

was to take the improvements evaluation for tax purposes, apply a construction cost index factor to it, and subtract this product from the sales price. The remainder was then considered to represent the price paid for land only. This technique, although it adjusts for variations in types of property that are sold, probably does not give a remainder that represents the price of land alone.

The amount of statistical work involved was insurmountable by hand; therefore, the magnetic drum calculator was used and a method worked out whereby all the methods that were applied to sales information were used in one quick operation of the machine.

Farmland Values of the U. S. Department of Agriculture

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The rural studies carried on by the Department of Agriculture have been primarily in cooperation with the state agricultural colleges, usually employing people with training in land economics. Currently being planned is a series of studies in the Great Plains area, on a sample of about 35 counties, in which graduate students will be used for field supervision of enumeration. This will be an interview survey in which sellers and buyers of farm property will be contacted. Apart from this survey the Department has a continuing research project, in which estimates of farm real estate values submitted three times a year are compiled and analyzed. These are subjective estimates made by farmers as to market values in their localities. In some areas these estimates reflect such market factors as location and non-farm use, in addition to agricultural value. They are useful for measuring general movements in market values by states and regions, and may have some utility for rights-of-way valuation problems.

In the regular research work no specific studies have been made of the impact of highways upon the values reported, but we have been increasingly aware of such influences through reports obtained from the local reporters. These reporters incidentally, are dealers, local brokers and abstractors who report regularly. For instance, when the Ohio and Indiana turnpikes were being built, reports were obtained on the impact of those highways upon rural property values extending north and south from the highway as farmers attempted to relocate themselves on other farms. In fact, the last survey (November 1956) contained a specific question along this line. About a third of the reporters said they had observed some non-farm influences operating in their local areas. Such influences are largely concentrated, of course, in the Southeast, the East and the West Coast, with low incidence in the Central Plains and Central Corn Belt areas.

A report, "Current Developments in the Farm Real Estate Market," is prepared three times a year on these general trends.

The question arises as to what extent we are limited in our thinking by measuring only the changes in values that have occurred up to the date of a study. There is a flow of benefits being created by highway programs which should be recognized. Many of these benefits are yet to be realized and will occur over an unknown number of years in the future. People are generally slow to readjust their concepts of value, certainly of farm property. Among farm people it may take a number of years before the full economic significance of a highway is appreciated and is translated into rural property values.

It also takes the actions of a good many other people, with respect to plant locations and uses of lands along highways, to create a new level of values in a farm community.

Local people use essentially the comparative method of evaluation. They observe what the other properties have sold for. They compare theirs with them, and they arrive at some judgment as to what they will ask or pay for property. We are trying to determine the actual valuation procedures followed by sellers and buyers in the Great Plains study, through analysis of about 1,000 transfers that occurred in 1956.

There is another potential for research in this general area in the census of government projects that is now getting under way. In this census a sample of possibly 200,000 transfers of all kinds of property will be obtained. They are concerned primarily with investigating price and type of transfer and whether or not it is a bona fide transfer. It is hoped that the farm sales that fall in that sample can be separated and followed up with another questionnaire in which could be included such factors as location with respect to type of highway.

Montana Farm Property Study

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A brief study of rural land values was made in Montana in connection with the improvement of a particular secondary road. The method was rather crude, and the degree of validity of the conclusions is unknown. In most of the rural areas of the state which had significant highway improvements, a scarcity of sales data was found. In the particular area not a single farm had been sold since the development of the highway about three years prior to the study. Therefore, use of another method was required—a method that might be called an opinion survey.

We contacted every farmer in this particular area in which a road had been improved from rather primitive standards to a surfaced road. The estimates these people gave indicated a land value increase in the development of the highway of about 12 or 13 percent. This amounted to something like \$12,000 or \$13,000 per farm.

These people also were asked to give estimates of cost savings in transportation and operation of their motor vehicles.

Approached in this way an capitalized, cost savings amounted to something like \$3,000 per farm. Therefore, from the standpoint of cost savings alone, one cannot justify the highest increase of \$12,000 per farm as reported.

Discussion on Land Values

In reporting on the studies made in Washington State, Mr. Garrison had said that perhaps we had erred in confining ourselves merely to studies of "the indicators of the effects," such as land values, whereas changes in land values result from changes in the behavior of people affected by highway improvement. Chairman Levin asked Mr. Garrison how this basic problem—the effect of highway improvement on people's behavior—could be studied. Mr. Garrison recommended studying how property values were