

IV. RESEARCH DATA AND INFORMATION SOURCES;  
RESEARCH METHODS AND TOOLS



Reporting System Update

The Committee to Curtail Unnecessary Reporting Burden (CURB) issued a final report in October 1978. Several of the recommendations have been and others are being implemented and a few recommendations cannot be accepted. The following list details actions taken:

1. ETA 5-39, Extended Benefits Data, and ETA 5-210, Weekly Claims Report, will not be merged. Weeks claimed for Extended Benefits have been removed from the trigger computation (MIL 1403).
2. ETA 5-63, Trade Act of 1974, has been revised and was effective in October 1979. (ETA Handbook No. 315, October 5, 1979).
3. MA-5-81, Contribution Operations, revisions have been completed but have not yet been cleared.
4. ETA 5-86, Interstate arrangement for combining Employment and Wages, was revised (MIL 1379).
5. ETA 5-159, Claims and Payment Activities, has eliminated "ethnic identity" because it is obtained on the ES-203, and eligibility review information has been added. (MIL 1391)
6. ES-200, Dependents Activity, has been discontinued. (MIL 1393)
7. MA 2-112, Net U.I. Financial Transactions, is in the process of redesign.
8. ES-203, Characteristics of the Insured Unemployed, has been approved by OMB but will be reported only for the mid-month in each quarter (February, May, August and November). Other changes include race/ethnic coding to comply with OMB and occupational coding limited to three digits. The quarterly reporting is effective immediately (telegrams were sent to the regions) while the other changes become effective with the report for May 1980. An MIL will be issued soon.
9. ETA-207, Nonmonetary Activity Report, has been revised. Reporting frequency changed from monthly to quarterly (MIL 1383)
10. ES-227, Overpayments and Willful Misrepresentation, has been revised. The report for the July-December 1980 period will be due January 15, 1981. (MIL 1401)

Outside the CURB recommendations, forms for reporting activity under the airline deregulation program are currently being designed.

INFORMATION SOURCES

The Bureau of the Census has developed a research facility, the Survey Methodology Information System (SMIS), to collect, analyze, store and retrieve published and unpublished material on survey research. Information is organized in a computerized data base containing bibliographic references, index terms and annotations. Bibliographies on survey research methodology, research briefs, and individualized references and information services are provided.

For more information about SMIS, or to obtain information services, write or call:

Survey Methodology Information System  
Statistical Research Division  
U.S. Bureau of the Census  
Washington, D.C. 20233  
Telephone: (301) 763-5350

The Unemployment Insurance Service, Division of Research Services is currently initiating plans to update and reorganize its library of research studies. The goal is to build a complete, catalogued collection of research reports relating to the unemployment insurance program for the use of UIS staff. The library will be under the management of Dolores Gray, who would appreciate receiving copies of recent State studies to add to the library. The reports should be mailed to:

Dolores Gray, Division of Research Services,  
Office of Research Legislation & Program Policies, UIS, ETA, DOL  
601 D Street, N.W., Room 7402  
Washington, D.C. 20213

COMPUTER PROGRAMS

Design of a Computer Program to Estimate UI Costs

A computer program, written in Cobol, was designed to use the techniques contained in "Methods of Estimating and Financing Unemployment Insurance Benefit Costs, Book I: Techniques for Estimating Benefit Costs", October 1966, U.S.D.L. The program will allow quick and easy estimates to be made instead of long and tedious calculations by hand.

The data record format needed is Social Security number, high quarter earnings, 2nd highest quarter earnings, base period earnings, dependency class, and plant closing factor.

Cost estimate can be made for the following items; a change in duration of benefit, a change in the high quarter earnings divisor which determines a claimant's maximum weekly benefit amount, a change in the law to incorporate or remove a dependency allowance, a change in the percent of the statewide average weekly covered wage used to compute the maximum weekly benefit amount, a change in wage credits, a change in the monetary requirements, and a case where a State may be considering having two different maximum durations and two different wage credits at the same time.

The program was developed by Ralph E. Hoksbergen, Actuary, Iowa Department of Job Service and Carol Janssen, Systems Analyst, Iowa Department of Job Service. States wishing more information should contact:

Ralph Hoksbergen  
Iowa Department of Job Service  
1000 E. Grand Avenue  
Des Moines, Iowa 50319  
Telephone: (515) 281-5401



WORKLOAD ESTIMATING MODEL

The "Model" developed by the Division of Actuarial Services is not a single model but rather a composite of a number of forecasting equations and an allocation model.

The first step in developing the workload allocation is to build forecasting equations for each of the 4 Broadband Workload items (initial claims, weeks claimed, nonmonetary determinations, and appeals) in each State. This is accomplished using a nonlinear technique known as the Box-Jenkins Methodology. The equations for the FY 80 allocation were built using monthly historical data covering the period January 1971 through December 1978 and were checked for overall fit. The equations selected in each State (one for each broadband item) were then used to develop monthly forecasts for the proper period--October 1979 through September 1981.

In the second step the forecasts are aggregated by quarter and entered into a program called the Base Level Program which determines the quarter in each State when workloads are at a minimum, the staff time required to handle the projected workload, and adjusts the forecasts so that the Office of Management and Budget (OMB) aggregate staffing target is met. The basis for adjustment is the mean squared error (MSE), which is a measure of the variation in a time series (the historical data for an item) that could not be explained by the chosen equation. The forecasted values of workload items are multiplied by the appropriate Minutes Per Unit (MPU) and divided by the minutes per staff year to determine the staff years needed in each quarter. For each State, the quarter with the lowest staff earning is picked as the base quarter, or the designated low quarter (DLQ). Each workload item in the DLQ is summed across all States and the total compared to the budgeted workload level as set by OMB.

For each item, if the DLQ sum is not equal to the budget limit, an adjustment is necessary. For each series, the adjustment is based on two factors. The first, the square root of the MSE, takes into account the expected relative accuracy of the forecasts. The second, the square root of the ratio of a State's total forecasts to the sum of all States' forecasts, distributes the adjustments according to the relative sizes of the States. The adjusted quarterly workloads for the DLQ are then multiplied by four and increased by the amount of the

State's share of estimated UCFE and UCX workloads to obtain the yearly base workload.

Forecasts provided by the States are used to check the reasonableness of the national office forecasts. Other indicators used include seasonal factors, ratio of DIQ forecasts to total forecasts, and ratio of base workload to DIQ forecasts.

This approach to workload allocation has been used for the past two years and continues to undergo refinement.