

Defining and Measuring Land Value – A Progress Report

In a paper presented at a previous TRED conference, Oliver Oldman and I set forth, for purposes of critical discussion and development, a proposal for the administration of a tax on land value in urban areas (Oldman and Teachout 1979). In that paper, we were primarily concerned with making equitable distinctions between taxable land and other forms and elements of real property, and also with developing a conceptual definition for "land value" as a tax base in urban environments.

The difficult task of identifying workable concepts of land and land value continues. Our own thinking on this problem has undergone considerable revision.¹ An article in preparation will elaborate on the conclusions we have reached following further analysis by ourselves and others of the problems of defining land value for purposes of taxing urban land without buildings.

Meanwhile, we are continuing our inquiry into the problems of defining and measuring land value by focusing on the procedures that would actually be used to establish land value assessments for a separate tax on land value. Our particular purpose here is to expand on an idea suggested only briefly in the previous paper. That is, when an assessment error is

1. Some developments of our research appear in print in Oldman and Teachout (1978a) and in summary form in the *International Center for Land Policy Studies Newsletter*, no. 5 (August 1978).

discovered or new information is brought to light during the appeal process, revisions should be made to assessments of all land parcels affected by the new information, whether the owners of those parcels appealed or not (Oldman and Teachout 1979, pp. 232-234). In the present paper, we have designed an appeals, review, and revision structure for implementing this concept. The result is a set of procedures quite different from those usually used for property tax appeals.

For purposes of this paper, we assume that "land value" has already been defined. We also assume assessment by mapping of land value information derived from market sources. That is, land value information gathered from market sources is recorded on a map and adjusted according to chosen techniques² so that adjacent, similar parcels of land have closely related values irrespective of the buildings that may currently be on them.

The assumption of close interrelationships of value among contiguous parcels of land is fundamental to our proposal. Its significance is best illustrated by example. Imagine two improved properties in an urban environment located on adjacent parcels of equal size. The site characteristics of the two parcels are identical; the geological conditions of the underlying land are the same and they both have the same relation to transportation facilities, traffic flow patterns, aesthetic conditions, and so forth. They are improved with buildings of quite different ages and types. The fair market value of one of the properties is \$200,000, whereas the other has a fair market value of \$500,000. Our assumption is that the land values of the two parcels are the same, despite the extreme difference in the improved values, because the characteristics that determine land value — the site characteristics — are identical.

We recognize that this assumption glosses over some difficult problems. It denies the possibility that the existence of an improvement on a parcel can or should have *any* effect on the land value of that parcel. Perhaps this assumption does not produce an equitable or socially desirable result, and should not be followed too strictly in the design of a separate tax on urban land value. For example, a government may not wish to tax the owner of the \$200,000 property as heavily as the owner of the \$500,000, even for purposes of a separate tax on land value, if the \$200,000 property includes a well-maintained, functional building that could not be economically replaced.

2. Some of the available techniques are identified in Oldman and Teachout (1978b, pp. 184-85), and Oldman and Teachout (1979, pp. 225-28). See also Beach (1970), Jakarta (1973), Bahl (1979), and International Association of Assessing Officers (1978, pp. 198-210).

The relationship between land value and existing improvements, particularly improvements representing suboptimal uses, is complex. It presents some of the most difficult problems in the task of defining "land value" in urban environments, and will not be addressed here. For present purposes, it is sufficient to point out that the values of neighboring land parcels bear close and definable relationships to each other. Even if the land values of the parcels in the example are determined not to be identical according to the chosen definition of "land value," they are interdependent in a way that the improved values of the properties are not. There is an intuitive sense of this relationship that is reflected in the everyday question, "What is the value of land now in downtown (City X)?"

Because of the greater interdependence among land values than among improved values, we concluded that an appeals system for land value assessments ought to include a feature not generally found in systems for appealing improved value assessments. That is, when revisions are made to assessments following appeals, as many assessment revisions as necessary should be made to maintain an equitable pattern of assessed land values. Therefore, assessment appeals may result in revisions to assessments of some parcels whose owners did not appeal, as well as to assessments that were appealed. Furthermore, adjustments might lead to assessment increases as well as decreases.

For example, assume that our imaginary property Blackacre was originally assessed at \$20,000, but on appeal the assessment is reduced to \$15,000. Assume further that the several lots near Blackacre were assessed at approximately the same level as Blackacre because they were all determined to be of substantially equivalent value. When the assessment of Blackacre is changed on the map to \$15,000, an assessment inequity is created if the assessments of the other parcels are allowed to remain at \$20,000. Equity in assessment can only be achieved if the assessments of Blackacre and other contiguous parcels are reconciled.

Assume that the owner of Blackacre, in presenting his case on appeal, introduced reliable evidence demonstrating that, because of variations in site characteristics, other land parcels located in one part of the neighborhood also had a lower value than the map showed, whereas the values of parcels in another part were actually higher than mapped values. That is, the taxpayer's evidence showed that the mapped figure of \$20,000, while a valid average for the neighborhood, was inaccurate because the assessor had failed to distinguish between site characteristics that made the values of some parcels higher and others lower than that figure.

Assuming the validity of the taxpayer's evidence, the implications of the appeal are not only that the appealed assessment should be changed but some other assessments should be changed as well. Some of the assessments should be reduced below \$20,000 while others should be increased above that figure.

We determined that mechanisms for making such adjustments could be incorporated into a system for taxation of land value if the processes of appeal and revision become a function administered almost totally by the assessment agency with taxpayer participation, rather than by the courts. In addition, the land value mapping process would be continued throughout the course of assessment appeal proceedings. Accordingly, we propose for this system an administrative structure that differs in three respects from those currently used for improved property taxation in most American jurisdictions. First, the land value mapping process would be used not just as an assessment technique but as the foundation for review, appeal, and revision of assessments. Second, the assessment agency, in carrying out its responsibility to supervise the orderly administration of the tax, would expand its annual internal review procedures to include participation by taxpayers. Finally, taxpayers' rights to an appeal hearing would be exercisable only at the level of the assessment agency on issues of valuation fact. The power to appeal an assessment beyond this level would be severely restricted.

The practical operation of the proposal may be summarized as follows. Each year, after the land value map is initially drafted by assessors, but before it has been certified as final, the assessment agency administers a series of review and revision procedures. During this period, taxpayers would be notified of proposed assessments; they then have the opportunity to be heard in public hearings administered by the agency. Taxpayers would also have the legal right to an individual appeal hearing before an agency review board. Following these public and private hearings, the land value map would be reviewed by senior assessment officers and revised on the basis of the additional information presented at the hearings. Those taxpayers whose assessments were changed on the revised map as a result of appeals by others would have the right to a further private hearing before the assessments became final.

After this extensive annual administrative review and revision period, a final land value map would be certified for tax billing purposes. Following certification, there would be no further right to appeal on valuation questions. Judicial review would be restricted to questions of law and to cases of fraud, incompetence, or unauthorized action on the part of the assessment agency.

Further details of the proposal are set forth in the following pages. All of the steps described would probably not need to be repeated every year. Rather, each procedure is presented as it might be used during the first year or two of implementation of a separate tax on land value. Some steps necessary in the transition to this system could be eliminated or simplified later. In addition, not all of the procedures suggested here would be needed in every jurisdiction having a tax on land value. Some may be able to use simplified versions depending on the level of land values and the rate of tax.

Supervisory Review and Taxpayer Appeal

The period of supervisory review and taxpayer appeal would begin as soon as the proposed land value map is presented to the public, an event that should occur at a specified date each year. Once the system is installed, what takes place each year at that date is a presentation of changes proposed to the previous year's map.

Public Information Campaign

In recent years, assessors have increasingly advocated the use of public education efforts in order to increase taxpayer understanding of and support for assessments and to reduce the number of unfounded appeals. This approach may be particularly useful for a separate charge on land value based on a land value map because the process of land value mapping may not be familiar to taxpayers in most American jurisdictions.

Enlarged portions of the land value map should be displayed at neighborhood locations frequented by the public, such as government offices, libraries, post offices, and transit terminals. In addition, assessors should acquaint taxpayers with the proposed map through news releases and appearances on radio and television. Specifically, these media should be used to explain in general terms the basic outlines of the land value mapping process and to provide information about reading and understanding the land value map. Presentations would be particularly important during the first year a separate charge on land value goes into effect. In subsequent years the assessors should also use the media presentations to explain major changes made since the previous year's map and the reasons for such changes.

Notice to Taxpayers

At the time the proposed map is presented, personal notice should be

provided to all landowners, by mail or otherwise, in order to inform them of their land value assessments as shown on the land value map. In each succeeding year, personal notice need only be given to owners of parcels on which the assessment is changed. Substitute forms of personal notice must be established in each jurisdiction with reference to jurisdictional law and the practice with respect to other forms of property taxation.

The notice should include information on the time and location of the public hearings dealing with the map. It should also inform the owner of his right to an individual private hearing on his land value assessment. Simple instructions should be included explaining how to make an appointment for such a hearing, and the kind of information that the taxpayer should be prepared to present in support of his objection. The notice should, of course, satisfy all due process of law requirements for notice within the jurisdiction.

Public Hearings

A public hearing should be held soon after public presentation of the map. The public should be allowed a period of time in which to become familiar with the map through inspection in public places and media presentations before the hearing is held. Nonetheless, the hearing should take place early in the review and revision period. If taxpayers have an opportunity to gain an understanding of the map early in the review period by attending a public hearing, the number of requests for private hearings may be minimized.

The public hearing serves three purposes. First, it gives the assessor an opportunity to explain the map to taxpayers in greater detail than is possible through brief introductions in the news media. An assessor should begin the hearing with a presentation in which he explains the methods used to assess land through land value mapping. He should describe the nature and sources of the data used in preparing the map, such as specific benchmark values, and explain how adjustments are made to obtain values for other parcels.

In cities, the public hearing could take place in a series of sessions, each one held in a different neighborhood. At such sessions, assessors should also describe any special problems or circumstances found within that district and how they affected the assessments on the map. Such sessions should focus primarily on the district in which the meeting is held, in order to aid taxpayers in their understanding of the map as it applies to their specific parcels. However, assessors should be prepared also to relate the assessments in that district to assessments in other parts of the taxing jurisdiction. Large jurisdictions may need a jurisdiction-wide

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hearing that focuses only on relationships of value levels among the districts making up the taxing jurisdiction.

The second purpose of the public hearing is to answer taxpayers' questions about the proposed map. This portion of the hearing provides taxpayers with an opportunity to obtain information that may help them determine whether their parcels have been assessed equitably and whether they should request a private hearing. By responding competently to questions at this stage, qualified assessors should be able to increase taxpayer understanding of assessments and thereby limit taxpayer appeals to cases involving special problems.

Some taxpayers may be able to obtain answers to specific questions. Others may have misunderstandings about the assessment map or process that can be corrected at the hearing. Still others may derive from the public hearing sufficient confidence in the competence of the assessment agency to become satisfied that their assessments have been made in an objective and equitable manner. Conversely, taxpayers may become aware that their assessors are not doing their job competently. In either case, this second portion of the hearing, by promoting informal dialogue between taxpayer and assessor, allows the hearing to function as a forum for public education on questions of assessment processes and methods.

A third and major purpose of the public hearing is to offer an opportunity for taxpayers to voice their objections to the general contours of the map (as opposed to objections relating to specific parcels, which are addressed in private appeal hearings), and to offer information that the assessors might use in revising and improving the network of interrelated assessment values. For example, taxpayers in one section of a city may present evidence to show that land in their section is assessed at full value, whereas parcels in another district appear to have been assessed at a lower assessment-sales ratio. Owners of land in a given neighborhood may demonstrate together that their land parcels will not support multilevel building construction without extensive piling; thus their land value assessments should not have been interpolated from a benchmark parcel that will support highrise construction without additional investment.

This portion of the public hearing does not provide taxpayers with a right of appeal in the traditional sense. By current standards, it probably could not satisfy the legal requirements guaranteed by the due process clause of the United States Constitution, as well as many state constitutions. Rather, it is a hearing held as part of the assessment agency's internal process of supervisory review. Taxpayers are invited to present any information that might aid the assessing agency in revising and improving the map.

The public hearing can provide a more flexible hearing opportunity than is available at a taxpayer's appeal hearing on his individual property. Any person may speak at the public hearing; his remarks are not required to meet any legal standard of burden of proof, except they must be relevant to the question of land value assessment within the jurisdiction. It may be necessary to subject each speaker's remarks to a time limitation in order to ensure that the hearing proceeds constructively and efficiently. Any person also should be able to submit written presentations or evidence in place of (or in addition to) oral presentations, with no limitation that the material presented relate only to the value of his own property. In sum, the public hearing offers a flexible hearing for taxpayers, as well as a useful opportunity for assessors to gather additional value information for use in revising the map.

Private Appeal Hearings

Although some taxpayers may choose to present objections only at the public supervisory review hearing, every taxpayer is legally entitled to an individual appeal hearing before his land value assessment is finally determined. This legal right derives, in the United States, from the due process clause of the Constitution and from similar clauses in most state constitutions.³ The appeals systems of many other countries offer similar rights of appeal (International Association of Assessing Officers, vol. 42, no. 11, 1976, p. 23-27).

After receiving a notice of assessment or assessment increase, a taxpayer should be allowed several days to consider whether or not to file an appeal. The deadline for filing an appeal, if possible, should not occur until after the public hearings have been held, so that taxpayers will have had the fullest possible opportunity to become informed about the basis of the assessment before deciding whether or not to appeal. Formal requirements should be few and simple. A taxpayer should be required only to submit a short form of notice of appeal and make an appointment for an appeal hearing.

The hearings may be conducted by panels of assessors or single hearing officers. They should be open to the public. The taxpayer need not be represented by counsel, present expert witnesses, or submit evidence in writing, but he may do all of these if he chooses. The hearing process should offer a meaningful opportunity for the smallest taxpayer with the least resources to be heard, yet it should also be able to accommodate the presentation of complex valuation evidence by experts.

All taxpayers should understand from the outset that this appeal hear-

3. For recognition of this right by the United States Supreme Court, see *Bull v. United States*, 295 U.S. 247 (1935), and *Hagar v. Reclamation District No. 108*, 111 U.S. 701 (1884).

ing is the *only* hearing to which they are entitled. Taxpayers should be informed of this limitation to their appeal rights on the original notice of assessment or assessment increase. Any evidence or information that they wish to present to the assessors on valuation must be presented at this time. There is no further opportunity until the following year, since there is no automatic right of appeal from the decision at this level.

A second important point is that all evidence that is presented at private hearings will receive exactly the same treatment as the information presented at public hearings. In other words, no preference is given to evidence presented at private hearings. All value information gathered during the review and revision period, whether from public hearings, private hearings, written submissions, or further data collection efforts on the part of the assessors, will be studied by senior officials of the assessment agency and used to revise the map to improve its accuracy and equity.

It is possible that no revisions will be necessary in certain years, despite numerous appeals. On the other hand, taxpayers may present evidence that warrants extensive revision to the proposed map. In any case, revisions may be made to the assessments of any parcels, whether or not the owners appealed or appeared at a public hearing. All decisions with respect to revisions are the responsibility of the chief assessor and should be made by him and his staff assessors according to their skill and judgment.

When the revisions are complete, the revised map is again presented to the public and should be available once more for inspection at public locations. It should be emphasized that this procedure means that all changes are made public, whether they are the result of private or public hearings. This represents a change from the prevailing practice in most American property tax jurisdictions, in which the results of assessment appeals are sent only to the appealing taxpayer and are usually not publicized, even though they are available to the public. The proposal provides the public with the opportunity to observe the results of appeals as a whole and judge their impact on relative tax burdens.

Taxpayers who made formal appeals should be given personal notice as to whether their assessments were changed or not. Personal notice of assessment change should also be given to all taxpayers whose assessments were changed as a result of the revisions, even though they themselves may not have filed individual appeals. Such notice should inform them that they are entitled to a hearing on the new assessment of their property; this notice also should tell them how their right of appeal may be exercised.

This further right of appeal is reserved for those taxpayers who did not appeal their original assessment and whose assessments are nonetheless changed by the revisions. It is necessary to grant them this extra opportunity for appeal in order to protect fully their legal right to a hearing before their assessments become final. Appeal rights are limited to this group only at this stage in order to prevent the process of appeal-revision-appeal from continuing indefinitely.

Further Rounds of Public and Private Hearings

A final public hearing is held after the revised map has been presented to the public. The assessors should open the hearing with brief explanations of the important changes made during the revision process and the reasons for these changes. Taxpayers should have an opportunity at the hearing to ask questions about these revisions. Once again, the final hearing may be held in several sessions in different regions of a large jurisdiction. However, if the revisions are minor only a single meeting may be necessary.

The second round of private appeal hearings are also held to hear the appeals of those taxpayers who did not appeal previously but whose assessments were changed on the revised map. The hearing opportunity of these taxpayers should be identical to that provided taxpayers during the first round of individual appeals.

After the final round of public and private hearings, the assessor should make any revisions necessary to the assessments of those taxpayers who appealed during the second round of appeals, but not to any other parcels. When appeal results are mapped and are sent to those who appealed during the second and final round of appeals, the land value map is complete. It is then certified by the assessor as the official assessment map for the tax year, and it is ready to be used for tax billing. No further appeals may be heard on issues of valuation accuracy.

In the first year of implementation of a land value tax and land value assessment map, both rounds of public and private hearings would be necessary. Even a third round may be desirable during the initial year, if data adduced from the second round of private hearings make further changes appropriate in the first map to be certified as final. In later years, after the process is understood and the accuracy of the map has been refined to the extent that the map needs only annual updating, only a single round of public and private hearings may be necessary each year.

Special Hearings

Occasionally there are developments within a taxing jurisdiction that have an unusual impact on land values. Examples might be the location

of a new major transportation facility such as an airport or a transit system, or the loss from the jurisdiction of a key employer or center of economic activity, such as a large factory or a military base. Under these circumstances, significant shifts in land value patterns may occur in a relatively short period of time. The assessor may need to gather a great deal of land value information in order to make the extensive revisions to the map that this kind of unusual development requires.

The assessor should have, therefore, the statutory authority to convene special hearings if he, in the exercise of his discretion, deems additional hearings to be desirable for accurate revision of the map. These special hearings would be in the nature of the public hearings that are part of the supervisory review process. The difference is that they need not be called only during the annual revision period, but could be held earlier in the year to aid assessors in updating assessments as part of the process of preparing the annual proposed draft. In the usual tax year in which there were no significant unusual developments affecting land value, the assessor would not need to convene special hearings.

Judicial Review

A basic feature of our proposal is the omission of judicial review of questions of fact in determining land values. The reason is the usual one of judicial deference to administrative expertise. That is, the findings of specific valuation facts often requires the skill of an assessor who has been trained in specialized techniques of land valuation and land value mapping. A great deal of technical knowledge and experienced judgment may be required for mapping land values, especially in urban areas, in order to establish a carefully balanced network of interdependent land value assessments.

Although judges should not be in a position of interfering with assessors' uses of technical valuation methods or upsetting a coordinated set of interdependent assessment values, the judicial function of interpretation of the law need not be abandoned with respect to legal standards of valuation. Thus, judicial review is available for questions of valuation law, as well as for fraud, incompetence, and unauthorized action on the part of the assessment agency. Although the proposal to limit the availability of judicial review is an integral part of our framework for a land value tax, it presents a difficult legal problem. It is seldom easy to distinguish questions of valuation fact from questions of valuation law. Disgruntled taxpayers will always seek to characterize their objection to an assessment as an issue of valuation law in order to obtain judicial review. What criteria should be used to determine whether a particular

appeal presents a reviewable question of law or a non-reviewable question of fact? This is a problem that we have, for the moment, reserved for further study.

Another issue that we have reserved is the design of procedures and standards for providing relief in hardship cases. Although the desired market effects of land value taxation are promoted most efficiently if no exemptions from the land value charge are allowed, such a tax is apt to fall harshly on elderly or low-income homeowners or marginal business owners whose properties are located in neighborhoods that become subject to new development pressures. If the land value charge coexists with other forms of property taxation and is levied at a relatively low rate, no hardship provisions may be necessary.

If, however, the land value charge were to be the primary form of property taxation in a jurisdiction, some mechanisms for providing partial relief in specified situations might be desirable on the basis of equity. The Taxation Relief Board used in Jamaica may provide a useful model, but this issue would need to be analyzed in relation to the specific land value charge contemplated and its relationship to other forms of property taxation in the jurisdiction.

Conclusion

The scheme of assessment and appeal procedures described above does not provide a complete answer to the question of how "land value" should be defined. For example, it does not solve the problem of assessing a parcel of land that has on it a building of substantial value that does not reflect the current highest and best use of that parcel, or of establishing the proper relation between that land value assessment and the assessment of a contiguous vacant parcel with identical characteristics. These problems still need to be resolved.

Nonetheless, through the exercise of designing a set of procedures whereby assessment values for urban land would be measured, we can begin to flesh out a conception of what "land value" might mean as a tax base for urban environments. One characteristic of land value assessments is that they will have been derived from market information and will have been determined with reference to land values of contiguous parcels. They will have a definable relationship to the assessments of neighboring parcels.

A second characteristic of a land value tax system based on these procedures is that taxpayers will have, through the land value map, a mechanism by which they can judge whether their land value assessments are equitable in relation to those of their neighbors. Taxpayers might be

able to keep track of market values of their improved properties so that they are able to judge the fairness of their improved value assessments in relation to assessments of like properties. However, they are not as apt to have access to enough information on underlying land values to determine if their own land parcel, whether improved or not, has been assessed fairly in relation to other land parcels. The land value map provides this information in visual form so that it can be readily understood. Ultimately, it may be the assurance of equity provided by procedural mechanisms such as this that will make the concept of a separate tax on urban land value acceptable to the taxpaying public.

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