
Farmers and Land Re-allocation in the Rural-urban Fringe

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The rapid expansion of urban centers during the post-World War II period has brought about considerable change in land use in areas surrounding cities. During the past decade, more than a million acres per year have been transferred from agricultural to nonagricultural uses in urban fringe areas. Resource re-allocation of this magnitude may be both beneficial in terms of rising land values, and detrimental in terms of social adjustments, to the farmers who live in the path of the expansion.

The variables involved in this process of change have never been adequately defined and weighed. We need to know more about the benefits and dis-benefits incurred by farmers in and near an advancing urban front. We need to know something of the time-space aspects of land re-allocation in the neighborhood of these fronts. And we must discover when, why, and how land is re-allocated. Thus, in general, research needs to be designed and conducted to show (1) the processes by which re-allocation of land occurs; and (2) the ramifications to landowners of such processes.

In an initial effort at attaining the above goals, a study was carried out in Meridian Township, located on the fringe of the Lansing-East Lansing, Michigan metropolitan community of some 300,000 persons (Fig. 1). Historically Meridian Township has been a farming area, located in the heart of the dairy and general farming region of south-central Michigan. As recent as the end of World War II, 70% of the land, consisting of 17,793 acres, was devoted to agricultural purposes on 209 farms (Fig. 2). Since the war, however, population within the Township has increased at an extremely rapid rate. The growth of Michigan State University, plus restricted expansion to the north owing to organic soils and to the south because of the location of the university, has channeled much of the recent development of the area into the Township. As a result population within the Township has risen 300%, a much greater increase than the 75% growth of the central cities (U.S. Census, 1940-1965).

In the face of this rapid suburban expansion, there has been a dra-

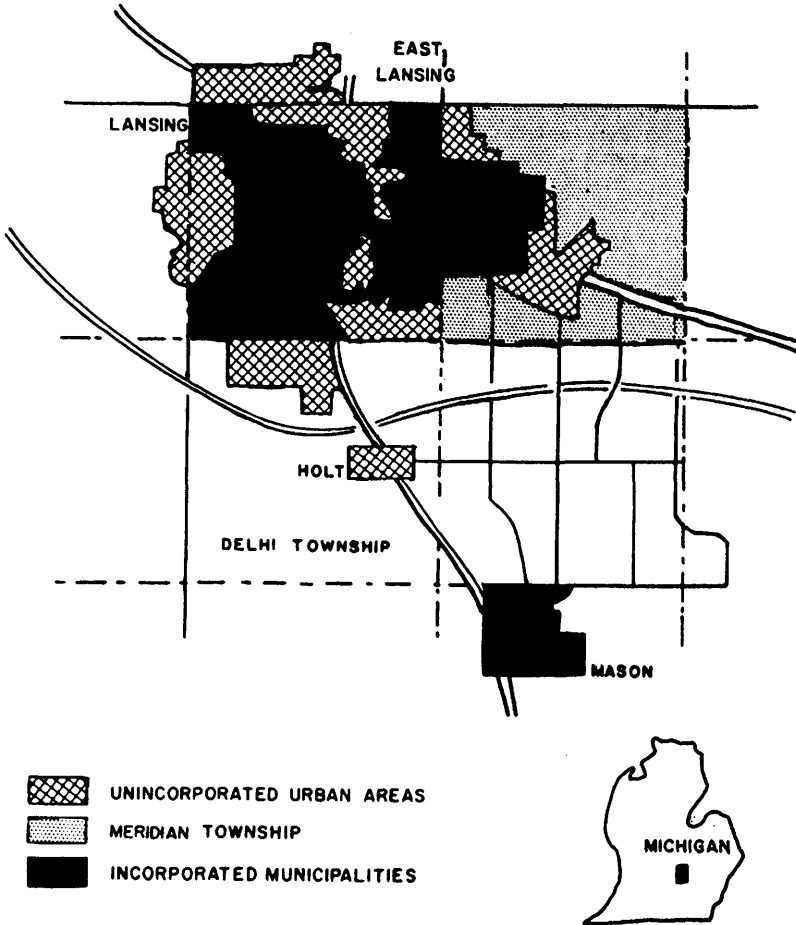


Fig. 1. The Lansing, Michigan urban area

matic reduction in both farm acreage and number of farms. Fig. 2 indicates that of the 209 farms present in the study area in 1945, only 15 were still in operation in 1965, amounting to 3,396 acres of land or a reduction of 14,397 acres.

THE RE-ALLOCATION SYSTEM

Theoretically land shifts from one use "A" to another "B" when the use of "B" will provide a higher economic rent on the land than will use "A" (Fig. 3). The two triangles, COP' and DOR, on the diagram, describe the competition between two types of land use. The lines CP' and DR represent the amount of economic rent derived from the two types of land use as an urban front advances over time. The point, ab, at which the two triangles intersect, represents the margin of transference. At this point, "P", increasing costs brought about by the advance of the urban front have reduced the amount of economic rent from use "A" to the point that it becomes more profitable to shift to use "B" than to

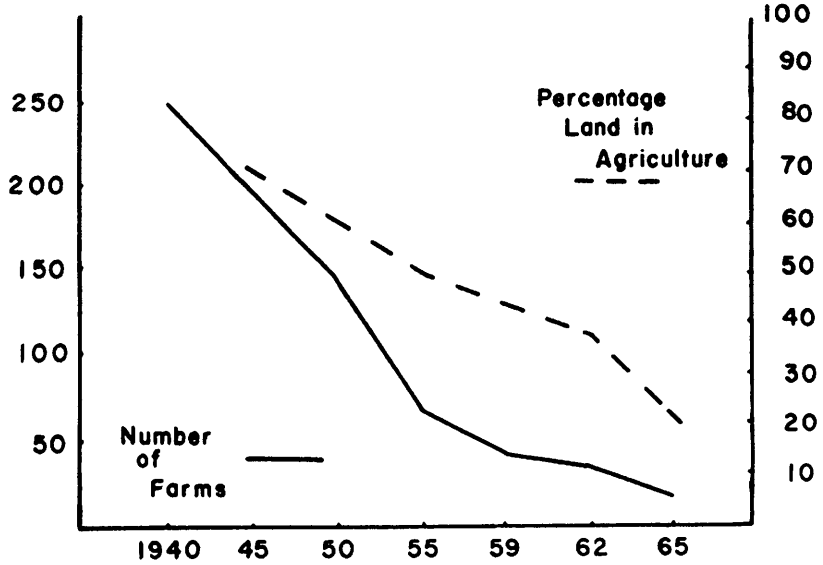


Fig. 2. Decline in number of farms and percentage land in agriculture. 1940 to 1965.

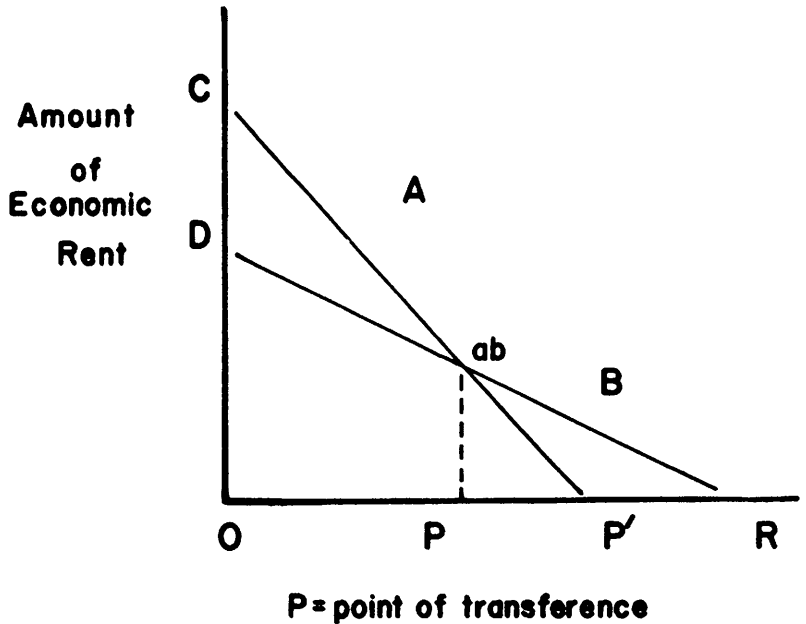


Fig. 3. Illustration of the relationship between economic rent and allocation of land resources between competing uses.

continue with use "A". This, of course, is theory. In reality the system doesn't work quite this smoothly. In the case of agricultural land, only a small percentage changes directly from one use to another. It is commonly recognized that another stage, idleness, often enters the transitional process. Thus, instead of a smooth flowing system from agricultural to urban use, we have a tripartite framework: agricultural to idle to urban, and conceivably in the reverse direction, although this seldom occurs.

The results of the study in Meridian Township clearly demonstrate this point. Of the land allocated to agriculture in 1947, only 8% was transferred to some higher economic urban-oriented use by 1965. Fully 57% of the former agricultural land was in an idle state at the end of the 18-year period, with only 35% remaining in agriculture. Thus, assuming a future rate of growth equal to that of the study period, enough land was withdrawn to supply the growth needs of the area for the next 140 years. Moreover, of the land which was already idle in 1947, only 28% was absorbed by urban development, with 66% remaining idle and a small amount, 6%, returning to agriculture. All of the urban area remained urban. This analysis supports previous statements by Clawson (1963), Landsburg (1964) and others that the current re-allocation system is grossly inefficient, with large acreages of land being forced out of agricultural production long before the expanding urban front is prepared to absorb it.

FORCES AND PROCESSES BRINGING ABOUT CHANGE

In an attempt to identify the variables involved in this process of change a questionnaire was drawn up and interviews conducted with the remaining farmers in the Township. While the sample was obviously biased and represents the opinions of the farmers, the consistency of answers to the questionnaire shows that there are four basic variables involved in the decline of agriculture in Meridian Township: (1) population pressure coupled with rising land values, (2) rising taxes, (3) zoning ordinances, and (4) increased labor mobility due to the development and widespread use of automobiles and all weather roads.

Influence of the Automobile—Part of the increase in non-farm use of former agricultural land can be attributed to construction of country homes by city workers no longer content to live in congested urban centers. The modern automobile has provided greater freedom of movement, making possible rapid transit from rural areas to urban jobs. Similarly, the automobile has made it possible for farmers to take off-season employment in the cities, or to combine their farming and non-farm work operations in part-time farming activities, an apparent transitional stage in the re-allocation process. Currently, 54% of the remaining farmers in Meridian Township have off-farm jobs and fall into the transitional part-time farmer category.

Population and land values—The rapid increase in population, mentioned above, has resulted in a very significant rise in land values within the Township. All 15 of the remaining farmers felt that their land has increased in value during the past five years. But they emphasized that this increase was in terms of potential urban land uses, not agricultural.

Rising taxes—Of the farmers interviewed, 87% stated that taxes are their biggest problem in maintaining their farm operations. The need for new school and utility facilities brought on by the suburbanization movement has resulted in taxes being levied at a rate of 50 mills, the maximum allowable under Michigan law.

Moreover, full-time farmers usually pay more taxes than other types of residents. A study completed by Barlowe and Moore (1955) in this

area in 1955 showed that the average full-time farmer paid between \$105 and \$115 in property taxes, as compared to \$100 for the part-time farmers and \$65 for the average rural resident. The higher taxes paid by the full-time and part-time farmers reflect the higher assessed values assigned to their properties. Some of this higher assessed value undoubtedly reflects the market situation; but, according to Barlowe and Moore (1955), part of the higher assessed values assigned to farmer-owned property results from discriminatory practices. In substantiating their findings the authors state (p.23) "the ratio of assessed values to market values was 28.5% for full-time farmers, 32.2% for part-time farmers, and 16.9% for rural residents."

Even with the current relatively low assessment levels, Meridian Township farmers are now paying approximately \$7.00 per acre in taxes. This is particularly significant when compared with the average tax of \$3.50 per acre in the bordering township to the South, the \$2.10 per acre Michigan average, and the \$1.20 per acre National average.

Zoning—The zoning ordinance adopted by Meridian Charter Township in 1963 makes no provision for agricultural land. It is the opinion of the planning board that there is no place for agriculture within the Township. As a result current agricultural land is zoned as "One-Family, Rural Residential Districts." This implies a predominant occurrence of dwelling structures located on individual parcels of land at least 40,000 sq. ft., with a 200-ft. frontage. Although the ordinance prohibits commercial raising of swine, poultry, and rabbits, there are no other serious operating restrictions placed upon the farmers.

The most common complaint about zoning concerns the sewage regulations in the ordinance, which the farmers feel is responsible for a good share of their recent tax increases.

THE FARMING COMMUNITY

In view of the foregoing discussion the question might arise as to why there are any farmers left in the Township at all. Why does the farmer want to continue in view of such adverse circumstances? The questionnaire provided a partial answer to this question.

All but one of the farmers interviewed were either born on a farm or had farm backgrounds of one type or another. Most of the farmers classified themselves as old residents. Nearly 30% had occupied their present land for more than 30 years; and only 25% had owned their land for less than 20 years. The majority of these men feel that farming is a way of life; and, of those with city jobs, 54% indicated that, given a choice, they would prefer to farm.

Another key factor is the average age of the farmers. Only two of the 15 farmers were under 40 years of age; and five of them were approaching retirement. It is the goal of the older farmers to remain in operation until retirement, when they plan to sell their properties at high prices for subdivisions. Others are continuing to farm because they feel it would be difficult to change occupations so late in life.

Finally, there is a group of primarily part-time farmers who are holding their land in the face of rising demands—waiting until they feel it will bring them an "optimum price." These part-time farmers compose the bulk of the 25% who have owned their land for less than 20 years. It was found that they are farming primarily to pay the taxes on the land and to keep their land value inflated.

FINDINGS AND CONCLUSIONS

The findings of this study seem to support those of previous writers

concerning the efficiency of the land re-allocation system in this country. Land is being withdrawn from agricultural production years before there is a real need for it in the expanding urban centers. Increasing assessment and taxes on property, plus restrictions imposed upon their operations by urbanization, are forcing farmers to sell their land prematurely.

Current planning policies provide no place for the farmer in the Township. As a result, zoning and tax policies favor the speculator over the farmer. Recognizing this trend, the remaining farmers are preparing themselves for the coming change. The farmers realize that they could not block urban development permanently, nor do they wish to do so. They merely want to be able to continue farming until they can sell without the interjection of a middleman—the speculator—coming between them and the ultimate developer.

Another finding is that policies favored by the farmers to deal with the premature transference of farm land are (1) assessment of farmland based upon only its agricultural value until the actual re-allocation occurs, and (2) zoning to reserve some of the land for agricultural use. Both of these devices theoretically provide for the continuation of farming until the urban community is ready to use it. However, both of these policies have been tried elsewhere with unfavorable results.

Finally, the above study indicates a need for more thorough research concerning the status of agriculture in the rural-urban fringe. While progress cannot be blocked, it is evident that methods need to be found which make the process of change more orderly and provide for the continuance of agriculture until expanding urbanization is prepared to make more intensive use of the land.

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