

Clague had an active career for many years after his retirement. Initially, he served as a consultant to Secretary Wirtz. Later, he conducted and published research studies on labor force subjects, including the all-volunteer army, older workers, and coal miners. He has continued to be active in civic affairs.

Chapter VIII.

Four Commissioners: An Economy Going by the Numbers

There were four Commissioners of Labor Statistics in the two decades following Clague's departure as a variety of circumstances produced limited terms for Arthur M. Ross, Geoffrey H. Moore, and Julius Shiskin. Janet L. Norwood was well into her second term in 1984. Whatever the length of service, the head of the Bureau faced relentless demands as public interest in the Bureau's statistics heightened with continuous inflation, rising unemployment in four recessions, and the increased use of BLS data in evaluating national economic policies and distributing public and private funds.

The economic climate and escalating uses of statistics

In 1966, the chairman of the Joint Economic Committee stated, in introducing the hearings on government price statistics, that they would cast some light on "whether or not we have inflation. . . ." The annual rate of increase in consumer prices at that time was about 2 percent.¹ By the end of 1968, there was no longer any doubt about inflation—consumer prices had risen almost 5 percent over the year.

The inflationary boom of the late 1960's was accompanied by a drop in unemployment, which fell below the 4-percent goal set in the early 1960's. In 1969, however, unemployment started to rise, and the economy began to suffer from both inflation and high levels of unem-

ployment at the same time. Moreover, labor disputes in longshoring, steel, and railroads compounded the problems.

In August 1971, when less drastic measures had failed to stem the inflation, President Nixon, having already moved to restrain excessive price and wage increases in the construction industry, imposed direct wage and price controls. During the freeze and the ensuing control period, the Bureau was called upon frequently to supply data to the stabilization agencies—the Cost of Living Council and the Pay Board.

Controls lapsed in 1974, and inflation resumed its upward course, accompanied by rising unemployment, as the oil embargo and worldwide food shortages helped push the country into the steepest recession in the postwar period. As the Council of Economic Advisers described the decade of the 1970's, "Each time inflation accelerated. . . a temporary boost in employment was achieved at the cost of a subsequent recession. Moreover, the recessions became more serious."²

In recognition of these economic conditions, Congress passed several countermeasures to stimulate the economy and enacted the Full Employment and Balanced Growth Act of 1978, which reaffirmed and enlarged on the commitment of the Employment Act of 1946. The 1978 act obligated the Government to reduce the rate of inflation while also reducing unemployment to 4 percent.³ Meanwhile, another increase in oil prices led to a third inflationary wave, which lasted into 1982 before moderating.

The economy was also undergoing a variety of structural changes during the period. Commissioner Norwood, during her years in office, highlighted these trends: The larger number of young workers and the dramatic increase in the participation of women; the continued employment expansion in the service-producing sector and in white-collar occupations; the decline in the automobile, steel, and textile industries; and the general slowdown in productivity growth.⁴

The economic and social developments added to the importance of the Bureau's work in monitoring changes in the economy. And still other uses for the Bureau's data were developing which directly affected the pocketbooks of millions of Americans. With mounting inflation, pressures increased for indexation—tying money payments to price indexes—as a means of ensuring fairness. As President Nixon stated in 1969 in reference to social security benefits, "The way to prevent future unfairness is to attach the benefit schedule to the cost of living. . . . We remove questions about future years; we do much to

remove this system from biennial politics; and we make fair treatment of beneficiaries a matter of certainty rather than a matter of hope."⁵

As early as 1962, Congress had linked Federal civil service retirement benefits to changes in the Consumer Price Index. This was followed by indexing arrangements for a growing number of Federal programs. All major retirement and disability plans came to be adjusted on the basis of the CPI, and components of the CPI were used to adjust payments for the food stamp program, the rent subsidy program, school meals, and nutrition programs for the elderly. In 1981, the Congressional Budget Office estimated that "almost a third of Federal expenditure is directly linked to the CPI or related price measures. . . . A one-percent increase in the CPI will automatically trigger nearly \$2 billion of additional Federal expenditures, at 1981 program levels."⁶

In addition, wages of millions of workers under collective bargaining agreements were linked to the CPI. Also, under 1981 legislation, Federal income tax rate brackets were scheduled for linkage to the CPI beginning in 1985.

The Bureau's data also were used in Federal wage determinations. Under acts passed in 1962 and 1970, changes in the pay levels recorded in the BLS annual survey of professional, administrative, technical, and clerical pay in the private sector entered into the Federal pay-setting process. Area wage survey data played a role in setting wage rates for Federal blue-collar workers and for employees of government contractors. The BLS measure of changes in national average wages affected some benefits under the social security program and workers' compensation payments for longshore and harbor workers. In 1980, the Minimum Wage Study Commission recommended indexing the Federal minimum wage to this BLS measure.⁷ Further, unemployment rates estimated by the States according to Bureau specifications determined the eligibility of States and local areas for funding under various Federal programs.

Additional proposals for indexation were made, although not everyone supported the automatic adjustment procedure. Its growth alarmed some policymakers and legislators, who held that indexing reinforced inflation and multiplied the problems arising from mushrooming Federal budget deficits. Whether or not indexation would continue to be adopted, the uses already established by legislation focused the public's attention on the Bureau's measures.⁸

The four Commissioners

The four Commissioners responded to the challenges facing the Bureau in different ways. Ross, a professor of labor-management relations, saw it as his mandate to shake up and modernize a staid, old-line organization, and he sought to develop more data and analysis pertinent to social policy. Moore, a foundation research economist and expert business cycle analyst, emphasized production of sound figures and their neutral, objective release. Shiskin, a civil servant with long experience in government economic and statistical activities, stressed maintenance of the integrity of the data and independence for BLS from the policy concerns of the Department. Norwood, also a career civil servant, protected and enhanced the quality and scope of the Bureau's core programs in the face of widespread budget cuts. With inflation mounting substantially and consequent controversy over the Consumer Price Index, Norwood addressed the criticisms on their technical merits, applying the findings of the Bureau's long-term study of the CPI in making revisions in the homeownership component. She stressed the impartial and independent public-service role of the Bureau in meeting these difficult problems, while giving the Bureau a more "human" face in her increased attention to data on minorities and women.

Arthur Ross, October 1965–July 1968

Arthur M. Ross succeeded Ewan Clague in October 1965. Ross had been a professor of industrial relations at the University of California at Berkeley and had served as director of its Institute of Industrial Relations from 1954 to 1963. For over 20 years, he had served on various public and private boards and commissions and as an arbitrator in several industries. Less of a bureaucrat than other Commissioners, one who had been a user rather than a producer of statistics, his philosophy was reflected in his comment that BLS products "will not simply be raw data but will be usable to labor, management, and to other customers."⁹ Personally, Ross brought a concern for the disadvantaged and a commitment to social programs, pressing for research and surveys to identify and measure problems in slum areas.

From the beginning, Ross projected a new style and direction. In remarks at his swearing-in ceremony, he outlined six principal tasks for the Bureau, including maximum service to the Department;

increased analysis and interpretation; programs matched to new trends in the economy and labor force; improved technical quality, especially with enhanced computer capability; more effective communication of BLS activities; and development of new data and analysis on social issues and policy problems.¹⁰ Supported by Secretary Wirtz in this determination to reinvigorate the Bureau, Ross used the results of extensive management surveys by the private firm of Booz-Allen and Hamilton to reorganize the Bureau's operations.

Ross' views made for a crowded agenda of activities for the program offices, ranging from new measures of poverty and related problems to a "master plan" to integrate and improve all the Bureau's price programs. The reorganization made for delay in putting the plans into practice, however, and they were not far along when, in the summer of 1968, Ross decided to return to academic life and accepted a post at the University of Michigan.

Rather than submit a new nominee in an election year, Secretary Wirtz named Deputy Commissioner Ben Burdetsky as Acting Commissioner. Burdetsky had been with the Department since 1955, and Ross had brought him into the Bureau in 1966 to manage the reorganization. Burdetsky served as Acting Commissioner until March 1969, when Geoffrey Moore was designated Commissioner.

Geoffrey Moore, March 1969–January 1973

Geoffrey H. Moore came to the Bureau from the National Bureau of Economic Research, where he had been the Vice President for Research. The immediate past president of the American Statistical Association, Moore had also lectured on economics at New York University and Columbia University.

Throughout his term, Moore worked closely with Arthur Burns and Julius Shiskin. Burns was Counselor at the White House and, later, Chairman of the Federal Reserve Board, while Shiskin was Chief Statistician of the Office of Management and Budget. Burns had been Moore's teacher at Rutgers. Shiskin and Moore had been classmates there and, afterwards, professional collaborators in the development of the Index of Leading Indicators.

Early in his tenure, Moore stated his aims for the Bureau: BLS data should be relevant, timely, accurate, and impartial. In keeping with these guidelines, Moore listed specific programs needing improvement, including local area data, public sector labor relations,

the Wholesale Price Index, occupational safety and health statistics, and construction industry series. He also called for the development of a general wage index.¹¹

Moore was able to make progress on many of these objectives during his term and, in addition, to integrate into the Bureau four programs on employment statistics that were transferred from the Manpower Administration in a governmentwide reorganization of statistical activities. But, as described later, he was faced with a succession of events during his last 2 years in office that put the Bureau and its staff in the midst of a political maelstrom.

Moore left office in January 1973, shortly before his first term was to end. President Nixon accepted his pro forma resignation, which had been requested along with those of other political appointees, including Secretary of Labor Hodgson, at the start of Nixon's second term.

With Moore's departure, Ben Burdetsky again served as Acting Commissioner. Moore returned to the National Bureau of Economic Research. While at the National Bureau, he also served as adjunct scholar at both the Hoover Institution and the American Enterprise Institute. In 1979, Moore started the Center for International Business Cycle Research at Rutgers University as part of the School of Business. In 1983, he moved the center to Columbia University as part of the Graduate School of Business. Moore has continued to write and testify on the quality of BLS data.

Julius Shiskin, July 1973–October 1978

Julius Shiskin, an economist and statistician, was appointed Commissioner in July 1973. He was already familiar with BLS operations and problems through his earlier work in the Office of Management and Budget and the Census Bureau. As head of the Office of Statistical Policy of OMB, he had sought to establish procedures for ensuring that the release of statistical data would be free of political considerations. He had also proposed the guidelines for the reorganization of government statistical activities in 1971.

At his nomination hearing, called upon for his view of the Commissioner's independence, Shiskin cited the 4-year term and promised, "I would not resign before that upon request." Later, in refusing to submit a pro forma resignation when Gerald Ford succeeded to the Presidency, Shiskin again noted the 4-year term and likened the posi-

tion to that of Federal Reserve Governors. He reminded the committee that charges of politicization had followed the replacement of Moore and pointed out that Ewan Clague had served under four Presidents without submitting a resignation.¹²

Shiskin committed himself to improving the basic data and expanding the analytical work of the Bureau while maintaining the highest professional standards. In addition, he re-emphasized traditional BLS neutrality, observing, "Policy is not a role for professional statisticians."¹³

Shiskin served under three Presidents and four Secretaries of Labor. He encountered new and difficult problems, largely as a result of the Bureau's assumption of responsibility for local area unemployment statistics. He also faced contention on concepts and methodology in the revision of the Consumer Price Index.

Shiskin followed a policy of openness and full discussion of the Bureau's data and methods. Faced with charges of inadequacies in the unemployment data, he campaigned for a national commission to conduct a comprehensive review of employment and unemployment statistics, and he appeared before the Joint Economic Committee almost every month to provide the opportunity for questions about the Bureau's latest figures. He was closely associated with the establishment and funding of the program of continuing consumer expenditure studies.

Shiskin's success in improving the data and in maintaining the credibility of the Bureau was reflected in the support for his renomination in 1977.¹⁴ With his reappointment by President Carter, Shiskin became the first Commissioner since Clague to start a second term. After a long period of illness, he died in office in October 1978.

Janet Norwood, May 1979—

Secretary Ray Marshall named Janet L. Norwood the Acting Commissioner during Shiskin's illness, and President Carter nominated her for Commissioner in March 1979. She was confirmed in May. A graduate of Douglass College of Rutgers University, Norwood received a Ph.D. at Tufts University. Subsequently, she taught at Wellesley and conducted research in international economics at Tufts.

The first woman to serve as head of the Bureau, Norwood was also the first Commissioner since Ethelbert Stewart to be appointed from the ranks. She had worked in the Bureau since 1963, primarily

in the price office, where she renewed and redeveloped the international price program and managed the consumer price program. Moore had named her Associate Deputy Commissioner for Data Analysis in 1972, and, under Shiskin, she had become, first, Deputy Commissioner for Data Analysis in 1973 and, then, in 1975, the Deputy Commissioner. The Department recognized her professional accomplishments with the Secretary's Award for Distinguished Achievement (1972), the Secretary's Special Commendation (1977), and the Philip Arnow Award (1979). In 1984, the American Society for Public Administration and the National Academy of Public Administration honored Norwood with their National Public Service Award.¹⁵

Norwood stated that her role was not to theorize or predict the future, but to provide accurate statistics that were relevant to the country's economic and social needs. She warned the Bureau against a "built-in bias against change." "We ought to be the ones who are out there letting people know of changes which we think could be considered."¹⁶

During her tenure, the economic and political climate has kept public attention focused on BLS statistics. In her first term, inflation accelerated and unemployment rose to its highest level in more than 40 years. Members of the Carter administration criticized the Bureau's method of computing the CPI, claiming that it overstated the true rate of inflation. Candidate Reagan charged the President with "jimmying" the Producer Price Index, and President Reagan, referring to the seasonal adjustment of unemployment figures, complained that the statisticians in Washington had "funny ways of counting."¹⁷

Norwood was forced to rethink program priorities as both the Carter and Reagan administrations launched drives to cut government expenditures and employment. During fiscal year 1982, the Bureau suffered a 12-percent budget cut and lost about 10 percent of its work force through attrition. Norwood protected the Bureau's core programs—those relating to major national concerns—by winnowing out programs of more limited application, some of which required substantially more funding to bring up to Bureau standards of validity and reliability.

At the same time, Norwood obtained the resources needed to proceed with long-range plans for improving the scope and quality of data on consumer prices, producer prices, employment and unem-

ployment, and wage and benefit costs. She put into effect many major recommendations of the National Commission on Employment and Unemployment Statistics. Moreover, she began work on two conceptually complicated programs—multifactor productivity measures and another comprehensive revision of the CPI. Also, under her leadership, the Bureau assumed responsibility for administering the resources for national labor market information programs.

In 1983, Norwood was reappointed by President Reagan, and the Senate confirmed her by voice vote without holding hearings. Secretary Donovan hailed the action as assuring that "the work of the Bureau will continue under the highest standards of professionalism and integrity." Facing her new term, Norwood commented, "The challenges will be even greater over the next 4 years."¹⁸

Public release of statistics

During Clague's tenure, the procedures for releasing BLS data had been changed from informal arrangements—primarily news releases and occasional press briefings at no set dates—to formal press conferences for the major Bureau series on dates scheduled in advance. Despite these new procedures, separating the release of BLS data from political considerations remained a continuing concern.

Just at the time Moore became Commissioner in 1969, Arthur Burns, as President Nixon's adviser, addressed the need to preserve the credibility of government statistics. Burns' view was reflected in a memorandum the President sent to the Office of Management and Budget within 3 weeks after taking office, stating, "The prompt release on a regular schedule of official statistics is a matter of vital importance to the proper management of both private and public affairs." In addition, it stipulated that "as a rule, new figures should be released through the statistical officer in charge."¹⁹

This program was vigorously pursued by the head of the Office of Statistical Policy of OMB, Julius Shiskin, who called for a rule, to be followed in all agencies, "that the written press release must come out at least 1 hour before any policy commentary."²⁰

The BLS press conferences for technical briefings were also considered. Moore, Burns, and Shiskin agreed that these briefings should be discontinued, since they invited questions on economic policy and outlook—matters beyond the responsibility of career service statistical

officers. Shiskin drafted a memorandum recommending discontinuance, arguing, "The confidence of the public in the integrity of the statistical agencies of the government can best be maintained if all the statistics are routinely released on schedules in advance, in the form of written press releases without press conferences." However, press officers at the White House and the Department of Labor argued that discontinuance during a period of inflation would be construed as politically motivated, and the press conferences were continued.²¹

The issue took on new dimensions beginning in late 1970, when, with the continuing rise in unemployment, the Bureau's assessment of the contribution of the General Motors strike to an increase in the unemployment rate differed from that of the administration. Then, in February 1971, at the BLS monthly press briefing, a Bureau spokesman labeled the decline in the unemployment rate—from 6.2 to 6.0 percent—as "marginally significant." Secretary Hodgson, in a press release issued simultaneously, characterized the decline as of "great significance." The next month, the Secretary's press release called a 0.2 percentage point decline in the unemployment rate "heartening" while the Bureau described the situation as "sort of mixed," since employment and hours worked were also down.

Shortly after, Secretary Hodgson announced that there would be no more monthly BLS press briefings. As Moore outlined the new procedures, the statistics would be issued in written releases, reporters could phone technicians to ask questions, and the Secretary would wait at least an hour to make his statement.²²

Moore and Shiskin, along with Hodgson, explained that these arrangements would preserve the neutrality and objectivity of the statistics and put the Bureau in conformity with the practices of other statistical agencies.²³ However, there were immediate charges of politicization, and these set off a round of congressional hearings and reports, as well as investigations by the Joint American Statistical Association/Federal Statistics Users' Conference Committee and by the Industrial Relations Research Association.

Several other events also raised the charge of politicization. In July 1971, now functioning without the press briefing, the Bureau issued the unemployment data for June. The release warned that the published figures possibly overstated the decline in unemployment because of technical problems with the seasonal adjustment factors. The warning, according to a later report of the Industrial Relations

Research Association, "evoked dismay and anger within the Administration. These reactions were duly reported in the press, and the Department of Labor was privately told of President Nixon's anger concerning the incident." Subsequently, the unemployment figures calculated with the revised seasonal adjustment factors showed a drop of half that originally reported.²⁴

Shortly after the July incident, the Office of Management and Budget issued guidelines for the reorganization of Federal statistical activities, citing the proliferation of such activities and the recent recommendations of the President's Advisory Council on Executive Organization.²⁵ In the fall of 1971, in response to the OMB directive, Moore announced several changes in the Bureau's organization and personnel. The Office of Manpower and Employment Statistics, whose chief had been the Bureau spokesman at press briefings on the employment situation, was split into two separate units. In line with the OMB guidelines, the Bureau abolished the positions of Chief Economist and Chief Statistician, and the incumbents left the Bureau. In their place, two new offices were established, each headed by a Deputy Commissioner. The Deputy Commissioner for Statistical Operations and Processing was a Bureau staff member. The Deputy Commissioner for Data Analysis was new to the Bureau, having come from the President's Commission on Federal Statistics.

Moore characterized the reorganization as an effort to improve the management of the Bureau's programs and a refinement of earlier organizational changes made by Ross. But, coming on the heels of the termination of press briefings, the changes were attacked as politically inspired. Lawrence F. O'Brien, chairman of the Democratic National Committee, alleged that the White House was attempting to stack BLS with "political appointees." *The Washington Post* editorialized, "The Nixon Administration is bringing hand-picked political appointees into the Bureau of Labor Statistics." As the *Post* noted, the reorganization appeared to many as retribution.²⁶

With the termination of the press briefings, the Joint Economic Committee began monthly hearings on the employment situation. At the first several of these, the committee heard testimony from officials of the Bureau, the Department, and the Office of Management and Budget relating to the press briefings and the reorganization. It received reports from the American Statistical Association and the Industrial Relations Research Association, and also called upon Ewan

Clague and Robert A. Gordon, who had been chairman of the President's Committee to Appraise Employment and Unemployment Statistics in the early 1960's.

The House Committee on Government Operations concluded, based on a study and hearings by a subcommittee, that the reasons given for terminating the press briefings were unpersuasive and recommended that Hodgson immediately reinstitute the briefings and "make it clear in a departmental directive that the traditional objective role of the BLS must be maintained." In "additional views," 4 of the committee's 16 Republican members supported Moore's view that the new procedures should be given an opportunity to be tested before reaching final judgment on the termination.²⁷

The Committee on Post Office and Civil Service also issued a report, following an investigation by the staff of its Subcommittee on Census and Statistics. The staff had interviewed 65 individuals interested in Federal statistics, including present and former employees of government agencies, users of Federal statistics, labor representatives, news media, and members of congressional staffs. While accepting the subcommittee finding that there was "no supportive evidence of conspiratory politicization of Federal statistics," the committee held that an incumbent administration under the decentralized statistical system could "politically influence and utilize the various statistical agencies." This warranted "constant vigil, to insure the continuation of public confidence in the reliability and validity of Federal statistics and to avoid creating a credibility gap in government information." The staff also recommended studying "the feasibility and desirability of establishing one central independent agency to . . . reduce the opportunity for an incumbent administration to exercise a partisan effect," among other reasons.²⁸

Moore welcomed the report as supporting the Bureau "on every point that had been raised." Hodgson reiterated his commitment to the "scientific independence and integrity" of the Bureau and pointed to the procedures established to protect them.²⁹

Shortly thereafter, however, Moore was involved in a political issue which was unprecedented for a BLS Commissioner. In November 1972, following his landslide reelection victory, President Nixon called on all Presidential appointees to submit their resignations. Although his term extended to March 1973, Moore, believing he had

no option, submitted his. Contrary to his expectations, it was accepted, becoming effective in January.

Moore's removal caused an immediate outcry. Senator Proxmire, pointing to the traditionally nonpolitical nature of the commissioner-ship, warned, "If the preparation of our basic statistics becomes further tainted with suspicion of political manipulation, it could lead to a serious credibility crisis." The Industrial Relations Research Association viewed the acceptance of Moore's resignation "with particular concern. . . because this termination under these circumstances represents a sharp break with the long-established tradition that this position has not been regarded as a political appointment."³⁰

The Committee on the Integrity of Federal Statistics, a joint committee of the American Statistical Association and the Federal Statistics Users' Conference, reported, "During the past 2 years, the integrity of the Federal statistical system has come into question. . . . Specific steps should be taken to allay the growing fears concerning politicization. . . and to ensure and maintain a high level of credible, professional, statistical work." Among the specific recommendations were that "heads of statistical agencies should be career professionals of demonstrated competence. . . free of political influence," and that they have direct control of their program planning, budgetary priorities, and publications.³¹

Soon after these events, the Office of Management and Budget developed further the requirements for separating the technical release process from policy and political statements through a succession of directives added to the one first issued in 1969. The rule requiring a 1-hour delay between the technical release and any policy statement, already widely in effect, was formally stipulated by OMB in April 1972, along with the requirement for written releases. In October 1974, the circulation of data before their official release (BLS data had been given in advance to the White House and several agencies) was restricted to the Chairman of the Council of Economic Advisers specifically for briefing the President; other principal advisers would be notified at the same time as the media, subject to the 1-hour rule on political comment. These provisions were continued in later revisions of the directive.³²

The procedure for clearance of Bureau releases within the Department of Labor paralleled the OMB requirements. In 1969, the Bureau was given authority for final clearance, although in the early

1970's departmental officials participated in the clearance procedure. In 1970, for example, Secretary Hodgson asked Moore to hold review meetings in the Secretary's office as a convenient way to "keep himself informed." After several months, the meetings were moved to the Commissioner's office, with the departmental group attending.³³

Then, in 1974, in a move complementing a revision of the original OMB directive, Secretary Brennan specified that data should not be "available to me or any other official of the Department of Labor outside the BLS until it is released to the press about one hour before public release." In 1981, an OMB directive specifically included the Secretary as one of the principal economic advisers to receive indicators at the same time as the press. Norwood testified in 1979, "There is no further review outside the Bureau."³⁴

The Bureau's work

Consumer prices

In 1964, under Clague, the Bureau had completed a major revision of the CPI. In 1966, Commissioner Ross presented to the Joint Economic Committee's Subcommittee on Economic Statistics a "master plan" for a comprehensive system of price indexes which included improvements in the CPI to fill gaps, update statistical techniques, and extend coverage to the entire population. In addition, the proposal provided for review—between major revisions—of such elements as outlet and reporter samples and item and specification samples, with appropriate reweighting. Furthermore, it called for experimentation with new approaches to shelter costs, substitution, new products, quality change, taxes, and annual consumer surveys.³⁵ Planning for the next CPI revision, started in 1968, reflected extensive discussion of such issues.

The issue of quality change had already been brought to Ross' attention in several controversies involving the automobile industry. The United Auto Workers, with automatic cost-of-living adjustments in their contracts, kept close watch on the CPI. In 1966, with contracts up for renewal the following year, UAW President Walter Reuther attacked the "Big Three" automakers for their use of BLS data for "unjustified price increases" and called for improvement in the BLS technique of adjusting the CPI for quality change.³⁶ In 1967, Senators Warren Magnuson and Walter Mondale also questioned the

BLS technique in their efforts to determine the cost of higher safety and pollution standards for automobiles. They also criticized the position of the manufacturers in maintaining that they could not provide Congress with cost estimates, although they had furnished them to the Bureau. The Bureau refused to give Congress details and specific figures because the industry had submitted them in confidence, but it did offer summary data. In addition, it moved to refine the quality adjustment process with a continuing research program.³⁷

Implementation of the plans for the CPI revision began under Moore. In 1970, the Office of Management and Budget directed that the Census Bureau—rather than BLS, as before—conduct the prerequisite consumer expenditure survey, hoping that this would increase efficiency since the Census Bureau was the agency specializing in the collection of data from households. In another change from previous procedures, data were collected at quarterly intervals during the year rather than in a single annual review on the assumption that consumers would be more likely to recall details of their expenditures over the shorter time span. The quarterly interviews involved about 20,000 families. A separate sample of about 20,000 families was asked to complete a 2-week diary to provide additional detail. These innovations and other factors complicated and delayed the project, and data collection was not completed until 1973—approximately 2 years later than planned. A "point-of-purchase" survey, to improve item and outlet samples by determining where people bought various goods and services, was conducted in 1974, covering some 23,000 families.

Commissioner Shiskin had to resolve several major conceptual problems before the revision of the CPI could be carried through. One concerned the population to be covered. From its inception, the CPI had been based on the expenditures of urban wage earners and salaried workers. There had been proposals, notably from the Stigler Committee, for extending coverage to the entire urban population, in view of the expanded use of the CPI as a broad economic indicator. The growing use of the CPI for indexation also pointed up the need for wider coverage.

In April 1974, Shiskin announced plans to proceed with an index representing all urban consumers and to drop the traditional index. The announcement sparked a lively controversy. The BLS Labor Research Advisory Council, while not opposing the broader index, strongly objected to the discontinuance of the traditional measure.

The Business Research Advisory Council supported the broader concept but suggested that the Bureau explore the possibility of publishing more than one index.³⁸

George Meany of the AFL-CIO criticized Shiskin's decision, maintaining, "The CPI should remain firmly grounded in the experience and needs of low- and middle-income workers. . . . We have no objection to the Bureau of Labor Statistics developing a separate index covering additional occupational categories, if funds are available." Leonard Woodcock, of the United Auto Workers, also attacked the decision and further complained of the "secretive" way in which BLS reached its determination, alleging that the labor advisory group had only been given one opportunity to discuss the question.³⁹

Senator Proxmire introduced a bill requiring BLS to produce the traditional CPI, whether it compiled other indexes or not. Citing the role of the CPI in collective bargaining, he stated, "If the BLS is allowed to dismantle the present Consumer Price Index in favor of a more broadly based index, it will create absolute chaos." Shiskin, while acknowledging the problem, responded that, after all, the unions would have 3 years to adjust agreements to the new index. Moreover, he continued, BLS would produce "a whole family of indexes" if Congress would provide the money.⁴⁰

The Subcommittee on Economic Statistics of the Council on Economic Policy supported the broader coverage and recommended that BLS compile both the broad and the traditional CPI for a period of 3 years before deciding the next step.

Shiskin then sent the Secretary a revised plan for congressional action to allow for the production of two indexes, a new Consumer Price Index for All Urban Consumers (CPI-U) and the traditional Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), both to be calculated for at least 3 years. Congress provided an increased appropriation for the additional work in the fiscal year 1976 budget.⁴¹

In 1978, the Bureau published the new CPI-U along with the traditional, though revised, CPI-W. The CPI-W was based on the buying patterns of about 40 percent of the civilian noninstitutional population; the CPI-U, on about 80 percent. The CPI-U added coverage of the self-employed; professional, managerial, and technical workers; short-term and part-time workers; and the unemployed, retirees, and others not in the labor force.

Even before the work was completed, the Office of Management and Budget sought legislation making CPI-U the index for government programs, arguing that it "is the best measure that we now have in the country in a technical sense." And later, the General Accounting Office also recommended the change. Congress did require use of the CPI-U to escalate tax rate brackets starting in 1985. However, most Federal programs and collective bargaining agreements continued to make use of the traditional CPI-W.⁴²

Another thorny problem facing Shiskin was the method of measuring homeownership costs. In the 1953 revision, the Bureau had changed from a rent-based method to an "asset" formulation based on five specific costs associated with homeownership: House prices, mortgage interest, property taxes, insurance, and maintenance and repair costs. Then, the Stigler Committee had recommended investigating the development of an index based on rental housing representative of owner-occupied homes.

The Bureau was already studying the issue of which method to use for the upcoming revision when, in the late 1970's, house prices and mortgage interest rates rose more than other market-basket costs. This focused increasing attention on the BLS method of measurement. Critics felt that the investment aspects of homeownership should be removed from the cost of shelter. Furthermore, BLS found that the data provided by the Federal Housing Administration on home prices and interest covered only 6 percent of the housing market—a small and unrepresentative sample.

In planning the revision, the Bureau explored alternatives to measure only the "flow of services" and to exclude the investment aspects of homeownership. One alternative, the so-called user-cost approach, included the prices for all five components but adjusted the result for appreciation and the cost of equity. Another approach, rental equivalence, provided for a survey of a sample of rented homes similar in type and location to owned homes, using the rental price to represent the cost of shelter.⁴³

Neither of the Bureau's research advisory groups found these proposals acceptable. As one labor adviser wrote in 1975, "To price only the 'services' is to price an abstraction which has no concrete existence and for which there are no market transaction prices." Such a procedure, the economist continued, was at variance with the character of the index and even with the treatment of other durable goods.

Specifically, she contended that the rental equivalence measure depended on faulty assumptions, since the rental market and the home-purchase market differed greatly. And the user-cost measure also rested on many theoretical assumptions.⁴⁴

During 1976, at the Commissioner's request, the Bureau's advisory groups formed a Joint Technical Group on Homeownership in the Revised CPI. The panel met four times between March and December 1976, and its spokesman reported to Shiskin: "We believe BLS has not yet found a satisfactory user-cost approach. . . . Further research on user cost should be continued." The Subcommittee on Economic Statistics also failed to reach a consensus. In April 1977, citing "widespread disagreement," Shiskin announced that BLS would continue the existing treatment while also continuing research.⁴⁵

In 1978, soon after the revised CPI was issued, the Bureau received authorization and funds for a continuing, rather than a periodic, consumer expenditure survey, a goal it had sought for 25 years. It also was able to institute a continuing point-of-purchase survey, planned to cover one-fifth of the CPI areas each year, thereby updating the entire sample of outlets for pricing within 5 years.⁴⁶

Labor advisers had expressed fears that a continuing consumer expenditure survey would be used to revise the CPI market basket too frequently, violating the concept of a fixed market basket. They argued that, out of economic necessity in periods of rapid inflation, workers would substitute products—"trade down"—and, therefore, frequent revision would "understate price increases."⁴⁷ Responding to this argument, Shiskin saw the continuing survey as having both immediate pertinence and a longer range use in deciding when a major revision of the CPI would be called for. He insisted that the data would only be used for a revision after an appropriate number of years. He also urged the continuing survey as a means of avoiding the substantial startup costs of periodic surveys. The Subcommittee on Economic Statistics of the Council on Economic Policy gave the project top priority, saying that a continuing survey would facilitate revision of the CPI, help keep weights and market baskets more current, assist in revising family budget estimates, and provide valuable data for analysis of spending patterns.⁴⁸

The resurgence of inflation in 1978—about the time Norwood became Acting Commissioner—and its acceleration in the following 2 years intensified concern about the rising costs of the indexation

process. Attention centered on the CPI, and specifically on its homeownership components. In 1979 and 1980, the Council of Economic Advisers pointed out that shelter costs, which had a substantial weight in the index, were rising faster than most other components of the CPI and questioned the Bureau's treatment of the purchase of homes and the associated costs of home financing. The Council described the Bureau's exploration of alternative treatments of this component and the failure of any of these to satisfy major users of the CPI. It suggested that using a rent index to represent the costs of using the services of a house might provide a better measure of changes in the cost of living to the average consumer, particularly in periods of sharp changes in costs of homes and home financing.⁴⁹

At hearings of the House Budget Committee's Task Force on Inflation in December 1979, government, labor, and management witnesses discussed the housing component. In her testimony, Commissioner Norwood discussed the problems of altering the index at that time. The following month, Norwood announced that, although no change would be made in the official index, the Bureau would publish five experimental measures for the CPI in the monthly release, using alternative approaches to homeownership costs. Based on the extensive staff analysis for the CPI revision, these included three flow-of-services measures—one based on rent substitution and two on outlays.⁵⁰

The treatment of homeownership continued to be debated. Some members of Congress urged President Carter to appoint a special panel of economists to study the homeownership issue. Others, especially in the Senate, suggested shifting from the CPI to some other measure as the indexing mechanism. Alfred Kahn, chairman of the Council on Wage and Price Stability, frequently attacked both the homeownership component and congressional inaction on severing the linkage between the CPI and the entitlement programs.⁵¹ President Carter's last economic report in January 1981 stated that the CPI had overstated significantly the actual rise in the cost of living because of the way it treated housing and mortgage interest costs.⁵²

The *New York Times* exhorted Carter to change the housing measure: "Since the index has been overstating inflation, it has triggered billions in excessive increases in wages and pensions. Thus the index not only measures inflation but contributes to it." Early in 1981, the General Accounting Office recommended that BLS substitute for

the homeownership component some measure of the cost of consuming housing services—either rental equivalence or nominal outlays.⁵³

Norwood testified before several congressional committees examining the effect of the CPI on Federal expenditures. During the debate, she maintained: "It is for the Congress—Congress and the administration—to determine what the purpose of the indexation should be." She noted that escalation "sometimes produces results that were not anticipated." As to the CPI itself, she pointed out that BLS had raised the housing issue during the revision process but had been unable to obtain a consensus among its advisory groups and users. Summarizing, she concluded, "Some people would like an index that doesn't go up so much, and other people would like an index that goes up more. And when they don't have that which they want, they feel there must be something wrong with the indicator itself."⁵⁴

In October 1981, Norwood announced that BLS would shift to the rental equivalence approach for the housing component. Noting that BLS had called attention to the issue over a period of 10 years, she cited immediate factors requiring implementation of the change before the next overall revision of the index. There had been changes in the financial markets affecting the availability, arrangement, and rate of mortgage money. In addition, the FHA sample caused increasingly serious estimation problems. Furthermore, the Economic Recovery Tax Act of 1981 directed use of the CPI-U to adjust income tax brackets. This, Norwood said, obliged the Bureau to produce "a CPI which reflects the experience of consumers to the fullest extent possible."⁵⁵

The change, Norwood said, would be implemented at different times in the two CPI's. It would be introduced into the CPI-U with the data for January 1983, largely because the Economic Recovery Tax Act mandated advance announcement of tax bracket changes by December 15, 1984, based on CPI-U data for the prior 2 years. For the CPI-W, widely used in collective bargaining, the shift would be delayed until January 1985 to provide time to adjust the provisions of labor-management contracts.⁵⁶

Both the change and the split timetable sparked controversy. Almost immediately, bills were introduced in Congress, one requiring continuance of the current methods for 5 years beyond the change dates and another requiring congressional approval of changes that

would cause "reduction of benefits to retirees and disability programs."⁵⁷

Business spokesmen generally supported the changes as "a welcome improvement in the accuracy of the CPI that is long overdue." The BLS Business Research Advisory Council favored the shift but recommended that the Bureau produce "one single measure at the earliest possible date." Labor union representatives, still critical of the rental equivalence approach, welcomed the 2-year grace period that allowed further study and evaluation.⁵⁸

The complete implementation of the rental equivalence approach, following full public discussion and improvement of the rental sample, was carried out on schedule and without further controversy.

In fiscal year 1984, the Bureau received funds to begin another major revision of the CPI, scheduled for completion in 1987. As planned, the CPI for January 1987 would include a new market basket and reflect data from the 1980 Census of Population; improved measures of price change, especially homeownership and rental costs; modernization of the computer system; and enhanced error measurement and quality control.⁵⁹

Standard budgets

BLS issued new standard—or family—budgets during 1967 and 1968 for a family of four and for a retired couple, using data from the 1960-61 consumer expenditure survey. Each of these budgets was calculated at three levels—a medium or moderate standard, a lower, and a higher. Federal and State governments wrote the budgets into legislation on social security, unemployment insurance, public welfare, and employment and training programs.

The Bureau, however, increasingly questioned its role in making the normative judgments underlying the series. As Moore wrote in 1969, "I do not think the BLS should set itself up as an authority on what is adequate or inadequate, what is a luxury and what is not, etc., no matter how reasonable the position may seem to us." Thus, in 1971, Moore proposed to suspend preparation of the estimates for a few years until data from the next consumer expenditure survey became available. At that time, suggested Moore, the Bureau would "expand its program of publishing and analyzing data on actual spending patterns for families of different sizes and types at different

incomes and expenditure levels and for different regions and sizes of place."⁶⁰

"Consistent and considerable pressure" forced BLS to continue issuing estimates for use in a variety of social programs. For example, Nelson A. Rockefeller, Governor of New York, wrote, "The possibility that the Bureau of Labor Statistics will discontinue periodic publication of family budget data threatens New York and many other States with the loss of a valuable, irreplaceable administrative tool." Therefore, Moore suggested that either the Office of Management and Budget or an interagency committee set the standards for which BLS could collect the prices. Later, Shiskin argued that an operating agency such as the Department of Health, Education, and Welfare should develop the standards, rather than a statistical agency. Although OMB accepted the idea, HEW refused to take the responsibility.⁶¹

Moreover, a lack of funds compounded the problem. Shiskin posed the dilemma faced in 1974: "The Bureau's professional reputation and credibility are dependent on the maintenance of data of high quality. Yet, in this case, the Bureau has no resources with which to protect the quality of this program."⁶²

In 1978, after considering a number of alternative approaches to the standards issue, the Bureau contracted for a complete review of the family budget program with the Wisconsin Institute for Research on Poverty, which then appointed the Expert Committee on Family Budget Revision. In its 1980 report, the committee, recognizing the problem confronting the Bureau, recommended four new budget standards to be defined on the basis of actual expenditures of families at different income levels, rather than the older procedure based on judgments as to the adequacy of quantities and expenditures. In 1981, however—as part of a substantial program reduction required during the fiscal 1981 budget cycle—Norwood decided to halt the production of these data for lack of the additional resources needed either to implement the recommendations of the Expert Committee or to bring the quality of the budgets up to Bureau technical standards.⁶³

Wholesale prices

In 1976, BLS started the first comprehensive revision of the Wholesale Price Index by surveying index users to determine their needs and their views of shortcomings in the measure. The Bureau had substan-

tially revamped procedures twice, in 1914 and 1952; it had instituted a major expansion and reclassification in 1967; and it had most recently reweighted the index in January 1976. But BLS wanted a "general price index" that would be more broadly based and more accurate, utilizing probability sampling.⁶⁴

Critics had pointed to inadequacies from time to time. Jules Backman and Martin Gainsbrugh, in 1966, had noted several shortcomings. Others wrote of out-of-date weights, double and triple counting, and list (rather than transaction) prices. Also, such groups as the National Association of Wholesaler Distributors pushed for a change of name to more accurately describe the data. In 1975, Albert Rees, director of the Council on Wage and Price Stability, attacked the index for presenting "totally inadequate data" and announced that Richard Ruggles of Yale would lead an examination. Ruggles issued his report in 1977, proposing a number of improvements in the program.⁶⁵

The outside recommendations for improvement in the index were taken into account in the extensive planning for the multiyear revision of the series. To set the measure on a firmer theoretical foundation, the revision plans were based on a model of a fixed-input output price index. The new system consisted of four major components: Industry output price indexes, detailed commodity price indexes, stage-of-processing price indexes, and industry input price indexes. It rested on collection of actual transaction prices, expansion of coverage, and elimination of multiple counting of price changes.⁶⁶ In 1978, to emphasize that the index was a measure of change in selling prices received by producers at the level of the first significant commercial transaction in the United States, the Bureau changed its name from Wholesale to Producer Price Index.

The Bureau continued to introduce new producer price indexes, with the goal of covering all 493 industries in the mining and manufacturing sectors. By 1983, the Producer Price Index Revision program covered 191 industries, accounting for almost 60 percent of the value of all domestic mining and manufacturing production, with over 18,000 price quotations for over 3,500 commodities. BLS used probability sampling techniques to select companies by size and location and to identify individual items and transaction terms for the firms. Estimates of sample error were also being constructed. Budget

cuts, however, postponed completion of the project as well as further developmental work on new indexes for the services sector.

Petroleum prices. On several occasions during 1973, when major petroleum exporting countries imposed an oil embargo, the New England congressional caucus complained to the Secretary of Labor of the failure of BLS to provide "adequate wholesale or retail price data" on petroleum products—even at a time of acute shortages. The Secretary initially responded by noting that BLS had been working on the problem for more than a year, contacting companies and helping them develop reporting procedures, but that response had so far been disappointing. In December, the Secretary reported that the first data would soon be published. Indeed, on December 21, with the release of CPI figures for November, BLS presented the expanded and improved gasoline component, along with monthly retail gasoline price measures.⁶⁷

But continued difficulties in developing voluntary reporting from the companies—especially on wholesale prices—at a time of shortages and embargoes encouraged those demanding mandatory reporting of energy statistics. In March 1974, the Joint Economic Committee recommended, "Unless corporations producing petroleum products provide full and immediate cooperation with the requests of the Bureau of Labor Statistics, Congress should provide BLS with authority to require submission of corporate data with appropriate safeguards to prevent competitive injury."⁶⁸

However, following considerable discussion, the Bureau's Business Research Advisory Council upheld the principle of voluntary reporting and offered to encourage increased participation. The petroleum industry representative to the Business Advisory Council on Federal Reports made a similar offer.⁶⁹

In June 1974, in presenting the Wholesale Price Index for May, the Bureau introduced improved data for refined petroleum products. Even so, the New England congressional caucus still complained of the lack of detail specific to their region. Commissioner Shiskin explained that more detail was not feasible, as BLS collected statistics from a sample and would not issue numbers that would identify reporters.⁷⁰

Export and import prices

Following World War II, BLS had started development of indexes of prices for U.S. exports and imports, but had terminated the work in 1948 due to budget cuts. Research on concept and methodology resumed in the late 1960's. The Bureau published export price indexes in 1971 and import price indexes in 1973. As of June 1982, coverage accounted for 71 percent of the value of exports and 96 percent of the value of imports. By the end of 1983, BLS had expanded coverage to 100 percent of the value of products in U.S. foreign trade—but with less detail than originally planned because of budget reductions.⁷¹

Employment and unemployment statistics

The Gordon Committee—set up in 1961 to review employment and unemployment data—had called upon the Bureau for major improvements in its statistics. During the next 20 years, recurring recessions and the legislation passed to alleviate them increased the demand for more detailed and accurate employment data. In addition, the reorganization of government statistical activities gave the Bureau added responsibilities; in 1972, it took over from the Manpower Administration the preparation and publication of local area unemployment statistics, occupational employment statistics, employment and wage data for workers covered by unemployment insurance, and data on the characteristics of the unemployed. The Bureau also expanded its analysis and publication of labor force data relating to minorities, women, and families.

In the 1980's, the Bureau worked to carry out the recommendations of another group of experts empaneled to review the government's statistics—the National Commission on Employment and Unemployment Statistics. The National Commission, headed by Sar Levitan, issued its report, *Counting The Labor Force*, in 1979, after extensive public hearings, preparation of 33 background papers, and much discussion. "By and large," the commission stated, "the most important national statistics are timely, objective, and reasonably accurate, and they have unquestionably played a crucial role in guiding policy formulation. The commission's review of existing data, however, has led it to several areas in which the information system might be improved." The commission's 90-odd recommendations covered all the Bureau's employment and unemployment statistics programs.⁷²

Secretaries of Labor Ray Marshall and Raymond Donovan, as required by the law establishing the commission, submitted reports to Congress evaluating the desirability, feasibility, and cost of each recommendation. Under Norwood, a number of major recommendations were put into effect, but others were found to be too costly or impractical, and implementation of others awaited the results of testing and the development of programs.

Current Population Survey. In January 1967, the Bureau put into effect some of the major recommendations of the Gordon Committee for the CPS. It introduced sharper definitions; a minimum age of 16, rather than 14; and a larger sample.

One element of the new definitions proved controversial. Under the new terminology, persons were classified as unemployed only if they had searched for work within the previous 4 weeks and were currently available for work. If no job search had been conducted, a person was classified as "not in the labor force" rather than unemployed.

Union economists charged that the new procedure, which had been tested in a survey of 13,000 households in September 1966, would aggravate the "existing undercount" of unemployment by excluding those who were discouraged—those who were no longer searching because they believed no work was available. They advocated increased efforts to identify and learn more about discouraged workers. Although the new definition of unemployment remained in force, the Bureau did add a series of questions to the CPS designed to collect data on discouraged workers. The results were published quarterly thereafter.⁷³

The size of the CPS sample, increased in 1967, had to be decreased in 1971, but the Bureau obtained funds to increase it substantially in 1978 and again in 1980, largely to provide the detail needed to improve State and local estimates. In 1981, the sample had to be reduced again but remained considerably higher than it was before 1980. New methods of seasonal adjustment were introduced in 1973 and refined in 1980.

In 1976, the Bureau—to allay outside criticism of the unemployment concept—began to publish in its monthly release on the employment situation an array of unemployment rates, U-1 through U-7, each based on a different definition. The U-5 rate remained the official

definition, but, as Shiskin explained, "No single way of measuring unemployment can satisfy all analytical or ideological interests."⁷⁴

As the National Commission had recommended, the Bureau added military personnel stationed in the United States to the national labor force and employment figures, although not to the State and local data, and included them in the computation of the overall unemployment rate. Further, all industry and occupational data in the CPS were classified according to a new system developed for the 1980 census. In addition, the estimation methods were revised along the lines the commission had recommended.

BLS also added monthly questions to the CPS on the school attendance of 16- to 24-year-olds, another recommendation of the commission, to learn more about their work and school choices and their labor market attachment. The commission had also recommended improving the identification of discouraged workers by collecting more specific information on recency of job search, current availability, and desire for work, but the Bureau postponed this work indefinitely because tests of the feasibility of introducing pertinent questions into the CPS questionnaire were inconclusive. Discouraged workers continued to be counted as outside the labor force and excluded from the official unemployment figure, in line with the commission's recommendation reached after much debate.

The commission had called upon BLS to prepare an annual report containing national data on economic hardship associated with low wages, unemployment, and insufficient participation in the labor force. The Bureau issued the first report, *Linking Employment Problems to Economic Status*, in January 1982, with annual reports thereafter. Congress, in the Job Training Partnership Act of 1982 (PL97-300), specifically authorized the Secretary of Labor to develop such information.

In the early 1980's, the Bureau started a major project to redesign the CPS in cooperation with other Federal sponsors of household surveys and the Census Bureau. By July 1985, an entirely new sample will have been phased in, based on materials from the 1980 census.⁷⁵

Establishment survey. The Bureau continued to expand its monthly series on employment, hours, and earnings in nonagricultural establishments. In 1965, it had covered a sample of 135,000 establishments; by 1975, the sample had grown to 160,000 and by 1983, to 190,000.

In 1979, the National Commission criticized the sample design and other basic statistical underpinnings of the establishment survey, but urged caution in making major changes that might disrupt economic series essential for current analyses and as building blocks for important indicators. Basic shortcomings noted by the commission included inadequate sample size, poor documentation, and lack of quality control measures. With the support of the Secretary, BLS established a long-range project for a full-scale modernization of the survey. Major changes would await development of an overall systematic redesign.

The commission specifically recognized the inadequacy of industry detail for the large and growing service-producing sector of the economy, and the Bureau moved to improve the sample. Cooperating State agencies responded with a buildup of coverage so that, by 1984, BLS expanded publication of industry detail in the service sector by 82 additional industries.⁷⁶

Occupational employment statistics. The Vocational Education Act of 1963 required the States to develop information on future occupational requirements for use in planning education and training programs. To help State officials, the Bureau prepared a series of occupational projections for the year 1975, published in *Tomorrow's Manpower Needs* (1969).

Also, at the urging of the Gordon Committee, the Bureau began to develop occupational statistics through industry studies. Then, in 1971, BLS mailed questionnaires to 50,000 manufacturing establishments, marking the start of the Occupational Employment Statistics survey conducted in cooperation with the Employment and Training Administration and the State employment security agencies. Between 1971 and 1981, the Bureau completed three survey cycles for manufacturing; various nonmanufacturing and service industries; and government services. By 1982, 48 State agencies had joined the effort.

Since 1980, the survey has been an important source of data for the Bureau's national industry-occupational matrix, one of its basic tools for occupational employment projections and occupational outlook studies.

Local area unemployment statistics. Among the Bureau's most intractable problems has been the inadequacy of local area unemployment

data. Before the program was turned over to the Bureau, the figures had been used primarily to identify areas of labor shortage or surplus by the Bureau of Employment Security and its successor agencies. They had been developed through a complicated series of computations—the 70-step or Handbook method—relying heavily on data derived from administrative records of the unemployment insurance system. Beginning with passage of the Comprehensive Employment and Training Act (CETA) in 1973 and later under additional legislation, these data were incorporated in the formula used for the regular and direct distribution of Federal funds to States and local areas. The Bureau, assigned technical and publication responsibility for the data, found them of questionable quality for the new purpose.

Shiskin summarized the difficulties: "These unemployment statistics have been severely criticized because they lack conceptual uniformity and consistency, are of uneven reliability, and cannot be fully reconciled with data from the national survey of employment and unemployment."⁷⁷

In 1974, BLS instituted new procedures to improve the data, including benchmarking the annual estimates to the Current Population Survey and improving the Handbook procedures to provide greater uniformity among the States in concepts and methods. States facing reduced CETA funding challenged the new procedures. New Jersey attacked the methodology, Maryland attacked the implementation, and both charged specifically that the Secretary of Labor, in instituting the changes, had violated the advance-notice requirement of the Administrative Procedures Act and had exceeded his authority.

The Bureau's statistical methods were upheld in the New Jersey case. In the Maryland case, a lower court upheld the Department position that it was not required to give advance notice in the *Federal Register* of changed methods for gathering unemployment statistics, but the decision was reversed by the U.S. Court of Appeals for the District of Columbia. In so ruling, the court found that "the development of statistics no longer serves merely informational purposes" in view of their use in allocating billions of dollars under the CETA program.⁷⁸

The Bureau continued efforts to improve the data, although it recognized the limited possibilities in view of the lack of funds. Shiskin acknowledged many shortcomings, stating in 1977, "When you get to those very small areas we're talking about, we worry about

whether we're giving any better than random numbers." He estimated that accurate State-by-State figures would require an additional annual appropriation of \$40-\$50 million—which still would not provide dependable city and county data.⁷⁹

In 1978, BLS again introduced improvements. The monthly unemployment rates for 10 States and 2 metropolitan areas were now drawn directly from the Current Population Survey. With these revisions, Congress, in reauthorizing CETA, provided that the Secretary should ensure that areas within Standard Metropolitan Areas and central cities would not lose funds as a result of changes in statistical methodology.⁸⁰ In addition, the Bureau and the States began work to standardize the underlying unemployment insurance claims data to provide greater consistency with the concept of unemployment used in the CPS.

In 1979, after reviewing the local area unemployment statistics program, the National Commission concluded, "There is no way, at reasonable cost, to produce accurate employment and unemployment statistics for thousands of areas every month." Thus, it suggested "only incremental" improvements: Expansion of the CPS, enhancement of the Handbook procedures, and congressional review of the allocation formulas.⁸¹

The very large sums of money required for a major overhaul constituted a critical obstacle. Even so, in 1982, Norwood commented, "The local unemployment statistics program is one which clearly needs more work."⁸² The Bureau continued an intensive research effort.

Job vacancy statistics. The Bureau continued its efforts to develop job vacancy statistics, although methodological and conceptual problems and budget restraints plagued the program from the beginning. In 1967, the Bureau began collection of job vacancy data in Phoenix and Oklahoma City in connection with the regular labor turnover survey. At about the same time, however, funding for the turnover program was cut in half as part of general budget reductions.⁸³

Shortly after assuming office in January 1969, President Nixon, at the urging of Arthur Burns, directed BLS to develop plans for a national system of job vacancy statistics. Building on the Bureau's earlier efforts, Commissioner Moore developed a Federal-State cooperative program of statistics on job openings and labor turnover. The

first data on job openings were published in 1970. BLS had to terminate the program in 1974, however, after the Manpower Administration withdrew its supporting funds on the basis that the data were not useful to the placement activities of the State employment security agencies.⁸⁴

In the late 1970's, Congress authorized the Bureau to plan for a survey of job openings. A pilot study demonstrated that, while a national program could be developed, the cost would be "in excess of \$25-\$30 million a year"—twice the budget for the national household survey. Then, the labor turnover program, which had been the vehicle for the pilot study, became a casualty of the 1982 budget cut, in view of its overall technical limitations, particularly its failure to cover service industries, where turnover rates were highest.⁸⁵

This checkered history reflected the difficult and controversial nature of job vacancy statistics. The Labor Research Advisory Council expressed grave reservations because of the difficulty in defining basic terms and the belief that industry would use vacancy statistics to "deflate" unemployment figures. Somewhat more supportive of the program, the Business Research Advisory Council nevertheless opposed connections with local employment offices and sought assurances that the Employment Service would not use vacancy data to direct referrals. In its report, the National Commission "found no evidence that useful job vacancy statistics can be collected in a cost-effective manner."⁸⁶

Poverty and urban problems

BLS accomplished some of its most innovative work in special surveys related to poverty and urban problems. In February 1966, the Bureau canvassed food prices in six large cities for the National Commission on Food Marketing and also for Esther Peterson of the President's Committee on Consumer Interests on the question, "Do the Poor Pay More?"⁸⁷

At about the same time, the Bureau launched a new quarterly series of data on conditions in urban poverty neighborhoods. Beginning with data from the Current Population Survey of March 1966, the Bureau compiled special tabulations of poverty tracts and compared the findings with characteristics of other city dwellers. Census had developed the classification system for the Office of Economic Opportunity, basing it on 1960 census data for cities of 250,000 popu-

lation or more and for a range of variables such as income, education, skills, housing, and family conditions.

Then, in response to a directive of Secretary Wirtz that the Bureau and the Manpower Administration "provide the information necessary for a concerted attack on individual and social problems," the agencies conducted a series of pilot projects. The Manpower Administration financed a joint BLS-Census survey of slum areas in six large cities covering the period July 1968 through June 1969, a study specifically designed for use in the President's Concentrated Employment Program of jobs and training activities. In October 1969, BLS published *Urban Employment Survey: Employment Situation in Poverty Areas of Six Cities*, following with special articles in the *Monthly Labor Review*. The Bureau conducted a second urban employment survey but, despite its desire to continue the work, was unable to reach agreement with the Manpower Administration on methodological issues and policy priorities.⁸⁸

In 1971, Moore announced that BLS would suspend production of the quarterly series on poverty areas the following year to improve accuracy by allowing for introduction of 1970 census data when they became available. The suspension was criticized by Senator Hubert Humphrey and George Meany because it would occur in a Presidential election year. Roy Wilkins, chairman of the Leadership Conference on Civil Rights, wrote the Secretary, "The BLS has enjoyed a deserved reputation for integrity. Recent developments have raised doubts. . . . The decision to abandon the ghetto unemployment data . . . reinforces these doubts and raises new questions of political interference with BLS."⁸⁹ In 1973, once data from the 1970 census had been introduced, BLS resumed publication of the quarterly data but based solely on an income definition of poverty.

Earnings statistics

Since 1947, BLS had published a series on gross and spendable average weekly earnings based on the establishment survey. Spendable earnings were derived by adjusting average gross weekly earnings of all production or nonsupervisory workers for Federal taxes and Social Security payments for a worker with no dependents and for one with three dependents. Adjusted by changes in the CPI, "real" gross and spendable earnings series were developed to indicate changes in the purchasing power of money earnings. In 1982, the spendable earnings

series was discontinued because of conceptual inadequacies. Many critics—among them former Commissioner Moore—had faulted the series as "misleading" because it rested on the unwarranted assumption that a worker with three dependents had the same weekly earnings as the average for all workers. The National Commission had recommended discontinuance, explaining, "This hybrid figure does not measure what it purports to measure."⁹⁰

Instead, the commission urged development of earnings statistics derived from the Current Population Survey. BLS then published quarterly reports of median earnings of workers and their families derived from the CPS. Some observers characterized these statistics as "soft," noting that they were based on subjective, oral responses, in contrast to the "hard" numbers derived from establishment reports. Furthermore, the CPS samples were rather small, with a substantial nonresponse rate, and the statistical variance for earnings was relatively high.⁹¹

Earnings data were also derived from the reports filed by employers covered by the unemployment insurance program. From these reports, BLS developed and published statistics on average annual pay by State and industry. The data were used by the Employment and Training Administration and State agencies to construct projections of total and taxable wages and by the Commerce Department in developing the personal income estimates in the gross national product accounts.

For a number of years, up to data for 1975, BLS also published another series on annual earnings, developed from a 1-percent random sample of the records of the Social Security Administration and the Railroad Retirement Board.

Wages, benefits, and industrial relations

In 1965, the Bureau's wage program included three principal types of surveys which produced occupational wage information: Area wage surveys, industry wage surveys, and the national survey of professional, administrative, technical, and clerical pay (the PATC or white-collar survey). Although differing in industrial, geographic, and occupational coverage, and originating for different purposes at different times, they were developed into an integrated program based on common concepts and definitions, a common set of administrative forms, and a single manual of procedures.

In the area wage survey program, statistical techniques were improved in the early 1970's. By 1982, the program included about 70 Standard Metropolitan Statistical Areas, statistically selected to represent all metropolitan areas of the United States, excluding Alaska and Hawaii.

The Bureau also conducted wage surveys in 86 areas on behalf of the Employment Standards Administration for use in administering the Service Contract Act of 1965. The act required payment of the prevailing wage by employers providing services to the Federal Government under contracts of \$2,500 or more.

For several years after World War II, BLS added detail to its area wage surveys for use by the Department of Defense and other agencies in setting wage rates for their blue-collar employees. However, in 1965, President Johnson directed the Civil Service Commission to work towards developing a uniform system for all Federal agencies. In the negotiations that followed, BLS rejected proposals that it actively participate in these surveys, noting a potential conflict of interest and violation of confidentiality, since representatives of employee unions and agency management customarily participated in the detailed planning and conduct of the surveys. Therefore, under the Coordinated Federal Wage System, established administratively in 1968 and enacted into law in 1972, BLS provides some statistical support, but local wage survey committees, consisting of management and labor representatives, conduct the studies.⁹²

Various groups have suggested that BLS become the data collection agency for both the white- and blue-collar pay systems. This was the recommendation of the Federal Job Evaluation and Pay Review Task Force in 1971. In 1979, the General Accounting Office recommended that BLS work with the Office of Personnel Management to improve the system.⁹³

Industry wage surveys, conducted in each industry on a 3- or 5-year cycle, covered about 40 manufacturing and 25 nonmanufacturing industries by 1982. Following the budget cuts for fiscal year 1982, the program was reduced to 25 manufacturing and 15 nonmanufacturing industries.

The PATC survey was made the basis for carrying out the principle of comparability of Federal and private-sector pay under legislation passed in 1962 and 1971. The Bureau acts as the data collector for the

President's Pay Agent, which sets the specifications for the survey and makes the recommendations on pay adjustment.⁹⁴

Several investigations of the Federal pay system have touched on matters relevant to the Bureau's role. In 1973, the General Accounting Office, after a review of the comparability process, emphasized the need to expand the coverage of the PATC survey and to clarify the definitions and terminology. In 1975, the President's Panel on Federal Compensation (Rockefeller Panel) called for the inclusion of data from State and local governments, a change which would require amending the Federal pay laws. Also at that time, the Council of Economic Advisers urged the separation of managerial or political interests—those of the President's Pay Agent and the Federal Employees Pay Council—from the technical side of pay comparability, with the Bureau assigned responsibility for developing a mechanism for determining the wage rates and benefits of workers doing "comparable work" to that of government employees.⁹⁵

With increases in appropriations, BLS extended the occupational coverage of the PATC survey from 72 occupational work levels in 1975 to approximately 100 such categories in 1982. However, critics still complained that the survey covered mainly large, high paying firms, and also objected to the continued exclusion of State and local government workers.⁹⁶

The review groups also had recommended that the Federal pay comparability system be expanded to include benefits. The Office of Personnel Management, in developing its Total Compensation Comparability project, called on the Bureau to gather data on benefit plans in the private sector. The Bureau conducted a pilot project in 1979 and then developed an annual survey of the incidence and characteristics of employee benefit plans in medium and large firms.

The Bureau added another type of occupational wage survey in 1970 with a program of surveys of wages and benefits of municipal government employees. The series eventually covered 50 occupations in 27 large cities before it was eliminated in the budget cuts of fiscal year 1981.

Economic policymakers had long felt the need for a current, broadly based measure of change in wage costs in the economy, comparable in scope to the consumer price and employment measures. The urgency increased with the wage-price spiral of the Vietnam era. In 1969, the Bureau asked Albert Rees of Princeton University to

make recommendations for improving its measures of wage change. While questioning whether a new series could be developed on a cost-effective basis, Rees suggested that the Bureau develop an index from the existing data on average hourly earnings in the establishment survey, adjusted to exclude overtime payments in manufacturing and employment shifts between high- and low-wage industries. He also stressed the importance of obtaining information on the changes in the earnings of government employees.⁹⁷

The Hourly Earnings Index was developed in 1971, responding to the Rees suggestion. While it represented a step forward, the index was limited to earnings of production workers, excluded supplementary benefits, did not adjust for part-time workers, and did not provide separate detail for occupational groups.

Pressure continued for the development of a broad, general wage measure to serve as an economic indicator. Shiskin explained that government officials responsible for monitoring the economy and evaluating the effectiveness of economic policies had pressed BLS to produce a measure which included benefits. Although the labor advisers questioned the proposed measure, complaining of the lack of "a well-constructed, theoretical framework," they participated in the technical development of what came to be called the Employment Cost Index.⁹⁸

The Employment Cost Index, measuring quarterly changes in wages and salaries, was first published in 1976. Designed as a fixed weight index at the occupational level, it eliminated the effects of employment shifts among occupations. Developed in stages, the ECI included benefits in 1980 and, by 1981, presented indexes by occupational group and industry division for State and local government workers as well as for the private nonfarm sector. It also provided detail by collective bargaining status, region, and area size. In October 1980, the Office of Management and Budget designated the ECI a "Primary Federal Economic Indicator."⁹⁹

The series on current changes in wages and supplementary benefits agreed to in collective bargaining continued as an indicator in this more limited but significant sector. Since 1982, BLS has followed about 1,900 bargaining situations involving actions covering 1,000 workers or more. Initially limited to wage adjustments, the series now covers changes in total compensation in agreements covering 5,000 workers or more in all industries and 1,000 workers or more in

construction. Also, beginning with 1979, BLS has published data on total compensation under negotiated agreements covering 5,000 workers or more in State and local government employment.

Bureau wage programs of long standing were eliminated during the budget tightening of 1979-82, however. The series of wage chronologies, which provided a continuous record of wage and benefit changes negotiated in about 30 major firms or associations of firms, was discontinued, along with the series on union wage rates and benefits in the building and printing trades, in local transit and trucking, and in grocery stores.

Industrial relations programs were also substantially affected. The Bureau's file of collective bargaining agreements was maintained only for contracts covering 1,000 workers or more, and, while the file continued as a basis for BLS reports on wage negotiations, in-depth studies of contract provisions were no longer conducted. The directory of unions and employee associations was discontinued, and strike statistics were reduced in coverage.

Productivity and technology

Economic conditions focused increasing attention on the productivity of U.S. industry and its workers. Concern over the consequences of technological change and foreign competition, the use of productivity improvement factors in collective bargaining agreements, and the implementation of wage-price guidelines as national economic policy gave productivity measurement heightened importance. With the slow rate of productivity increase during the 1970's, productivity measures remained in the spotlight.

To meet the demand for more information, the Bureau's ongoing work on productivity measures was expanded. The number of industries for which BLS prepared productivity indexes increased to 116 over the period, reflecting in part extended coverage in trade and services. Productivity measures for the economy as a whole and major sectors, first published on an annual basis in 1960, were introduced quarterly in 1968.

Innovative work was stimulated by the National Academy of Sciences Panel to Review Productivity Statistics, which recommended in 1979 that BLS "experiment with combining labor and other inputs into alternative measures of multifactor productivity." The General Accounting Office seconded the suggestion in a 1980 report.¹⁰⁰

In 1983, the Bureau published its first multifactor productivity indexes for major sectors of the private economy, covering the period 1948–81. These estimates measured the annual change in output per unit of combined labor and capital input. The Bureau explained that this “more inclusive measure” represented the first step in trying to quantify the contribution of a number of major factors underlying productivity change. Comparing movements of the multifactor index with those of the more familiar measure—output per hour of all persons—would indicate how much of the growth or falloff in output per hour was due to changes in the use of capital—capital productivity—and how much was due to a combination of the other factors, i.e., changes in technology, shifts in the composition of the labor force, changes in capacity utilization, and so forth.¹⁰¹

The Bureau also played a leading role in developing statistics on productivity in the Federal Government. The Joint Economic Committee initiated the project in 1970 by asking the General Accounting Office, the Office of Management and Budget, and the Civil Service Commission to establish a task force to collect information and construct indexes. BLS provided assistance and, in 1973, assumed full responsibility for collecting data and developing measures. By 1982, the program covered about 450 organizational units in almost 50 Federal departments and agencies.¹⁰²

Meanwhile, BLS continued its interest in the impact of automation and technological change. In 1966, it released an expanded and updated version of its study of 36 major industries. It followed with new studies on computers, railroads, and energy, while continuing to update the earlier work in a series of publications.

The Office of Productivity did lose one of its programs in the latter part of the period. Since 1959, the Bureau had surveyed various types of federally assisted construction to determine labor and materials requirements in order to estimate the total employment generated. Over the years, it had conducted some 28 studies, covering, for example, highways, hospitals, college housing, Federal office buildings, and sewers—extending the scope to include private housing construction. The data were used in projecting training needs and occupational outlook, shortages and surpluses in labor supply, material demands, and input-output matrixes. During the 1982 budget austerity, BLS eliminated the program, largely because of the time lag between survey

dates and publication and the extensive use of estimation and imputation.¹⁰³

Economic growth and employment projections

Since the 1960's, the Bureau had produced projections of the labor force, industry output, and employment. The Bureau prepared projections on a 2-year cycle covering five areas: Labor force, aggregate economic performance, industry final demand and total production, industry employment levels, and occupational employment by industry.¹⁰⁴

The Bureau continued to publish revised editions of the *Occupational Outlook Handbook*, a comprehensive reference volume for career guidance first produced in 1949 at the urging of the National Vocational Guidance Association and with the financial support of the Veterans Administration. In 1957, BLS had added the *Occupational Outlook Quarterly* to supplement the biennial *Handbook*.

The projections work was coordinated with the occupational outlook programs, although the functions were located in separate offices. In November 1979, the Bureau brought the work together under the umbrella of the Office of Economic Growth and Employment Projections, making for closer integration of the work on labor force, industry output, employment, and occupational projections.¹⁰⁵

Industrial safety and health

Historically, BLS had conducted frequent studies of occupational safety and health problems and had worked closely with safety and inspection groups. By 1966, it was publishing both quarterly and annual statistics on the frequency and severity of work injuries in many industries.

Passage of the Occupational Safety and Health Act of 1970 greatly altered the field of industrial safety statistics. The act directed the Secretary of Labor to issue regulations requiring covered employers to maintain accurate records of work-related deaths, injuries, and illnesses. In 1971, the Secretary delegated to BLS the responsibility for developing the underlying statistical system, in coordination with the Assistant Secretary for Occupational Safety and Health.

The Bureau moved quickly to construct a cooperative Federal-State program to gather statistics necessary under the new law, providing grants to States for planning and development. The specialized

treatment formerly accorded the collection of data on occupational injuries of longshore workers was discontinued, superseded by the more comprehensive program. By 1976, the annual survey of occupational injuries and illnesses had become the largest annual sample survey conducted by the Bureau. In the following years, BLS sought to reduce the reporting burden on employers while refining the survey. In 1982, it sampled about 280,000 establishments in 48 participating States.

The Bureau also developed procedures to provide additional information from State workers' compensation records on the characteristics of the injuries and illnesses and the workers involved. The Supplementary Data System, introduced in 1976, became fully operational in 1978, and by 1982, 34 States were participating in the cooperative program.¹⁰⁶

In addition, to help fill gaps in the knowledge of how and why on-the-job accidents occur, in 1977 the Bureau began a series of direct surveys of injured workers. Each survey in the Work Injury Report program was designed to cover a specific type of accident being studied by the Occupational Safety and Health Administration and the National Institute for Occupational Safety and Health. From 1978 on, the Bureau conducted four such studies each year, publishing, for example, *Accidents Involving Eye Injuries* and *Back Injuries Associated with Lifting*.

International activities

In the 1960's, with the growing importance of foreign trade and concern for competition in world markets, the Bureau published two studies presenting international comparisons of unit labor costs, one for the manufacturing sector as a whole and the other covering the iron and steel industry. The Bureau also participated in a joint project of the Department of Labor and the Japanese Ministry of Labor, a comparative study of wages in Japan and the United States. Janet Norwood, as Chief of the Wage and Labor Cost Section of the Office of Foreign Labor and Trade, led BLS activities for the project.¹⁰⁷

However, in 1969, BLS dismantled the Office of Foreign Labor and Trade and distributed its constituent units throughout the Bureau. Then in 1972, as a result of budget cuts and staff reductions, one of the units was abolished and the periodical *Labor Developments Abroad*, begun in 1956, was suspended. To fill the gap, the *Monthly*

Labor Review expanded its coverage of foreign labor conditions. The Office of Productivity and Technology continued the work on international comparisons of employment, earnings, and productivity.

The Bureau continued to provide training and technical assistance to developing countries. The training programs for foreign technicians were restructured in the early 1970's, when it became apparent that the developing countries no longer needed basic statistical training as much as they needed more advanced training on practical applications. At the recommendation of a 1972 task force representing the U.S. Agency for International Development and the Department of Labor, BLS instituted short-term seminars on specific topics in applied labor statistics. By the early 1980's, about a dozen seminars of 4 to 8 weeks duration were being held each year. Moreover, the BLS international training program held two seminars overseas in 1977. Since then, about 20 such seminars have been conducted throughout the world on various topics in labor statistics.

Administration

Funding

Generally, the Bureau's budget fared relatively well until Federal appropriations tightened in the 1980's. BLS appropriations increased about eightfold between 1966 and 1985, although this reflected mandated salary increases in addition to growth in programs and personnel (table 7). The number of staff positions increased by one-third over the period. In 1983, the Bureau was given full financial responsibility for the labor market information system, and an initial sum of \$20.4 million in unemployment insurance trust funds was included in the Bureau's budget for fiscal year 1984.

With the tightening of the Federal budget in the 1980's, Norwood gave priority to assuring the quality and adequacy of the Bureau programs providing major national indicators. Other programs were trimmed to accommodate to the loss of funds. In fiscal year 1982, when Congress added a cut of 4 percent to the 12 percent proposed by the administration, the Bureau considered furloughing its work force as other agencies had done, but managed to avoid that step through advance planning of new hires and replacements. With support from labor and business groups and the Joint Economic Commit-

Table 7. Funding for Bureau of Labor Statistics, 1966-85
(in thousands)

Fiscal year ended—	Total ¹	Salaries and expenses
June 30—		
1966	\$21,995	\$19,967
1967	23,519	20,588
1968	24,311	20,985
1969	27,071	21,933
1970	30,433	24,653
1971	32,644	28,096
1972	42,033	37,300
1973	48,874	44,451
1974	53,261	48,635
1975	62,324	54,422
1976	75,841	65,846
September 30—		
1977 ²	90,363	75,617
1978	93,410	84,015
1979	103,869	94,752
1980	124,395	102,890
1981	121,792	111,081
1982	120,170	113,067
1983	130,001	121,743
1984	157,740	137,340
1985	173,260	152,860

¹Through fiscal year 1984, includes the direct appropriation together with advances and transfers of Federal funds and payments from trust funds. For fiscal years 1984 and 1985, includes, in addition to the direct appropriation, the trust fund supplement of \$20.4 million transferred to BLS for management of the labor market information program. The 1985 figure does not include other advances and transfers.

²Includes funds for transition quarter.

SOURCE: The Budget of the United States Government.

tee, Congress appropriated supplemental funds to restore the initial administration levels.

Management

In 1966, Secretary Wirtz's management consultants, Booz-Allen and Hamilton, recommended that BLS become "a more integral part of the Department." Also, characterizing BLS as too compartmentalized and inflexible to meet new demands, the consultants suggested stronger central leadership for the Bureau, with a Chief Economist

responsible for products and planning and a Chief Statistician responsible for standards and techniques.¹⁰⁸ Ross accepted these recommendations and put them into effect, also separating the operations functions from the program and planning functions in the Bureau's regional offices.

Implementing another Booz-Allen recommendation, the Bureau established a central Office of Publications to help the Commissioner and the program offices plan, prepare, and disseminate public information. The Office used computer languages created by the Bureau's systems staff to generate photocomposed statistical tables, charts, and text, making the Bureau a pioneer in the photocomposed production of statistical publications from existing data bases.¹⁰⁹ Moreover, BLS now makes available major data series at the time of initial release through electronic news releases and, more comprehensively, through magnetic tape.

Indeed, the Bureau had emphasized improving its electronic information systems. Booz-Allen had stressed the need for broader and more aggressive use of electronic data processing and had recommended the centralization of all data collection and processing, which were then being conducted separately in the various program offices. BLS had installed a second-generation computer system in 1963. Under Ross, the Bureau encouraged computer language training for its professionals to promote expanded use of the computers for analysis and interpretation and worked with the Department to plan a system based on a third-generation facility.

During the early 1970's, the Office of Systems and Standards developed Table Producing Language (TPL), a system designed to select, restructure, cross-tabulate, and display data. Installations around the world have acquired this tabulating system, including commercial enterprises, State and municipal agencies, major universities, and other national statistical agencies. In fiscal year 1978, BLS initiated LABSTAT (LABor STATistics), its greatly expanded data base or general pool of statistical information which gives users direct on-line computer access to more than 150,000 time series.

Meanwhile, the Bureau had moved into time-sharing on main-frame computers at the National Institutes of Health and, later, with a commercial computer center. This boosted processing capabilities in major programs and greatly increased opportunities for analytical research, while also facilitating transmissions between BLS headquar-

ters and the field offices—without committing scarce resources to expensive and soon-outdated equipment.

Having already reorganized under Ross, the Bureau largely conformed with proposals issued by the Office of Management and Budget several years later for improving the organization of all Federal statistical activities. In 1971, when OMB called for centralized data collection and processing activities within the statistical agencies and the establishment of separate units for planning and data analysis, Moore replaced the positions of Chief Economist and Chief Statistician with two Deputy Commissioners, one in charge of data analysis and the other in charge of statistical operations. Shiskin altered the arrangement somewhat by establishing a single Deputy Commissioner in 1975.¹¹⁰

During her term, Norwood refined the BLS organizational structure. She enlarged the role of the Office of Research and Evaluation, which she expanded in 1982, reflecting increased interest in mathematical statistics and concern for improving the quality of the Bureau's data. In 1982, she also created the position of Deputy Commissioner for Administration and Internal Operations. In 1983, she announced the recombination of the two program offices dealing with employment statistics, forming the Office of Employment and Unemployment Statistics.¹¹¹

Field operations

The tremendous growth in demand for local data and the accompanying expansion of Federal-State cooperative programs enhanced the role of the Bureau's regional offices. In 1967, as part of the Department's effort to establish uniform regional organizations and boundaries, BLS changed the location of one of its regional offices from Cleveland to Kansas City. In 1968, it established new offices in Philadelphia and Dallas, for a total of eight.

The incoming Nixon administration pushed decentralization of government activities, prompting the Department to issue orders to its agencies to delegate authority to the field. In 1973, when the Bureau's regional directors were designated Assistant Regional Directors, Shiskin complained of the "apparent subordination of the Bureau staff to political appointees," namely the Department of Labor Regional Directors.¹¹² In 1975, Secretary Dunlop made a change, establishing Regional Commissioners along with Regional Solicitors and Regional

Administrators. At about the same time, Shiskin created the position of Assistant Commissioner for Field Collection and Coordination in the national office.

The regional offices now exercise several basic functions: They collect and process primary data required for the Consumer Price Index, the Producer Price Index, the Employment Cost Index, the international price program, and the occupational wage survey program. They supervise and assist cooperating State agencies in collecting labor force and occupational safety and health statistics and also assist in the preparation of area estimates of labor force, employment, and unemployment. In addition, they disseminate Bureau publications and data. The Regional Commissioners represent the Commissioner and the Bureau in the regions and advise the Department's Regional Director.

Advisory groups

The Business and Labor Research Advisory Councils, established in 1947, continued to play active roles as advisers and disseminators of the Bureau's data. Most recently, Norwood has stressed the importance of their role and her desire to see that they become more helpful to the Bureau in carrying out its mission.

Over the years, there have been proposals for extending the Bureau's formal advisory arrangements. Moore proposed setting up some means of obtaining advice from the staffs of universities and research institutes, but these were not implemented. In 1979, the final report of the National Commission on Employment and Unemployment Statistics contained a proposal for a panel "broadly representative of the data-using community." In his comments on the report, Secretary Marshall noted that BLS sought means of obtaining advice from State, county, and municipal leaders, as well as CETA prime sponsors, State employment security agencies, and others interested in State and local statistics. However, in his report on the National Commission recommendations, Secretary Donovan rejected the suggestion for a "new permanent advisory council."¹¹³