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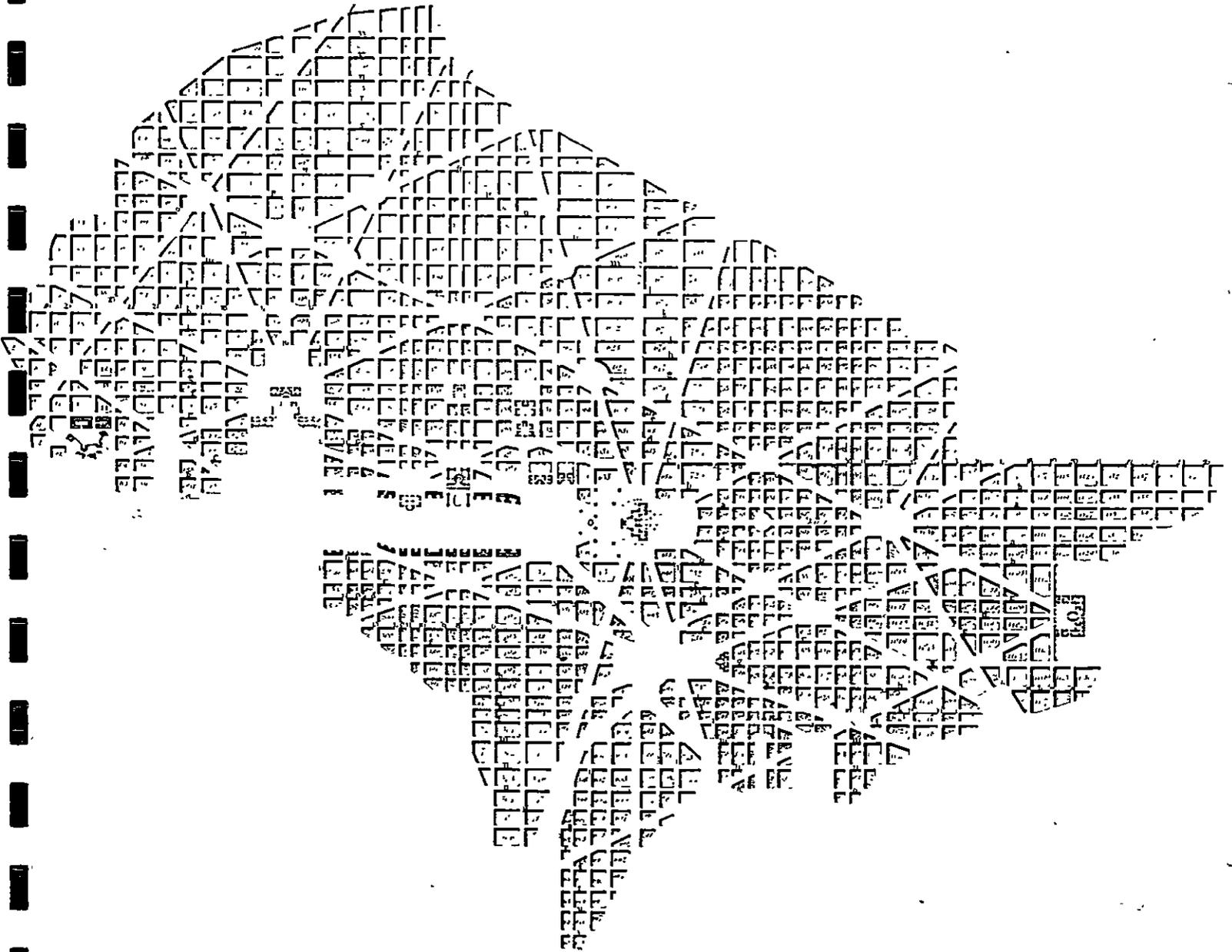
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AN EVALUATION OF SELF-ASSESSMENT  
UNDER A PROPERTY TAX



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**AN EVALUATION OF SELF-ASSESSMENT**

**UNDER A PROPERTY TAX**

**April, 1966**

## Introduction

At a conference held in Santiago, Chile, December 1962 on Fiscal Policy for Economic Growth in Latin America sponsored by the Joint Tax Program of the Organization of American States, the Inter-American Development Bank, and the Economic Commission for Latin America, considerable interest was expressed in a scheme suggested by Professor Arnold Harberger, one of the participants, for having property values for tax purposes set by the owner of each property.<sup>1</sup> And since that date interest in and discussion of self-assessment has continued.<sup>2</sup> Our paper is an evaluation of self-assessment and some judgment on its potential with particular reference to Latin American municipalities. Its scope therefore is more particular than the discussions at the Santiago conference which, in general, failed to distinguish between agricultural and urban properties. And we are primarily interested in evaluating self-assessment as an alternative to the more usual procedure, rather than simply as a transitional device to be used in going from no property tax to government assessment, with self-assessment being used in the interim until the capacity for government assessment can be developed.

## Conference Discussion

Harberger's remarks and the responses of Conference participants to his proposal cover the major arguments that have been made in support of and against self-assessment, and they do it in an interesting way. Therefore in defining what it is our paper is concerned with, and setting forth the pros and cons of self-assessment we draw directly on the Conference

record, identifying the participants in each case, and referring to the appropriate page in Fiscal Policy for Economic Growth in Latin America.

Original Proposal - Arnold Harberger, pp. 119-120.

If taxes are to be levied, or income imputed, on the basis of the value of agricultural and/or residential properties, it is important that assessment procedures be adopted which estimate the true economic value of property with reasonable accuracy. Assessment procedures have been notably weak in most Latin American countries and are badly in need of reform. The economist's answer to the assessment problem is simple and essentially foolproof: allow each property owner to declare the value of his own property, make these declared values a matter of public record, and require that an owner sell his property to any bidder who is willing to pay, say, 20 per cent more than the declared value. This simple scheme is self-enforcing, allows no scope for corruption, has negligible costs of administration, and creates incentives, in addition to those already present in the market, for each property to be put to that use in which it has the highest economic productivity. The beauty of this scheme, so evident to economists, is not, however, appreciated by lawyers, who object strongly to the idea of requiring the sale of properties, possibly against the will of their owners. The economist can retort here that if owners value their property at the price at which they would be willing to sell, they should not be unwilling to sell at a price 20 per cent higher. But there are also other ways of accommodating the objections of the lawyers. Perhaps the simplest way is to create, within the office in charge of property assessments, strong incentives against underassessment - penalizing assessment officers whenever properties assessed by them sell for prices substantially above the assessed value and rewarding assessment officers with "good" records (i.e., whose assessed values turn out to be reasonably close to the actual sales prices of those properties which are sold). Within a framework which stimulates high assessed values, the interests

of the property owner can be protected by permitting him to make a bona fide offer of sale and to use as the assessed value in this case a figure 20 per cent below his offer price. Under this procedure, a property owner is never required to be in the position of being forced to sell, although he may voluntarily place himself in that position if he considers the value put on his property by the assessing officers to be too high. Regardless of which of the two assessment schemes outlined above is adopted, it would be important for assessed value and/or the offer prices placed on their properties by owners to be linked to a price index, so as to avoid the possibility of owners' being required to sell their properties simply because inflation had rendered unrepresentative prices which, when they were initially set, reflected fairly accurately the true market values of the properties in question.

Criticism - Carlos Matus - pp. 126-127

The idea is suggested - and Mr. Harberger supports it - that the property owner declare the commercial value of his own property for tax purposes and be required to sell it to any bidder who is willing to pay 20 per cent more than its declared value. Fearing that he might otherwise have to sell it, the owner would be forced to set an evaluation on his property that was more in keeping with the market price.

Mr. Harberger recognizes that lawyers are not sympathetic to the idea. It is true that the legal mind is ill equipped for analyzing economic problems, but in this case I think the lawyers are right.

In the first place, I do not believe that anyone can be compelled to sell his property to another individual, even when his price is reasonable. The government has the right to expropriate for the benefit of the community, but the individual cannot have the right to expropriate for his own benefit. If anyone is interested in making a purchase against the will of the owner, it must be because he is gaining some advantage.

In the second place, the commercial value of a piece of property need not coincide with its value to the owner. Family memories and other intangible values that a

property may possess have no market price, and no one should be compelled to pay taxes on them.

In the third place, the system lends itself to many abuses, especially in the case of agricultural property, by making purchase bids when long-run investments are beginning to bear fruit.

Fourth, the owner would feel insecure in his farming activity, since he would be exposed to the whim of any neighbor who wanted to purchase the land.

In the fifth and last place, under the system proposed, if the property owner cheats the government through a low assessment this benefits, not the community, but some other owner.

I believe that there are more efficient methods for correctly assessing property, which are also less costly in terms of equity.

The alternative system proposed by Mr. Harberger - that is, of rewarding assessment officers whose assessments approximate actual sales prices, and vice versa - is not practical either, since an assessment cannot be made by just one official but requires a committee, and generally the owner affected has several resources for appeal. In the final analysis, it is a court of appeals that fixes an assessment, and it would be absurd to reward or punish a court financially.

It seems much more simple to correct assessments by means of sale prices, if these are accurately known. (Sale prices are consistently falsified in real estate deeds as a means of evading the tax on property transfer.)

I do not believe that direct and realistic assessments should not be sought. In any case, what is important is for the tax system to operate as a whole, in the sense that a tax payer evading a property tax will have to pay an excessive tax on something else.

Criticism - Victor Urquidi - p. 130

Referring to the suggestion made by Mr. Harberger of instituting the compulsory sale of property when the owner received an offer of purchase at a certain percentage above the value of his assessment, he believed it would not be feasible. There were other means of establishing gradually a system of honest assessment which were far more practicable than the method proposed by Mr. Harberger. For example, in Mexico, assessment by a bank, duly certified by a notary public, was requested.

Criticism - Richard B. Goode - p. 132

Mr. Goode supported the idea that there should be an effort to increase substantially the taxes paid in most Latin American countries on urban residential property, as well as on agricultural land. Referring to Mr. Harberger's paper, he said that he distrusted the proposal that property should be assessed on the basis of a simple assessment of the value of his property by the owner himself. Moreover, the idea of obliging the owner to sell his property if offered 20 per cent above that assessed value would introduce the constitutional problem of forced sale. In addition, it might leave room for corruption, or for sharp practice on the part of those, who had easy access to information about, for example, the building of a road that would lead to an increase in the value of certain properties. Again, there might be no likely buyers for a property that was unusually large or valuable, or at least none outside the social circle in which the owner moved, where social restraints would operate to prevent an attempt to force a sale, whereas there would be a much larger market for small properties.

With respect to the adjustment of established values, he doubted very much whether a general price index would be appropriate for the purpose, especially for agricultural property, in view of the instability of agricultural prices. He sympathized with Mr. Har-

berger's aim, but could not agree with his views about achieving that aim. Property valuation was a technical problem that the Latin American countries would have to deal with by getting technical assistance and advice from the various public and private agencies that specialized in that field. It would be a lengthy and costly task, but it was urgent and important, and the only true solution of the problem of getting a correct assessment of taxes on property.

Modification and Support - Nicholas Kaldor - pp. 132-133

Mr. Kaldor suggested an amendment to Mr. Harberger's proposal regarding self-assessment of property values by the owner, which might meet some of Mr. Goode's objections. The scheme might be more acceptable if the owner always had the option of retaining his property if he revalued it above the offer made; for example, if an offer was made to buy the property at the owner's valuation plus 20 per cent, the owner could retain it if he raised his valuation by 25 per cent. That would lead to a correct valuation on the basis of a kind of auction, without involving forced sales. Mr. Harberger's original proposal might lead to certain difficulties; for example, an owner who was particularly attached to his property might overvalue it through fear of losing it, which would lead to resentment against the system.

As for Mr. Goode's suggestion about the difficulty of finding buyers for large properties, it was quite likely that a syndicate could be found as a buyer if there was the chance of a large profit. If no one came forward, that would mean that the market value of the property was in fact lower than the valuation plus 20 per cent, and that the valuation was approximately correct. The question of self-assessment had been discussed in public finance circles in the United Kingdom for the past fifty years, and the view had long been held that expert valuation was to be preferred; but that view was now changing. However good the expert advice

there would be strong pressure for undervaluation unless the tax administration was entirely free of corruption. No country had found an ideal method of adjusting assessed values. In Latin America, assessed values represented less than 1 per cent of current market values; but even in highly developed countries the situation was not satisfactory. In the United Kingdom, assessed values represented about 10 to 30 per cent of market values; and in the United States, where there was no shortage of experts, assessed values in some states were entirely out of line with current values. Whatever expert system was used, values would be out of date within a few years; but if Mr. Harberger's system, amended as suggested, were adopted, assessed values would continue to rise as inflation or other factors led to a continued rise in market values.

Reply to Criticism - Arnold Harberger - p. 134

In the reply to Mr. Goode and Mr. Kaldor, he feared that if owners were allowed to retain properties on which a bid had been made, simply by paying a penalty, the system of self-assessment would be much weaker than under the method he had proposed. But provided the penalties in question were high enough to be effective deterrents to those who would like to understate the values of their properties, he would have no objection to make, since in that case they would not affect the substance of his suggestion.

Support - Jaime Porrás - pp. 230-231.

He attributed the difficulties of administering the real estate tax chiefly to its decentralized character. For example, in Ecuador the tax in question was in the hands of ninety-seven municipalities, not one of which had the slightest possibility of carrying out the land surveys required for accurate valuation. The same difficulty with respect to valuation would be encountered in estimating potential

income from rural real estate, and while it was true that the system had been introduced in Chile, he did not think it could be adopted in Ecuador, where even the possibility of taking aerial photographs was limited by the poor light in some districts. Therefore he thought that more careful study should be given to Mr. Harberger's proposals for a system of voluntary returns on the part of the landowner, with the modifications suggested by Mr. Kaldor.

Support - Wade Gregory - p. 338

As an alternative, the following proposal is suggested: that the owner himself assess the value of his holdings and that this value be used by both the taxing authority and land reform authority. It is at this point that these two agencies working together can be much more effective than each one working alone.

What happens under this system if an owner undervalues his property in order to keep his tax liability low? The land reform agency, having the authority to buy any and all property at say 10 or 20 per cent above the assessed property value, can now acquire land at a low price.<sup>17</sup> If owners do not wish to run the risk of having to sell their land at less than its real value, they must pay taxes on what they consider to be the real value of their property. The system should permit annual adjustments in assessments to reflect changing land values which might result from inflation, improved technology, and changed market conditions. Therefore if inflation becomes a significant factor, a mechanism is provided to ensure that land assessments will keep pace with it. This method of determining property values does not lessen the need for progressive rates, which should be based on assessed values rather than on the number of hectares owned.

<sup>17</sup> It can be argued that if one is forced to sell, he should receive more than the market price, for there are costs of moving, etc.; but more important, any given property is unique in terms of location, and therefore the present owner may value his land above the market for sentimental or other reasons, and it is only fair to reimburse him for these values if he is forced to sell.

Mainly critical - Sol Descartes - p. 351

With regard to the self-assessment of property by the owner, he had no objection, provided that all that was intended was a mere declaration of the value of a piece of property. Mr. Gregory, however, had gone further in suggesting that a government should be able to purchase the property on the basis of the value assessed by the owner. He opposed that suggestion because it might be at variance with the constitutional position in some countries. Moreover, land reform should not be based on purchase of property merely because an owner had understated its value. Land reform was an instrument of economic development, and it would be wrong to complicate its implementation. Land could be more properly acquired by other methods. The method proposed might well be considered an undesirable form of expropriation. The right of expropriation was undeniable, provided that adequate compensation was paid to the owner.

Even more objectionable would be a proposal to allow individuals to purchase property by paying 25 per cent more than the value set by the owner. Such a scheme would affect the stability and productivity of the agricultural sector, even if it were applied as a provisional measure. A better system would be to tax land on the size of the property concerned and its productive capacity and to use the revenue for the purchase of land by the state. At the same time, an attempt should be made to obtain more data on which to assess land values.

Summary in Conference Report - p. 422

25. The basic problem in the taxation of urban and agricultural properties is to obtain adequate assessments, i.e., to determine the tax base. The participants considered two methods as possible substitutes for, or supplements to, the traditional one of direct valuation by fiscal officers.

26. The first was the method of self-assessment: the declaration by the owner himself of the value

of his property. This declaration would be placed on public record, and any individual or enterprise would be free to make a bona fide bid to purchase the property. In the event that such a bid exceeded the owner's declared value by a significant amount (say, 20 per cent), the owner, if he chose not to sell, would be required to revalue his property up to the amount which was bid. In this case, the maker of the frustrated bid would be entitled to a premium, which might be in the amount of the extra tax obtained in the first year following the revaluation of the property. Where inflationary problems are of serious dimensions, provision would have to be made for the automatic readjustment of assessed values during the period between successive declarations required of the owner.

27. Some participants thought that the self-assessment system was likely to be superior to the traditional system, even where this latter system was well administered; others considered self-assessment to be desirable over a transitional period during which the administrative means would be developed for an adequate assessment by fiscal officers. A further group felt that the principle of self-assessment was a good one but that the mechanism for enforcing proper declaration should be legislation authorizing the proper governmental authorities, on their own initiative, to acquire properties at the values declared by their owners. This variant has in fact been applied by a number of countries in the implementation of their agrarian reform programs.

These, then, constitute the major variants of the proposal for self-assessment and the arguments that have been raised in support and in criticism of this procedure.

The scope of this paper is limited. Its main focus is on the subject of self-assessment of urban real property in developing countries

especially in Latin America since the recent proposals for self-assessment have had their origin in discussion of Latin American fiscal problems. In preparing the paper we have assumed that: a) the question of whether to have a tax on real property has been decided in the affirmative; b) the question of the base of the tax (capital value, site value, annual value, etc.) with all its concomitant equity and efficiency considerations has been debated and decided upon; and c) the proper government, municipal in this case, has committed itself to enforcing the tax. Our problem, in short, is to consider the proposal, in the context of alternative possibilities, that self-assessment be used to implement the tax on this chosen base. (Of course, self-assessment will work better with some bases than with others, and this subject will also be discussed below.) The main point here is to impress upon the reader that this paper assumes that many of the important decisions have already been made--decisions which for the most part determine the allocation, distributional and stabilizing effects of various taxes, and that "all" that remains is that the tax base be determined as realistically, equitably, and efficiently as possible.

#### The Importance of Realistic Assessment

Before discussing self-assessment proposals for which stem from dissatisfaction with the current state of real property taxation, it might be useful to review some of the reasons that an accurate assessment -- an assessment which closely approximates the present market

value of the property (or, more realistically, approaches market value more closely and uniformly than at present) -- is important.

Firstly, accurate assessment would insure that each tax payer paying a tax with a real property base would in fact be taxed more in accord with his ability to pay than would be the case if assessments were inaccurate. This would help to eliminate interpersonal and interarea inequities and inefficiencies and would help to promote general taxpayer acceptance of the fairness of the tax which, as students of public finance have long observed (and politicians have always known), is a vital prerequisite for the successful use of any revenue measure. Furthermore, accurate assessment would enable the authorities more easily and conveniently to raise or lower the tax rates.<sup>3</sup>

Secondly, given any real property tax rate schedule, it is important from a revenue point of view that the property be assessed at current market values. This point can be dramatically illustrated as follows. It has been estimated that in Latin America, assessed values of land represent less than 1 per cent of the current market value.<sup>4</sup> Hence, even were rates set at 100 per cent of assessed value, the effective tax on the real value of land would only be one per cent. In Latin American municipalities, however, the tax rate on assessed values seldom is greater than 20 per cent. The conclusion is obvious. Underassessments are the equivalent of a low effective tax rate, and will have the same effect on tax collections. This point may

be especially valid of the community is "suffering" from a "rate illusion," i.e., their attitudes and actions are influenced by the nominal tax rate and not the effective (nominal rate adjusted for the degree of under or overassessment) tax rate.<sup>5</sup> Hence, higher rates cannot fully counteract underassessment. (The need of Latin American cities for additional revenues to undertake social improvements, e.g., roads, schools, public housing, is obvious and need not be stressed here.)

Thirdly, coupled with the above point, unrealistic assessment of lands (either underassessment or overassessment) can have the same distorting effects on allocation of resources and interpersonal equity as a system of partial excise taxes. To the extent that these effects are unintended, they are unequivocally undesirable; to the extent that favored treatment is desired, e.g., stimulation of certain kinds of construction, there are more efficient ways of achieving this goal.

Fourthly, realistic and complete assessment of real property would provide the maximum acceptable base upon which to levy the real property tax, and, hence, would require the minimum tax rate to produce the required amount of revenue for the taxing district.<sup>6</sup>

Fifthly, accurate assessment of property values would serve a number of additional useful purposes. The assessed value can be used as the basis for compensation in any public taking of land, a frequent event in developing countries. The assessed values could be the basis for a presumptive income approach to taxation. Accurate property valuations would expedite the administration of other taxes--taxes on

inheritances and gifts, as well as taxes on capital gains and transfers. Grants in aid from state or national government as well as municipal debt limits are also often tied to the assessed values of property. Finally, assessed values could be the basis for all special assessments for local improvements, as well as for incremental charges for regional development agencies or cadastral organizations.<sup>7</sup>

Given these advantages of accurate assessment and the fact that on the whole, Latin American assessments are, at best, antiquated, the need for realistic land assessment is apparent. But the mechanisms for meeting this need are apparently missing. Providing these factors may be called, for want of a better name, the technical reasons for advocating self-assessment, and some claim they are very persuasive. Thus Professor Arnold Harberger, a strong proponent of self-assessment, holds that because "this simple scheme is self enforcing, allows no scope for corruption, has negligible costs of administration ... "<sup>8</sup> it can be expected to lead to a better property tax.

But the case for self-assessment is not made on technical grounds alone. Realistic land assessment is clearly desirable, but different methods of assessment will yield different answers to the question of what is realistic assessment. A governmental cadastral survey, in all likelihood, will tend to value property in its existing use, whereas self-assessment, in some of its forms at least, in Harberger's words

"creates incentives, in addition to those already existent in the market for each property to be put to that use in which it has the highest economic productivity."<sup>9</sup> This argument, further elaborated below, may be called the economic reason for advocating self-assessment. With "land use" generally considered to be suboptimal in Latin America, this is a strong point.

It is in this context-- (1) the need for accurate assessment coupled with the apparent inability of municipal governments to perform such assessment due to lack of funds, lack of technical knowledge and trained personnel entrenched interests or just inertia, and (2) the need for a better pattern of land use--that the proposal for self-assessment of real property has been developed. One version of this proposal (probably the most publicized), as formulated at the Santiago Conference appears above on p. 2. Of course this is not the only form self-assessment could take. There have been other proposals-- some have had no provision for the owner to revalue his property in order to retain it, and in others the proposed size of the bids necessary to force revaluation or sale have varied from 100 per cent to 140 per cent of the owner's valuation of the property--but the essence of the idea is contained here: the owner of the property is to value it, and to ensure realistic evaluation he must stand ready to sell his property at a price near this evaluation, or if he chooses not to sell he must revalue his property to better approximate current market value and (perhaps) pay a penalty for his initial "underassessment."<sup>10</sup>

Not all of the writers in this field of public finance are agreed on the benefits to be derived from self-assessment, as the excerpts from the Santiago Conference report above suggest. And other students

have printed out the practical limitations of particular schemes.<sup>11</sup>

To explore these issues with the purpose of coming to a decision as to policy recommendations, we have adopted the following approach. Firstly, the advantages of self-assessment as seen by its proponents will be discussed (since often the objections to the system are merely a denial of the alleged benefits). Secondly, some objections to the principle itself and implementation problems will be noted and evaluated. Finally, the conclusions that follow from this analysis and policy recommendations suggested by this analysis will be stated.

#### Some Advantages of Self-Assessment

This section analyzes some of the alleged advantages of a system of self-assessment for a developing country. It explores the system in principle, not in practice; the latter will come later.

One advantage claimed for self-assessment is that it might work, whereas the alternatives either have not worked or, where not attempted, have strong theoretical drawbacks which suggest that they would not work in South America. Due to a number of reasons: the power of large landowners, the political influence of the more numerous middle - and small sized farm owners, weak local administration, chronic and severe inflation, the lack of well trained surveyors who are incorruptible and "courageous," the lack of sufficient tax revenue and legislative appropriations; for all these reasons and more, the establishment of realistic land values for whole countries or even cities through cadastral surveys has long been unattainable. (But note, cadastral

surveys would be easier in municipalities than for rural lands, because usually there is a more active land market, and ownership and boundaries are more clearly defined.)

Alternative procedures heretofore utilized or considered seem to fall short of desired objectives. Assessment by a bank, duly certified by a notary public upon transfer (as is the practice, presumably, in Mexico City), depends on an active land market and would probably reflect current (as opposed to optimum) use. Also, it could hardly be used on a mass scale, and it requires, of course, a corps of trained assessors. Another scheme, punishing or rewarding assessors in accordance with the accuracy of their assessments, as determined by subsequent sale prices, might stimulate high assessments (not necessarily realistic, however), but this system also presupposes an active market for real estate and conditions such that land values can be objectively determined within "narrow" margins. To the extent that the latter is not attainable (and see below for reasons for scepticism), rewards and penalties would be randomly distributed and not necessarily allocated in accordance with the diligence or honesty of the assessors. This, in turn, would induce an upward bias in assessments. Also, such a system might be subject to corruption in the case of properties which were not for sale.

Still another point of view minimizes the assessment problem, holding that if assessment is too low, other forms of taxation, namely, capital gains (if the assessed value is used as the basis) or estate and inheritance taxes, would eventually penalize the underassessment. But this is a serious misconception. Relying simply on, say, the capital gains recoupment, would allow the postponing of tax payments, cause interpersonal

inequities, and would usually mean that property would escape municipal taxation since capital gains taxes are levied by the federal government, if at all. At best, therefore, it would mean a property tax riddled with inequities and unlikely to command taxpayer support and compliance. An equally serious objection lies in the fact that capital gains taxation is either nonexistent or merely token in a number of Latin American countries.

Self-assessment, on the other hand, is alleged to have unique comparative advantages. As Harberger states, this procedure is inherently simple, does not require other agencies to enforce its fulfillment, does not lend itself to administrative corruption, its administrative costs are almost nil compared to other methods, and it puts additional pressure on property owners to put their property to its most productive use. Thus, it could be argued that self-assessment would have the same kind of effect as site-value taxation, but without the latter's administrative complexities, costs and "social overtones." Other advantages mentioned in the literature are that self-assessment would make all land available for sale, ensure the widest possible base for a property tax; by improving their knowledge of the community's land resources it would give the municipalities greater control over the land that they wish to exempt from taxation or acquire; it would provide a better record of the boundaries and existing ownership of the land under the municipalities' jurisdiction, knowledge of which is necessary for any successful assessment scheme; if the sanctions are effective, it would promote equitable uniformity of assessment; and finally, as compared with more elaborate schemes, self-assessment is capable of immediate application.

One point regarding these advantages should be emphasized here. Many of them are transitory in nature. As the economy develops, taxpayers and assessors are trained, and / administrators become more skilled, and sophisticated, some of these advantages noted above will not be particular to self-assessment. Hence the recommendation made by some, as stated above, that this system be used during a transitional period. Others, however, think that self-assessment is the best system at all times. As a necessary step in forming our own judgment, we look first at the requirements for a successful system of self-assessment, and then at some of the objections to such a system. In the main we will direct our attention to self-assessment as a permanent system.

#### Self-Assessment -- Basic Requirements

This section simply seeks to enumerate certain features and capacities that a system of self-assessment must have in order to be effective. In the next section (objections) we will evaluate the extent to which these conditions exist or might reasonably be expected to exist in the Latin American context.

The sine qua non of successful self-assessment is the credible threat. For the system to work, underassessment must be costly to the property owner. He must be faced with the alternative of losing his property to the government or a higher private bidder or pay a penalty if he chooses to retain his property after submission of a bid. As Herrmann put it:

The system must force the property owner to balance three factors; on the one hand, the requirement of paying higher taxes due to his own declared value, and on the other hand, either loss of his property or payment of a severe penalty for underassessment. The natural tendency toward underassessment must be met strongly and quickly. <sup>13</sup>

Clearly, some latitude must be permitted the property owner, and there should be some presumption in his favor. Thus minimum alternative bid or penalty values should be higher than the self-assessed values. The percentage difference between the self-assessed value and a minimum acceptable bid must be large enough not to penalize slight underassessment unnecessarily and to prevent nuisance bidding, but must be small enough so as not to permit serious underassessment. (A margin for error must, of course, be permitted if the system is to be acceptable to the taxpaying community.) A 20-25 per cent difference between self-assessed value and minimum acceptable bid is frequently mentioned as being acceptable in this connection (but see below under Objections).

In theory bids by private parties are by no means the only way of making the threat credible. An effective fear of financial loss or loss of property can be induced by three mechanisms: the threat of a public taking, the threat of a bona fide <sup>bid</sup> and/or the threat of payment of a severe penalty for underassessment. <sup>14</sup> These three mechanisms, however, differ in their acceptability and effectiveness.

Public taking would probably be most acceptable to the people (but not acceptable enough to pose no political danger for the government). Most governments have the right to appropriate land for good

public reason. Unless government were simply to expropriate under-assessed properties, reliance on public taking would limit the credible threat to the resources and the borrowing power of the government and this could be considerably less than the financial capacity that the private sector could muster. Moreover, even were there no difference in financial resources, consideration of the limitations that "political realities" could put on government exercise of sanctions suggests that the threat of public taking will not push land use patterns toward optimality nor assessments upward to reality as strongly as would the threat of private taking. Sometimes it is recommended that the system of self-assessment be coupled with a government land bank or a government sponsored program of expropriation for purposes of municipal improvements or land reform. Spot purchases throughout the municipality for public housing, roads, slum clearance, etc., with compensation fixed at the self-assessed values or some percentage of them would add to the "credibility" of the threat. "A systematic policy of foreclosure and public sale to satisfy delinquent back taxes would help combat tax delinquency and evasion, especially of the owner's equity of redemption in these public proceedings were limited to his self-assessed value, any excess going to the state."<sup>15</sup>

Permitting private party bids, on the other hand, would enlarge the fiscal capacity for the credible threat and self-assessment's push toward "best" land use (as noted above), but the legality of this procedure (see below) and its acceptability are more questionable. To lose one's property to a public institution is painful but perhaps bearable,

but to lose one's property to a private party or even a private profit-making institution could very well not be tolerated. (This point, as will be elaborated below, is especially valid given the difficulty of determining "correct" property values.)

Finally, the threat of a penalty payment will only work if an effective penalty system is designed and the government has the power to enforce it. Given the low effective tax rates (both now and in prospect) in Latin America, setting the penalty at some multiple of the incremental tax liability associated with the upward revision in value attendant upon a bid by another private party - the most common penalty proposal - may not provide enough of a reward to stimulate bids. (See below for illustrations.) Other penalty proposals could be more severe and might work, but they would most likely to more removed from the wrong (under-assessment) that self-assessment is trying to correct, and also might have differential incidence.<sup>16</sup>

It has also been suggested that one way the government might make the threat credible would be to institute a system of checks and penalties similar to those used in the United States for the personal income tax, e.g., each person would submit his own assessed valuation and the government would spot check some of these returns (the chance of an assessment being audited increasing with the value of the property) and assess penalties if they were found to be inaccurate. This proposal, it seems to us, has one inherent defect, a defect not unique to self-assessment, but peculiarly severe to that system insofar as penalties are imposed for a divergence from "true" value. It assumes that in

practice property values can be established as easily and objectively as income can be measured. As will be pointed out below, this is not so. Furthermore, even with adjustment/<sup>for</sup>price changes, there is the problem posed by the present owners "honestly" evaluating his land, in its present use and a potential owner's (bidder) evaluating the land, given some flexibility in zoning, in a different (potential) use. Only occasionally will the two values coincide (the values coinciding more frequently as the uncertainty of permitted use is removed) and yet for the above proposal to work it would have to be decided which value was more honest than the other. (Granted, however, there would be some clear cases of underassessment.) Finally, there is the problem that the market value of a property, in general, is not the same as the value to the owner, due to neighborhood friendships, relatives nearby (or far away if that is the owner's taste), convenience in shopping, getting to work, etc. This further complicates property valuation. Market value reflecting potential use will probably (and should) prevail, but the point of this paragraph is to suggest that the income tax analogy, in short, is not a good one.

The credibility and effectiveness of the threat of bona fide private bidding depends on several factors. One factor is the emergence of an entrepreneurial group--potential buyers of properties who are knowledgeable and have (or can command) the financial capacity to acquire sizeable amounts of land. At the Santiago conference the objections were raised that there would be no buyers for certain large

properties, and that social pressures would prevent the well-to-do from "bidding" on properties owned by others in the same social circle. The first objections was answered by Kaldor (too easily in our opinion in view of the social and economic obstacles) by ascerting that partnerships would be formed to purchase the large properties, if a / <sup>chance of</sup> profits actually did exist.<sup>17</sup> The changing sociological conditions, as well as a changing power structure in Latin America have been mentioned as moderating the strength of the second objection. The possibility of opening up the bidding to "aliens," i.e., persons or institutions supported by United States capital, while overcoming some objections, also creates many more. Suffice it to say that there are many problems in this area, and the subject will be discussed further below.

The availability of credit through banks, mortgage institutions, etc., will also affect the amount and direction of the bidding. Those people and institutions with easy access to credit (government-favored loans, liquid assets, banks, etc.) may well profit from the system while others suffer. Furthermore, the amount of the penalty payable to the unsuccessful bidder will influence the amount of bidding, but it may also encourage (un)healthy speculative bidding. While it is true that an unsuccessful bidder, who must tie up a certain amount of his money (the down payment to assure a bona fide bid), deserves some compensation for his risk and inconvenience, the amount will have to be chosen carefully, so that it will be large enough to encourage careful bidding but not so great as to induce gambling.

Finally, under basic preconditions for a workable self-assessment system, come the requirements that the property must be able to be valued; it must have definite boundaries and owners (the title problem); even more importantly, the property should have a clear and definite set of property rights which, to make the system work, may have to be terminable;<sup>18</sup> and finally, this knowledge, as well as the working of the system itself, must be shared by enough people to make the final solution a reasonably competitive one. To the extent that any of these conditions are not met, the basic simplicity of the self-assessment system begins to evaporate.

#### Some Objections to Self-Assessment

Most objections to self-assessment are based on either a denial of its advantages or a belief that the basic requirements necessary for a self-assessment system are lacking; especially in Latin America. To the extent that any of these objections are valid (even though rectifiable), as stated above, self-assessment becomes more complicated, perhaps even more complicated than alternative schemes.

This section brings together some of the objections both in theory and practice that can be put to a system of self-assessment.

##### a) Will there be bidders?

A basic premise of the argument for self-assessment is that there will be a group of "bidders" sufficiently capable and numerous to under-

take a volume of bids that would force self-assessed values close to market values despite owners' natural propensity to undervalue. But, in fact, it may very well be that such a group does not exist and cannot easily be developed. Non-existence may simply be a fact of life in communities with poorly developed real estate markets and very low rates of property turn-over. Under such conditions the expertise required of "bidders" may simply not exist, at least in sufficient volume. But over and above this consideration, even were the expertise objectively to be there whether it would be forthcoming is still an open question. For if "bidders" are regarded by the rest of the community in the same light as "informers," persons with the necessary talents for bidding would be discouraged from doing so, and the mass of the population would feel it legitimate to harry or actively not cooperate with bidders in performance of their function. An attitude of this kind toward "bidders" is most likely in those communities with the most poorly developed markets, and who are least accustomed to the "logic and necessity of a price system." This suggests that self-assessment is more sensible for urban than for agricultural communities, but that does not mean it is feasible, on this score, in cities. Some informed students of Latin America just do not believe the experience and expertise is there in sufficient strength to make for an effective group of "bidders."

b) The question of sufficient capacity to police assessments

But even if this were not the case, i.e., even if there were a goodly

number of persons knowledgeable in real estate, it might be hard, if not impossible, or make the threat credible on other grounds. Forgetting for the moment the legal constitutional problems that might well preclude a forced private sale and, hence, would remove the whole private threat there are other problems in this connection. There is the difficulty associated with large plots of land. (1) Large plots of land are important in Latin America; (2) holders of such plots represent a distinctive and powerful social class; and (3) the market for such plots, especially highly developed land, is largely limited to members of the same class who form a social club, etc. Therefore underassessment of these plots might very well be more likely to be countenanced than would be the case for smaller properties.

Large plots, however, are the only part of a larger problem. It might simply not be possible to support the total amount of property transfer that might have to take place (either by private transactions or public seizure) to make the threat credible. Illustrative a priori (but seemingly reasonable) figures might help point up this difficulty. Suppose one in four properties are understated sufficiently so that "takeover" bids are in order and a one-fifth likelihood of being taken over is needed to make the threat effective. Therefore, one-twentieth of properties will have to be purchased. If on the average, however, only 10 per cent of property turns over every year, this means that property transfers will have to increase by 50 per cent. And this, in turn, would require a very substantial increase in the administrative facilities for real property exchanges and in the finance needed to effectuate them. For many municipalities, it is doubtful if their re-

sources and those of private (local) entrepreneurs could support such an endeavor. This is not to suggest that the increase in market functionaries and required finance would be precisely 50 per cent. For it is conceivable first that a high proportion of the underassessed properties (not so highly regarded by their owner relative to their true value) would have been in the 10 per cent that would have been sold anyway, secondly that mechanisms might be developed to make far more efficient utilization of existing property marketing institutions (such as professional arbitrageurs), and finally, the government might develop a program of loan insurance that would permit banks to make loans with smaller downpayments. So the strength of our objection here is an empirical question. Nonetheless, a heavy strain on existing facilities is a real possibility as a concomitant of the credible threat.

Moreover, the proposed remedies (see above) for this problem fail to be convincing. The possibility of opening up the forced sale to aliens, while perhaps solving the "buyer" problem, is not feasible politically. Again, perhaps for social reasons or for simply lack of funds, banks and credit institutions could well be reluctant to lend money for land speculation. Credit rationing (with attendant possibilities of corruption) would almost certainly take place. The credibility of the private threat, in short, is in doubt.

Much the same can be said about the credibility of the public threat. Here at least there is no constitutional problem, but in the

case of many governments their collecting penalties or seizing land for underassessment or failure to pay taxes will probably not seem a real threat, due to the fact that these governments, for the most part, have a history of non-enforcement of tax collections. It is a moot point whether the government's normal acquisition of /<sup>property</sup> (and payment for it at self-assessed values) for public purposes--roads, public housing, schools, etc.--would be sufficient to make the system work. If not, then the government would have a capital problem. Should underassessment be widespread and the government necessarily be required to undertake substantial purchases, it would be a rare municipality that would have the fiscal capacity to do so.<sup>19</sup> Raising the funds by selling bonds that have as collateral the property to be acquired is not as simple as it may sound, for capital markets are not well developed in Latin America. Nor are many municipalities in a position to arrange to manage the large portfolio of real property they would have to acquire. For if properties acquired are to be resold, there will be some lag between acquisition and sale; consequently an inventory of properties will have to be financed and managed. In the Latin American inflationary context printing money to provide finance for acquisitions is no solution and would just add to the problems caused by inflation (see below). One real possibility might be foreign aid for an interim period sufficient to establish the credibility. Although aid may be forthcoming, the desirability of providing it and using it is highly doubtful. Latin Americans, as would most people, can be expected to react strongly to any foreign aid that enabled their homes to be bid away

from them - the country providing aid for this purpose would get no kudos and the domestic government's action would be more unpopular than would otherwise be the case. Therefore, while foreign aid could help solve the capital problem, utilizing it would tend to make self-assessment even less appealing and more likely to be unsuccessful. However, if aid was forthcoming, the question must be decided whether it might be better for the government to use this money to undertake its own cadastral survey or other kind of assessment, or to try to enforce self-assessment. Enforcement, then, which is the heart of the self-assessment proposal, may not be as simple or as automatic as it might seem at first glance.

In this same vein is an objection to this system that has worried lawyers particularly--the constitutional problem of forced private sale. Basically, it appears questionable whether anyone can be forced to sell his property to another private party, even when the price is reasonable. The state, it is generally recognized, has the right to expropriate for the benefit of the community, but the private person does not have the right to expropriate for his own benefit (even if in the process he is tangentially benefiting the community via higher taxes, etc.).<sup>20</sup> Legal competence is required for full discussion of this issue, but the nonspecialist can sense that this will be a very delicate as well as emotional problem. If forced sale to a private party is unconstitutional, however, many of the alleged benefits of self-assessment (simple, easy self-enforcement) would evaporate and the burden of enforcement would be entirely on the government.<sup>21</sup> Administrative devices, e.g., exemption of small properties, may alleviate this problem, but would also add to the complexities of administration.

c) An alternative to forced sale

The discussion to this point has concentrated on the difficulties that might be experienced under a system of self-assessment relying on forced sale for its sting. Given these difficulties, it has frequently been proposed that self-assessment not rely solely on forced sale but rather that the current owner be given the alternative of revaluing his property and paying a penalty for this privilege, with the "bidder" receiving some or all of the penalty. (See the citations to Kaldor and Strasma in the first several pages of this paper.) Any such option would be likely to make for a less credible threat than forced sale alone. But given the uncertainty that inheres in the process of property valuation, we agree with those who hold that self-assessment would be intolerable without a revaluation - cum-penalty option for the property owner.

Ideally the penalty should be structured to discourage any under-assessment. The cost of accurate assessment each year in the form of higher taxes must be less than the cost of under-assessing until "caught" and then paying a penalty. In theory this is possible; in practice it is not likely to be achieved. If the estimate noted earlier is correct - that the effective rate of tax on the real value of property in Latin America is often of the magnitude of 0.2 per cent - then a penalty which would give the maker of a frustrated bid (the owner chose to revalue) a premium in the amount, say, of the extra tax obtained in the first year following the revaluation of the property may not be sufficient to elicit any sizeable volume of bids.

For example, even with a five-fold increase in effective rates, to one per cent, revaluing a property from \$5,000 to \$10,000, quite a jump, would result in a \$50 increase in tax which would hardly justify the expense and effort of making a bid. The importance of this illustrative point should not be minimized. For even with an effective rate of tax of 3 per cent - a level sometimes achieved in the United States but well at the upper end of the range of rates prevailing in this country given the data of the above example, the premium for the bidder would be \$150, a sum that may or may not be sufficient to elicit bids. And remember we are assuming that property is assessed considerably below its market value. Were the under-assessment less egregious, the available premium would be more meager.

But even if we neglect this problem, there are other difficulties connected with the penalty provision alternative to forced sale. Presumably the penalty would be levied only when a take-over bid had been countered by the revaluation option. Yet the property may have been under-assessed for years, and there would be a penalty only in the year that the owner is caught. The conclusion is obvious. With a revaluation option of the kind under discussion it would never pay fully to self-assess until you are faced with a take-over bid. The government could seek to rectify this situation by a) trying to determine how long the property was under-assessed and the cumulative

total of under-assessment, b) applying a rate of tax to this cumulative total, and, finally, and most important c) applying a rate of interest, greater than the market rate, to this figure to obtain the total tax due the government from the under-assessor. This procedure would go far toward eliminating the problem of under-assessment, but, we're afraid, it would also come close to eliminating any claim of simplicity that might be made for self-assessment.

A third problem with a revaluation - cum - penalty option under self-assessment remains. In the preceding paragraph we stated that under such a system it would never pay an owner to fully assess his property. The word "fully" was carefully chosen. The reason is obvious. If penalties are only to be levied when take-over bids are refused, then the correct strategy on the part of the property owner would be to prevent as many take-over bids as he could. If  $(100 + X)$  per cent of the self-assessed value is considered a legitimate take-over bid, the current owner would never assess his property at its true value, even if he knew what it was. For example, let X be 20 per cent; then 120 per cent of assessed value would be a legitimate take-over bid. Now if the true value of the land is \$96, and assuming there is no cumulative reassessment as noted above, it would pay the property owner to assess its value at \$80. Bids on the property between \$81 and \$95 will not force revaluation; only bids of \$96 (or greater) would do this, but this is what the property should be assessed at. To further protect

his property the owner might choose to assess it at some intermediate value, say, \$84, for then it would take a bid of at least \$101 to force him to revalue (or accept a bid for his property in excess of its true value). The point to be made here is that while the provision that take-over bids be at least  $(100 + X)$  per cent of the self-assessed value is a necessary measure to protect property owners in view of the large random component of property valuations, it could act as a shield against the penalty provision unless the latter incorporated the provisions and attendant complexities outlined under a), b) and c) above. This discussion, by the way, also illustrates how important it is to pick the "right" X. Indeed what it suggests is more pointed than this. The value of X depends on how well developed real-estate markets and financial markets are, and the degree of business acumen in the community. For developing countries where such institutions are emerging and financial and business skills scarce, a higher X would be in order. But the higher the X, the bigger the shield against the bite of the penalty provisions.

In brief summary, the discussion of the last several pages serves notice that if revaluation - with-a - penalty provisions are to be an acceptable alternative to forced sale, they will have to be more thoughtfully constructed, and necessarily more complex than those implied in past proposals. And if they cannot be structured to be so, then we are forced to the conclusion that, for

self-assessment to work, forced sale with all its attendant problems is the only feasible credible threat for a system of self-assessment.

d) The difficulty of valuing real estate

A major objection to any assessment scheme, but, in our judgment more particularly to self-assessment, lies in the great difficulty of determining the "true" value of real estate. Here the opponents of self-assessment point out that under the best of circumstances, and particularly in Latin America, property valuation is a difficult task. So difficult, in fact, the argument runs that for a good many properties professionals would have to be employed at a cost greater than or equal to the cost of government assessment. A stronger and more cogent objection based on the difficulty of valuing property appears directly below.

To expand on an earlier point, it seems to us (as it has to others) that the problems of property valuation, difficult enough under the best of conditions, may be close to impossible in the Latin American context. The goal of accurate assessment, in short, while noble, may not be feasible. Assessment in any country must wrestle with the problem of evaluating properties which differ in location, type (commercial or residential) and price classes. The United States assessment experience suggests that trained professionals differ substantially in their appraisals of property values. As summarized in a note in the Harvard Law Review:

The (Census) Bureau studied 1,263 localities throughout the country and found that the degree of assessment equality accepted by most experts as a reasonable and obtainable goal<sup>22</sup> had been achieved in only one-fifth of them. This conclusion is amply supported by reported cases and other evidence of current assessment practices. In a recent South Dakota case the trial court found that property of the same class had been assessed at rates ranging from 13.3 to 131 per cent of the value. The Wichita, Kansas, Chamber of Commerce reports that in five bona fide sales of downtown office buildings within the past two years the ratio of assessed to market value were respectively 26, 41, 43, 46 and 65 per cent ... And the New Jersey Supreme Court was confronted last with findings that assessment ratios within a given municipality for the year in question ranged from 4.13 to 86 per cent on vacant lands, and from 5.13 to 79.88 per cent on other properties.<sup>23</sup>

Among the most thorough of the recent studies in this field<sup>24</sup> is one by Oldman and Aaron which examined the pattern of differentials in property assessment in a particular case, Boston. They found:

1. A systematic difference in the assessment-sales ratio, which averaged 34 per cent in the case of single-family residences, 42 per cent for two-family dwellings, 52 per cent for three to five family houses, 58 per cent for residences housing six or more families, and 79 per cent for commercial property.

2. Patterns of inequalities associated with price within each category of property. Thus "for most classes of residential property the average ratio declined for each successively higher class," but "the patterns are not smooth."

3. For any given class of property the assessment-sales ratio had a sizeable standard deviation, and as among different classes of property there were wide variations in the standard deviation of the ratio. Specifically, they report the following:

<u>Property</u>	<u>Standard Deviation of Assessment-Sales Ratios</u>
Single Family	.150
Two Families or Apartments	.195
Three to Five Families or Apartments	.274
Six or More Families or Apartments	.206
Commercial	.411
Land	.439

(In a preliminary draft, Oldman and Aaron warned that they had so few observations on vacant land that "it would be hazardous to make generalizations about this category." Yet, pointing to its high standard deviation, they noted specifically "the problem that this would create for any assessment scheme--especially one with forced sale provisions.")

All this adds up to a well documented picture of stark differences in assessed values relative to market value for which there seem to be two underlying causes, purposeful policy and random errors at measurement. The systematic patterns noted under 1. and also, perhaps, 2. above can, as a first approximation be taken to be expression of a purposeful policy, to bring assessments on some classes

of properties closer to "true" value than others. Assume that in the absence of this policy, the assessment-sales ratio for all classes of property would average unity. The standard deviations noted in 3 above, however, which as a first approximation can be taken to be the result of random errors of measurement, indicate that nonetheless the observed assessment-sales ratios will be widely dispersed around their expected value of 1. And it is this latter evidence, as Oldman and Aaron note, that is particularly germane to an evaluation of self-assessment. These data point to the inherent difficulties of property valuation which suggests special problems for self-assessment. What follows is highly artificial, but it makes a relevant point.

Assume property valuation to be a random normal process with a mean assessment-sales ratio of 1. Under such conditions, after all the properties in a jurisdiction have been assessed, half of them will be undervalued and half overvalued. Now let there be, as there would in a self-assessment scheme, two sets of valuers, each characterized by the same random process, and have them assess each property simultaneously. Each "assessor," then, can value every property either too high or too low with probability one-half. Call the two assessors for each property owners and bidders. Owners can set either too high or too low a value (the probability of a particular event - say, "setting just the right value" - being zero in a continuous distribution) as can bidders. There are four possible outcomes.

If owners set too high a value and bidders too low a value, properties will remain with owners and be overassessed. Twenty-five per cent of properties will fall in this class. If owners assess above market value and so do bidders, half the properties in this category (which encompasses 25 per cent of all properties) on average, will end up with owners, the other half with bidders; all will be over-assessed. If owners assess below market value and so do bidders - a joint event which covers twenty-five per cent of properties - half the properties in this group will go to bidders, the other half remain with owners and all will be underassessed. Finally, on the remaining twenty-five per cent of the properties, the assessments by owners would have been below market value; those by bidders above market value, and all such properties would have been taken over by bidders and would be overvalued for tax purposes. Summing up it would appear that under this self-assessment scheme, three-fourths of the properties will be overvalued for tax purposes.

Recalling that the result of regular assessment practice was 50 per cent overvaluation and 50 per cent undervaluation, self-assessments' 75 per cent overvaluation "achievement" would seem to be a criticism of it as against the traditional method. But this would be incorrect for if, as we assumed, this is a purely random process and symmetrical as to owners and bidders, each will have equal proportions of overvalued and undervalued properties; and since the goal set by the government is a given amount of tax revenue,

tax rates will be commensurately lower in the face of the higher tax base. So it appears that there will be no real difference between the single assessor (usual procedure) and the dual assessor (self-assessment) situations.

Moreover, of course, the example is highly contrived and unrealistic, for it is not likely that home owners and bidders will value simultaneously. In the usual case bids would follow self-assessment. In this context, then, the large standard deviations cited by Oldman and Aaron seem to suggest real difficulties for a scheme like self-assessment backed by a credible threat of takeover. (Vide the quote from Aaron and Oldman above). For in this case a mistake could mean the loss of one's property. Since the large standard deviations suggest that "mistakes" are quite likely, it would seem that self-assessment would bring many hard cases.

To illustrate with the Oldman-Aaron data, assume that the purposeful errors that account for an assessment-sales ratio of less than 1 (i.e., that incorporate policy decisions to assess some classes of properties more heavily than others) are eliminated by self-assessment, but that the randomness remains, and that the process of property assessments can be described as a normally distributed random variable with an expected assessment-sales ratio of 1, and the standard deviation,  $\sigma$ , as measured by Oldman-Aaron. Then for two-family residential properties with a  $\sigma$  of .195 we

know that if homeowners assessed with the same degree of "insight" as Boston assessors, slightly less than one-sixth of all two-family homes would have an assessment-sales ratio of less than .8.<sup>25</sup>

Assuming the sales value to be market value, these homes would have been valued at less than 80 per cent of their market value. If, as has been suggested, the self-assessment system would not permit takeover bids unless they exceeded the owner's assessment by, say, 20 per cent, this group of homes would be biddable. So, incidentally, this example also suggests the strong need for a sizeable premium of bid price over self-assessed price, for otherwise the number of bids required would be extremely large.

Even though owners valued as accurately as assessors, one-sixth of all two-family homes would have values set by owners that would be far enough below market value to be an attractive target for a take-over bid even in the face of a condition that such bids must exceed the owner's assessment by 20 per cent. Per se this is not a criticism of self-assessment, since by our assumption the "error" here is just as great as in regular assessment. But the consequences would seem to be more severe. For, whereas in regular assessment the errors are as pronounced, they result in over - or undertaxation, whereas under self-assessment the consequences could be forced sale. But is there really any "hardship" here? Won't these victims "cry all the way to the bank"? If

forced to sell, these homeowners would receive a price considerably more than they thought their homes were worth. Yet this, too, is not all of the story. For it also seems clear that a system of assessment and associated enforcement that puts say, one-sixth of well intentioned homeowners who have been honest in their valuations in the position of having to part with their home upon a bid from a more "knowledgeable" party, is not likely to be supported or even tolerated by the community, even though there would be monetary assuagement should the homes be bid away<sup>26</sup> We take this to be a serious disability of self-assessment. And notice how much stronger a case for our conclusion could have been made had we used vacant land with its very much higher standard deviation to illustrate the point. In fact, this case would have been too good, for it would have a sizeable number of observations with negative assessment sales ratios, an impossibility since it requires that either the assessed or the sales value be negative, which, in turn, would direct critical attention to our simplifying assumptions that the assessment-sales ratio is a normally distributed random variable. Despite the looseness of the assumptions, however, we think the point is valid. Moreover the real estate valuation process probably has smaller variances in a community with well developed and active real estate markets - Boston - than in most Latin American cities. Thus our illustrative figures understate the seriousness of this problem.

But this still may be a somewhat artificial way of looking at the

main difficulty we see in self-assessment, a difficulty severe enough to render it very questionable in our judgment. The point we wish to make now is closely related to one of several paragraphs above, but it focuses on some other features of the housing market and may be more realistic in that it takes account of attitudes toward risk. For people valuing an asset like a house may very well not simply put the "best" value they can via a process similar to that of Boston assessors; being averse to risk, more particularly the risk of having to sell their homes, (and some, at least, having little capacity to assume risk) they may set values that guard against this risk.

We start by noting that homes are a highly differentiated commodity providing as they do not only shelter, but access to work, shopping, recreation, neighborhood friendships and activities, closeness to relatives, etc. In common with all other commodities, a house is worth more than its market price to all but the marginal purchaser. And remember, for any person there are not, in fact, a large number of home offerings comparable in all the relevant dimensions of services provided by a house to make him sanguine about the prospects of getting as good a housing situation as he has now i.e., flow of satisfaction of all kinds from the house should he have to sell his house at the current market price and buy another with the proceeds. To appreciate the point, note the distinction between homes and, say, cars. Most automobile owners

would not be distressed if they were forced to sell their car at the going market price, because they could get a replacement with the proceeds that would be identical for all intents and purposes. But for homes a forced reshuffling of ownership would bring a loss in welfare. In other words, it seems reasonable to assume that for given income and tastes the existing distribution of the housing stock among the population is optimal in the sense that any forced redistribution thereof will not make some persons as well off as it lowers the welfare of others. Not only do we assume that the distribution is optimal, our argument requires additionally that it be an optimum worth talking about, i.e., that there not be exceedingly close substitutes for the current choices of individuals at any given price.<sup>27</sup>

Given, then, the inferior nature of all other housing alternatives available at a given price, under a self-assessment scheme homeowners would seek to protect their consumers surplus. That is to say, even if they knew the market value with precision, they would, except for the marginal owner, set a value that incorporates some part at least of the excess of what the house is worth to them over what they would have to pay in the market were it freely for sale. Some part, at least, of consumers surplus would appear in their assessments. To come back to automobiles for a moment: if automobiles were to be self-assessed for tax purposes, we would expect the values set by taxpayers to aggregate just about as much as their market value. For homes, we would expect the self-assessed values

to aggregate more than the market value of the housing stock. Incorporation of consumers surplus in the valuation base is not bad per se. It simply means the tax base will be higher and given that a specified amount of revenue is to be raised, tax rates would be commensurately lower.

But this dismisses the problem too glibly. The incorporation of consumers surplus will not be uniform for all taxpayers, nor will consumers surplus be the same for all. Besides one's taste for housing, the extent to which consumers surplus is incorporated will be determined by the homeowners' degree of risk aversion.

Since at any given level of value of housing ownership, the degree of risk-aversion varies with owners' tastes a horizontal inequity would develop. De facto rates of tax would be higher for properties of equal value depending on the degree of the taxpayer's aversion to risk. Moreover one might argue that<sup>a</sup> reasonable property of utility functions is that risk aversion decrease with income.<sup>28</sup> (Certainly the rich, ceteris paribus, have a greater capacity to assume risk.) Under these conditions self-assessment would tend to discriminate against homeowners on the basis of income. And this vertical inequity too we would consider to be a serious objection to it. Thus, with a taste for risk aversion and the capacity for assuming risks varying among property owners, self-assessment could be expected to result in divergencies between market and assessed values. A system of property taxation which, when the

self-assessment rolls were opened to inspection, showed a wide variation in the assessed values of homes that have the same market value, could not be expected to command public support or appear to be a real improvement over administered assessment.

Ironically, then, one can argue that self-assessment would provide a tax base that is too subtle insofar as elements of consumer surplus are brought into it. This is a degree of sophistication not currently achieved by our most highly developed tax--the federal government's levy on personal income. For purposes of that tax the base is the dollar amount of income, not the capacity for enjoyment that it means for the taxpayer. Calibration among taxpayers is by this objective monetary amount. But under self-assessment with forced sale, a likely result will be a tax base for each homeowner that is somewhere between what he can sell his house at and what he would pay not to have to give up that house. Thus one could expect self-assessment to lead to wide divergences between true and assessed values.

All that we have said on this point relates to a system of self-assessment implemented by private party bids at some premium, say, 20 per cent, above the owner's valuation, and with no recourse by the owner against forced sale. However, were either Kaldor's suggestion (see above) of permitting the owner a counter-bid at some premium above the additional bid price or Strasma's variant of permitting the owner to keep his property upon making a penalty

payment adopted, our point would not lose its sting. But the credible threat so necessary for the effectiveness of self-assessment could. For, as argued earlier, neither the Kaldor nor Strasma alternatives would seem to carry the same preventive punch as compulsory sale. And in either case, if the penalty is a modest premium above the list price, say 5%, or a penalty related to the increased tax, owners would be impelled to gamble. Thus if/<sup>the</sup> owner could keep his property by valuing at 25% above his initial valuation if/<sup>d</sup> bid were 20% above, any owner whose property had a true value of  $\beta$  and valued it at  $.8\beta$ , would be able to support four years of penalty for each year he went "undetected." And if he undervalued it even more, he could support more than four years of penalties with the tax savings from each undetected year of underassessment. Owners' valuations, then, would, as in the forced sale case, be a function of their view of market value and their propensity to take risk; hence different tax values would exist for properties of the same market value, etc.

e) Some Other Objections

The argument to this point leads to the conclusion that severe difficulties are inherent in any self-assessment scheme with the threat of forced sale, even under "normal" conditions. But in Latin America, "normal" conditions are seldom given. The conditions, instead, are such as to accentuate any problems an assessor might

have and make the assessment problem for professional as well as self-assessors very difficult, if not impossible. The reasons for this conclusion and their implications for a self-assessment system are as follows:

1. Inflation. A number of Latin American countries have a history of chronic and severe inflation. This, of course, has affected resource allocation and distribution of wealth and definitionally implies that prices are changing rapidly. Inflation has implications for self-assessment. For a number of reasons, land is one of the few ways to hedge against inflation; under inflationary conditions its price will rise in common with the price of other goods, but more sharply than most.<sup>29</sup> It follows from this fact that the assessment system must allow for these price changes and must not penalize the owner for failing to revalue constantly. In the limit, this could be a never-ending process. (Note also that self-assessment is no great reform in this respect since it accepts market prices even when they are not good, e.g., based on artificial scarcities, speculation, etc.). Thus a proposed system whereby, say a 20 per cent leeway is given between self-assessed value and bid many not be nearly sufficient if inflation is rampant. Also, deflating self-assessments by a general price index, if one could be constructed, may be a step in the right direction, but would not be a panacea. For it is hard to devise indexes that will permit the separation of real changes in value from normal ones for classes of properties. In this respect, of course, the problem with real estate is similar (albeit generally more severe) to that which characterizes all other commodities. Moreover, while

inflation poses a problem for a self-assessment scheme, it could be argued that it also accords a relative advantage to this procedure as against other modes of assessment. For self-assessment is more likely to permit new valuations to be filed each year, much as with an income tax.

2. More generally, real estate markets are not perfect; it could be argued that they are not even reasonable facsimiles thereof.<sup>30</sup> The many imperfections and externalities in the market for land and real properties will, in all likelihood, lead to a structure of prices and a pattern of resource use that is far from optimum. Self-assessment, utilizing the threat of forced sale to private parties would, of course, not improve matters. Very simply, if market prices are not correct from a social point of view or an allocational point of view, utilizing a system of valuation that taxes on the basis of market value will not have the virtues usually claimed for it. On the other hand, if the market sets unrealistically high values on, say, vacant land, taxing on market values, which involves a heavier penalty for holding such land than under any other tax base, will also be most conducive to efficient use of this land. In sum, what we are saying is simply this: where imperfect markets prevail, taxes based on something other than market values are necessary to correct the imperfections. But if a tax must be based on private value, then a market value base will produce the most salutary results.

3. Also, many Latin American countries have or are revaluing their

currencies and a self-assessment system must take changes in value due to this fact into account before assessing penalties. Also, for the small landowner, not used to a market economy (even in municipalities) it may be difficult to understand the intricacies of depreciation and inflation, and it is not clear that he should be penalized for failing to do so (above and beyond the penalties that ignorance itself inflicts).

4. Also, as Turvey suggests, the smaller the number of market transactions, the greater the lack of information and the greater the degree of heterogeneity in the property, the greater will be the fluctuations in value and the harder will it be for an individual to find a yardstick with which to evaluate his property.<sup>31</sup> This suggests that in Latin America property valuation will be subject to an even larger penumbra of uncertainty than, say, for the United States, and, hence, even more difficult to assess. But this is a difficulty applying to any assessment scheme.

5. Finally, it must constantly be remembered that in the Latin American context land is very often more than just an asset. It is the family's social status, pride, etc., and has often been passed down, along with memories, from generation to generation. Hence the commercial value of a piece of property does not necessarily coincide with the value to its owner, and it is not sure that any system which seriously jeopardizes the owner's continued right to his land would command any lasting respect and, therefore,

ultimately, it would be doomed to failure. Thus, a system of self-assessment with forced private sale may not work--if rigorously enforced--in Latin America.

The above is meant to suggest that valuation of property, and in Latin America probably more so than in the United States, is at best difficult, and therefore simple rules for bids of 120 per cent of self-assessed value are not likely to produce a workable, equitable tax system. Most of the problems mentioned above can be solved by various devices, such as a price deflator, etc., but with each added device, self-assessment begins to lose part of its pristine beauty and seeming simplicity, and, hence, its appeal. No matter what refinements were introduced however, the basic criticism noted above, i.e., the differential incorporation of consumer's surplus into the tax base would still remain.

Other objections to self-assessment have been raised. Briefly, they are as follows:

One recurring objection as in our major criticism, centers around the hypothesis that self-assessment will affect different individuals differentially. A variant of this point recognizes the fact that some individuals will have greater ability than others to bear the risks of undervaluation. In addition, knowledge is seldom distributed equally. Engineers, contractors and real estate men by profession are usually thought to be better equipped for appraising property than other people are. It will be recognized by sophisticated taxpayers that even the central government will have

limited ability to check the accuracy of self-assessment and that, at best, the threat of government purchase will be carried out only occasionally. Also, as stated above, large landowners--assuming as the proposal usually does, that the parcels must be bought in the same units as they are declared--will not have to worry as much about potential private buyers. It will therefore pay those willing to bear this risk to undervalue their property holdings. Some individuals, especially those with low incomes, whose homes are their only significant possessions, will not be able to take the same risk, and will therefore bear a greater burden of the tax because they assess their property closer to market value than others would. Also, the costs--as a percentage of the value of the property--of having professional appraisers appraise the property, are smaller for larger properties than for small. (This, by the way, is true also of the imputed costs of self-assessment.)

This objection has merit. It could be removed by a) a system of exemptions for small property owners; b) the government publishing a series of guidelines to help owners appraise their property; or c) making sure that people assess their property correctly by hiring enough professional appraisers to check the accuracy of a large sample of properties. If these measures are necessary, however, then the alleged advantage of self-assessment of minimal costs and ease of administration become questionable.

A variant of this argument just discussed, stresses another

source of bias in a self-assessment scheme toward the over-valuation of properties. The flow of information to property owners under self-assessment would be asymmetrical. The system is geared up to inform them when property has increased in value via take-over bids, but there will not be the same flow of information to signal decreases in value. (The failure to receive take-over bids is not in general clear or as strong an indication in the downward direction as getting such bids is in the upward.) The result of this essentially one-sided flow of information will be a stronger likelihood for over-valued properties to remain such and pay taxes accordingly than for under-valued properties to remain in this condition.

To argue that there are reasons to expect an over-valued tax base, with the degree of over-valuation capricious or dependent on taste or capacities of taxpayers other than differences in the value of their properties in this part of our paper, after having pointed to reasons to expect under-valuation in another, is not inconsistency. Rather it is our judgment that both sets of biases will be present and will crop up for taxpayers with different weights on net balance. We see the results not so much as self-correcting, but tending to produce greater diversity in tax liabilities than in real property values.

Another objection to self-assessment has been mentioned previously and need only be reiterated here. It is held that self-assessment with forced sale would create greater uncertainty than government assessment and hence retard construction or improvements of land.

For under government assessment there is one known assessed value (and tax liability) facing the developer, whereas under self-assessment with forced sale (or penalty of some sort) there are numerous potential assessors who cover a wide range of possible valuations. Even if the expected value of their bids was equal to the government assessor's valuation the variance of this collection of bids would be greater and therefore so will the uncertainty surrounding the net returns from the investment.

This system, by making all property potentially saleable, should stimulate a better record of boundaries and ownership of property. However government assessment, especially of municipal properties, would also accomplish this objective.

The assertion that corruption would probably be minimized under self-assessment as opposed to alternative proposals is open to debate. Certainly, one source of corruption could be advance information as to plans of government purchases which might make profits available for holders of the inside information. Penalties, relatively simple to administer, could be designed to correct this abuse. A more serious source of corruption, however, must be recognized once the possibility of capital rationing, i.e., not enough fiscal resources to purchase all under-assessed properties, is admitted. Given this possibility, there would be a great opportunity for all kinds of abuses and favoritism in deciding whose take-over bids to support and/or whose property to have bought out.

Furthermore, it is not impossible to imagine other abuses under self-assessment. Forced sale would make it relatively easy to create the "kind of neighborhood" you would like to live in. Also, monopolistic exploitation might be possible. Consider a strictly zoned one-family residential district in a municipality. The current use of land, due to zoning, would be its only use and, hence, in a sense its best economic use. Consider further that all of the houses have the same value and that that value was the current market value and that these houses were also assessed at that value. It is conceivable that a speculator could purchase this entire block or enough of it to extract monopolistic rents, which may or may not be taxable (see below).<sup>32</sup> Often for property, the value of the whole is greater than the value of the sum of its parts. Add to this example the fact that this development may have a location premium, and the situation becomes more realistic. Self-assessment does not ensure that such a situation might not take place, although some have argued that it does in the following way: take  $n$  identical one-family houses in a neighborhood zoned just for this type of property. A monopolist who acquired  $n-1$  of the houses would, in effect, be faced by a competing monopolist in the last house who could hold out for all the producers' surplus, thus getting it into the tax base. A priori, in this situation of competing monopolists, it is hard to say which one will prevail. A likely possibility is that some but not all of the monopolist's profits would be in the tax base.

The extent of zoning will influence the extent to which self-assessment can help to insure property being used both optimally in an economic sense and effectively in the sense that it will partly determine the fiscal capacity necessary to make the "threat" credible. As mentioned above, a municipality with strict zoning has already determined land use and no tax system could be expected to change this. (Although the tax system will affect the pace at which this pattern of land use is implemented, i.e., more construction under site value taxation than under a tax on improvements, etc.) Under such conditions, market value and self-assessed value might be expected to be closer and therefore fewer take-over bids (less fiscal capacity) would be necessary. With flexibility in zoning, however, current use would now only be one of a number (the number approaching infinity as the amount of zoning approaches zero) of possible uses. Theoretically, then, self-assessment with take-over bids would push land to its optimal use. But with increased flexibility would also come an increased number of bids, and hence the necessity of having an increased fiscal capacity to make the system work. (Also, the degree to which the zoning code, i.e., permitted land use is known will affect the number of bids.) No town will probably have no zoning ( a slaughter house next to a hotel does not seem likely) and likewise, few municipalities will have as strict a zoning code as mentioned above. But it must be remembered that zoning will and does have an effect on both the extent to which self-assessment could alter land use and also the resources necessary to make self-assessment work.

A further abuse that some observers think might occur under a system of self-assessment is the possibility of timing of bid and purchase so as to capture the benefits of other people's work. This objection is mainly used with reference to agricultural land (not our primary concern here) where it is believed purchase could be timed to take advantage of a good harvest. However, a system of adequate compensation for land and the improvements made on it should, theoretically at least, rectify this problem for urban as well as rural land.

Another problem deserves only comment. If self-assessment is adopted on a municipal level, the community that enforces the system the best may find itself losing resources to a community that is more lax (lower effective tax rate) in its administration. Municipalities might become competitive in their enforcement, granting lower taxes as an incentive to development via poor administration rather than by outright subsidies. If this should occur, great inequities would result.

The above point is not unique to self-assessment, but could be made with regard to any tax system. A similar point, however, is more particular to self-assessment. Differential enforcement could arise because of the differential fiscal capacity of cities to implement a credible threat. In this case, inequities would result not from lack of initiative in administration but from lack of resources. These possibilities suggest, perhaps, the need of a central coordinating office to mesh municipalities' use of the property tax with each other and with the various state and national taxes.

F. The Problem of Encumbrances

A final problem, and a severe obstacle to self-assessment is suggested by some of the legal writers in the field. This is the problem of separate rights and interests in real property which, according to Herrman "could pose potentially the greatest threat to the efficiency of any system of self-assessment."<sup>34</sup> It is a known fact that, for good economic reasons, the existence of encumbrances on land can seriously diminish the value of its potential use to any person contemplating bidding or taking title, as can the existence of leaseholds, reversionary interests, rights of entry, life estates or the burden of restrictive covenants (as well as zoning). Land may also be pledged as security for debts, or may be looked to as security for mechanics liens.<sup>35</sup> Obviously, the bidder cannot abrogate these rights or interests merely by purchasing the basic or underlying estate. On the other hand, full recognition of such rights may constitute such a set of constraints on the effective use of a property as to discourage bids for it even though it be "underassessed." The problem, again in Herrmann's words, must be "resolved by balancing the expectation of parties prior to adoption of self-assessment and their past reliance on the inalienability of such rights and interests, with the probability of the future employment of grants of such rights or interests as a means of evading or totally avoiding the sanctions of the self-assessment system." (That this latter could be done is easy to envision. Imagine two fairly identical pieces of property owned by two different individuals. Each one could sell his respective property to the other for, say, \$1.00 and lease it back for 99 years for \$1.00 a year. If a prospective bidder has to purchase either property subject to the lease, the property has little

value to him, and the value for tax purposes is accordingly nil.)

To meet this problem, which is a difficult one--but one that must be solved if self-assessment is to work--Herrmann proposes a two-step solution. The first step would be to require negotiation or recording of severable interests and rights in real property, as a condition precedent to recognition in the event of bid and purchase. This would serve to let the buyer be aware of just what he is bidding on. The second, and more radical step, is to conceive of separate rights or interests in real property as being severable, and requiring separate declarations of value by persons who have duly recorded rights or interests in each given parcel of property. Property tax would be also assessed on these declarations. Any bidder taking title to the underlying estate would take it subject to the rights or interests, but he would also be free to bid separately on them. The separate declarant would then have the option to sell or reassess with payment of a penalty<sup>36</sup>

The alleged benefits of such a solution are that it would:

a) have the salutary effect of merging interests and encouraging owner use and control of land; and b) it would also result in the taxation of many interests and rights in real property which are, or could be, of more value than the basic or underlying estate itself. Our competence only allows us to observe that a) it is not clear that a property tax should get at these other interests; and b) that there is a real problem here which only serves to underscore the fact that any solution to the assessment problem, self-assessment included, will not be simple.

Exemptions can be handled under self-assessment as they would be handled under any other system. They should be granted cautiously.

If it is decided that all types of property (commercial, residential) should fall under the self-assessment system, it would probably be wiser not to exempt any properties (churches, charities, etc.) from the obligation of having to self-assess their property (and hope that even though exempt from tax they would be valued realistically). Exemptions should rather be given--in accordance with the municipality's economic and social objectives--from the tax-paying and forced sale requirements of the self-assessment proposal.

Another objection sometimes made to self-assessment is that for communities already on another basis of assessment, the re-adjustment to self-assessment would be difficult. The trite but true answer to this objection is that it depends on how great the readjustment would have to be. Some countries are presently only making token attempts at assessment and hence any change would be devoid of a burden. A few municipalities, however, are conducting cadastral surveys or are laying the groundwork for them, and in this case the switch might be more difficult. No general statement can be made in this area, except that there is reason to believe that self-assessment, at the very worst, would be no costlier to the government (as opposed to the community in general) than alternative assessment schemes.

Finally a point about the penalty provisions that are suggested by some as a substitute for forced sale. If the estimate mentioned earlier is correct--that the effective tax rate on the real value of land is often of the magnitude of .2 per cent--then a penalty which would give to the maker of a frustrated bid (the owner chose to revalue) a premium in the amount of the extra tax obtained in the first year following the revaluation of the property may not

be sufficient to elicit bids. To wit, even/a <sup>with</sup> 1 per cent effective rate (very high in the context of Latin American property taxation) revaluing the property from \$5,000 to \$10,000, quite a jump, would result in a \$50 premium which would hardly justify the effort.<sup>37</sup> More accurate (current) assessment and/or a higher nominal rate would raise the effective rate. But this may not be that easy to achieve. Assessment problems, especially in Latin America, have already been discussed and higher nominal rates might run into the rate illusion dilemma. Thus if the penalty provisions are to be effective they will have to be more thoughtfully constructed than those proposed in the past.

The importance of the above point should not be minimized. In the United States, for example, tax rates are very high compared with Latin America, but only run at an effective rate of about 3 per cent. In the above example, this would mean a reward of \$150, which probably is not enough either. The reward, then, would have to be many multiples of the tax rate (but still related to the value of the property or underassessment thereof.) Thus one is forced back to the conclusion that for self-assessment to work, forced sale, with all its concomitant problems, would have to be the powerful threat.

### Conclusion

We have presented and evaluated the arguments--both pro and con--as well as some of the problems of implementation of a system of self-assessment of real property for purposes of taxation. If one conclusion can safely be drawn from this discussion, it is that there is no simple solution to the problem of property assessment. Self-assessment, it turns out, is no exception. But the question

remains: How does it stand relative to alternative assessment schemes? Before a final judgment on this question, some observations are in order.

In deciding on methods of assessment, a government really has four choices: to forego property taxes and not undertake assessment; to undertake the assessment itself; to have self-assessment; or to have a combination of the three methods, e.g., some property exempt, some governmentally assessed and others self-assessed. The first alternative does not seem desirable, especially in a developing country, and hence will be dismissed. (In fact, it was ruled out by assumption at the start of this paper.) The fourth alternative will be discussed below under extent of self-assessment. This, then, leaves us with the choice between government assessment and self-assessment.

In making this choice, it seems to us, the municipality should not be swayed too heavily by arguments which tend to show that one assessment scheme (usually self-assessment) is less costly, easier to administer, more equitable, etc., because as demonstrated above, both systems are complicated, costly and probably contain built-in inequities. Self-assessment is not simple, it may require other agencies to enforce (outside aid) and it may prove costlier, if not to the government, to the community. And when it is considered that our primary<sup>concern</sup>/is with urban properties, many of the problems mentioned in the literature about cadastral surveys (rough terrain, unknown ownership and boundaries, vast land holdings, no comparable sales, etc.) are either mitigated or disappear, and hence self-assessment loses some of its relative virtue vis a vis other tax proposals.

Moreover a system of self-assessment could very well need outside support for effective enforcement. Might not this aid be also used for municipal cadastral surveys undertaken by officials of the local government? The case, then, for self-assessment must be made on other grounds than these alleged cost and administrative advantages.

These other grounds, however, are persuasive in theory. Briefly, they are as follows: Self-assessment, with effective threat of forced sale, should tend to value land and properties in their best use, given permissive zoning, and not in their current use as would the usual government assessment schemes. Anyone who wishes to withhold land from productive use would have to put a premium value on it, thus paying for the privilege of not using it, while anyone who is using property uneconomically would be encouraged to use it more efficiently since he would be paying taxes based on the property's value to others, or would be forced to part with it. Thus many of the features of a site-value tax would be gained without having to separate land value from improvement value.

Secondly, self-assessment should reflect changes in values sooner than the usual government assessment programs, since presumably land would be self-assessed annually, whereas the government programs are conducted once every five years. (Note to the extent that these value changes are distorting, self-assessment, which reflects them quickest, may add to the distortion.)

Thirdly, self-assessment, by encouraging people to evaluate their own property, should make them more aware of values, taxes and economic alternatives, and also may promote acceptance of the tax

quickly in the sense that the tax payers are the ones who determine the values. They have no one to blame but themselves.

These three reasons are powerful, but only the third is unique to self-assessment. However in theory, they suggest that there is a case for self-assessment. But, and this is a big but, it is a case in theory. As can be inferred from our earlier discussion, there are, we think, considerable difficulties in the transition to practice.

In our view, the primary deficiency of self-assessment lies in the strong penalties that are necessary to make it work, and the inequitable pattern of assessments that would emerge as a result of homeowners' efforts to protect against them. In particular, property owners who are most averse to taking risk or who can least afford to lose their property are likely to be discriminated against. In reaching consumer's surplus to a differential degree, self-assessment would lead to a tax base for individual properties that has all the objections of direct assessment and could well generate more taxpayer discontent than the latter. This is the main objection to self-assessment as we see it, but there are others.

Secondly, there is the fact of inflation in Latin America. If inflation could be controlled (and in some places, such as Mexico and Peru, price increases have been moderate) all types of assessment would be easier, especially self-assessment. But if the present pace of inflation continues as in some areas, say Brazil and Chile, any attempt at property assessment might be comparable to tilting

at windmills. A price index, even if constructable, would still introduce distortions given the wide disparity of real estate price movements. Furthermore, inflation would cause reasonable men to differ over the value of the land and hence lead to legal problems over forced sale and penalties, thus destroying the efficacy of the system. It is for these and other reasons that in the inflation context we cannot help but be pessimistic about this system of property assessment in particular. For while the conditions described make any assessment scheme imperfect, self-assessment would probably levy the heaviest penalties on these legitimate differences of opinion.

Thirdly, there is the constitutional problem of "forced private sale. If it should be decided that "forced sale " was illegal, many of the automatic functions, and therefore benefits, of self-assessment would be lost. This would put the problem of enforcement solely in the <sup>hands</sup> of the municipality which, as we have seen above, may lack either the ability, resources, or desire to insure adequate enforcement either via purchasing land or collecting penalties. Even if the desire is present, outside aid would probably be needed, and even then the municipality would have to hire assessors to determine which properties were underassessed.

Finally, forced sale to government or private parties may just be unacceptable to people (and Latin Americans in particular) which, of course, would mean the inevitable failure of self-assessment. Real estate may presently be held in such high esteem in

Latin America, partly due to <sup>family</sup> memories and partly due to inflation that most people would not countenance any scheme that carried the threat of forced acquisition. Perhaps as growth proceeds property will lose part of its lustre but until this occurs its present semi-sacrosanctity poses a problem.

Moreover, if the problem of encumbrances cannot be worked out, self-assessment may prove unworkable. And for urban properties encumbrances represent a more severe difficulty than for rural properties.

Finally, as the most serious objection to self-assessment we remind the reader of the point made earlier, viz., that a) simply due to chance and imperfections of knowledge, the harsh penalty of having to part with their property would hang over the head of a sizeable number of taxpayers and b) the response to this would mean different tax liabilities for properties of equal value in an objective sense, but whose owners are enjoying different amounts of consumers' surplus and have different tastes for risk and unequal capacities to bear it.

Is there no place, then, for self-assessment as a permanent arrangement in a system of property taxation? Despite the fact that we have just ticked off several points against self-assessment, the answer to this question is not at all obvious. For, in fact, the objections we have raised are primarily objections to self-assessment of own residential properties. In particular, the objection cited above as primary, is most germane for homeowners. There are other property ownership categories, however, where the possible

gains from self-assessment seem strong and the consumer-surplus risk aversion argument not so apropos. For them, self-assessment might very well be considered.

Thus, we should suggest that there is a case for self-assessment of vacant land in urban districts, for here there are frequent clear instances of land not being used optimally<sup>38</sup> and the encumbrance problem is minimal. True, the high variance that Oldman and Aaron note in the assessment-sales ratio does not augur well for the administration of this system, but the economic gains theoretically obtainable might justify the effort.

Finally, an ingenious use of self-assessment has been proposed by Professor Arnold Harberger whose remarks reproduced earlier suggested permitting self-assessment subject to forced sale as a relief measure for taxpayers who dispute the government's assessments. This seems like an interesting possibility, eminently worth experimenting with as a device to expedite relief, repeals, etc. in property taxation.

The case for self-assessment of commercial and industrial properties is not as strong as it is for vacant land, particularly in Latin American municipalities. For these properties may be unique (only steel factory in town) and therefore hard to evaluate; the encumbrances should be greater; zoning laws more strict with regard to some commercial establishments; and the increased risk which forced sale would entail for improvements might restrict activity more in this area than in residences or vacant land, and perhaps current use is closer to optimum for commercial than residential properties. Yet, because the emotional and consumer surplus objections noted for residences do not apply in the same degree to businesses and there-

fore self-assessment would have a powerful potential, an experiment with self-assessment would be worth trying.

Finally, we note that our generally-sceptical evaluation relates to self-assessment as a permanent arrangement. The case for self-assessment as an interim device, while capacities and institutions for the more usual procedure are being built up, is much stronger.<sup>39</sup> Self-assessment with all its imperfections might be used by a developing country over a transitional period during which the administrative means would be developed for an adequate system of assessment by government fiscal officers. Administration of the tax could be lax and the imperfections like self-assessment itself, could be considered transitional. Yet it would be a great improvement over no tax on real estate or many ~~poor~~ <sup>current</sup> systems of government assessment. The important point here is that self-assessment would be easier to install initially, establish the basis of some structure of valuation, begin to collect some revenue and begin to promote taxpayer awareness which would ease the transition to subsequent, more sophisticated assessment schemes.

APPENDIX

This appendix develops an argument in the text at greater length. By way of illustrating some of the issues involved in the preceding discussion, consider the following highly simplified and admittedly unrealistic "model." We assume that take-over "bidders" and home owners both value properties by the same "process" which is a random variable about which all that it is necessary to specify for our purposes is that there is an equal probability of a property's being overvalued or undervalued. Moreover, for convenience, we assume that no premium over assessed value is necessary for the take-over bid. Thus our numbers are merely illustrative of a tendency, but overstate its strength insofar as they overstate the number of take-over bids.

1. As discussed in the text, under our assumptions about the process, if property valuation is handled in the usual way by government assessors, half the properties will be overvalued and half undervalued. Individual properties will be discriminated against, but it will be "at random" and, on the average, the assessed value of homes will equal the market value.

2. Now let there be a scheme of self-assessment, with both homeowners and "bidders" setting values on all properties with the latter purchasing the properties whenever their valuation exceeds that of homeowners. Define the following events:

- $H_O$  = An overvaluation by homeowner
- $H_B$  = An overvaluation by bidders
- $U_O$  = An undervaluation by homeowner
- $U_B$  = An undervaluation by bidders

Each of these events has a probability of one-half, and is independent. Hence the joint events consisting of owner's and bidders assessments being over - or undervaluations all have a probability of one-quarter. There are four of them, of course, designated as follows:

$H_0H_B$  = both owner and bidders overvalue

$H_0U_B$  = owner overvalues and bidders undervalue

$U_0H_B$  = owner undervalues and bidders overvalue

$U_0U_B$  = owners and bidders undervalue

Under our assumptions, in the event  $H_0H_B$ , the bidders and owners each are just as likely to overvalue more strongly, so half of the homes that fall into this category or 12 1/2 per cent are taken over by bidders. Clearly, all 25 per cent of total homes covered by  $H_0U_B$  remain with owners, while bidders will take over all the homes, 25 per cent of the total, that fall in  $U_0H_B$ . Finally, half the homes in  $U_0U_B$ , i.e., 12 1/2 per cent of all homes, will remain with owners; the other half will be taken over by government.

Thus, there would seem to be a real difference between the self-assessment case and the government administered assessment example. For in the latter, half the homes were overvalued and the other half, of course, undervalued. Under self-assessment with the same valuation process but different rules of the game, 75 per cent of the homes are overvalued and 25 per cent undervalued. Thus the tax base appears to have been inflated. But the fair comparison between 1 and 2 involves fixing the total amount of revenue to be raised. Then if 2 has a higher base, this will mean a lower

rate of tax. Is this the only difference between them? Yes, because homeowners and bidders each have 75 per cent of their properties overvalued and 25 per cent undervalued, so while the share of undervalued and overvalued properties in total tax base has changed, i.e., the tax base has been inflated, original owners are not discriminated against. They have half the taxable value, bidders the other half; each accounts for half the tax base.

3. Now for the reasons elaborated above, let owners be concerned about losing their house and guard against it by being more likely to overvalue. They express their concern via a change in the probabilities of over- and undervaluing their house. Specifically, let  $H_0$  be, say, two-thirds and  $U_0$  one-third. For bidders the probabilities of both events remain one-half. Then

$$\text{Probability of } (H_0 H_B) = 2/3 \times 1/2 = 1/3$$

$$\text{Probability of } (H_0 U_B) = 2/3 \times 1/2 = 1/3$$

$$\text{Probability of } (U_0 H_B) = 1/3 \times 1/2 = 1/6$$

$$\text{Probability of } (U_0 U_B) = 1/3 \times 1/2 = 1/6$$

Reasoning as before, we can allocate 1/6 of all homes to owners and 1/6 to bidders from  $H_0 H_B$ . All of the  $H_0 U_B$  homes, 1/3 of the total, will be with owners and all of the  $U_0 H_B$  homes, 1/6 of the total, will be taken over by bidders. Finally, 1/12 of all homes stay with owners in  $U_0 U_B$ , the other 1/12 is taken up by bidders. Therefore, owners will hold 7/12 of all homes, bidders 5/12. And owners will account for more than 7/12 of the tax base. For 6/7 of their homes will be overvalued, while only 4/5 of the homes taken over

by bidders will be overvalued. Consequently, even with a downward adjustment in rates to correct for inflation of the tax base, the owners' proportionate share of the total tax will increase.

Admittedly, these examples are highly contrived and far removed from reality, but they do illustrate, we think, a basic difficulty with self-assessment. And we remind the reader that under- and overvaluation, while not specified in magnitude here, could be consequential if the Oldman-Aaron data are at all on the mark; and there is no reason to believe they are not.

FOOTNOTES

1. The Conference proceedings were published as Joint Tax Program, Fiscal Policy for Economic Growth in Latin America (published for the Joint Tax Program by the Johns Hopkins Press: Baltimore, Maryland, 1965). This volume will hereinafter be cited simply as Fiscal Policy, etc.
2. More recently a full-blown proposal supporting self-assessment and outlining a procedure implementing it has been made by John Strasma in a paper circulated by the Land Tenure Center of the University of Wisconsin, "Market-Enforced Self-Assessment for Real Estate Taxes," August, 1965.
3. In theory, one might claim these advantages, too, for a perfectly inaccurate system of assessment--one in which the "error," i.e., the departures from market(true) value were in the same proportions for all properties. In fact, however, one would never expect to find this precise degree of inaccuracy. Realistically, error is spread over properties by type, location, value, time of assessment and, of course, by particular assessor. Under these conditions, a stiff increase in rates would, in fact, mean a stiff increase in tax for the most accurately assessed properties, but only a nominal increase in "effective" rate for the heavily underassessed properties. Consequently, the harsh fate that would be experienced by only a fraction of the properties (those accurately assessed) tends to prevent localities from raising rates on all properties.
4. Programa Conjunto de Tributacion, OEA, BID, CEPAL, "Reforma Tributaria Para America Latina: II. Problemas de Politica Fiscal, Documentos y Actas de la Conferencia Celebrada en Santiago, Chile, en Diciembre de 1962," (Union Panamerica, 1964), p. 202. This is the Spanish language edition of Fiscal Policy, etc., as cited in Herrmann, "A Possible Solution to the Valuation of Real Property in Latin America" (An unpublished seminar paper prepared by Lawrence M. Herrmann for Professor Haar's class on "Land Reform in Underdeveloped Countries," June 1964), p. 6
5. For the notion of a "rate illusion" in this connection see Jacob Wiseman, "The Future of Local Government Finance," Lloyds Bank Review, July 1957, p.34.
6. Lawrence D. Lee, "A Proposal for Self-Assessment of Real Property for Purposes of Taxation" (An unpublished paper prepared for Professor Oldman at Harvard Law School, June 1965), p. 1.
7. Herrmann, pp. 6-7.

8. Arnold C. Harberger, "Issues of Tax Reform for Latin America," in Fiscal Policy, etc. p. 120.
9. Ibid.
10. Fiscal Policy, etc., p. 422. In discussing economic effects the distinction between having government appraisers undertake to set values and self-assessment is not the important one. The important distinction between the usual method and self-assessment is that self-assessment contains a forced sale or revaluation-cum-penalty provision, whereas the governmental survey does not. It is this economic sanction and not the method of assessment, as such, that tends to have property evaluated in its most productive use. Governmental assessments, with sale provisions, could theoretically attain the same results. Self-assessment, however, is generally advocated as being the most acceptable way of achieving them. (This point will be elaborated upon in the text.) One hundred forty per cent of the self-assessed value was the figure suggested by Currie in 1951 and 100 per cent the value finally adopted in 1957 by Colombia in an experiment in self-assessment. (See Albert O. Hirschmann, "Land Taxes and Land Reform in Colombia" reprinted in Richard Bird and Oliver Oldman, Readings on Taxation in Developing Countries (The Johns Hopkins Press: Baltimore, 1964), pp. 422.
11. Cf. Hirschmann, op. cit., p. 420. "When, as has long been the rule in Colombia, the state has to pay cash for expropriated property, its ability to acquire large tracts of land even at bargain prices is strictly limited and it is naive to suppose that the landowners do not know this. Moreover, the individual landowner is likely to rate as low the probability that the government will single him out - and, anyway, he has a good, well-connected lawyer friend in Bogota - so why worry?"
12. The phrase "credible threat" is from Hirschmann, who in turn got it from the "atomic strategists" (Hirschmann, p. 422)
13. Hermann, p. 22
14. A fourth method of making the threat credible has been suggested. This method would require that the self-assessed valuation be the basis for all credit issued the property owner. The effectiveness of this proposal would vary with the degree to which property is used to secure loans. The incidence of this method would be differential among property owners; it would affect borrowers primarily and even more specifically only those borrowers who pledged their property as security for a loan. Still it could be used to re-enforce one or more of the three "primary" methods of making the threat believable.
15. Ibid.

16. For instance, a flat penalty of \$50 for underassessment would hurt properties of lower value more than higher valued properties. Also, those that were the most underassessed would pay the smallest penalty as a percentage of penalty paid to corrected valuation. This kind of system certainly would not be acceptable. On the other hand, a penalty scheme such as \$5. per \$100. of underassessed property value (adjusted for price changes) would be fairer but might be regressive (more bids and hence more changes in property values on lower priced units) and might be too steep, relative to the tax liability itself to be acceptable.
17. In any event this would be a more feasible possibility for large tracts of vacant land than for large pieces of developed property, because the task of managing the former between sales is much easier. Still it is questionable whether too much faith should be placed in this partnership possibility.
18. If the rights are not terminable, then those people who own properties that are highly encumbered will be allowed to underassess their property holdings. Few people would bid on or buy properties if it is necessary to accommodate these encumbrances. (Still equity must be served in terminating them. This point is further developed, below.)
19. Again the caution, however, that to the extent that the municipality is able to sell the properties it has purchased, its operations in properties will require finance only to the extent of the "float," and this will obviously not be as heavy a requirement as would be needed for buying and holding a given number of properties.
20. Carlo S. Matus at Santiago, reproduced in first section of our paper. (See comments on pp. 3-4.)
21. The government, of course, could expropriate designated land and then resell it to pre-determined (by their bids) private buyers. This legal fiction might meet the constitutional objection, but would not remove the de facto sting of forced sale to private parties. Moreover, it would add complexities and additional temptations for government administrators.
22. This "reasonable goal" was measured by a co-efficient of dispersion which itself is a result of dividing the average deviation from the median ratio by the median ratio.
23. Note, "Inequality in Property Tax Assessment - New Cures for an Old Ill." 75 Harvard Law Review, 1962, p. 1377.
24. Oliver Oldman and Henry Aaron, "Assessment-Sales Ratio under the Boston Property Tax," National Tax Journal, March, 1965, p. 36

25. Half of all two-family houses have assessment-sales ratios under one, and one-third of all two-family homes have ratios under one but greater than .8, i.e., one-third of all two-family homes have ratios that are no more than 1  $\sigma$  below the mean.
26. Reminding ourselves that most proposals for self-assessment provide an alternative to forced sale, the consequence of random errors in valuation under this alternative would be differential ratios of assessed to true value for properties of the same true value.
27. In effect we envisage the housing decision as involving  $n$  variables, hence the housing choice is describable by an  $n$ -dimensional indifference surface. And we assume that the tangency of the budget hyper-plane to this surface is at a point that has no other points very close to it. In other words we are assuming that the indifference surface bends sharply away from the budget line.
28. John W. Pratt, "Risk Aversion in the Small and in the Large," Econometrica, January-April, 1964, Volume 32, No 1-2, p. 123.
29. For a discussion of this point see Robert S. Hamada (under the supervision of Daniel M. Holland) Factors Affecting the Price of Land (Cambridge, 1964) unpublished manuscript, pp. 38-43.
30. Hamada, Ibid.
31. Ralph Turvey, The Economics of Real Property, (London, 1957), p. 25
32. Whether they were taxable or not would depend upon how encumbrances were treated.
33. Also, it might be mentioned here that as the bids increase, the possibility of such a system being politically acceptable would probably decrease. With more bids comes the increased possibility of land changing hands and/or tax payments increasing to the displeasure of the former owners or the residents in general. Zoning, by affecting the number of bids, can also influence the public's acceptance of the self-assessment proposal.
34. Herrmann, p. 49.
35. These examples are from Herrmann, p. 49.
36. Ibid., p. 50

37. Obviously, examples could be developed that would prove just the opposite, and Strasma has one. Like ours his owner sets a value of \$5,000 but he assumes a bid of \$15,000 and a tax rate of 1.5 per cent. In our judgment such a degree of under-assessment and a tax rate this high are extreme assumptions and highly untypical. Since Strasma proposes that the penalty be the added tax liability plus twice this amount and that the frustrated bidder be rewarded with half the penalty, this example involves a lot of bids. But if less optimistic (i.e., more realistic) assumptions are made about degree of under-assessment and level of effective rate, even his proposal which, in effect, comes down to paying the frustrated bidder 150 per cent for the annual increase in taxes due to the forced re-assessment, would not seem generous enough to draw out a lot of bidding activity. Thus, given the numbers of our illustration, the reward for a frustrated bid would be \$75 instead of \$50, and this, too, does not seem likely to stimulate a large volume of bids. (See John Strasma, "Market-Enforced Self-Assessment for Real Estate Taxes," Land Tenure Center, August, 1965, p. 26).

38. We recognize that land kept idle for speculative purposes can, by providing a buffer, serve a useful economic purpose much the same as arbitrage operations serve in markets such as the commodities markets. In Latin America, especially in municipalities, keeping land idle probably only adds to the already distorted price structure and further retards development.

39. See John Strasma, op. cit., particularly the appealing argument for doing something via self-assessment as regards property taxation that would be in the right direction and could be a substantial improvement over the current practice of doing practically nothing in this area of taxation.