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Challenge

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years.

Tinbergen also anticipated the work of distinguished colleagues in the theory of economic growth. Dr. Dale Jorgenson recently called to the attention of the Third World Congress of the Econometrics Society a paper by Tinbergen, originally published in German and then republished in Dutch in the *Selected Papers*, which clearly predates the work of Harrod and Domar, Trevor Swan and Robert Solow, and J. E. Meade.

At present, Tinbergen is devoting the major part of his time to work on income distribution. He is also the guiding spirit behind a program for world economic development sponsored by the Club of Rome. His committee of twenty experts from both industrialized and developing countries will issue a report in 1976, which is expected to cover not only development problems, but questions of food, trade, and world peace.

Jan Tinbergen is an unassuming man, who does not trumpet his achievements to the world. He almost never criticizes colleagues. He could earn substantial personal income with his talents, but instead he has chosen to devote himself to the service of others. He does not drive a car, but takes a bus or tram to work. He has been known to thank his undergraduate students for selecting his courses. He has studied many languages, mainly in order to communicate better with those he has worked with in many parts of the world. (He learned Norwegian, for example, in order to have full access to the work of Ragnar Frisch.) He is fond of drawing. He believes in human dignity. And he lives by that belief.

WILLY SELLEKAERTS

The writer is Associate Professor of Finance, The Wharton School, University of Pennsylvania, and editor of the three-volume *Essays in Honour of Jan Tinbergen*, published by International Arts and Sciences Press in 1974.

ECONOMIC AFFAIRS

Housing and Financial Policy

Allan H. Meltzer

Repeatedly, attempts have been made to increase the supply of housing, or to reduce the amplitude of fluctuations in housing starts, by increasing the amount of mortgage credit. These attempts have largely failed. Failure has not, however, led to the abandonment of the policies. As is too often the case with government programs, failure has produced demands for more of the same. As long as the relation between housing and housing finance is misinterpreted, there will be a wide gap between intention and results.

Government policy is based on the presumption that increases in the supply of mortgage credit necessarily increase the supply of housing. Interest rate controls on small savings accounts under the Federal Reserve's Regulation Q are defended as a means of assisting thrift institutions to compete with other lenders. Government-sponsored credit agencies like the Federal Home Loan Banks borrow in the money and capital markets to lend in the mortgage market. All of these actions are remote from housing, however. After re-

viewing most studies of the effects of Regulation Q and the federal credit agencies, I am not certain that they have any influence at all on the supply of housing.

The main reason is that allowance must be made for withdrawals from banks and savings institutions to purchase the additional securities issued by the government credit agencies and to buy other financial assets or consumer goods. After such adjustments, the net effect on the stock of mortgages outstanding is small, and may even be zero. But even if the stock of mortgages is increased by the government's policies, it does not follow that the housing stock will be increased. Home mortgages finance a wide range of financial and real assets, not just housing.

Standard price theory teaches us that a consumer's decision to acquire real assets depends on a cost comparison between the real services provided by a particular asset and the services rendered by alternative assets. The relative costs of alternative means of financing enter into the consumer's decision about the fi-

ALLAN H. MELTZER is Maurice Falk Professor of Economics and Social Science at Carnegie-Mellon University, Pittsburgh.

nancing of *all* assets; making one type of credit more "available" than another changes relative supplies of credit but has no effect on the consumption of real services. In short, the particular forms in which credit is made available do not enter into the decision to consume more housing services.

Since housing is a long-term durable asset, fluctuations in market interest rates do, according to price theory, affect the timing of purchases. Changes in market interest rates, relative to past or anticipated rates, encourage buyers to postpone or accelerate purchases. Fluctuations in rates permit purchasers to achieve their desired, long-term flow of real services at substantially lower cost by purchasing when mortgage rates are relatively low and deferring purchases when rates are high. From this perspective, housing cycles are largely a consequence of individual decisions to postpone or accelerate purchases taken in response to relative prices. Mortgage borrowing declines or increases because housing purchases decline or increase, and not the other way around.

The Keynesian interpretation

The standard textbook Keynesian view of the world provides a very different interpretation of these relationships. The composition of credit determines the relative costs of various forms of borrowing and borrowing costs are supposed to determine both the composition and the level of real expenditures. In this interpretation, rising interest rates are said to increase the cost and reduce the availability of mortgage credit, and thus to reduce housing demand—and, by implication, housing starts. Increase the amount of mortgage credit and housing increases.

It is only a few steps from this Keynesian interpretation to the policies of controlling interest rates and

imposing controls on the allocation of credit. But if the Keynesian interpretation is wrong, the main effects of the controls are to increase bureaucracy, reduce efficiency, and restrict economic freedom. Housing policy itself provides a test of the merits of the two alternative theories, since it is largely based on the Keynesian conception.

The long-term evidence

Mortgage contracts, the functioning of the mortgage market and the role of government in the mortgage market have changed considerably during this century. Mortgage insurance, amortization, monthly payments, and longer terms are now common. Partly as a result of the changes in the mortgage contract, the proportion of mortgage debt in the total liabilities of the public has increased. More than 60 percent of the outstanding debt of nonfarm households in the 1960s consisted of mortgages on residential property. Particularly in the later years, there was a large increase in the amount of government assistance to the mortgage market. From 1952 to 1973, the stock of mortgages owned by government agencies increased from \$4 million to \$55 billion, with more than half the increase occurring in the last five years.

Yet there has been no corresponding increase in nonfarm housing relative to total assets, at least for those dates on which measurements have been made. The proportion remained about 25 percent in 1912, in 1933, and in 1958. Indeed, the share of total output allocated to housing has fallen. From 1952 to 1956, production of residential housing was never less than 5 percent of GNP; after 1959, production of residential housing never reached 5 percent of GNP.

The evidence, therefore, gives no support to the Keynesian view that very large increases in mortgage

credit and changes in the availability or terms of mortgage contracts have any long-term effect on housing. The main long-term effect has been to substitute borrowed funds for owner's equity in housing. Despite the imprecision of our measurements, there is little doubt that as mortgage debt has risen, the proportion of owner equity in housing has fallen. From 1912 to 1970, mortgage debt as a percentage of the value of nonfarm housing just about trebled, with most of the increase occurring in the 1960s and 1970s, the period of rising government assistance to the mortgage market.

To a student of price theory, none of this is very surprising, since he is aware that specific liabilities do not finance specific assets. With mortgage insurance reducing default losses, for example, lenders are willing to supply more credit per dwelling and the loan-to-value ratio rises. The owner's equity previously invested in housing becomes available for investment elsewhere. Since this is, in fact, what investors have done, the long-term evidence leads us to accept standard price theory and reject the explanation of textbook Keynesianism.

Housing cycles and housing policy

The long-term data are consistent with two very different conclusions about short-term housing cycles, however. Either there is no short-term effect at all or homebuilding activity rises with increased availability of mortgages but later declines.

Examination of the evidence from most recent studies suggests that there may be a small effect for a few quarters. Annual data show no effect of mortgage policy on the annual volume of housing starts. The positive effect on housing starts of an increase in the availability of mortgage credit is offset by the reduction in

Comparison of Three Periods of Declining Housing Starts

Period (1)	Length of decline (months) (2)	Size of the decline (%) (3)	Change in mortgage debt of U.S. agencies*		Change in home loan bank advance		Change in FHA mortgage rates (%) (8)	Change in interest rate spread FHA-10 yr. govt. bonds (9)
			Current dollars (billion) (4)	Constant dollars† (5)	Current dollars (billion) (6)	Constant dollars† (7)		
I. January 1966 to April 1967	16	-21%	+\$4.0	+\$4.0	-\$1.2	-\$1.2	13%	+67
II. July 1969 to June 1970	12	-20	6.6	4.0	+3.2	+2.8	14	-27
III. June 1973 to April 1974	11‡	-30	9.5	6.5	+4.9	+3.3	20	+67

*Annual Report of the Council of Economic Advisers, February 1974, p. 322.

†Deflated by index of prices of residential structures, 1966-67 = 100.

‡April 1974 is the last month included. Decline continues. (April 1974 was the last month available when this paper was prepared.)

housing starts caused by the additional government debt issued to finance the government's mortgage purchases. The government's purchase of mortgages in the secondary market lowers mortgage rates; the sale of debt to finance the purchase raises market rates and mortgage rates, offsetting the effect of the purchase. The net effect becomes approximately zero.

Annual data may hide some short-term changes. Four of the main econometric studies of quarterly housing starts suggest that mortgage market operations have very little effect on mortgage rates. The same studies show that changes in mortgage terms and conditions do not seem to have any significant effect on housing. The main findings of these studies are that loans from the Federal Home Loan Banks to the member savings and loan associations do increase the amount of mortgages offered, but that the change in the value of outstanding mortgages is less than the amount of the Federal loans. The effect on housing is thus small enough to ignore.

The three most recent periods of declining housing starts provide another test of mortgage policy. I have delineated these periods by computing the annual change in housing starts between the corresponding months of successive years—January to January, February to February, etc. I dated the start of the decline at the beginning of a sustained fall in starts and the end of the decline at the first positive sign. The dating for each period is shown in the accompanying table.

Compare the three declines. Judged by the decline in housing starts, the first two periods are about equally severe. The percentage increase in mortgage rates is about equal also. The third decline is 50 percent more severe and the increase in mortgage rates is about 50 percent greater. Data for the three periods would be reconciled if each 1 percent increase in interest rates (say, from 8 percent to 8.08 percent) encouraged buyers to postpone purchases and reduced the demand for housing and the number of housing starts by 1.5 percent. If there are offsetting ef-

fects on housing for factors other than interest rates, the effect of postponement in response to higher rates of interest dominates the observed changes and reconciles the data from the three cycles.

Columns (4) to (7) show the amount of "support" for the mortgage market and mortgage lenders by agencies of the federal government. Columns (4) and (6) are the amounts the agencies had to borrow in the credit markets to sustain their lending operations. These data are money values, so they rise or fall with the price level. Housing starts are a real value—the number of houses put into production. Columns (5) and (7) are deflated to eliminate the effect of increased housing prices. The total amount of government operations in the mortgage market, measured in constant dollars, is the sum of columns (5) and (7). This sum has no clear relation to the decline in housing starts, column (3).

As column (9) indicates, there is no evidence that mortgage rates have been reduced relative to other rates. In one cycle, the spread between the

mortgage rate and the rate on government bonds narrowed. If we interpret this finding as evidence of the effect of government operations in the mortgage and credit markets, how do we explain the contrary findings for the remaining periods, 1966-67 and 1973-74? In both of those later periods, mortgage rates increased relative to rates on government bonds. The same thing happened in 1957-58 and in 1959-60, before government operations in the mortgage market reached their present scale.

The results I have cited summarize only a small part of the available evidence. Experience in a number of European countries is similar to our own. Like us, the Europeans have adopted a variety of policies that are supposed to encourage housing by increasing the supply of mortgage credit or by changing the terms and conditions under which mortgages become available. There is little evidence showing any substantial effect on housing.

Negligible benefits and heavy costs

The sizable increase in the amount of government agency debt sold to finance mortgage operations appears to have no long-term effect and little, if any, short-term effect on housing. While the benefits of the policy appear to be small, the costs are not negligible. The sale of debt to finance mortgage policy substitutes government debt for private securities in portfolios. Individuals borrow more in the form of mortgages and less in other forms. The government and its agencies dominate the capital markets. The efficiency of the credit market is reduced. In attempting to prevent a rise in interest rates, the Federal Reserve expands the money supply and increases inflation.

Like most other forms of government intervention in markets, one

type of intervention begets another. The failure of mortgage policy to reduce fluctuations in housing does not bring the policy to an end. Those who propose the policy do not admit that their theory is incorrect or that their policies are misguided. They ask, instead, for additional controls and new restrictions on free exchange in open markets. We lose both economic freedom and efficiency.

Recently, there has been a rising demand for controls on the allocation of credit. A growing number of voices ask that financial institutions be forced to allocate a larger share of total credit to the uses that bureaucrats or journalists think are important, and a smaller share to the uses the public chooses by its daily decisions in the marketplace.

There is no way in which regula-

tors can control both the quantities of particular types of credit and the price or interest rate at which loans are made. Costs of borrowing in the form that the regulators favor (for example, mortgages) will decline relative to the costs of borrowing by offering the types of loans or bonds that are in disfavor. There will be an increasing incentive to borrow on mortgages, and to relend in other markets at higher interest rates. The incentive to borrow abroad and relend at home also increases, and for the same reasons. Controls on the allocation of credit impose costs on private borrowers and lenders who must seek new ways to achieve their desired ends. Ultimately, the policy will fail for the same reason past mortgage market policy has largely failed: namely, that the policy is misconceived.

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