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FORECASTING OF NATIONAL INCOME IN JUNE 1947

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1. **Final forecasts**

Economic Variables	Period				
	Second Half 1947	Fiscal 1948*	Fiscal 1948**	Calendar 1948*	Calendar 1948***
Consumers' Price Index (1935-1939 base)	142.0			142.7	145.9
Unemployment (billions)	4.4	5.0	4.5	6.4	5.2
Income Payments to Individuals (billions monthly)	13.78			12.96	13.39
GNP (billions)		190.0	193.5	182.1	189.2

*Assuming no foreign aid beyond present allocations.

**Assuming one billion dollars foreign aid beyond present allocations for fiscal 1948.

***Assuming two billion dollars foreign aid byond present allocations for calendar 1948.

2. Assumptions

These forecasts were based on the use of Klein's Model III (in his _Econometrica_ paper). Equations (3.4), (3.10) and (3.11) were not needed for forecasting the quantities desired. (3.7) and (3.8) were dropped because of the absence of a free rental market. (3.12) was dropped because it has not fitted well in the postwar period. (3.16) was somewhat modified; in particular, it was assumed that there are no vacancies today.

Several variables treated by Klein as exogenous (e.g., q, q_1, T) could not be forecast without introducing additional relations. T was treated in virtually the same way as Klein did. For q and q_1, it was assumed that their ratios to p in each of the forecast periods lay between the values of the ratio in 1935-1939 and in 1946 (return to normal conditions). Those assumptions are highly arbitrary and probably false. The basic problem is that variables classified as exogenous were really endogenous, and the relations to explain them which were not fitted statistically must be replaced by crude guesswork of the above type.

Further assumptions are needed to proceed from quantities forecast by the Klein model to those actually desired. Consumers' price index was found by assuming a relation to p similar to those for q and q_1. Unemployment was found by assuming the ratio of employment to output (Klein's X) to be the same as in 1946. Total income payments to individuals is found from a formula derived similarly to that for T. The derivation of gross national product is the same as in Klein.

3. Wages and Employment Equations

To replace (3.4), Klein, subsequent to the publication of his paper, fitted equations to forecast wages and employment. Substitution

of ~~correct~~ (current) values into these equations shows very large residuals. It was suggested that Klein's use of time as a variable was insufficient to represent the changing importance of union activity, and a measure of the exogenous (political) influences on the strength of labor was proposed. It has just been discovered that there was an error in the calculation of the equations, and they are now being recomputed.

4. Plans for the Future

The forecast made here used some guesses for the data for the last few months of Fiscal 1947, as the data were then unpublished. It is planned, in cooperation with the Budget Bureau, to redo the forecast for Fiscal 1948, using the full data available.

For further work in the future, equations should be introduced for T, q and q_1, instead of leaving them exogenous. The first of these equations relates primarily to a forecast of government revenue, and may be of great interest in itself.

For still further work in the future, basic revision in the equations will probably be a necessity. This will depend on a more thoroughgoing analysis of the firm's behavior and a more comprehensive treatment of aggregation theory.