Personal consumption expenditures were estimated in purchaser values on a commodity basis for 55 categories. An average ratio of each expenditure category to aggregate disposable income was computed by relating consumption to income, relative prices, and time. Although various functional relationships were tested for goodness of fit, the regression equations used to derive all the estimates were of the general form:

$$X_i/Y=a+b_{12.34}Y+b_{13.24}Z_i+b_{14.23}T$$

where;

X_i =personal consumption expenditures in constant 1954 dollars for the i-th commodity
i=1,2,...55
Y =disposable personal income in constant 1954 dollars
Z_i =an index of relative prices for the i-th commodity
i=1,2,...55
T =time

The parameters were established by using annual values for the 13-year period 1947–59.

Even though variations in consumption expenditures may be explained by variations in current income, previous income, rate of change in income, changes in the price level, interest rates, and holdings of liquid assets, previous studies indicate that the long-run variations in consumption are highly correlated to variations in current income.[4]

[4] See for example Michael Sapir, "Review of Economic Forecasts for the Transition Period," *Studies in Income and Wealth*, vol. 11, 1949, pp. 302-317; Robert Ferber, "A Study of Aggregate Consumption Functions," Technical Paper 8, National Bureau of Economic Research, 1953; and Louis Paradiso and Mabel A. Smith, "Consumer Purchasing and Income Patterns," *Survey of Current Business*, vol. 39, No. 3 (March 1959), pp. 18-28.