How High Should the Rate of Land Value Tax Be?

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A new national land value tax is to be introduced in the fiscal year 1992. The tax rate is 0.3%, but 0.2% only for the first year. It seems to have been a product of political bargain. The Government Advisory Commission on Tax Systems, which at first had thought of setting the tax rate to 1%, did not show any specific value in the final report, but giving only verbal definition of a required rate. After the Government Advisory Commission on Tax Systems submitted the report, the Liberal–Democratic Party submitted its proposal, in which 0.5% was given as the rate. But it was 0.3% in the final bill by the government. To my knowledge, there does not seem to have been so many logical arguments about the rate level in the course of discussion on the new tax. The purpose of this paper is to present a framework of determination of a proper rate of land value based taxation and examine the rate level of the new tax.

In dealing with this problem, we must ask how heavily land rent should be taxed. Henry George stated that rent should be taken to the State. He held that rent was unearned income and should be appropriated by taxation for public uses. He also said that a percentage of rent would be better left to landowners, for the reason that renting land through government agency would involve some costs. I agree to his position. But he did not give a specific value of how much fraction of rent should be taken to the State. Alternatively, I set an operational rule that the rent of the highest income bracket of people in the income tax should be taken to the society. The present income tax is imposed on the bracket of taxable incomes over 20,000,000 yen at the highest marginal tax rate of 50%.

There are two alternative taxes on rent. The first is an income tax on rent.

The second is a land value tax. Either tax is a burden to the landowner. The first approach involves itself in a difficult problem. A perfect income tax on rent in accord with the rule I set calls for a classified income tax on rent with the 100% tax rate for the highest income bracket. The principle of classified income taxation conflicts with the present comprehensive income taxation. It does not seem a feasible and realistic approach in the given circumstances. Under such an income tax system where rent is taxed separately and perfectly, is there any reason why we should have a land value taxation? Under the second approach, rent is taxed perfectly in land value taxation, and so it should be exempted from personal and corporate income taxation. The in-between mixed cases of the two approaches are conceivable, one of which is the current system. We have already had income taxation on rent, such as the national individual and corporation income taxes, the prefectural individual and corporation income taxes, which are the major component of the Prefectural Inhabitant Tax, the local individual and corporation income taxes, which are the major component of the Local Inhabitant Tax, and the prefectural business income tax, which are called Business Tax. We have also had land value taxation such as the property tax, the city planning tax and the special land holdings tax. Therefore a new land value tax should fall on what the existing forms of taxation on rent have left to rent.

In dealing with a appropriate rate of land value tax, we assume an given exact assessment of land value. In practice, taxable assessment is deviated from true market value. The assessment differs among the property tax together with the city planning tax, the special land holdings tax, and the new land value tax. But the problems of tax rate and assessment are different in analytical nature from each other, so we assume that assessment is given.

First, we consider the tax payment of overall taxation on land value. We denote the overall rate of all kinds of land value based taxes by \( t \) and land value by \( V \). The tax payment is \( tV \). This amount is to be equal to the total sum of all kinds of land value based tax payments.

Next, we turn to the existing income based taxes, which, as already mentioned, includes the national individual income tax, the national corporation income tax, the prefectural individual income tax, the prefectural corporation income tax, the local individual income tax, the local corporation income tax, and the prefectural business income tax. We treat the corporation in-
Income taxes as integrated into the individual income taxes. Under the present system, certain percentage of dividends are tax-credited in the individual income taxes on all levels of government. Therefore we may treat the personal income tax and the corporation income tax on the national level as one income tax on each government level.

Capital gains taxation also has to do with the integration problem. A personal income taxation on capital gains together with corporate income taxation introduces some elements of absolute corporate income taxation. But the present system of capital gains tax is not so an important component that we may ignore this factor in the integration issue.

The land value based taxes and the prefectural business income taxes are deducted in the national and corporation income taxes on each level of government. The land value based taxes are deducted in the prefectural business income tax. Thus the base of income based taxes on rent except for the prefectural business income tax, denoted by \( R \), is as follows.

\[
R = tV - t_b(R - tV)
\]

where \( t_b \) is the prefectural business income tax rate.

We have already mentioned that we treat the individual and corporation income taxes as integrated on each government level. Let's denote the average (or effective) rates of income tax on the national, prefectural and local government levels by \( t_1 \), \( t_2 \) and \( t_3 \) respectively. The total amount of the overall income based taxes is

\[
(t_1 + t_2 + t_3)[R - tV - t_b(R - tV)] + t_b(R - tV)
\]

Applying my rule that for the top horizontal bracket of persons total tax burden on the rent, comprising of both income based taxes and land value based taxes, should be equal to the rent, we have

\[
R = (t_1 + t_2 + t_3)[R - tV - t_b(R - tV)] + t_b(R - tV) + tV
\]

It is easily seen that the first term of the right hand side of the above equation is the amount of all the income based taxes, the second one the amount of the prefectural business income tax, and the last one the amount of all the land value based taxes.

By the way, land value is determined by capitalizing rent. So we have the following relation.

\[
(3)
\]
\[ V = \frac{R}{i} \]

where \( i \) is the discounting interest rate. Substituting this equation into the preceding equation and solving for \( t \), we obtain the following equation.

\[ t = i \]

The required overall rate of all the land value based taxes, \( t \), which is in accord with my criterion already mentioned, is determined, which is equal to the interest rate, \( i \). Given the interest rate, \( i \), the appropriate value is determined accordingly.

Now a question arises as to what level and what kind of interest rate are used. First, what level of interest rate should be recommended? Interest rates change over time. The constancy of tax rate is called for over a number of years. In view of this, it is advisable not to exceed the lowest possible level of interest rate for the relevant time periods. Second, what kind of interest should be recommended? Risk-free interest rates are to be advised. One example is the interest rate of the short-term Government Bonds. The yields of the Government Short-term (sixty day term) Securities have been in the range of 2.384% to 5.550% these five years, and in about the same range these ten years, too. The yields of the Government Discount Bonds (six months or less term) have been 6.255% to 8.351% for these two years. The yields of the interest-bearing two year term Government Bonds have been 6.114% to 7.603%. Another example of risk-free interest rates are interest rates of bank time deposits. The interest rates of the 3 month time deposits have been in the range of 1.76% to 4.08% for these five years, those of the 6 month time deposits in the range of 2.64% to 5.33%, and those of the 1 year time deposits 3.39% to 6.08%\(^2\). The interest rates of other longer term deposits are higher. We now have to make a difficult choice among these various interest rates. The Government Short-term Securities are not readily available for choice to ordinary individuals and corporations. So we may put them away out of consideration. Here we have a question what term is appropriate. We have no rule about it. I am inclined to take one year term. In that case the minimum rate of the bank deposits is 3.39%, roughly 4%. We have no Government Bonds of one year term, but we might guess that its yield would be around 6% at the minimum if we had them. Whose rate of


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return is better, the Government Bonds or the bank deposits? In my judgement my choice is the latter in this connection for prudence.

Anyway this choice is arbitrary. Indeed, choice on tax rate based on interest rate and choice on tax rate without taking interest rate into account appear to be the same thing. But they are different. The former is more sound and reasonable in taking the taxpayers' abilities into consideration. Interest rate, which one may be taken, sets the maximum limit on land value based taxation. The tax rate should be adjusted depending on market interest rates in the medium or long run.

What can we say about the rate of the newly introduced land value tax? We have already had three land value based taxes: the property tax, the city planning tax and the special land holdings tax. So the additional burden of the new tax should be limited to what is left after these existing taxes have been imposed. One question we meet here is about special land holdings tax. Its tax base is, to be specific, purchased price. Actually it is higher than the assessed value for the property tax purpose. So, the tax liabilities are larger than those of property tax, though their rates both are the same, that is, 1.4% (standard rate for property tax). The property tax is credited in the special land holdings tax. But in this setting it is assumed that the taxable assessed values of tax bases are the same for every land value based tax. So the two taxes virtually end up with one and the same tax in an effective burden. Thus we can treat these two taxes as one tax.

From the above considerations, the required rate of the new tax is the overall rate of the land value based taxation, which we have already derived, less the rates of both property tax and city planning tax, 1.4% and 0.3% (allowed maximum limit), respectively.

In the preceding discussion we chose 4% to be a representative or standard interest rate, which determines the overall rate of land value based tax. Interest incomes are subject to the 20% total rate of income taxation on all levels of government. Hence the net representative interest rate is 3.2%. Subtracting the total rate of the other land value based taxes (1.4% + 0.3%) from this, we obtain 1.5% as the newly introduced land value tax rate\(^3\).

This paper considered an appropriate rate level of land value based taxa-

\(^3\) It might be guessed from my framework that the rate of the new tax, 0.3%, is based on 2% standard interest rate \((0.3\% + 1.4\% + 0.3\% = 2\%)\).
tion from the George's basic point of view, which I agree upon. Needless to say, the effective burden of a particular tax depends on the tax base as well as the tax rate. Among others, in the case of land value based taxes, the assessment of taxable land value is important in determining the burden. A good administration of land value taxation needs an precise assessment of market value. It is a more important task, which should be pursued. But, from an analytical point of view, the determination of a proper tax rate is one thing, but the task of improving taxable base is another. In discussing a proper rate of land tax, it may be assumed that a proper tax base is given. Hopefully, the determination of rate of the land value tax should not be based on mere political bargaining or intuition, but on some sort of reasoning. The tax rate of a newly introduced land value tax should be harmonized with the existing tax system on rent. This paper attempted to give a framework of determination of land value tax rate.