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THE LAND PRICE PARADOX

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The unprecedented rise in market prices of farm real estate since the end of the Korean War without a corresponding rise in farm income challenges conventional economic analysis. It also raises important questions with respect to the design and effectiveness of farm programs and the current and probable future financial strength of the agricultural industry. The purpose of this brief paper is to document the extent to which land prices have outpaced farm earnings and to examine the validity of several different explanations that have been offered of the land price-farm income paradox. 2/

The farm real estate package (land, land improvements, and structures) had a market value of $136.5 billion as of March 1, 1961, nearly $42 billion, or 44 percent, more than in 1954. Net income originating in agriculture averaged about the same for 1958-60 as for 1953-55. Despite substantial increases in the quantities and values of non-real-estate capital items, farmland and service buildings currently represent about three-fourths of all productive assets of agriculture, a slightly higher proportion than in 1940. The increase in average acreage per farm combined with the rise in price per acre has boosted the average value of farm real estate per farm more than 60 percent in the last 5 years.

The extent of the disparity that has developed between land prices and farm income can be documented in several different ways:

(1) The imputed return on current market values of land and service buildings (after allowance for unpaid factors at market prices) has declined from about 7 percent annually in 1950-54 to about 3 percent in 1959-60.

(2) Twenty-four of the 33 types of commercial family farms for which USDA estimates costs and returns showed an average annual return of less than 6 percent on the current market values of land and

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1/ The opinions expressed in this paper are those of the author and do not necessarily represent those of the Farm Economics Division, Economic Research Service, or the U. S. Department of Agriculture.

2/ The terms "land" and "farm real estate" are used interchangeably in this paper, even though they are not synonymous in a strict economic sense. Nor does it labor the distinction between value and price. Both are used to mean "market value," or the price at which farm properties change hands in the market.

buildings in 1958-60. 3/

(3) The price-income ratio is now the highest since the early thirties. Market values of land and buildings were 5.6 times annual net farm income in 1950-54, and they are now about 10 times annual income.

If we accept these facts as evidence that net earnings are no longer the primary basis for land values, what other explanations can be offered? Several of these are examined briefly here:

Land Prices Have Responded to General Inflation.- Although there is ample historical evidence to support the belief that land affords protection against inflation, the idea rests upon the implicit assumption that the agricultural sector will share in any general inflationary trend in the total economy. Actual experience in the last decade has been counter to this expectation, yet land prices have advanced about a third more than the consumer price index. This is equivalent to an average increase of 3.0 percent a year in purchasing power. If this return from capital appreciation is added to the annual return from production, the total return from land becomes about 8 percent a year. Returns for 1955-60 averaged a little lower because of the decline in farm earnings.

Although these rates appear to be sufficient to encourage the retention of investments in land, and also further investment, they are modest compared with common stocks. The net (deflated) gain in purchasing power of the composite price index for 500 common stocks averaged 19.2 percent annually between 1950 and 1960. 4/ Dividends averaged only 4.8 percent a year, or a little less than earnings from farmland.

Several factors other than the relative returns to land and common stocks must be considered to explain the strong interest in land as an investment. One of these is the opportunity land ownership affords for converting ordinary income into capital gains. Certain types of expenditures can be treated as current operating expenses under Federal income tax laws, even though such expenditures may be recoverable from subsequent sale of the property. Depreciation allowances on farm structures also provide a means whereby farm income is subject to a somewhat lower average tax rate than applies to dividends on common stocks or other investments not eligible for depreciation allowances. Although such tax savings constitute a third component of returns to land, they cannot be estimated in the aggregate because they vary with the tax situation of each owner. Other nonmonetary returns from landownership, such as prestige and the tangible nature of land, as well as unfamiliarity with and distrust of alternative investments, have tended to hold considerable amounts of capital in land even though substantially higher returns could have been realized in other investments.

3/ Assuming an allowance of $2,400 for family living and a 6-percent capital charge for non-real-estate capital.

4/ Rates of capital appreciation for both land and common stocks were computed by fitting a least-squares trend line to the respective deflated price indexes.

Population Growth Creates a Scarcity Value for Land.- The belief that future population growth assures a long-term upward secular trend in land values has been deeply ingrained in the American tradition since Colonial days. Yet the idea rests upon the concept of a fixed physical supply of land which fails to allow for the increase possible in the economic supply of land as a result of technology. Unlike the industrial sector of the economy in which technology creates new products, technology in agriculture has been essentially cost- and price-reducing. The annual growth rate of the agricultural sector is limited essentially to the rate of population growth, whereas in industry, this factor is a relatively minor part of the total growth potential. Existing projections of food and fiber requirements by 1975 and even 2000 provide no support for the belief that population growth will create a scarcity value for land for production of food and fiber.

Failure to distinguish between land as a productive factor and land as space seems to have given unwarranted weight to the land-scarcity belief. Current thinking in this regard is strongly colored by the unprecedented dispersal of population around our metropolitan centers since the end of World War II. It seems probable that land requirements per capita for subdivisions, commercial uses, recreation, highways, and other nonfarm uses have increased and that these rates have been projected into the future. A pervasive speculative psychology has been generated which now extends far beyond the actual growing edges of our metropolitan areas. Market values of farmland in metropolitan counties average about double those reported in the nonmetropolitan counties. However, the increase in values between 1954 and 1959 are only a little higher in the metropolitan counties. 5/

I share the view of at least one other land economist that the market has greatly overestimated future needs for land as space. 6/ Several counteracting forces that will tend to slow down the rate at which rural land will be needed for nonfarm uses are already apparent. The most powerful of these, at least in terms of the capital likely to be expended, is urban renewal. Both private and public capital is now being committed to protect and possibly enhance existing investments in central-city areas.

The projected pattern of a lower rate of family formation to the mid-1970's also suggests a slowdown in suburban growth and will complement urban renewal. There is evidence also that some of our metropolitan areas are approaching the outer physical limits imposed by commuting time and distance. If the outward thrust were to halt, the acreage of vacant land still available within the presently defined metropolitan areas would likely serve future needs for several decades.

Increased Returns from Technology Have Been Capitalized Into Land Values.- In contrast to the two previous forces that have influenced land prices, the effects of farm production technology operate at the firm level, and on the demand side. Firms that have an excess supply of certain nonland inputs, principally machinery and operator labor, seek also to capture the additional returns possible from other nonland inputs (fertilizer, improved seed, and so on) but

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5/ See U. S. Economic Research Service, "Current Developments in the Farm Real Estate Market," CD 58, May 1961, for additional comparisons.

6/ Gaffney, Mason, "Urban Expansion - will it ever stop?" U. S. Dept. Agr. Yearbook, 1958, Land, pp. 503-522.

require additional land to which these inputs can be applied. Because land is limited in supply but nonland inputs are reproducible, marginal returns from the nonland inputs become capitalized into prices of the factor in fixed supply.

These basic economic principles have been evidenced in the land market by a doubling in the last decade of the proportion of all land purchases made for additions to existing farms. In some areas, more than half of all land purchases are made for this purpose. However, much of this demand comes from farmers who already own or control sufficient acreage to achieve near-optimum efficiency. Farmers on the substandard units who could realize larger returns from additional land have neither the capital reserves nor the credit rating to compete successfully with the larger operators.

There are reasons to suspect that the drive of successful operators for more land may not be based wholly on efficiency criteria. Bigness and success are still measured in rural communities by acreage of land owned, rather than in terms of volume of sales or highest marginal returns. Most studies of factor returns show higher rates of return to capital invested in nonland inputs than in land at current prices. If farmers were to give more attention to alternative uses of capital other than for additional acres, farmer demand for land would likely be reduced.

Space limitations permit only passing mention of the possible effects of acreage allotments on land prices. Although regression analysis usually allocates a substantial part of the sale price of land to acreage allotments, particularly those for tobacco and wheat, this approach is focused on a means rather than an end. Acreage allotments are simply one device for achieving higher net returns; their aggregate effects on land prices should be appraised in terms of the extent to which they are successful in achieving the income goal. However, because production restrictions, regardless of the device used, tend to run counter to the desire to enlarge existing operating units, demand for additional land to offset such restrictions is likely to be intensified. Land prices can be bid up by those operators who are willing to pay the price of staying in business.

Conclusions and Implications

Several strong forces have been instrumental in raising land prices above the levels that seem warranted by current and prospective levels of farm income. The extent of this overpricing varies considerably in different areas, but the national level is now 15 to 25 percent higher in relation to income than has prevailed in the past. Although capital appreciation has represented about half of the total returns to land, common stocks have provided a better hedge against inflation.

Agriculture now has some of the characteristics of an overcapitalized industry; farm operators are likely to continue to fact difficulties in earning a "fair" rate of return on current capital values. Much of the increase in farm income that farm programs seek to achieve is likely to become capitalized into even higher land values. Although present owners benefit from such capital appreciation, future buyers may gain little real advantage in that respect.

The advance in land values above the level supportable by income has also contributed to the upward spiral in local property taxes. Although assessed values have about kept pace with market prices, total taxes levied now take about double the percentage of farm income compared with a decade ago. Because market values now provide a less equitable basis for taxpaying capacity, increasing resistance from farm property owners is likely to slow the rise in property tax revenues in the future. In some areas, current levels of taxes already appear to be pushing land prices downward.

High capital requirements for initial entry into agriculture have encouraged the use of land installment contracts, which may create serious financial problems in the future. Because returns from land have declined in relation to market prices, prospective buyers have resorted to a form of "deficit financing," in which the installment contract provides a means of accumulating the downpayment necessary to qualify for conventional mortgage financing. Debt obligations between sellers and buyers are being generated at the rate of about $750 million annually; this is about half the total amount of credit used to finance all land transfers. Buyers using the land-contract device have little protection for their equities if they are unable to meet their contract payments. If financial distress should occur in the future, it is more likely to consist of contract defaults than of mortgage foreclosures. New types of legislation would be needed to provide relief.