

Residential Building as a Leading Sector

By Lauchlin Currie

I propose to discuss residential building strictly from the point of view of macroeconomics. What role does it play in contributing to the course of business in general or to the rate of growth in the GNP? Could it be made to play a more important role? It is an aspect of building that has, I think, been neglected in both academic and building circles. Although my main interest lies in furthering the rate of economic growth in less developed countries, the data I shall draw on are mostly those of the United States for which the statistics are so much more abundant and reliable. As long as countries are

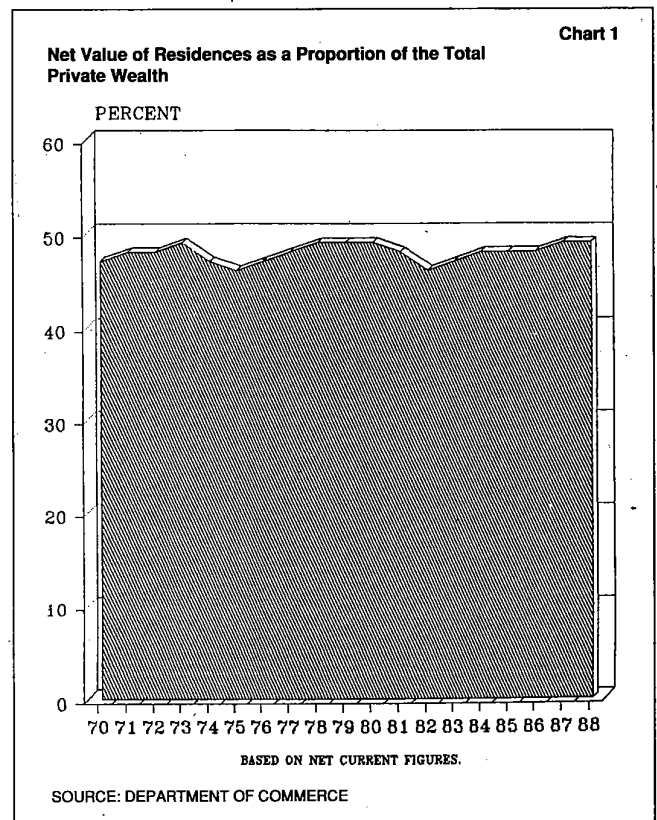
This article was presented initially at the Third International Shelter Conference held in Washington DC in April 1990. Even with the widespread adoption of the UN's Global Shelter Strategy throughout the developing world, the role of shelter sector investment in the process of economic development in general is still not widely known or accepted. We therefore republish Professor Lauchlin Currie's article to reach a much wider audience in the hope that some key links between the housing sector and the economy at large can be clearly established. Dr. Lauchlin Currie is Professor of Economics at the University of de Los Andes, Bogota Colombia.

developing, they follow in general the pattern set earlier by the more developed countries so it is permissible to use the data of the latter as of general applicability.

The main hypothesis I shall develop is that there are some types of expenditures that are more volatile, or more independent of the general trend of business, than are others. Insofar as they may be influenced to move independently of the general trend, they may offer an opportunity to influence the course of activity, either to reactivate a depressed economy or to raise the level of growth.

I have called such sectors Leading Sectors and their conscious manipulation as a use of the Leading Sector Strategy. But, if one prefers, one could distinguish between sectors where spending is depend-

ent on, or independent of, the general trend of activity. The term "leading" refers to timing, not to importance or size. On occasion bonanzas of various kinds, such as petroleum, have played a leading role. The most common leading sector, however, can be found in exports. I shall argue



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that business capital expenditures, to which most attention has been paid, behave in a following or dependent manner rather than in leading activity. For growth, business capital expenditures are highly important, but they are difficult to influence directly.

Most expenditures are stable with a secular upward trend in real terms. They include the bulk of consumer expenditures on what we might call software—food, clothing and so forth—and services. Such expenditures, though the largest, fall in the classification of following or dependent sectors as they are heavily dependent on and follow incomes.

In the macroeconomic texts explaining growth and variations in growth attention has been concentrated on the trade balance, on the fiscal balance and on the large category of investment. Although in formal definitions the word "investment" includes residences in construction, in practice writers tend to think of investment mostly in terms of business expenditures on structures and producers goods—things that are used in producing other things—and perhaps for this reason are thought to be more "productive." Housing, while a part of the capital of a community, is also classified as a durable consumer good.

Some Characteristics of Housing

In housing we are dealing with a large portion of the private wealth of all countries. In the United States, according to official figures, it amounts to nearly half the private wealth and the proportion has remained remarkably constant over the past quarter of a century (Chart 1).¹ In addition, housing expenditures give rise to expenditures on public services, shops and community buildings. Moreover a house is an empty shell without its extensive home furnishings. So in dealing with housing we are at the same time dealing with a large portion of the privately owned wealth or capital of a country.

The magnitude of current gross expenditures in the construction of new houses is large enough to form a significant proportion of total private investment averaging 49.6 percent (Chart 2) for the decade 1978-88.

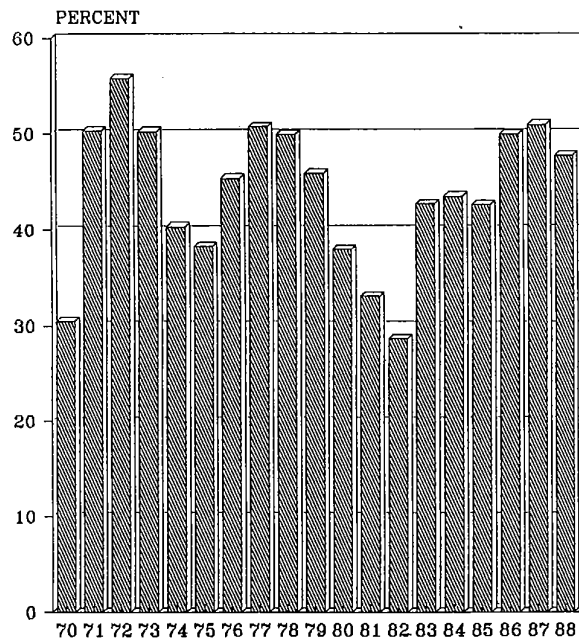
Of perhaps even greater significance for my present purpose is the magnitude of changes in housing expenditures in comparison, let us say, with changes in business investment. For example, in terms of annual rates in current dollars, residential building expenditures rose to US\$ 53 billions in the critical turning period from recession to reactivation from the second quarter of 1982 to the second quarter of 1983 while business investment in structures and equipment fell by \$12 billion. New private housing starts, seasonally adjusted, soared from an annual rate of 800,000 in November 1991 to 2,208,000 in February 1984 or nearly threefold in about two years.

Determinants of New Housing Expenditures

I turn now to an aspect of the demand for housing that helps to explain why residential building has such macroeconomic significance.

Residential Investment in Relation to Business Capital Expenditure

Chart 2



BASED ON CURRENT FIGURES.

SOURCE: NIPA, DEPARTMENT OF COMMERCE

The magnitude of the stock of housing and the smallness of new construction in relation to that stock gives rise to a peculiar circumstance. A relatively small increase in the effective demand for housing in general can give rise to a large percentage rise in the volume of spending on new housing, and such movements in spending can be, in turn, large in relation to changes in total business capital expenditures. Let me develop this point a little further. An increase in demand that is concentrated on the existing stock may produce a rise in the price of part or all of the stock. But if the increase in demand is concentrated on new housing, a large increase in construction expenditures could result. Similarly, a small decline in total demand, if concentrated on new housing, can lead to a very large absolute and percentage decline in construction

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expenditures.

Although there was no deliberate planning to this end, it is interesting to note how frequently variations in housing starts and hence, even more, decisions to build, have moved independently of general activity and generally in advance of movements in activity in general (see charts 2, 4, 5 and 6).

I may conclude at this stage that residential construction expenditures, both from the point view of size and variability, meet one of the requirements of a Leading Sector in the sense I have defined the term.

A factor that influences the demand for new housing is the movement of monthly rental payments in relation to the movements of service charges on new financing. Actually the comparison should be with servicing charges plus an allowance for a reasonable return on the equity invested. But I suspect that in this matter many people do not calculate so strictly. They hope for valorization and many pre-

fer to own rather than rent and there seems to be a disposition to allocate a certain proportion of a salary income to the provision of housing. In any case, if financing costs fall in relation to rents, which may be more sticky, any increase in the demand for housing in general should tend to be biased toward new building. On the other hand an increase in vacancies may be expected to lead to a decline in building. I have made no particular study of this aspect but I know that real estate dealers keep close watch of rentals, vacancies and sales of existing houses.

Much has been made of the multiplier effect in building, on how an expenditure on construction ramifies throughout the economy. I think the calculations are valid provided there is much overall excess capacity that can be utilized and provided further that the initial impact is not offset by counter movements elsewhere in the economy. If these conditions are met one can indeed assume that the initial impact will be multiplied. However, one should

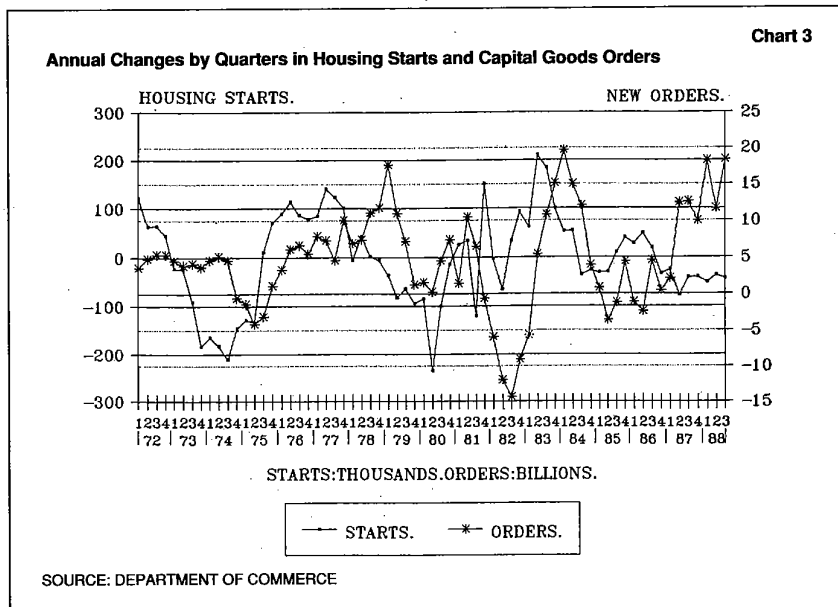
note that most new and additional expenditures likewise share this characteristic.

Interest Rates and Building

Most writers lay considerable stress on the cost of borrowed money as an important influence on the demand for the volume of building as it is a most important factor in servicing costs. Charts 7 and 8 show changes in nominal and real interest mortgage rates together with annual rates of growth by quarters in residential expenditures (in constant prices) for the period 1975-1988. There appears to be some relation but not as close nor as consistent as one might expect and in general movements in nominal interest rates appear to have more impact on building than do movements in real rates of interest. Movements in real rates of interest lag behind nominal rates. Thus it seems reasonable to say that the high rise in nominal mortgage rates (which in turn reflected inflation) to a peak of 16% in 1981 played an important role in the long slowing of the rate of growth in building expenditures from their peaks in 1976/77. But throughout this period, real interest rates were abnormally low. It was after real interest rates had risen from around 2.5 percent to 10 percent that building took off in a big way in 1982, that is, after nominal rates fell sharply in 1981. The further decline in the 1980s in both nominal and real interest rates was not sufficient to arrest the gradual decline in the rate of growth in building although it may have helped to maintain the volume at a relatively high level.

The Supply of Mortgage Funds

Many writers assume that any variations in the supply of funds available for housing finance will be reflected in mortgage rates, and may be neglected. But it is conceivable that a portion of the impact of variation in the supply of funds may be found in variations in the standards of



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creditworthiness imposed by lenders as well as in interest rates. From the middle 1970s, because of Regulation Q on savings banks' interest rates, the thrifts were not competitive in bidding for deposits. However, their place was assumed in the early 1980s by federal agencies by a large growth of the secondary mortgage market in general. It became evident by the late 1980s that standards of creditworthiness had become excessively relaxed.

Evidently a factor affecting the supply of mortgage funds is inflation. Even if mortgage rates are permitted to rise sufficiently to offset inflationary expectations, the cost of mortgage money may appear prohibitive to would-be borrowers, particularly in the first years of a mortgage. Hence inflation can act to decrease both the supply and the demand for housing finance and home construction.

I conclude that building activity has frequently acted as an independent variable capable of moving contrary to the general trend of activity. The explanation offered above is a hypothesis that at least appears reasonable. How it might help in the formulation of macroeconomic policy will be considered after a brief discussion of other possible leading sectors.

Other Possible Leading Sectors

Exports

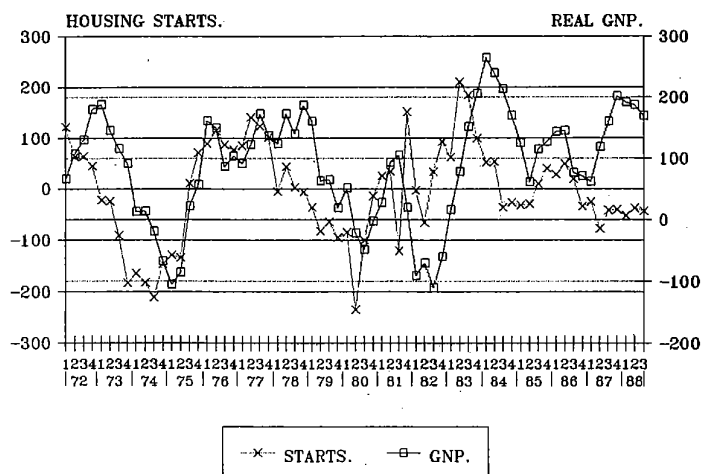
I imagine that most economists would subscribe to the view that the safest and most assured way of speeding growth is to encourage exports. A few still favour agriculture but when confronted by the high price and income inelasticity of demand for agricultural goods in the domestic market they usually add that they had in mind agricultural exports. So the interesting question becomes the characteristics of exports that makes them a favorite leading or independent sector. To reply simply that it is the world market does not

pinpoint the reasons sufficiently sharply. The key point is that if a country can become competitive in the world market, it opens a large market and a demand that was hitherto only latent or potential and so permits a flood of new economies of scale, both internal and external to a firm. This

As I mentioned earlier, oil discoveries and booms in various commodities have on occasion acted as leading sectors, but they depend more on exogenous and chance events. Also a fiscal deficit may in certain circumstances sustain and even add to effective real demand. Too often, however, and especially in developing countries, it leads to inflation and stagna-

Annual Changes by Quarters in Housing Starts and Real GNP

Chart 4



SOURCE: DEPARTMENT OF COMMERCE

is the key to an understanding of the West German, the Japanese and the Far Eastern "miracles". They were all export-led, that is, demand led upsurges. The resultant economies of scale led to further expansion as well in the domestic as in the foreign market. But in most cases I mentioned the leading sector was exports and the sequence was an opening of a new and effective source of demand followed by a growing domestic demand. The United States market was so large at an early date that exports did not play such an important role. But that was an exceptional case. For most developing countries the domestic market for most non-foods and clothing is relatively small.

tion.

Business Capital Investment

At this point it may be objected that I have omitted the most important sector of all - business capital investment. It is true that business investment was omitted to this point, but it was done deliberately because I think that too much emphasis has been placed in influencing the rate of business investment through monetary policy and interest rates. My reason is very simple. According to the quarterly figures of the national accounts such expenditures appear to follow rather than to lead the trend of business and do not appear to be very sensitive to changes in

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interest rates. This comes out clearly for the post World War II period in Charts 9, 10 and 11. This is perhaps the most surprising result of my study.

The hypothesis I would suggest as an explanation of such behavior of business investment is that many firms, perhaps most, are anxious to maintain and to increase their share of the market, and that most business investment is financed out of depreciation reserves and retained earnings. Inability to meet demand promptly may lead to a permanent loss of customers or attaining less internal economies of scale than are accruing to competitors. Such considerations may outweigh the higher actual or opportunity cost of money and may explain why business investment appears to rise rather than fall at times of rising interest rates and follows closely the decline in excess capacity. Support of this hypothesis is suggested by Chart 12 on excess capacity and business investment.

Another perhaps surprising result is that, in the aggregate, business finances its expenditures on structures, plant and equipment out of earnings. Despite the churning in the stock market and large issues of shares and of billions in bonds, the net figures indicate that over an extensive period business finances its productive capacity out of depreciation reserves and retained earnings. In recent years there has been an excess of business saving over business investment. This feature is clearly shown in Chart 13.

It appears, therefore, that despite the weight of opinion to the contrary, business capital investment is a derivative or following type of expenditures and can only be stimulated, in the aggregate, by an increase in real demand and a decline in unused capacity. This finding limits the effectiveness of policy measures to raise the rate of growth of business investment directly. Deficit financing is rather out of favor partly because the budget is a cumbersome instrument and does not lend

itself to fine tuning. More and more the World Bank and IMF economists are looking to exports and are stressing the advantages of international trade and an open society. A difficulty with such measures, however, lies in the initial, but necessary, restrictive monetary and fiscal measures that accompany them.

In these circumstances I have felt for a long time that the possibilities in the housing field have been neglected, especially in the lesser developed countries, partly, no doubt, because of the overriding concern of writers on housing with social considerations.

How Housing Demand may be Stimulated

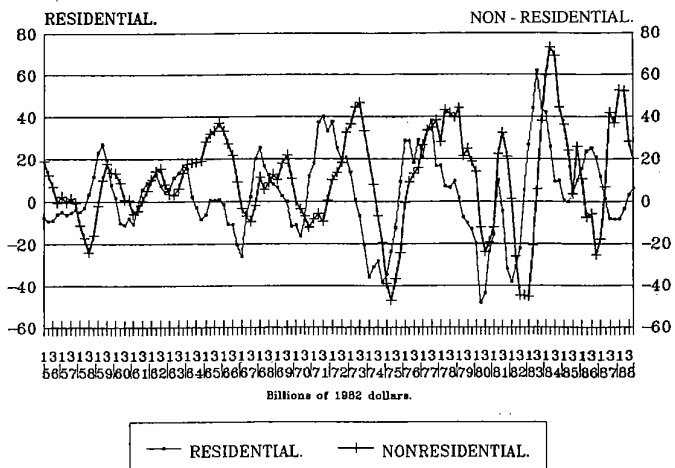
The characteristics of building both on the side of supply and of demand provide clues on how building may be influenced by policy. On the side of demand anything that serves to reduce current financing costs in relation to rents on comparable

buildings will tend to shift and enlarge the demand for new residences. The reduction in monthly servicing charges may be brought about by a fall in the rate of interest on mortgages, by a lengthening of maturities and, especially, in countries, with inflation, by the adoption of an indexed savings/mortgage system.

Why the latter may be so important is perhaps not immediately evident. It may be objected that indexation only postpones payments and does not reduce them. But to the home buyer the postponement is all important. If the inflation rate is 20 percent per annum, it is likely that market interest rates on loans may rise to over 30 percent. A home buyer in such circumstances would have to repay out of current income nearly a third of his mortgage in the first year in interest charges alone—a very heavy charge. In the case of an indexed loan, a percentage equal to the rate of inflation is added to the mortgage and does not have to be paid immediately out of current income. What has to be paid is a real rate of interest of, say, seven percent plus a charge for amortization. In effect, the lending institu-

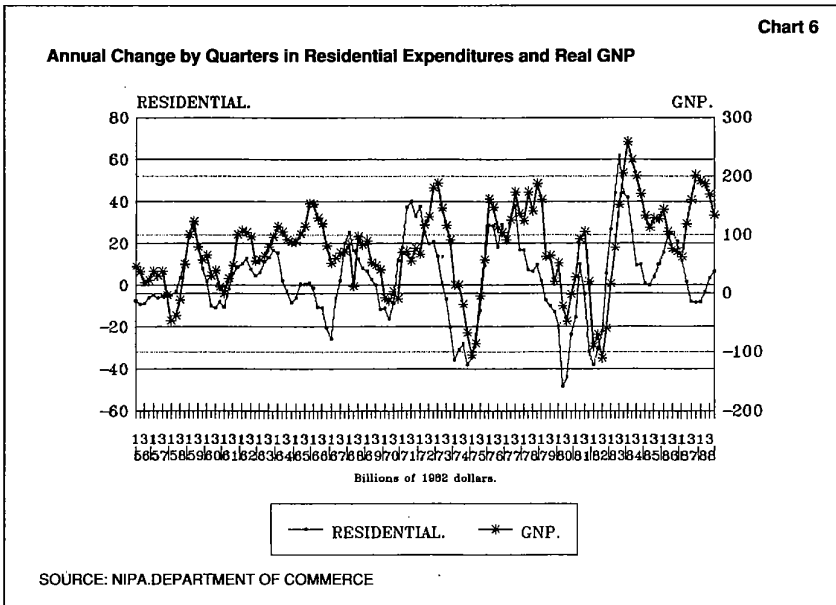
Annual Change by Quarters in Residential and Non-Residential Investment

Chart 5



SOURCE: NIPA, DEPARTMENT OF COMMERCE

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tion makes an additional loan to offset inflation less amortization. But, in this case, it will probably be objected, the mortgage keeps rising. The answer, of course, is that with inflation, incomes and property values in general equally rise. If there is any growth in income per capita, they rise more on the average than the rate of inflation.

This was the theory underlying the Colombian System and is set forth in more detail in the paper by Dr. Luis Eduardo Rosas. The theory was proved to be valid, and the response to the system of indexed accounting applied to both the assets and liabilities—mortgages and deposits—was a dramatic success. Not only did it encourage savings but it made it possible for many would-be home buyers to meet their initial monthly debt servicing charges which they could not have done at full current interest rates.

Other ways of stimulating demand would be to lower down-payments, extend maturities, relax creditworthiness standards or grant subsidies. In Colombia there was such confidence in the stimulus to

demand to be expected from indexing that the down-payment was initially set at a high 30 percent and the maturities limited to 15 years so that if demand slackened these requirements could be relaxed. In the United States there perhaps do not exist the same possibilities as standards are if anything too relaxed and maturities are quite long. In addition inflation is low and the rates on mortgages are already variable to a certain extent. Furthermore there are already incentives in tax exemptions. Finally, the growth of the large secondary mortgage market has supplied abundant funds.

For these various reasons housing as a leading sector is an especially attractive possibility for lesser developed countries. This does not mean that residential construction cannot be a leading sector in the United States, but that it may be more subject to market forces than to conscious influence by policy.

It is possible to combine the leading sector motivation for housing policy with more narrow and direct social considerations by the use of subsidies. But from a

macroeconomic policy point of view it is desirable that a subsidy be applied where it has the greatest leverage effect. This would be where there is a high elasticity of demand for a product as is the case in certain exports or in lower (but not the lowest) income housing.

However, in exports, subsidy generally has to be concealed to avoid retaliation. In housing a relatively small reduction either in initial costs or in monthly service charges can tap a large layer of potential or latent demand. This would suggest a housing subsidy for lower income groups but not for the lowest. For the latter it may be safer to rely more on the filtering or escalation process. However, it is difficult for politicians to accept such an argument.

In Singapore a modest but concealed subsidy plus efficiency in construction made it possible, by reducing rents of new apartments to around 15 percent of working class incomes, to tap and meet the demand for housing for about 80 percent of the population.

Housing and Economic Growth Theory

I have treated housing here in a general macroeconomic context. Elsewhere I have treated it in the context of what is called the classical theory of growth. To do so here, however, would take me too far afield for this occasion. About all I can do is to assert that what I have argued is perfectly consistent with the theory and indeed it is a logical implication for policy formulation for the purpose of raising, for a period, the actual rate of economic growth closer to its potential rate, or to reactivate a depressed economy. It must be kept in mind that growth proceeds in an exponential or compound interest manner, so that even a short term rise followed by a return to the previous rate means that growth then proceeds on a higher base than previously. In absolute terms output tends to be continuously higher because

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of a previous short (or longer) term rise in the growth rate.

I mentioned earlier that the reason an expansion of exports has been so successful in raising the rate of growth to a higher level is because it permits the exploitation of a large latent market. To a degree, new housing construction shares this characteristic.

Other Benefits from Increased Housing Expenditures

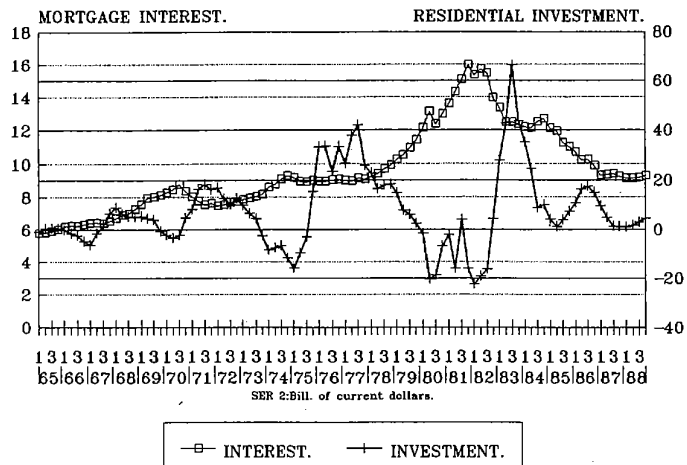
There are additional benefits especially for lesser developed countries to be gained from new housing. It has a very low import content even after including some of the equipment to make and transport building materials. In Colombia the import content has been estimated at 10 percent of the gross expenditures on building. It is peculiarly an industry that provides work for much relatively unskilled labor.

Development is associated with rapid urbanization so that the need for housing is acute. A large and sustained building program can lead to a general shifting upward or escalation in housing accommodation for the whole community, including low income earners. This process is sometimes dismissed with a phrase that has acquired a disparaging social connotation as a "trickle down process". It would be more appropriate to call it an "escalation process". One can see it in operation every day in the used car market in the United States. It is so effective because there are large annual sales of the demand for new cars which in turn permit a very large used car market.

Conclusion

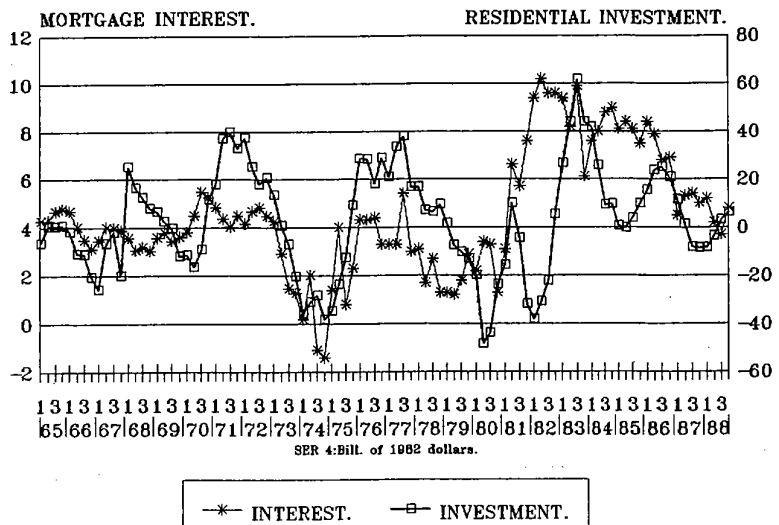
So my conclusion is that under certain circumstances the volume of expenditures on new residential construction can be influenced through conscious policy either to increase or decrease and that

Chart 7
Nominal Mortgage Interest Rate and Annual Growth of Residential Investment



SOURCE: ECONOMIC REPORT OF THE PRESIDENT

Chart 8
Real Mortgage Interest Rate and Annual Growth of Residential Investment



SOURCE: ECONOMIC REPORT OF THE PRESIDENT

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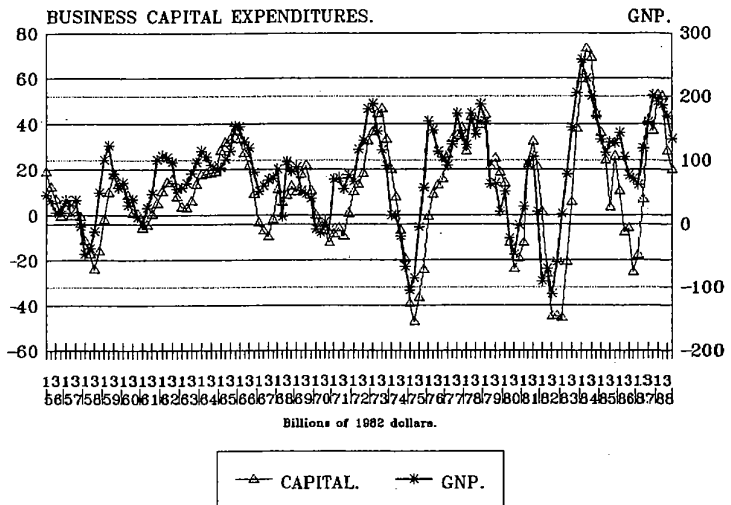
this applies particularly to lesser developed countries. I would not wish to overargue the case as the possibilities are probably more limited in countries which have enjoyed a long period of high building activity and have utilized already some of the possible incentives. However, even in the United States and fairly recently, I think that the characteristics of the demand for residences and the supply of funds permitted a most important role to be played by housing in the recovery of the early 1980s and in the long and sustained nature of the upswing from 1982 to 1989 - indeed, a more important *leading* role than was played by business investment which tends to follow rather than precede changes in the gross national product. ■

NOTES

1. Unless otherwise stated, quantitative statements are based on US Department of Commerce figures.

Annual Change in Real GNP and in Business Capital Expenditures

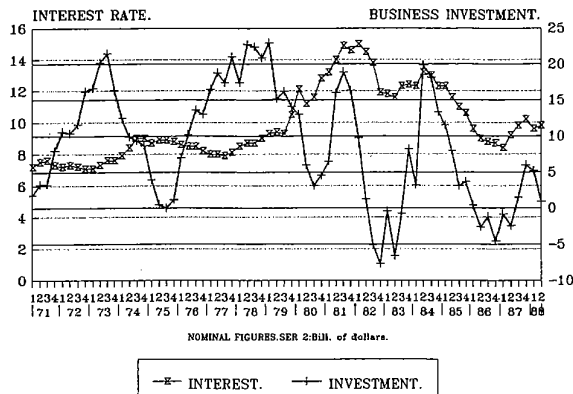
Chart 9



SOURCE: NIPA, DEPARTMENT OF COMMERCE

Interest Rate of AAA Bonds and Rate of Annual Business Investment

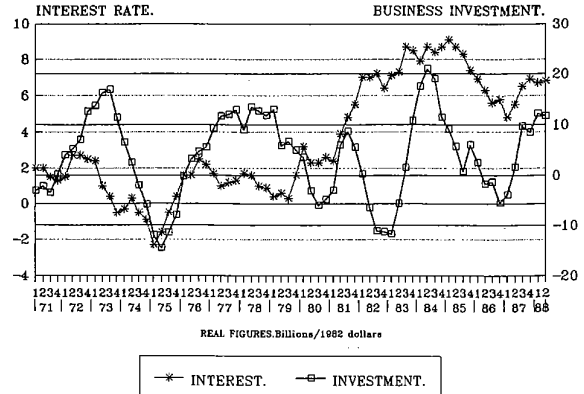
Chart 10



SOURCE: NIPA, DEPARTMENT OF COMMERCE

Real Interest Rate of AAA Bonds and Rate of Annual Business Investment

Chart 11



SOURCE: NIPA, DEPARTMENT OF COMMERCE

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