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APPENDIX C

PRICES OF TANGIBLE ASSETS

Prices of tangible assets, of which real estate is the most important example, are needed in several important fields of economic analysis.

Asset price indexes are an essential element in the derivation of estimates of national wealth and national balance sheets. For many types of tangible wealth, current estimates are dependent upon an extrapolation of benchmarks which in turn utilize asset price indexes: an example is the estimate of real estate values in the Balance Sheet of Agriculture.¹ Where the current value of reproducible tangible assets is derived by the perpetual inventory method, which utilizes construction cost and similar indexes to adjust for price changes,² indices of the prices of existing tangible assets are necessary to make independent checks of the estimates.

Asset price indexes are also needed in flow-of-funds analyses (including the "equation of exchange" of the quantity theory of money), if it is desired to separate movements in the volume of transactions in existing assets and movements in their prices. Related uses of the asset price data are involved in the deflation of various items in the national income accounts.

In addition to these uses of asset prices in constructing basic economic data systems, a variety of analytical uses could be cited. To study the effects of inflation upon the economic position of various debtor and creditor classes one must have information on the movements of asset prices. To study the locus and causes of economic progress, one must have information on the deflated stocks of capital. Asset prices are playing an increasingly important role in all branches of economic analysis.

Indexes of asset prices encounter the usual problem of quality change. One cannot compare directly the price of a 1956 automobile in 1959 and in 1960, for the price relative one wishes is that for a three-year-old car, not one which has aged another year. The comparison of a 1956 automobile's price in 1959 with a 1957 automobile's price in 1960 raises the same problems as the pricing of new goods, and our discussion (III, 3) is applicable here.

There are four practicable approaches to price indexes of existing tangible assets:

The first approach compares the prices registered in actual transfers of identical or similar properties at different points in time. Either all transactions or a systematic or unsystematic sample of them may be utilized in the construction of the index.

The second approach is based on estimates of price changes of comparable assets made by experts, either for the purpose of con-

¹ See *Land Values and Farm Finance* (Agricultural Handbook No. 118), U.S. Department of Agriculture, 1957, p. 7.

² See, e.g., R. W. Goldsmith, *A Study of Saving in the United States*, Vol. III, p. 31.

structing a price index or as a byproduct of lending, taxing, or other administrative activities. These estimates will in practice be tied to an unsystematic sample of actual transaction or of bid and ask prices.

The third approach makes use of prices listed in publications (often known as "Red Books," or by a similar name) guiding dealers in secondhand assets, particularly automobiles and farm equipment. These prices in principle approach those realized in actual transactions, at least in those transactions in which the trade-in of an old asset is involved in the purchase of a new one.

The fourth approach resorts to the reproduction cost of an asset specified as to type and age; i.e., it is essentially a weighted average of cost elements at current prices. This method therefore does not, strictly speaking, yield an index of the price movements of existing assets, although allowance for depreciation will bring it close to the latter.

At the present time, hardly any current and reasonably reliable information exists on the prices of tangible assets. The only exceptions are the annual index of farm real estate prices compiled by the Department of Agriculture and the monthly index of selling prices of single-family residences put together by Roy Wenzlick & Co. The information on the average annual prices of existing one-family houses, on which loans have been guaranteed during the year by the Federal Home Loan Banks and the Veterans' Administration, although not price indexes in the strict sense, may be regarded as pertinent.

The index of farm real estate prices³ is based on estimates of the changes in the current price of farm properties which are made semi-annually by about 16,000 farm crop reporters cooperating with the Department of Agriculture. These estimates are first combined (without weights) to obtain averages for each of the several hundred crop-reporting districts. These unweighted district averages are then combined by the Department of Agriculture into state averages with weights generally corresponding to the acreage of farm land in the district. Finally, the state averages are combined into weighted averages for regions and for the entire United States. The state and United States estimates may be adjusted on the basis of replies to a mail questionnaire received twice a year from 6,000 to 7,000 "farm real estate dealers, lawyers, local bankers, county officials, and others in contact with the local farm real estate market." In most districts the exact type of property to which the estimates refer is not specified, nor are separate estimates required for different types of properties. In the western states, however, separate estimates are required for irrigated and nonirrigated and grazing land.

The basis and method of the Wenzlick index on selling prices of single farm structures are not known precisely. It is supposed to refer to well-maintained family residences to which no major additions have been made.⁴

In this situation, we must start virtually from scratch in the construction of a reasonably comprehensive system of price indexes of tangible assets, and we can hope for only slow progress. Even modest

³ *Land Values and Farm Finance*, pp. 3-7.

⁴ See, e.g., "Factors Affecting the Outlook for Real Estate in 1959" (chart).

progress will require continuous pressure for experimentation with asset prices in neglected fields and steady improvement in the few indexes that we have. Tentative recommendations for development or improvement of indexes for the main types of privately owned tangible assets are presented in summary form in the following pages.

1. FARM REAL ESTATE

The index of farm real estate prices of the Department of Agriculture should be improved by distinguishing the main types of farm properties so that separate indexes may be derived for each type, by giving more definite instructions regarding the estimates to be made by farm crop reporters and by checking the information received from farm crop reporters and from real estate dealers and others against a systematic sample of actual transactions. The data on value of farmland should be distinguished from, and given priority to, that on farm homes and service buildings.

2. SINGLE FAMILY HOMES

Since single family homes is the category of tangible assets in which the volume of transactions is largest, and since homes are very important as a basis for credit, the area deserves immediate and concentrated attention. Two main approaches to deriving indexes of the prices of existing single family homes appear feasible.

The first is the utilization of the existing statistics of the average appraised value of homes on which FHA and VA loans have been made (see also App. B). These statistics should be brought closer to true price indexes by classifying homes by age, size, type of construction, location, and possibly some other characteristics, so that the average prices will refer to groups of structures which are reasonably homogeneous from an economic point of view. Such a relatively fine classification is possible because of the large number (several hundred thousand) of units which are appraised each year. It would also be desirable to shift the data from an annual to a quarterly basis. A good deal can be accomplished simply by tabulation of data already being collected as part of the lending activities of FHA and VA.

Since FHA and VA loans account for only about one-third to one-half of all homes on which loans are made, it would be advisable to enlarge the basis of the index by a sample of the homes on which conventional mortgage loans are made by private lenders, particularly savings and loan associations and mutual savings banks.

The second approach utilizes the price of homes realized in actual sales. These statistics might be obtained as part of a project, on which preparatory work has already been done, particularly at the School of Business of the University of California in Los Angeles, of selecting a systematic sample of all real estate transfers throughout the country, a sample that would serve as a basis for statistics on many aspects of residential real estate and mortgages.

The first approach permits separation of the value of the land from that of the structures, since appraisals usually distinguish between these two elements of the total value of the property. The second approach obviously does not permit such a separation.

Assessed valuations do not constitute a usable independent source for indexes of real estate prices since assessments usually deviate considerably from market values and, what is more serious, there is no method of estimating the relation of assessed to market values and the changes in that ratio unless there is an independent ascertainment of market values.

3. MULTIFAMILY STRUCTURES

At the present time, we are entirely without information of changes in prices of multifamily structures. As in the case of single family homes, two approaches are open, appraisals by lenders and sampling of actual transactions. In this case, the most important lender groups are life insurance companies and mutual savings banks, followed at substantial distance by commercial banks and saving and loan associations.

In principle, the problems are the same as those encountered in calculating an index of prices of single family homes, but the practical difficulties are likely to be greater because of the smaller number of properties which change hands or become the subject of institutional loans. It will, therefore, be considerably more difficult to select an adequate sample of properties to obtain reliable information on multifamily structures of different age, size, and other characteristics defining economically homogeneous groups.

4. COMMERCIAL STRUCTURES

The two basic approaches, appraisals by lenders and sampling actual transactions, are available here too, but the practical difficulties are still greater because of the greater variety of types, the greater influence of location, and the lower rate of turnover. It may therefore be well to start with a few fairly standardized types of commercial structures, particularly office buildings. In this case, the main lender groups whose records are needed are life insurance companies, commercial banks, and mutual savings banks.

5. VACANT LOTS

Vacant lots are important enough to merit a special index. This will probably have to be based on a systematic sample of either transactions or appraisals; the latter approach is less promising in this instance. It will undoubtedly be difficult to maintain a reasonable degree of homogeneity with respect to "ripeness" of lots, i.e., the status of improvements such as streets, sewers, and utilities.

6. CARS AND TRUCKS

In some respects price indexes for used cars and trucks are relatively easy to calculate—the number of transactions is very large, the subject of transactions is relatively homogeneous, and there exist trade publications listing the prices of used cars and trucks of different age and type as a guide to dealers. There are, however, considerable conceptual problems. The true allowance made for used cars or trucks traded in connection with the purchase of a new vehicle is disguised by the practice of using the trade-in value to give a discount from the list price of a new car or truck. It will therefore be preferable to

base the index on the sales price realized by used car and truck dealers. These prices are probably best ascertained by systematic sampling of dealers, requiring reports on a limited number of representative types and age groups.

7. OTHER CONSUMER DURABLES

It would be very difficult to ascertain the prices for the remaining consumer durables because they are heterogeneous in character and the markets are unorganized. In view of the limited volume of transactions, it is doubtful if price information on these other used consumer durables is worth the cost at this time.

8. PRODUCER DURABLES

Hardly anything is known in quantitative terms about the size of the market and the price movements of used producer durables other than trucks and farm equipment. In the latter case, it is possible to proceed in the same way as for cars and trucks, using dealers' catalogues or actual prices for representative types of farm equipment obtained by a systematic sample from dealers. The other types of used producer durables pose probably the most difficult of all cases of constructing an index of prices for existing assets, both conceptually and practically. Such an index, however, is particularly important because among the major components of reproducible wealth the value of the stock of producer durables is outranked only by residential and nonresidential structures. Two special conceptual difficulties are the apparently very low ratio of sales of secondhand equipment to the stock, which makes it very difficult to find prices of transactions that do not represent distress sales, and the multiplicity and rapidity of change in models.

9. FOREST LAND

While timberland is one of the smaller components of national wealth, movements of its price are of considerable economic interest. It would therefore be desirable to have an index of timberland (stumpage) prices. The construction of the index should probably be based upon the collection of prices of actual sales of timberlands of different species in the main forest regions of the United States. Information should be relatively easy to obtain for Federal and State forest, but transaction prices of privately owned timberlands would be much more difficult to secure.

10. OIL LANDS

The price movements of oil lands (i.e., land with proven or suspected but not yet developed oil reserves) is of great economic importance for some parts of the country, particularly the Southwest, and is of considerable interest for an analysis of the oil industry. The number of transactions in oil acreage is sufficiently large to yield useful average prices per barrel of oil under ground. It is doubtful, however, whether an overall average for the United States would be meaningful, and it might well be necessary to prepare separate averages for major fields, areas of different degrees of exploration, and areas differing in other economically relevant respects.



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