
The Efficacy of Selective Credit Policies: An Alternative Test

*A Note by Michael J. Hamburger and Burton Zwick**

In a recent article in this journal Kane [4] presents a case against selective credit allocation. His argument is based on the social costs involved in implementing and enforcing such policies and on econometric evidence that suggests that the effects of credit controls on expenditure flows are, at best, short-lived. Kane's theoretical discussion stresses the ability of lenders and borrowers "to relabel debt contracts and to substitute other less efficient unregulated (even specifically devised) forms of credit for regulated ones" [4, p. 67]. The econometric evidence that he cites focuses primarily on the role of selective credit policies in influencing investment in housing, the area where most policy initiatives have been taken. However, there have also been some studies of the usefulness of credit allocation programs in affecting expenditures on consumer durable goods, and some of this evidence does not appear to support Kane's position.

The latter studies are frequently based on correlations between particular expenditure flows and the flows of credit typically used to finance those expenditures. The strong positive associations that are observed between these variables have been interpreted as evidence that selective credit policies can alter expenditure patterns [2, 7]. The problem with these analyses is that such correlations may also reflect the influence of expenditures on customary credit flows or the simultaneous response of both variables to other factors. An alternative test that is far less susceptible to this reverse or simultaneous causation interpretation follows quite naturally from a simple extension of a model of consumer durable goods expenditures developed by Mishkin [6].

The first section of this note provides a brief discussion of the Mishkin model and our proposed modification. In the second section the extended model is subjected to empirical test. The third and concluding section summarizes the results and compares them to earlier studies, including our own [3].

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1. *The Mishkin Model and Selective Credit Policies*

Mishkin's model, like many others, treats investment in durable goods as part of the consumers' overall portfolio decision process. It assumes that households seek to achieve desired stocks of durable goods, with the level of expenditures determined through the adjustment of actual to desired stocks. The distinctive feature of his approach is the inclusion of household assets and liabilities in addition to the usual relative price, income, and interest rate determinants of expenditure demand. These variables are introduced on the assumptions that the market for durable goods is imperfect and that consumers are risk averse. Imperfections in the durables market imply that attempts to negotiate large sales within short periods may prove costly. It follows that the desired stock and resulting purchases of durables should be positively related to the existing stock of financial (liquid) assets and negatively related to consumers' indebtedness.

The inclusion of household balance sheet components in the durables equation provides a means of testing the efficacy of credit allocation programs, as is discussed further below. Our reasons for incorporating these measures are slightly different from Mishkin's, however. We assume that households not only seek to achieve desired stocks of durable goods, but also seek desired levels of financial assets and liabilities. This suggests that temporary imbalances in the levels of total financial assets and liabilities will have effects similar to those in Mishkin's analysis, e.g., other things equal, a higher level of total consumer indebtedness will retard the investment in durables.

Unlike Mishkin, our concern is with the expenditure effects of selective credit policies—policies that seek to reallocate a given volume of total credit. The conditions that would seem necessary for such policies to alter expenditure patterns suggest that we may go further in specifying the derivatives with respect to the balance sheet components. If individuals finance particular expenditures with specific sources of credit (i.e., there is no substitution among liabilities), imbalances in the cumulated stocks of these liabilities will have a larger (more negative) effect on their associated expenditure than imbalances in other liabilities. To restate the argument with respect to durable goods, evidence that the expenditure effects of *installment credit, the type of credit customarily used to finance such purchases, are larger (in absolute value) than the effects of other liabilities would imply that individuals differentiate among liabilities in choosing assets and that selective credit policies influence expenditures. On the other hand, evidence of similar expenditure effects of installment credit and other liabilities would suggest that individuals choose overall liability positions in planning purchases and that selective credit policies have no real effects.*

2. *The Empirical Results*

Using data from 1954.I through 1972.IV except for quarters when there were automobile strikes, the parameter estimates reported by Mishkin for equation (23) in his paper (with *t*-statistics in parentheses) are shown in Table 1. To test for differential effects of installment credit and other liabilities on durable goods expenditures,

TABLE 1

ALTERNATIVE CONSUMER DURABLE GOODS REGRESSIONS

$$\begin{aligned}
 EXP^D &= -0.3378 + 0.2693 Y_T + (0.4295 - 0.4527 CAPC^D) Y_P \\
 &\quad (-2.45) \quad (3.89) \quad (2.40) \quad (-2.41) \\
 &\quad -0.0014 K_{-1}^D - 0.2167 DEBT + 0.0453 FIN + 0.5527 u_{-1} \\
 &\quad (-0.01)^{-1} \quad (-4.63) \quad (4.08) \\
 R^2 &= 0.9932 \quad D-W = 1.90 \quad SEE = 0.00753 \\
 EXP^D &= -0.3422 + 0.2652 Y_T + (0.4256) - 0.4228 CAPC^D Y_P \\
 &\quad (-2.37) \quad (3.68) \quad (2.27) \quad (-2.11) \\
 &\quad -0.229 K_{-1}^D - 0.2339 INST - 0.2189 (DEBT-INST) \\
 &\quad (-0.11) \quad (-4.59) \quad (-4.48) \\
 &\quad + 0.0505 FIN + 0.5538 u_{-1} \\
 &\quad (4.16) \\
 R^2 &= 0.9927 \quad D-W = 1.90 \quad SEE = 0.00788
 \end{aligned}
 \tag{23}$$

where

- EXP^D = real per capita durable goods expenditures
- Y_T = real per capita current income
- Y_P = real per capita permanent income
- $CAPC^D$ = user rental cost on consumer durable capital
- K_{-1}^D = real per capita lagged stock of durable goods
- $DEBT$ = real per capita total household liabilities
- $INST$ = real per capita household installment debt
- FIN = real per capita gross financial asset holdings of households
- U_{-1} = coefficient of u_{-1} is first-order serial correlation coefficient

Note: Both equations are estimated using Mishkin's instrumental variable technique.

total liabilities ($DEBT$) in equation (23) is replaced by installment credit ($INST$) and other household liabilities ($DEBT-INST$). The parameter estimates for this modification of equation (23) are also presented in Table 1.¹

The coefficients of installment credit and other household liabilities are quite similar to each other and to the coefficient of total household liabilities in Mishkin's original specification. All of the other coefficients are virtually unchanged. These results suggest that, although total household liabilities appear to have a strong impact on durable goods expenditures, the distribution of these liabilities between that form of credit typically used to finance durable goods expenditures and other liabilities does not. Consumers focus on overall portfolios in choosing the proportion of assets to be held in durable goods. Indeed, the decline in the adjusted R^2 when total liabilities are separated into two components means that allowing these components to have different coefficients adds less to the explanatory power of the model than it

¹Within the generalized stock adjustment model proposed above, equation (23') may be viewed as one of a set of household portfolio equations, where the desired stocks of the balance sheet components have been replaced by their determinants. To test for consistency among the parameters of the system requires estimation of the entire set of equations, as suggested by Brainard and Tobin [1]. Such estimation lies well beyond the scope of this note. Moreover, as Ladenson [5] and Smith [8] have shown, no inconsistency is involved in estimating only a subset of the model. Finally, it may be noted that the desired stocks of the balance sheet components other than durable goods may be influenced by factors not included in equation (23'). No effort is made to include these variables because of our desire to remain as close as possible to Mishkin's original specification.

costs in degrees of freedom; i.e., the difference between the coefficients of *INST* and (*DEBT-INST*) is not statistically significant. As argued in section 1, this focus on overall portfolios provides evidence that selective credit policies are unlikely to have a significant effect on the composition of real expenditures. Although in itself this result is not conclusive, additional supporting evidence is presented below.

3. *A Comparison with Other Tests*

As previously noted, the case for the efficacy of selective credit policies rests heavily on contemporaneous correlations between particular credit flows and the expenditures typically financed by those flows. However, such correlations are a very weak form of evidence. Although they may indicate effects of credit on associated expenditures, they may also reflect customary finance patterns, and hence be a poor indicator of the reaction of consumers when particular credit flows are restricted. The alternative relationship between beginning-period liability stocks (i.e., the cumulation of past credit flows) and subsequent expenditures is less subject to this type of simultaneous equations bias. It provides evidence on the adjustment of consumer expenditures to the type of balance sheet disequilibria created by credit allocation programs, and hence, bears directly on the policy issue at hand.

Despite this advantage, the present analysis has some limitations. First, it suggests that if selective credit controls are imposed consumers will seek to substitute other forms of credit for those that are restricted, but it gives no indication of whether they will be successful. (It will be recalled that this "substitution effect" is a crucial element in Kane's [4] analysis.) Some information on this issue is provided by our earlier study [3], which suggests that lenders will accommodate borrowers in their efforts to avoid the expenditure effects of credit restraints. Second, the effects of actually imposing consumer (i.e., installment) credit controls are not tested. Since such controls have not been employed in the United States in the last twenty-five years, it would seem difficult to devise such a test using recent data. However, the present results, which imply little or no expenditure impact, are fully consistent with our previous test of the effectiveness of the controls that were imposed during the late 1940s and early fifties (see [3]).

We conclude that our two analyses, which are based on different sample periods, different expenditure models, and different empirical methodologies, are reinforcing. Taken together, they support Kane's [4] position and cast doubt on previous tests, which suggest that credit allocation schemes could play a role in altering the composition of consumer expenditures.

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