any kind of information on a map provided it is accompanied by a geographic coordinate something like longitude and latitude. If all census data were coded geographically, put on tape and accompanied by standard programs for extracting or combining a variety of information, the present census data could be made vastly more useful to all metropolitan policymakers than the volumes of tracts that are presently issued.

3. *International studies.*—The United States collects a vast amount of statistical information pertaining to exports and imports, foreign investment, and other balance-of-payments transactions. This, like other major statistical programs, provides invaluable knowledge of the changing structural relationship among the nations of the world. But again our statistical base is far from satisfactory. For example, CED had to develop the first comprehensive comparison of U.S. and EEC tariff rates and trade volumes, with results that sur-

prised all of us. This study involved the reclassification of U.S. trade and tariff according to the Brussels system of classification used by the EEC and most other countries. This work needs to be kept up to date and expanded. In addition, we need greater comparability of our trade statistics with those of our own domestic production so that more meaningful comparison can be established on the relative importance of foreign trade for different parts of the economy.

There is much room for improvement in statistics on foreign transactions. Until the "errors and omission" figure in the balance-of-payments table becomes a lot smaller, we had better keep working to improve the data.

As a longtime collector and user of data, I cannot conclude without making three general suggestions for improving the usefulness of Federal statistics:

First, the role of the Bureau of the Budget as stimulator, evaluator, coordinator, watchdog, and arbitrator in this field is a vital one. Its function is to provide that minimum of central management required for a decentralized statistical program. It should have adequate funds and the highest quality of leadership at its disposal to carry out this function. It should not limit its interest merely to Federal Government programs, and it should rigorously review existing programs to detect obsolescence, as well as stimulate needed new ones.

Second, small research organizations such as ours (and all are small compared with the Federal Government's) are constantly called upon for information beyond their knowledge or competence, both for their own work and on behalf of their constituents. There is urgent need for a central agency within the Federal Government to which individual researchers and small research organizations can turn for a sophisticated rundown of available or potentially available research material and for arranging contacts with research people most knowledgeable on the subject of interest.

Finally, and directly related to the last suggestion, service to statistics users can be enormously improved by linking together the vast data collections of the Government with electronic data storage and retrieval systems. To plan the 1970 census without building in an electronic data processing system which would provide data on a fee basis to data users would be a great mistake. Only some such system can provide the special cross classification and breakdowns required in dealing with area and structural problems to which I have referred earlier.

STATEMENT OF FRED O. TOOF, AGRICULTURAL PUBLISHERS ASSOCIATION,
CHICAGO, ILL.

In reference generally to presently available Federal statistics it has occurred to us, as it has to many others who also rely heavily on Federal statistics for information or guidance, that there is a serious need for a single compendium, catalog, directory, or encyclopedia of statistical material now available from among all governmental agencies. Many of us have had the experience of accidentally turning up the existence of valuable material, sometimes long after the urgent need for it has passed. The proliferation of Federal statistics is of itself the requirement for an orderly record of them.

Such a compendium might well serve to reveal overlapping material, the lack of need for new studies, the need to fill gaps in information by new studies, and in other ways assist in an authoritative appraisal of our present resources in available published and unpublished Federal statistics. Such an inventory should be invaluable as a guide inside of Government as well as to all of us outside.

We are serious enough about this to submit that someone such as the Federal Statistics Users Conference might be given a Federal grant of \$75,000 or \$100,000 to do the research and development on this subject.

As to agriculture specifically, may we quote from a recent paper by Mr. Kermit Gordon, Director of the Bureau of the Budget, in which he said in part:

This is an area in which our current programs and attitudes are, at least in part, based upon conditions which no longer exist. In the interest of both the farmer and the Nation at large, we need to reexamine the hidden premises of our current policies and shape them anew, in closer correspondence to the facts of today's world.

It does seem clear that in this fast-changing segment of the economy reexamination of its many facets needs deeper probes at more frequent intervals. Inputs are one of the weakest areas of our knowledge: What, how much, and by whom among farmers and ranchers? Income is an extremely cloudy area. Even Director Gordon quoted some income figures which are, shall we say, subject to closer analysis in relation to available data.

If the national policy is to encourage the family farm, we need wider, deeper, more frequent probes to support this policy or even to change it, should this be indicated.

As we understand it, there is presently under somewhat favorable consideration an annual sample survey of agriculture. This, as now conceived and to be added to later, offers an opportunity for much accelerated gathering of needed information. We should like very much to give our support to this plan.

While, as farm paper publishers we are quite interested, as you know, in conveying aspects of our market to advertisers, our deeper

interest in Federal agricultural statistics is far more basic: For whom, for what kind of farmer or rancher shall we be editing our service papers 5 or 10 years from now? This is such a fundamental question that it involves governmental functions, manufacturing, and service company decisions throughout the Nation, as well as the farm publication industry.

STATEMENT OF LORETTA M. WALSH, INDUSTRIAL MARKETING RESEARCH,
KIMBERLY-CLARK CORP., NEENAH, WIS.

As both a user of Federal statistics and a supplier of data to the Government, we are vitally interested in Federal statistical programs from both viewpoints—the need for statistics and the burden of reporting.

As you may know, Kimberly-Clark is a member of the Federal Statistics Users Conference, and has been since the organization was founded in 1956. We feel that FSUC is an effective vehicle for communication among users and with producers of Federal statistics in working for an orderly and coordinated development of statistical programs.

Government agencies are also engaged in an effort to improve the usefulness of their services through inquiries to the business community concerning uses of the agency's statistics and reports. These efforts should also result in more effective statistical programs.

Rather than going into detail with respect to any particular series of data or Government program, I would like to indicate some of the general problem areas we encounter in using Federal statistics. Most of the problems are of long standing, but are becoming more complex with the growing diversity and conglomerate nature of business operations.

One problem is in the industrial classification of establishments and companies with diversified operations, and the apparent difference in a classification assigned to a company by various Government agencies. Statistics for "an industry" as compiled by different agencies, such as FTC, SEC, ICC, Departments of the Treasury, Commerce, and Labor or other agencies frequently are not comparable.

A similar type problem exists in the lack of coordinated classification and coding of products and commodities for the different census programs and among the various Government agencies.

Differences in definitions of items to be reported, and variations among reports, complicates both the reporting job and the interpretation of composite data. Efforts toward standardization of definitions, classifications, and coding among Federal agencies would tend to simplify the reporting task and provide for consistent composite information.

As more scientific methods are being used in business operations and planning, the needs for statistics are growing, but we recognize the problem of obtaining more data without adding to the reporting burden. More effective use of data already being collected by the Government, through coordinated efforts of agencies, may help to provide some of the needed statistics, as well as to free business from duplicate reporting of some information.

As a part of the total program of statistics collection, the increasing use of electronic computers would seem to offer new opportunities to simplify the task of reporting in the future. A machine-reporting program is presently being worked on by some companies in reporting to trade associations.

STATEMENT OF RALPH J. WATKINS, VICE PRESIDENT, SURVEYS & RESEARCH CORP., WASHINGTON, D.C.

In your letter of March 2 you invited my participation in the subcommittee's review of the country's statistical requirements in the light of the needs of our growing economy. The pressure of a very heavy schedule has delayed my response, apart from my acknowledgment of March 4, 1965.

At the outset I should like to express my appreciation of the leadership role which the Joint Economic Committee and its Subcommittee on Economic Statistics have played in the development and nurturing of our system of economic intelligence. I have been a close observer of that role over the past 15 years or so, and I can attest to its constructive influence.

I refer particularly to the opportunities for observation through my chairmanship of the Intensive Review Committee, 1953-54, appointed by the then Secretary of Commerce for an independent appraisal of census programs; my presidency of the American Statistical Association in 1955; my experience as one of the organizers of the Federal Statistics Users Conference and as its first chairman; and my service on advisory committees to the Bureau of the Budget, the Bureau of the Census, and the National Science Foundation. These assignments took place during my 13 years of service as director of research for Dun & Bradstreet, Inc., in New York, my 5 years as director of economic studies for the Brookings Institution, and my present position—in all of which connections I have been privileged to appear before the Joint Economic Committee or its Subcommittee on Economic Statistics.

It has been my observation that the approach to the question of statistical requirements of the Joint Economic Committee and its Subcommittee on Economic Statistics has been precisely the same as that of the organizations with which I have been associated. I would describe that approach in these words:

1. The successful functioning of the American economy is dependent on good management, both public and private; and good management must rest on accurate and prompt information on the state of the economy.

2. Economic statistics can never serve as a substitute for policy, but they do serve as indispensable guides to policy, public and private.

3. As our economy grows and becomes more complex, our statistical requirements inevitably increase and just as inevitably change in their composition. New statistical measures must be developed; old measures must be refined or altered to meet new needs or dropped as no longer needed; and new concepts must be formulated to provide measures of new phenomena or new interpretations of the old.

4. Statistical programs, public and private, are necessarily costly in time and money—both scarce resources—and in consequence it is imperative that they be conducted efficiently, at the lowest cost con-

sistent with a prudent and critical evaluation of our informational needs.

It is evident that there is no room in these criteria for statistics merely for statistics' sake; no room for duplication of effort; no room for inefficient conduct of statistical programs; and no room for the imposition of burdensome demands on respondents beyond the necessities of a civilized society.

In short, our interest is in purposive statistics, statistics that are essential to the good management of our economy and our society.

To anyone with even a slight familiarity with our system of economic intelligence, it is apparent that this system is and must be manned by highly competent practitioners, in private organizations no less than in public agencies; and that the science of statistical methodology and measurement and the art involved in its application have made great advances. Both the practitioners of increasing skill and the advancing science and art are concomitants of our dynamic society and advancing civilization.

Why do I enumerate these fundamental criteria and these elemental propositions? Precisely because I detect the reappearance of the same currents of obscurantism and anti-intellectualism that came near to wrecking our system of economic intelligence in the early 1950's.

Civilization carries a price tag, and similarly there is no way to eliminate the burden of time and cost involved in the maintenance of a system of essential economic intelligence. We can and must seek to minimize the burden on respondents and similarly the burden on those who must pay for the system, whether taxpayers, stockholders, or consumers. But however skillful our efforts, burdens of time and cost will remain.

I would not seek to deflect any congressional committee from a critical examination of statistical programs, and least of all the Joint Economic Committee and its Subcommittee on Economic Statistics. I do venture to express the hope that, in their continued role of leadership in the field of economic statistics, the committee and its subcommittee will be alert to the reappearance of these currents of obscurantism and will use their influence to counter them. Too much is at stake in the effective functioning of our economy to tolerate apathy in a situation in which eternal vigilance is required if we are to protect our system of economic intelligence.

STATEMENT OF TOM WINEMILLER, MARKET DEVELOPMENT MANAGER,
HESS & CLARK, ASHLAND, OHIO

Because my experience with Federal statistics is largely confined to those dealing with the agricultural sector of our economy, I will channel my remarks in that direction.

Agriculture, as you so well know, has undergone some tremendous changes in the recent past. It seems only prudent to expect still more dramatic changes in the future.

Unfortunately, many of these revolutions in agriculture are not adequately defined by our present agricultural statistics. This is not necessarily a criticism of our present system, but simply recognizes that large areas of "unknowns" still exist.

May I further explain?

Some land-grant colleges have estimated that in today's agribusiness it requires approximately nine of our citizens to supply the goods and services used by one producing farmer. This relationship simply illustrates the importance of the business community that supplies farmers with the "inputs" they require to farm scientifically today. It is my guess that still more skilled manpower will be required to serve each production farmer in the future.

While we tend to know a great deal about the finished products of our agricultural community—and some may take exception to that statement—we certainly know too little about the multibillion-dollar businesses that supply efficiency to farmers in the form of technical products and services. Perhaps part of the problem lies in the difficult area of defining whether securing such data properly belongs under the banner of the Department of Agriculture or the Department of Commerce.

This, I believe, represents one of the important opportunities remaining in better evaluating the industry which is in no small part responsible for the high standard of living we enjoy in this country today. Agriculture is far more than farmers on the farm. It is a whole industry of scientists, specialists, and businessmen dedicated to making every farmer a more efficient producer. We—both our Government and the private sector—should know more about this agricultural "input" industry. I hope your committee will give due consideration to this suggestion.

STATEMENT OF ROBERT WIUFF, MARKET RESEARCH CONSULTANT,
THOMAS J. LIPTON, INC., ENGLEWOOD CLIFFS, N.J.

We in the market research department at Lipton welcome the opportunity to express our thoughts regarding the economic statistics program of the Federal Government. Changes we would like to see in the program include the following:

1. The publication of monthly figures on gross national product and its components.
2. The presentation of gross national product on a regional as well as a total U.S. basis. Data on the four major census regions would be useful.
3. More detailed breakdowns of (1) the change in business inventories and (2) net exports of goods and services (as both are defined for gross national product).
4. A more frequent publication of the detailed breakdown of personal consumption expenditures found each year in the July issue of Survey of Current Business.
5. A quicker release of the final figures on gross national product. At present this data is published about 2 months following the end of a quarter.
6. The calculation of quarterly averages for series now presented only on a monthly basis, such as retail sales and industrial production.
7. The inclusion of data for the year-ago quarter in each publication. At present, for example, one must refer to two separate issues of the Survey of Current Business in order to obtain employment figures for the year-ago quarter and the current period.
8. More frequent release of population forecasts by State. Forecasts of county populations and of incomes for States and counties would also be helpful.
9. The publication of more detailed data regarding the number of families with children of a specific age. Present age groups are too broad.

In addition, information is desired on a county basis regarding—

1. The number of grocery stores in counties with less than 500 establishments. The Census of Business already provides this data on counties with 500 establishments or more. The information requested below is also desired for all counties.
 2. Number of grocery stores by type—chain versus independent.
 3. Number of grocery stores by annual retail dollar sales volume.
 4. Annual retail dollar sales of just grocery items. The definition of grocery is the one employed by Progressive Grocer magazine, which divides grocery store products into groceries, fresh meats, produce, frozen foods, dairy products, bread, and nonfoods.
- In addition to recommending the above changes, we are also anxiously awaiting the introduction of certain improvements already endorsed

by the Government. For example, at present there are two separate, noncomparable series on new construction included in Economic Indicators. Steps are now being taken to make these two series comparable. Moreover, it is understood that some means is being sought to make seasonal adjustments in the data included in Consumer Buying Indicators. I'm sure you realize that these refinements will make the data more meaningful and facilitate our analyses. Consequently, we are more than happy to cooperate with the Government in any way that will bring about such improvements. We hope that our suggestions have been helpful. Naturally, because our needs are constantly changing, it is quite possible that additional requests will be sent to you in the future.

