STUDY S-324

LAND AS AN ELEMENT OF HOUSING COSTS:

THE EFFECTS OF PUBLIC POLICIES AND PRACTICES

THE EFFECTS OF HOUSING DEMAND

Two Papers by:

Mason Gaffney
Richard F. Muth

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INSTITUTE FOR DEFENSE ANALYSES
PROGRAM ANALYSIS DIVISION
400 Army-Navy Drive, Arlington, Virginia 22202

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POLICIES AND PRACTICES AFFECTING URBAN LAND COSTS AS AN ELEMENT OF HOUSING COSTS

by Mason Gaffney

A.

INTRODUCTION

Land is a major cost element of urban housing. Site values of improved urban lots are about 20 percent of the total value of new single unit dwellings. However, this ratio varies significantly between neighborhoods and regional areas in the United States. For example, for the third quarter, 1967, FHA data for proposed one-family homes to be financed under Section 203, indicated that house lot prices per square foot varied from $1.72 in Orange County, California, to $.16 in Birmingham, Alabama--with the national average at $.38 per square foot.[1] Cost per unit of land is much higher in densely populated areas. For example, the acquisition cost of 110 acres for a co-operative apartment project in a decaying area of Queens, New York was $6.5 million, or ~~$38,000~~ $59,000 per acre, or ~~nearly~~ ~~$9~~ $1.35 per square foot.[2]

The cost of any parcel of urban land is derived from two elements. First, a private investment must be made to transform raw land into something usable for urban purposes. This private investment is embodied in the form of streets, sewers, utility facilities, and other privately financed improvements necessary for modern, urban living. Second, much urban land derives a value, and hence a cost

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1. See Area Trends, Second Quarter 1967, RR:250-M, (Department of Housing and Urban Development, FHA, Division of Research and Statistics).

2. See "Rochdale Village," a brochure prepared by the United Housing Foundation (New York, November, 1967). In addition, over $1.4 million was spent by the developer for water lines and sewers. Overall cost of the project was $100 million, including $85 million for buildings and other site improvements.

to any user, from an advantageous site location and from public works. In the economic literature treating the subject of land, the source of this second element of land cost is often viewed as economic rent, or simply as land rent or the earnings of land per se. As such, it is conceptually distinct from the return on any private investment in land improvements which is necessary to make raw land useful.

We may illustrate these two elements of land earnings as follows: Suppose it requires private initial investment of $2500 (to include a pro rata share of streets, sewers, and so forth) to transform a piece of raw land into a usable house lot. If the opportunity rate of return on investment is 10 percent, the annual earnings of the lot will be $250 (the public bears any costs of maintaining and replacing the facilities). The $250 might also be viewed as the rental price, or hire, of the land. As such it represents the value of the flow of services provided by the land improvements.

Assume next an identical parcel of land that is favorably located. It could be within walking distance of an efficient urban transportation system, or provide its owners an inspiring view, or both. As a result of this favorable location, it may be worth $1,000 a year for a homeowner to live in that location, in contrast to a "marginal" location. Here there is a differential flow of services, which has a value to consumers, associated with the particular location. If the rate of return on investment is 10 percent, the $1,000 annual value of the services due to the choice location of the land parcel will be capitalized at the 10 percent rate. Its capital value is $10,000. This capital value is in addition to the $2,500 investment in improvements necessary to make the parcel usable. The total capital value of the land, or its acquisition cost, is $12,500 if we assume a 10 percent capitalization rate. The annual cost of the land's services (including that which is derived from its preferential location) is $1,250.

These determinants of urban land value--i.e., investment necessary to transform raw or agricultural land into usable urban land, differential site value, and a capitalization or valuation process--

interact in complicated ways through the operation of land market and pricing process. The operation of urban land markets and pricing are further complicated by their interaction with critical public policy elements: zoning, the location of public works and facilities, property taxation, and Federal income tax practices. What follows is an attempt to clarify some of these relationships.

B.

ELEMENTS OF LAND COSTS AND PROPERTY TAX

1. THE STABLE CASE: ANNUAL FLOWS VERSUS PRESENT VALUES[3]

Table 1 illustrates by means of a hypothetical example the nature of land cost. It is assumed that Parcel "A" possesses no particular locational advantage; whereas Parcel "B" enjoys a favorable locational advantage as illustrated by the $1,000 annual site advantage. Both parcels are assumed to have embedded $2,500 worth of investment which renders them useful for urban housing. (The mechanics of how this kind of investment occurs--which is also the process by which the supply of urban land is increased--will be discussed later). The rate of return on investment, and the capitalization rate by which all future income streams is discounted, is assumed to equal 10 percent. It is further assumed that the land itself, including the investment embedded in it, is nondepreciable--i.e., the returns and benefits flow indefinitely.

Under these assumptions, Table 1 illustrates that the annual cost and present worth methods of looking at land values are different ways of viewing the same phenomenon. It should be emphasized, however, that in the case of urban land--because the supply can only be increased in roundabout ways and because urban land is nondepreciable--some special forces operate that warrant clarification. These forces operate through a capitalization process.

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1. For a more rigorous development of the material in this section, in terms of the mathematics of investment, see Appendix A.

Table 1

ILLUSTRATION OF URBAN LAND VALUE DETERMINATION

	Parcel A	Parcel B
Investment Cost	$ 2,500	$2,500
Annual Return on Investment @ 10%	250	250
Annual Differential Site Advantage	0	1,000
Annual Benefits (Cost)	250	1,250
Present Cost (Worth)		
Discounted @ 10%	2,500	12,500

If we assume the stock of urban land is fixed, the primary focus on the cost of the annual flows should be $250 and $1,250 for Parcels A and B respectively. The cost is unchangeable. For example, a lowering of interest rates which will reduce the capitalization rate to, say, five percent, will not benefit the prospective homeowner. The fixed earnings of the land will be capitalized by the lower five percent rate; parcel A's price will increase to $5,000 and parcel B's to $25,000. The purchaser of parcel B, therefore, will have to borrow $25,000 at 5 percent, instead of $12,500 at 10 percent. The lowering of interest rates, per se, does not benefit the housing consumer insofar as he consumes the services of urban land.

Let us next assume that parcel B is subjected to special property taxes, say $500 a year (possibly because it is in a "high tax" jurisdiction). The net private rent (or benefits derived from the land site) fall to $750 ($1,250 annual benefits, less $500 annual tax). The $750 annual rent after tax is capitalized at a rate of 10 percent and the market price of the land is $7,500. The prospective purchaser of the land confronts a market price for the parcel of $7,500, plus a

present worth of future tax obligations of $5,000. The cost of the land remains the same. Conversely, if the property tax is reduced, only the land owner benefits. The market price of the land increases to reflect the reduced property tax obligation. The essential elements of land cost remain. Students who propose property tax reduction as a means of permitting lower cost housing should not be surprised if in fact no cost reduction occurs. Rather, under certain conditions such property tax reduction may only increase the net worth of land owners.

To summarize, there are certain inescapable costs associated with urban land. Land parcels that enjoy a preferential location, and hence an "economic rent," incur a cost that cannot be avoided. Lower interest (or capitalization) rates, more or less differential property taxation, merely operate to change the prices which are registered in the market for the land itself.

By recognizing these points, we can dispose of some specious but ineffective proposals for lowering land cost:

(1) Lower interest rates: These raise the land price base in the same proportion that they lower the capitalization rate, leaving yearly carrying costs constant.

This argument presupposes a supply of land that is not elastic (or responsive) to lower interest rates. It would have to be modified under assumptions which made land supply rise with a fall of interest rates. For example, subsidized low cost credit for housing helps housing take land from industry, trade, recreation, charitable institutions, and agriculture. The supply of land for any one activity has some elasticity, especially if that activity is subsidized at the expense of others. The critical point is that there is no magic in low interest rates as a <u>general</u> policy that will circumvent holding costs.

(2) Lower tax rates: The basic general analysis is exactly the same as for interest rates. Lower tax rates can raise land prices. The net result is to substitute an added interest cost for the reduced tax cost.

Due to the nature of credit markets, the tradeoff between interest and taxes is not perfect and has an allocative effect. It removes a cost (property taxes) that bears equally on all landowners and replaces it with one (interest) that varies inversely with the credit rating of the individual. Credit ratings vary directly with income and wealth. Lower property taxes, therefore, can operate unfavorably against the low income groups seeking to acquire homes.

(3) Higher land taxation: It is often asserted that higher land taxes will reduce the cost of land. Although it is correct that through a capitalization process, higher property taxes will reduce the market price of land, the prospective buyer should also include the present worth of future tax obligations as part of the acquisition cost of land. However, there is a case for higher land taxes, as indicated in (2) by the criticism of the effects of lower land taxes. Raising the land tax substitutes an impartial tax cost for an interest charge that bears more heavily on lower-income groups. Land taxation lowers thus the capital that must be raised by private parties to achieve land ownership. If low-income individuals encounter higher costs of raising capital than do high-income individuals (and groups, including corporations), property taxes which lower land acquisition costs will operate to the relative advantage of those in the lower income groups. In addition, the added tax revenue from higher land taxation can assist local governments to handle their financial problems, or substitute for such taxes as payroll taxes (i.e., city "income" taxes), sales taxes, and perhaps taxes on building improvements. As noted earlier, however, an increase of land tax rates implies a wealth loss to those owning the land at the time the rate increase is anticipated. This loss occurs to <u>all</u> land owners--including lower income individuals who own their homes.

2. LAND COST AND THE SUPPLY OF LAND

a. <u>Some General Relationships</u>

A large share of what we normally call land value is not produced by private people in the same sense that buildings are, and land rent is not a reward for producing land. It may be described as a "public value," the joint product of appropriation and tenure protection provided through the police power of government, and access and utility provided by public works. The worth of land also arises from spillover benefits of private works on neighboring land. These spillover benefits values are "public" too, in the sense of not being captured by their producers, but by the neighbors of the producers.

For these reasons we can speak of land cost as not serving very directly to elicit the stock of land, and to treat stock as inelastic to price. This is not to say the stock is fixed in a meaningful economic sense. Area is fixed, but the productive and want-satisfying

potential of the fixed area is indefinitely expansible as spillover benefits from social progress and public works accumulate. But this process occurs mostly without the work of the landowner as such: there is no direct market mechanism whereby the public value of land stimulates its own production.

High land costs do motivate landowners to intensify the use of their land, where zoning allows it. This is a vital economic function of land price, without which the limited stock of valuable land would be used wastefully. The good use of a fixed stock has many effects that resemble an increase of supply, and the two are often confused. A 20-story building on a site uses less land per unit of building. When fill is dumped into the bay, use is made of a marginal underwater site. Higher land costs also takes land from lavish users--sportsmen, gentleman farmers, nurseries, and so forth--and causes it to be used for the needs of those who are willing to pay a higher price for less land per capita. In the process, a new set of prices is established, which is a necessary condition to attain the new and more intensive use of land.

But there is only a weak and indirect stimulus from land price to motivate people to "produce" land for housing. High land prices might motivate local governments to extend public works. But it is the public equity in the land, as asserted through taxation, that is the direct motive. A higher private equity motivates public works insofar as it moves landowners to exert political pressure to promote public works.

With these relationships in mind, let us review the effects of lower interest (i) and tax rates (t). No longer are they parallel, but at odds, for the public and private equities are divided in the proportions of $\underline{t}$ and $\underline{i}$. (Compare Eq. A14 in Appendix A, "The Mathematics of Land Costs.") The public share of rent is $P \cdot t$, and the private share is $P \cdot i$. If $\underline{i}$ falls, the public share of rent $(\frac{t}{t+i})$ rises. This should motivate cities to extend public works. Thus it may, through the tortuous path of city councils, add to land supply.

A higher tax rate should motivate cities to add to land stock by extending public works because a higher tax rate means a higher public equity in land. Thus higher land taxes should not reduce land supply; rather, they actually can cause it to be increased.[4]

b. Some Administrative Practices

The points that land taxation can operate to increase the supply of urban land, and to lubricate the functioning of the market mechanism, depend on the assumption that the tax system is administered in a certain way: that the tax base is an assessed value estimating the "opportunity cost" or best alternative use of land, and assessment is uniform. In practice this assumption is seldom perfectly met, and often not even approached. Let us now review the aspects of assessment and other practices most inimical to releasing land for low-cost housing.

(1) Exemptions. A large share of real property is exempt from the property tax. The privilege does not attach to the property, in rem, but to the organization - church, school, charity, foundation, brotherhood, cemetery association, state and Federal government, etc. It is therefore indefinitely expansible as these privileged groups accumulate more assets. Today, more and more human activity is being channeled into tax-exempt institutions.

The privilege being granted by the state, the local government has only weak defenses against erosion of its real estate tax base. The result is to limit the use of the property tax because the privilege is naturally worth most where tax rates are highest. Any municipality that taxes its property to provide superior local

4. There is also some deliberate private production of land value to consider. Large private landowners can consciously plan to deliberately create spillovers--"internalize externalities"--as in shopping centers, or other large, integrated land developments. If this were the predominant source of land values, indeed, the conclusion of the preceding paragraph would have to be reversed. On the whole, however, it is secondary to public works financed by government.

services will be that much more attractive to tax-exempt institutions. Thus the very existence of the threat of invasion by exempt institutions serves to limit the positive good that might be done by raising tax rates on land.

The primary direct damage done to low-income housing by tax exemption, of course, is the withholding of land from home seekers. The exempt holder has lower carrying costs, and can outbid the taxable rival for at least some land. In addition, exempt parcels in other uses, or unrelated uses, break up neighborhood symbiosis and synergism. In a perfect market, the highest use of a site is generally that which maximizes the present value of the net income stream. Such a use would be most complementary to the use of neighboring sites. This is most obvious in commercial centers. Churches, cemeteries, or schools at key places--which would not be located in a given site if they had to pay property taxes--break up the integrity of retail centers, reducing their aggregate power to satisfy wants, and sending retailers out in search of other sites. In this search they compete with homesite seekers over wide areas.

(2) Underassessment of Land. Although in some cases it does not matter how the total assessment is divided between land and building, in other cases to be discussed below, it does.

(a) Land under old buildings--When a builder buys an old "junker" and demolishes it, he obviously has bought land. The "land value" is the purchase price plus demolition cost. On the eve of demolition, therefore, old buildings should be assessed at zero or less (salvage less demolition costs); and the land be assessed at the full value of the parcel, or more. However, a study of about 1500 demolitions in Milwaukee over the last six years has brought out that just before demolition the assessor attributed over half the assessed value to the building. This suggests that the assessment practice may be generally biased in favor of land. This practice, which probably prevails nationwide, has a number of effects inimical to the production of buildings.

First, it lets new buyers of "junkers" redepreciate much of the purchase price for income tax shelter, so long as they do not renew. The Internal Revenue Service accepts local assessor's allocations of value between depreciable building and nondepreciable land.

Second, it puts a bias in favor of larger and more valuable grounds around buildings. If a parcel with a larger lot is assessed higher on account of the lot, it is not assessed enough higher when the proportion of the land to building is understated. Gasoline stations with wide aprons, for example, would receive lower assessments.

Third, to the extent that the assessment on neighboring vacant parcels is set and defended by comparison with nearby land, it biases downward and appears to justify low assessments on parking lots, unused land, vast grounds, etc.

Fourth, it makes an artificial incentive for owners to demolish old buildings of some residual value--often supplying low income housing--and leave land vacant, to lower their tax assessment.

Fifth, it partially converts the land tax into a tax on new buildings. Landowners may or may not succeed by demolition and waiting in keeping the land assessment down when they renew the site. Local practice varies widely. In New York, it is common for the land assessment to be raised when a new building goes up on the site. That practice makes the "land" tax partly[5] a tax on new

5. It is still partly a land tax because on land of low value the land assessment could not rise much or at all when a new building is erected. In general, so long as the rise of land assessment bears some relation to the land value, and is not simply a fixed proportion of the building cost, it is partly a land tax. Indeed, it is conceivable that the increase of land assessment could be entirely a function of the land's market value and independent of the building value. Then it would act as a building tax in respect to time of renewal, but as a land tax in respect to intensity and quality of the building. A land tax assessment administered this way would probably increase rather than reduce intensity when renewal occurred; the builder would want to minimize the amount of land whose assessment rose when he renewed the site. The net result would be sites renewed

buildings, and provides an incentive to defer renewal. In some jurisdictions, sale of land is the occasion for reassessment, making the "land" tax really a tax on change of ownership, locking in old owners and penalizing new ones--usually builders.

It might seem healthier for builders, by comparison, if land assessments simply remained frozen on the occasions of building or sale; and there are cases of that, too. But that means gradual tax exemption for land altogether, putting the whole burden on buildings, requiring a higher tax rate, reinforcing the disincentive effects of taxing buildings.

The proper standard against which to compare present practice is one in which land assessments are based on value, as the law directs. Value at any time is what the land if bare would sell for. It is value in the best alternative use: the economists' "opportunity cost." It is independent of present use or ownership. It changes year by year, usually gradually, as demands and neighborhoods change. A proper land assessment changes in step with these exogenous determinants, ignoring the specific response that individual landowners make to their environmental challenge. A simple test of land assessment technique is whether the assessor uses a map of land values that may be contoured, showing the dependence of land value on location. Most assessors, astoundingly, have no such map. Their assessed land values jump up and down from lot to lot.

The rarity of proper land assessment practice is attested to by the commotion aroused when an assessor applies it. Currently Assessors Francis Austin in Rosslyn, Virginia; Theodore Gwartney in Southfield, Michigan; and Irene Hickman in Sacramento, California are following the practice, apparently with positive results.

"too much, too late." As we now observe durably constructed high-rise buildings rising in many downtown areas long overdue for renewal, it is worth hypothesizing that this pattern of land assessment practice plays a role in determining land use.

(b) Appreciating Land. The Census of Governments in 1957 and periodically thereafter has supplied the most thoroughgoing nationwide evidence on assessment discrimination. Underassessment of vacant land was unquestionably the most extreme and consistent discrimination. Many fragmentary earlier studies had shown the same pattern, although obviously there have been periods (like the 1930's when vacant land was being abandoned for taxes) when this pattern did not prevail.

The pattern develops from several causes, other than explicit intent. One is that assessors tend to confuse the in rem property tax with the in personam income tax, and base assessments on present land use, income, and ownership, regardless of land potential. Thus land used for farming is regarded as "farm land," a class bearing lower assessments, regardless of urban value. Sometimes they confuse it with the welfare system and hold down assessments for "widows and orphans," although here one must register skepticism about who is hiding behind the widow's skirts. Sometimes they wait for a "happening," like a sale, raising the assessment on the parcel sold but not on the neighboring parcels.

Often assessors wait for subdivision. Subdivision raises square foot values and differentiates parts of a tract, so it is an occasion for reassessment; but assessors make it the occasion to tax not merely the gain from subdividing, but all the prior increment in acreage value as well. The effect must certainly be to defer subdivision. Another probable effect is to raise density in subdivisions in order to minimize the area of land whose assessment rises. The last may be a saving grace for low-income buyers but if it allocates capital inefficiently it is not for long a favor to low-income buyers most vulnerable to a shortage of capital.

Another way to avoid subdivision and still profit from urban demand is to sell off acreage having frontage on a road someone else has paid for. The inefficient land-use pattern is commonplace in urban fringes: individual driveways attached like suckers to a tree trunk; interior acreage idle, or farmed. As this

can occur without formal subdivision it costs the landowner less. If he avoids a tax increase as well, he is doubly motivated to suburbanize his land in this way, losing half of its potential to satisfy human wants.

(c) Missized lots-- Assessors often regard the unit of assessment to be the lot, or ownership unit, with its existing boundaries, rather than the square foot. Thus they can put a lower square foot value on a large lot than a neighboring small lot, without seeming to depart from market value as the criterion. They do not assess unrealized "plottage"--the gain from optimizing size of parcel.

Thus lots larger than the optimum are not assessed more in proportion to their land content. In newly dividing land, this puts a bias toward larger lots.

In older areas, where apartments are succeeding single family dwellings, the plottage problem is rather the reverse: lots below optimal size are assessed lower because they are too small. This strengthens the hand of holdouts, helps to make land assembly for apartments more costly than it should be, and contributes to a pattern of "apartment sprinkle" in the inner city that, in terms of apartment intensities, is more extreme than "urban sprawl" at the urban fringe. It not only slows apartment building but also casts its own floating value pattern over interstitial land, pricing it too high for new low income housing other than apartments.

(d) Zoning devices-- When assessors finally do catch up with rising market values of appreciating land, owners seeking to minimize their carrying costs have another bowstring in low-density zoning. Low-density zoning, if credible, holds down actual market values and so justifies low assessments and carrying costs. Even if it carries low credibility in the market, it may still get by in court and justify low assessments. The holder has the best of both worlds where low-density zoning is coupled with a lax policy of granting zoning variances and spot zoning to individuals at the time they are ready to cash in.

Low-density zoning has become almost universal in suburbs. The practice operates to keep low-income homeseekers out of a municipality because they have school age children and are therefore feared to be net fiscal liabilities. The only effective counterforce will be state school aid based on population or attendance. But some suburbs even zone so low and strictly that they virtually destroy the resale value of land. This succeeds in holding down assessments and school costs, but would seem to be biting the nose to spite the face. However, there are tax motives here, too.

First, the loss of revenue may be largely to an outside body, the county or a large school district, rather than to the municipality that imposes the zoning. In Wisconsin, with its shared state income tax obviating property tax revenues for rich municipalities, this is a common motive. The zoning is essentially a species of fraud against the countywide equalization process, sparing the suburbs' having to contribute much in county property taxes, during the years while they await their capital gains that can result from generally increasing land values. These they will reap at some future date, as yet undisclosed, when they will change their zoning and allow subdivision. Another force behind low-density zoning is the open-space conservation movement. On the whole advocates of open space may be relied on to oppose cities, subdivisions, and land taxes, on whatever ground the issue may be joined at a given time. Although not explicitly committed to perpetuating ghettoes and slums, open-space advocacy inspires low-density zoning and is a powerful force to reckon with.

(3) Delinquency With Option to Redeem. Most state laws grant landowners extended rights to reclaim land after letting taxes go delinquent for some years. In the late twenties and early thirties it was common for speculators to hold land tax delinquent, on the chance that it might appreciate. Should it do so, they could pay their back taxes with light penalties. Should it not do so they let it go for back taxes: heads they win, tails the county loses. In the meantime the land was frozen, unavailable to builders; and those who improved their own land had to pay taxes for them.

(4) Fighting Annexation by the City. Some landowners can successfully resist annexation by the city. Often quite near the city center there are wild lands that the city cannot saddle with services and taxes. In the absence of county zoning, wealthy resident landowners generally use extra space for insulation against nuisances that their neighbors might inflict: midget auto racing tracks, dumps, and so forth. Commitment of capital to individual wells and septic tanks, low capacity roads, and so forth during the early succession period strengthens resistance to incorporation and full urbanization, often leaving such lands for decades at much lower densities than otherwise.

More common is preemptive incorporation. Landowners in the path of urban growth established a "city" dedicated to being rural, or much less dense than the adjacent and sometimes surrounding city. Here a group of landowners manage to maintain a low density of land use. Snob zoning is used, but more is involved than zoning. Street and utility networks are kept primitive, so that tax rates may be low--the "septic tank suburbs." These practices hold down the unit value of land for resale, a disadvantage to owners wanting quick cash, but an advantage to owners seeking deferred capital gains and minimum carrying costs for tax purposes.

c. Summary

The principle mechanism by which higher prices of urban land operate to increase the supply of land is through the local government, which provides the social investment necessary to convert raw or agricultural land into land usable for urban purposes. Through a well administered property tax system, the local government can also have a powerful financial incentive to increase urban land supply. The sine qua non for a well administered property tax system, however, is to appraise land for tax assessment purposes in such a way as to reflect the economic or opportunity cost of the land. There is a widespread tendency to undervalue land for property tax purposes, which simultaneously is contrary to the stated intent of legislators when they write the tax laws. These assessment practices,

combined with low-intensity zoning, operate to reduce the supply of land available for urban use, including housing. The lower supply increases the market price of the land that is available.

An important policy implication of these points is that local governments may have at their immediate disposal untapped resources to cope with their financial difficulties. The property tax, potentially, is a means of financing public works improvements which can enhance the local setting and thereby increase land values. Conversely, public works financed by high government units (e.g., state and Federal) can often operate mainly to enhance local land values in such a way as to benefit only the land owners. This possibility suggests that grants from the state and Federal governments to local governments should primarily be employed to provide support for services oriented toward people, to include educational programs. However, any program of grants to local governments must be very carefully designed and administered if they are to achieve the effects purported for them, rather than being a mere transferral of Federal taxing power to state and local governments. Such actions, in turn, contain a high probability of extensive Federal "interventionism" in local government affairs, which creates a further set of problems.

3. PROPERTY TAXES: THEIR GENERAL SETTING

The previous sections treating land costs and their relationship to property taxes should be placed in a proper general setting. Actually, property taxes are also imposed on all "real estate," including buildings and housing, and on "personal" property. "Personal" property includes industrial equipment, machinery and inventory, as well as agricultural and commercial inventory. Public utilities, including railroads, telephone, and other service utilities, also bear substantial property tax burdens.

Table 2 shows the extent to which the US property tax system taxes assets other than housing, as well as housing.

Table 2

EFFECTIVE PROPERTY TAX RATES,
BY MAJOR TYPES OF ASSETS, 1956[a]

Type of Asset	Asset Value (Millions)[b]	Property Tax Payments (Millions)[c]	Effective Property Tax Rate (Percent)
Non-Farm Housing	$406,780	$5,195	1.28
Agriculture	149,117	1,164	.78
Total Non-Farm Business	503,286	5,544	1.10
Selected Utilites and Transport	118,158	1,541	1.30
Manufacturing	161,814	1,620	1.00
Other	189,314	2,383	1.07

a. Source: Dick Netzer, Economics of the Property Tax, (Washington, D. C. 1966) pp. 20, 28-29.
b. Asset value data primarily from Goldsmith; The National Wealth of the United States (Princeton: Princeton Univ. Press, 1962).
c. Property tax data from the Census of Governments, which encompasses fiscal years ending in 1956-57.

When viewed in this broader context, it is apparent that the property tax operates as a general tax on the earnings or income from wealth, including land. As such, it can cause the private earnings from all investment activity to fall and it lowers the rate at which all asset earnings are capitalized. For example, if the before tax rate of return on new investment is 10 percent, a property tax system which taxes 17 percent of total net asset earnings will lower the capitalization rate to 8.3 percent. In 1966, property taxes amounted to 17 percent of total asset earnings in the United States. Table 3 shows the derivation of these estimates.

Table 3 also illustrates that property taxes have increased in both their absolute and relative impact on property earnings. A recognition of this general character of the US property tax system has two important implications.

Table 3

DERIVATION OF ASSET EARNINGS, 1956 and 1966[a]
(Millions of Dollars)

	1956	1966
Net National Product	384,768	697,782
Employee Compensation	242,502	435,719
Property Earnings		
Corporate Profits	41,990	82,196
Rental Income	10,913	19,374
Net Interest	11,716	20,163
Property Taxes[b]	12,147	25,392
Total Property Earnings	76,766	147,125
Total Earnings[c]	319,268	582,844
Property Earnings as Percent of Total	24.0	25.2
Property Taxes as Percent of Property Earnings	15.8	17.3

a. Source: Survey of Current Business, July, 1961, 1963 and 1967.
b. Comprises property and vehicle license taxes identified as "business" taxes, and classified as an element of "indirect" business taxes in the national accounting scheme. Does not include an element of property taxes (specifically personal property taxes and vehicle license taxes) imposed on individuals which in the national accounting framework are classified as "personal" taxes. In 1966, these taxes were $1,956 million.
c. Remainder of net national product claimed by non-farm and farm proprietors (which the national accounts do not identify in terms of labor and non-labor earnings), and the non-property tax elements of "indirect taxes"--specifically sales and excise taxes.

First, to produce the effects on land values discussed in Section B of this Study--whereby a land tax is "capitalized" and the market price of land falls--land yielding an economic or differential "rent" must be taxed at a higher rate than other assets are taxed. If land earnings are reduced by only the same proportion as are the

earnings of other assets, the capitalization rate and the land earnings fall by equal proportions. Lower earnings are discounted by a proportionally lower rate, and land values remain unchanged.

On the other hand, to the extent that land is not as heavily taxed as are other assets, like improvements and industrial assets, possibly as a result of assessment practices discussed above, land values will be higher than they would otherwise be. Land thus becomes an attractive asset to hold; and improvements on it may be discouraged insofar as they call the assessor's attention to reappraise it. Property tax administration appears to be a critical factor in urban land cost and use.

The general nature of property taxes causes many students to ignore a second important point when they focus on the subject of housing. Some students suggest that the property tax is an important cause of high housing costs in urban areas.[6] The policy implication is that property taxes should be reduced. For example, a property worth $20,000 in an urban area might bear an annual property tax of $400 to $600 which would be an effective tax rate of 2 to 3 percent. Thus property taxes, along with mortgage interest, appear to be a major item in the annual, or "full cost" of housing services. The property tax is thus viewed as a "consumption" tax. It is also tempting to translate property tax liabilities into estimates of the "burden" they place on housing owners and occupants (as consumers) as a percentage of their income.[7] Thus it is held that property taxes especially burden the poor since they allegedly spend a larger share of their income on housing than do middle and upper income families.

This line of thinking warrants careful examination. First, it does not fully take into account the fact that property taxes are "general" insofar as they are imposed on property other than housing.

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6. See e.g. Dick Netzer, Impact on the Property Tax: Effect on Housing, Urban Land Use, Local Government Finances (printed for the use of the Joint Economic Committee) Washington, GPO, 1968.

7. Ibid, p. 19.

Consequently, the property tax may be considered to be a tax on wealth generally. Viewed in this way, the property tax simply reduces the earnings of the wealth and of property owners generally--including landlords (rich and poor) as well as low income individuals who own their homes.

A recognition of the general impact of this tax does not deny that if the tax were eliminated from housing but kept on other assets, an increased flow of investment into housing would be encouraged. However, a recognition of this possibility only means that tax exemption of some selected activities, when all other activities are taxed, is a subsidy and can indeed increase the output and reduce the price of the subsidized commodity. It would be equally appropriate to recommend that businesses and workers engaged in housing construction be exempted from income taxes. Such exemption, by making housing activity attractive relative to other activities would stimulate the flow of workers and capital into the housing sector.

Second, to the extent that tax assessors in urban areas may in fact be imposing heavy taxes on land values, and to the extent that those heavier taxes are reflected in lower land values, the effective tax rate, i.e., the ratio of tax to the market value of the property, will be high. Empirical evidence of high effective property tax rates in urban areas (particularly central cities) may in fact reflect heavy taxation of the favorable location of the property. If such tax capitalization has occurred, lowering of property taxes may only operate to enhance the earnings of the land owners, and to increase land values. No reduction in housing costs will occur.[8]

In summary, property taxes should not be viewed as "consumption" taxes--on housing or anything else. Rather, they reduce the earnings from creating and holding assets (which is the main reason property

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8. Prof. Netzer's cited works (especially his Economics of the Property Tax Washington: Brookings, 1966) take this effect into account in his excellent treatment of site value taxation. However we believe that he has not yet fully incorporated that analysis into his general statements about forward shifting of the property tax. Nor has he given due weight to the fact that even taxes on buildings may be borne by landowners in the form of reduced land values.

owners complain about them). Given an overall level of asset taxation, higher taxation of land earnings due to favorable location can reduce the market price of land and capture for the local government a share of the land rent. Under-taxation of land, on the other hand, benefits only the landowner and causes the market price of land to be higher. Tax relief for housing in densely populated urban areas may or may not benefit consumers of housing. To the extent that it does not, it makes landowners more wealthy; to the extent such tax relief does benefit housing consumers, it does so only insofar as the property tax system is simultaneously taxing other kinds of assets more heavily, and in this fashion is forcing capital investment out of nonhousing activities and into housing. In this case the property tax system is operating to subsidize one form of consumption at the expense of others. In most cases, property tax relief for housing in urban areas will probably exert effects both favorable to landowners and to subsidized housing consumers.

C.

THE FEDERAL INCOME TAX AND LAND VALUE

The Federal income tax system is characterized by major differences in the rates at which different kinds of earnings or gains are taxed: personal income at a scheduled rate of 14 to 70 percent, corporate profits at 48 percent, and realized long-term capital gains at one-half the personal or corporate rate or a maximum of 25 percent or at a minimum of zero percent. Important items like depreciation (particularly accelerated forms of depreciation), interest on borrowed money, and charitable giving are deductable for purposes of computing taxable income. These and other features of the Federal tax system combine in ways to make land an especially attractive vehicle by which taxpayers can reduce their income tax liabilities, and in this fashion increase land prices and hold land off the market.

1. COVERT WRITEOFF OF UNDEPRECIATED AND APPRECIATED LAND VALUE

Urban land is nondepreciable for tax purposes, on the ground that it is physically indestructable. If a nondepreciating asset could be written off, its income would achieve complete tax exemption as follows: Let t be the income tax rate. When the taxpayer writes off the asset, he reduces his tax liability by that amount, and his tax payments by t percent of that amount. Now the Treasury has put up t percent of the value of the asset. It also receives t percent of the income of the asset. Thus the Treasury simply receives a return on its investment. As for the owner, he has now invested only (1-t) percent of the value; and he gets (1-t) percent of the income. On his equity[9] he would earn a tax-free income in perpetuity.

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9. We assume 100 percent equity financing, for expository simplicity. Actually the game is leverage, or using borrowed funds to finance the venture. The mortgaged landowner who writes off land could easily end up receiving income on no equity at all.

The way to write off land is to buy it under an old building and allocate most of the acquisition cost of the property to the building, which is depreciable. If the remaining life of the building is short, it is rapidly depreciable (although there are limits to what one can get away with). The IRS has no well organized defense against this practice. It permits taxpayers to use the land-building allocation reported by the local tax assessors as evidence supporting their allocation. These allocations consistently understate the land component by a very large factor.

Covert writeoff of land is a factor above and beyond the multiple writeoff of buildings. This latter is a more or less intended consequence of accelerated building depreciation, which reduces book value of the depreciable asset below its remaining resale value. Land depreciation occurs when the buyer of an old building allocates less value to the land than it had originally, even though it has not declined; or allocates the same, even though it has risen.

There might seem to be recapture of land writeoff when one sells and pays a tax on the excess of sale price over book value. But this tax is twice diluted. First, it is deferred until sale, whereas writeoff came earlier. Second, it is at capital gains rates; the writeoff was from ordinary income. If the owner never sells there is never an occasion to recapture.

But actually taxpayers can do even better than that by selling, because the buyer starts writing off the land all over again--no matter how many times it was done before. Thus land, which the law says is not supposed to be depreciated at all, is written off several times. The only proviso is that it must remain under an old building.

Were it not for this device, the income tax might promote urban renewal. Once the initial cost of a building was completely written off, accelerated or not, its current cash flow would be fully taxable.[10]

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10. Indeed, if a building underwent locational obsolescence due to land appreciation, writeoff should end before the life originally contemplated, as soon as the "challenger" land value equalled the "defender" value of land with old building.

Thus in the year after the last allowable writeoff, the slum owner would suddenly face a much higher tax bill. If he wanted a tax shelter in real estate, he could get it only by actually building; not by redepreciating old slums.

But under present practice the surest way to lose the privilege of depreciating land is to clear it and erect a new building. For then the IRS perceives that what was bought was not the depreciable building but the nondepreciable site underneath it. It denies writeoff. Even demolition cost is nondepreciable. Or, if there was no recent purchase, the IRS allows depreciation only on the cost of a new building construction, not the land. The net effect: an owner can depreciate land so long as he does not improve it.

Thus the tax law biases owners of older buildings to delay renewal, to milk the last drop of tax shelter out of old buildings before releasing the land for new.

2. EXEMPTIONS

a. Exemption of Imputed Income

Durable goods used for the owner's consumption yield an income "in kind" that is not taxed. The price of land is more affected by this than is that of other assets because the service flow from land is 100 percent income--no wearing out.

The availability of land that builders might use is reduced in urban fringes by the high propensity of the affluent to "reside" over considerable acreage. Teamed with large-lot zoning (which holds down assessed values and property taxes), expensing of taxes and interest, expensing of "conservation" investments, capital gains on breeding stock, indefinite deferral of tax on sale of "residence," and a host of favors to deferred land increments (all to be treated later), this exemption of imputed income serves greatly to fortify the holdout power of landowners surrounding every city.

It is true, of course, that buyers of new homes on this same land would also enjoy the exemption of imputed land income, partially neutralizing the bias. But there is normally a tax-bracket

differential--appreciating suburban land gravitates to the strongest hands. Higher prices mean higher credit barriers all around, screening out the poor. Where the new use is an apartment and the income is taxable there is no offset at all--that is, there is an unmitigated or total bias against apartment owners and renters.

b. Exemption of Unrealized Appreciation

The form of income known as capital gains is not taxed until realized by sale.[11] If the land is never sold, there is no tax. Some landowners therefore prefer to lease ripe land rather than sell--prominent examples are the Big Five of Oahu. Others prefer to buy many years in advance of their own anticipated needs, even very conjectural ones. When and if the needs materialize, they have on tap needed land, now of high value, acquired at a low value. The difference is tax-exempt income. The motive is strengthened by, and mutually strengthens, the motive to acquire advance reserves of a raw material whose supply is jeopardized by the absence of a vigorous free market. The combination magnifies the area of reserves which individuals and firms find it advantageous to hold. Thus it raises the holdout price of land.

c. Capital Gains at Death

Capital gains taxes on appreciated assets are forgiven at death. There are death taxes to pay instead, but these would also be due on whatever other asset was substituted for appreciated land. It is therefore very costly for individuals to sell any appreciated asset during a period of several years before death; usually land is just held off the market.

d. Bequests

Eleemosynary bequests of appreciated land enjoy exemption from capital gains tax; yet they are fully deductible at appraised value for purposes of computing taxable income. Thus the taxpayer can

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11. Eisner v. Macomber, 252 U.S. 189 (1920), 40 S. Ct. 189.

deduct a value which he has accumulated tax free, in addition to enjoying the prestige and satisfaction of supporting his favorite church, college, or foundation. This adds to the motives to hold land for appreciation.

Another aspect is the gift with life estate. Under this arrangement, the taxpayer deducts the appraised value at time of bequest, but enjoys use of the home and grounds for life with no tax on the imputed income. During this period he cannot sell and the land is frozen.

e. Capital Gains of Eleemosynary Owners

Churches and other tax-exempt owners are normally not allowed exemption on business-type, profit-making activities. The exception is gains on land sales. The central city church that goes suburban takes the full selling price along with it. Edified by the experience, the church will probably select a large site with ample grounds and parking space, with one eye to future tax-free gains. It may buy its future site years before it is ready to build. Cemetery associations especially are large land speculators which benefit from this provision. The benefits from income tax exemption are usually coupled with exemption from local property tax.

3. DEFERRAL OF TAX ON REALIZED APPRECIATION

Land value can appreciate in two ways. First, its value can increase due to increased population and growth, which increases the relative scarcity of its services. Second, inflation can increase the money value of its services. Both these forces can operate to increase the value of all assets, including those which can be produced but which depreciate with use. However, land--because it does not depreciate with use, or because it is especially long lived--possesses more potential to increase in value from these forces.

This characteristic of land combines with the "realization doctrine" embedded in the Federal income tax to make the long-period holding of land a very attractive tax shelter. The

essence of the realization doctrine is that gain cannot be taxed until the taxpayer actually realizes it through a sale or other explicit transaction. Appreciating land is like a corporation that does not distribute profits to avoid taxation of dividends, but plows them back into capital and lets the shareholders realize the income at their tax convenience in the form of appreciated stock values at capital gains rates. This loophole for corporations has been recognized and somewhat compensated by the double taxation inherent in the corporate income tax. In the case of appreciating land, however, there is no such compensating device. There are rather a number of fortifying loopholes, discussed elsewhere.

The desire of landholders to defer taxes on gains is often colloquially described as the "locked-in" effect. To show the force of the locked-in effect and its tendency to defer sale, Table 4 shows how after-tax rates of return increase with holding periods.

Table 4 is derived from a formula that assumes that selling price of land rises yearly at an assumed rate i. A tax rate, t, is applied to the excess of sales price in any year, $(1+i)^x$, over cost of \$1 at time zero. The landowner's rate of return after tax is r.

$$(1+r)^x = (1+i)^x (1-t) +t \qquad (1)$$

Using a standard set of interest tables, Table 4 shows numerical examples of how r rises with x, the year of sale.

The speculator who sells in one year bears the full stated tax rate--his rate of return is halved, as the nominal tax rate of 50 percent contemplates. The speculator who sells in 20 years bears less than three-fourths of the nominal tax rate. The old settler who waited 50 years bears less than half the tax rate.

At the same time that investors seek to defer tax liabilities they seek to advance deductions. Here the landowner again receives favorable treatment because he deducts his holding costs as he spends the money--i.e., he "expenses" local land taxes and interest on borrowed money, even though the increment of land value which they finance will not be taxable for many years to come, if ever. Hence, even without preferential treatment of capital gains, the realization doctrine makes

land an attractive investment. Taxation of realized gains at lower capital gains rates makes holding land even more attractive. But even if long term capital gains were treated as ordinary income, the realization doctrine would still make land holding attractive.

Table 4

AFTER-TAX RATE OF RETURN FOR DIFFERENT HOLDING PERIODS[a]

Year of Sale	Value of 1 Compounded at 8% for x years	Value of 1 Compounded at After-Tax Rate of Return for x Years (r=.04)	After-Tax Rate of Return
x	1.08^x	$(1+r)^x$	r
1	1.080	1.04	.040
5	1.469	1.24	.043
10	2.159	1.58	.047
15	3.172	2.09	.050
20	4.661	2.83	.053
25	6.848	3.92	.056
50	46.902	23.95	.065
100	2199.798	1100.40	.072
∞	--	--	.080

a. Based on the equation:
$(1+r)^x = (1+i)^x (1-t) + t = 1.08^x \cdot 1/2 + 1/2$ when r is after-tax rate-of-return to land owner for different holding periods, when the rate of appreciation before tax (i) is constant at 8%, tax rate (t) is 50%, and acquisition cost of $1 is deductible in year of sale (x).

4. DEFERRAL OF TAX BEYOND DATE OF SALE

a. Sale of Residence

If an owner sells a residence, the tax is deferred so long as he buys another residence within a year. Under large lot zoning, five or ten acres of grounds would probably qualify as part of the "residence," although local administrative practice varies.

b. Deferral of Tax by Barter

If the grounds qualify as a "farm" the owner can barter it, tax free, for a larger "like property" further out of town. The new owner has a higher basis--the appraised value at time of barter--and can subdivide and sell off without tax on the pre-barter increment. Or he can hold for further appreciation, the tax on which he too can defer in the same manner. Section 1031 of the Internal Revenue Code provides: "No gain or loss shall be recognized if property held for productive use in trade or business or for investment (not including stock, etc.) is exchanged solely for property of a like kind to be held either for productive use in trade or business or for investment." There is a good deal of "tailoring" of transactions to fit the letter of Section 1031. An investor whose intent is to buy a suburban farm for cash will first buy a rural farm, satisfactory to the prospective seller, and then barter farms with him. Or he might buy other suburban land for barter. The other land of "like kind" might also be a golf course, dump, drive-in, airport, nursery, etc. A network of brokers' clubs has developed to arrange such bartering. Thus a ready avenue is open to suburban land speculators to defer taxation of capital gains.

Section 1031 is not an unmixed evil for low-income housing. It unlocks some locked-in investors by letting them release their land to commerce without tax penalty on the transaction. On the other hand, it makes land speculating more attractive and so tends overall to inflate the level of land prices. The seller, too, is still locked into his "like property," which may be a rural farm--a big factor inflating farm land prices--but may also be another suburban farm.

c. Deferral by Installment Sale

The affluent seller who is in no hurry for cash, or whose strong credit enables him to obtain cash by borrowing, may defer tax on land sale by the installment device. He must be the mortgagee. He must not take a down payment of more than 30 percent of the selling price.

An important incidental benefit of this method of sale is that a large share of the interest on the deferred payments may be treated as part of the contract price and receive capital gains rates. Only a 4 percent rate must be treated as interest, at simple interest rates.

Mortgage interest rates today are about double that, at compound interest. So contract prices are inflated to reflect the buyer's benefit from borrowing at 4 percent simple interest from the seller; and the seller takes his interest above 4 percent at capital gains rates.

The longer the installment period, the greater the difference between simple and compound interest. So sellers who can wait a very long time for cash can get capital gains treatment on all compound interest above 2 percent or 3 percent, depending on the time involved.

A variant of installment sale is the "land contract." The seller instead of conveying title and taking a mortgage, retains title until payments are completed. If payments come in slowly this method is rather like rental, but with the tax benefit of capital gains treatment for all payments on principal representing taxable gains to the seller, and all interest payments above 4 percent simple. Thus a good deal of ordinary rent income receives capital gains rates.

d. Simple Prorating of Installment Payments between Interest and Principal

Whenever a debt is paid off in level installments, the true proportion which is interest is a maximum in the first year when the unpaid balance is a maximum, and falls nearly to zero in the last installment. The necessary sinking fund tables to find the true proportion are the common property of bankers, and no deep mystery. Simple prorating of level installments between interest and principal therefore constitutes a deferral of tax liability relative to an accurate accounting--another benefit from installment sales.

e. Contract Price Contingent on Buyer's Profits

If the contract price is contingent on the buyer's profits from the land, the seller need not prorate early payments between interest and recovery. He treats all payments as nontaxable recovery of principal until he has recovered his full basis; and only then does he begin to pay taxes on his cash receipts.

f. Condemnation

If land is condemned, as for highways or urban renewal, the tax on gains is deferred if the unwilling seller reinvests in like property within a year.

5. DEFERRAL OF INCOME FROM LAND USE

a. "Implicit Expensing" of Foregone Income

There is often an intertemporal dependence of land rents. Sacrificing early rents to get higher later ones is a form of investment, basically quite legitimate. However, the income tax biases landowners toward more of this kind of investment, because the foregone early rent is plowed back without ever having been received and taxed.

The effect is the same as though the early foregone rent were received in cash and then reinvested, and granted the valuable tax privilege of being expensed. This is "implicit expensing." Expensing of capital investments, we have seen, is tantamount to 100 percent exemption from income tax.

An example of how implicit expensing decreases the availability of land to builders is the following. As a district or neighborhood fills in, the early builders establish a pattern of use. The more of the land is developed, the more certain become the specifics of the highest use of the remaining undeveloped land. Thus certainty improves over time. This has always supplied a certain rationale for deferral of land development, even before income tax rates were significant. But now the early foregone rent--the investment in greater certainty--is expensible (implicitly, that is.) This encourages individuals to withhold land to achieve greater certainty. Since the individual's gain of certainty is achieved by imposing uncertainty on other landowners, there is no net social gain to justify a subsidy to this kind of withholding.

Another familiar example is the effort of large developers to attract the highest possible stratum of the market, at the expense of

some waiting. Early sales to wealthy buyers are thought to tone up a subdivision and enhance later sale prices, if not volume. Thus a bias toward high pricing and slow sales results. The income tax exaggerates it. The loss of potential income from idle land is "implicitly expensed." The same reasoning applies to apartment management which holds rents above the level that would fill the building quickly. Implicit expensing is involved not merely in the year-to-year management but in the original decision to put up a building whose units cater to higher tastes than the broadest and most frustrated stratum of the market can now afford.

A third example is the new towns movement. These have ideal tax shelter properties. Early operating losses are expensible; the final payout is the land value increment, taxed very lightly. Many towns have foundered by overestimating the increments and using too much leverage, but the point here is that the tax structure helps them divert land from meeting the most urgently felt current needs in order to prepare land for tomorrow's alleged needs as envisaged by the founders, their advisers, and the aesthetic taste dictators of the architectural haut monde. Too often they were rich men's hobbies and status symbols.

A fourth example is the California zoning device whereby large landowners can have their development density measured as a whole. They can raise density in parts of their land if they keep the average down to the required level. Their response is to begin at densities below the average, building up zoning "credits" to apply later to apartments after the integrated development has become established. The unreaped rents of the unused land, meantime, are implicitly expensed.

b. Explicit Expensing of Early Operating Losses

It is possible in several ways to appropriate control over territory by establishing an early position. An example is the effort of retailers to establish an early position in growing suburban territory. Here the bias is toward premature development--but not of housing, as a rule. How does this work?

Retailers establish new positions around every growing city. Where there is room for only one store, or shopping center, or only a few gas stations, to be there first is to establish a species of franchise over the trade area, at least for several years. The early losses are expensible; the taxable income is deferred, and might even be taken as capital gain by sale of land.

Thus, areas best suited for residential use are subject to premature invasion by commerce, a higher use. The "floating value" that results, diffused over wide areas, inflates values above the residential level, without, however, raising them enough to stop the commercial demand. This drives residential builders farther out, where high density residential use establishes a floating value over areas best suited for low density use.

While the homesite seeker is thus pressed from above by the higher use of commerce, he is pressed from below by the farming interests which also enjoy extraordinary privileges. "Farmers" may expense many capital investments in soil and water "conservation." The gentlemen farmers who sink money in farms have become a conspicuous case in point. A recent U.S.D.A. study, based on 1963 tax returns, shows that most wealthy taxpayers who own farms report farming losses. Of 3.2 million individuals who filed tax returns including farm income, 66,000 reported combined farm and non-farm incomes over $25,000.[12] Of this top group two-thirds reported farm losses. Their alleged tax losses are only current. They are expensed from ordinary income, usually urban, to be recouped later at capital gains rates by sale of a greatly improved farm. Soil and water conservation are likely to hold the land in agriculture until the tax-motivated farm improvements have been used for farming.

The cost of establishing orchards also is expensible, and the unrealized rent of the land used for an orchard's early nursery years

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12. Edward I. Reinsel, Farm and Off-Farm Income Reported on Federal Tax Returns (ERS-USDA, ERS-383), August, 1968, p. 25.

enjoys implicit expensing. The competitive strength of horticulture against housing is thus enhanced.

6. SUMMARY ON THE FEDERAL INCOME TAX

It seems reasonable to assert that the Federal income tax operates in such a way as to encourage land holdout and so increase urban land prices. It also stimulates consumption of owner occupied housing and land by income tax payers. It stimulates, through accelerated depreciation, construction of office buildings and rental apartments for moderate and high income renters. Each of these factors, by forcing up the price of land, impacts unfavorably upon housing costs for low-income individuals.

It is tempting to suggest changes in the Federal tax system that would "improve" this situation as it applies to housing. The present Federal tax system is exceedingly complex: changes in one part of the system usually create inequities or difficulties in other parts. To close one man's loophole makes the remaining ones stand out even more; and to eliminate one set of the loopholes or shelters while leaving others untouched may itself be a form of inequity. Nothing short of a sweeping reform of the entire system may suffice to restore some semblance of neutrality to the impact of the Federal tax system as it affects land use and housing, and a number of other elements of our economic system. It may be concluded, however, that land income receives unusually favorable tax treatment; that the favors are granted in such ways as to encourage land holdout and price inflation; and that there is probably scope for legitimate reduction of housing costs, without subsidy, *via* review and revision of the income tax features discussed in this paper.