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Subject: economic thought on Land Value Taxation

I did some research into the economic thought underlying the Land Value Taxation idea and I found a solid piece written by Martin Feldstein back in 1977. (Feldstein was Pres. Reagan's chief economic advisor. He now teaches at Harvard and is the president and CEO of the widely-respected, non-partisan National Bureau of Economic Research).

His article suggests that there are a few problems with the LVT proposals that you are considering.

the basic argument for land value taxation

Before I discuss his paper, let's review the basic argument for land value taxation. Specifically, how would LVT affect you personally?

As I recall, you just bought a rental property.

To keep the math simple, if the value of your new property is $100,000, if you can rent it for $10,000 and if the tax rate is 10 mills (or one percent), then you would pay $1000 in taxes, so your annual net return would be $9000.

Under the current property tax system, any improvement on the property that increases the rent you can earn from the property would be subject to tax. So if the improvement increases the property value to $200,000 and the rent to $20,000, then you would pay $2000 in taxes (after reassessment) and your annual net return would be $18,000.

Now here's the important part ... By making the improvement, your annual net return would increase by $9000.

Under a highly simplified LVT system – where the land is taxed and the property value is not taxed at all – making a capital improvement would not increase your tax burden at all. So if the land value tax was a flat $2000, then your net return before the improvement would be $8000 and your net return after the improvement would be $18,000.

The important part once again ... By making the improvement, your annual net return would increase by $10,000.

So comparing the current system with the simplified LVT system, your return from the improvement would be $1000 higher under LVT. Consequently, in this simplified example, you would no longer be "punished" $1000 for making improvements on your property. Instead you would receive the full rental value of the improvements that you made.

This line of reasoning suggests that LVT would send a positive signal to property owners that they will not be penalized for making improvements on their property.

portfolio allocation

Now let's discuss a simple theory of optimal allocation of assets in a portfolio. Such theories state that the returns on assets of equal risk should be equal at the margin to maximize profit.

I'm going to discuss stocks, but to keep things simple let's assume that the share price remains constant at $1. The share price never goes up and it never goes down.

The only reason why you would buy such a stock is if it paid a dividend each year. I'm going to assume that the dividend is set at a constant percentage of the share price and call it "the return."

So let's say you're talking with your broker about two different stocks that are equally risky. One has a return of 10 percent per year and the other has a return of 5 percent a year. Which stock would you buy? The one with the higher return, right? You'd be foolish if you didn't.

Now let's say you had to pay a tax of 50 percent on the return to the stock with a 10 percent return, but no tax on the stock with a 5 percent return. Which stock would you buy? Net of taxes, both stocks now have the same return, so you'd buy a little of each.

That was simple, right?

As an introduction to Feldstein's article, I'm going to change the example and introduce a concept that I will refer to later as "complementarity."

Let's say one stock has a 10 percent return and the other has a 5 percent return, but this time assume that for every share of stock with a high return that you purchase, you MUST also buy one share with a low return. (The stocks are "complements.")

If you bought 100 shares of each stock (at $1 each), then you'd receive $10 from the stock with a 10 percent return and $5 from the stock with a 5 percent return. At the end of the year, you'd be $15 richer.

As before, let's say you had to pay a tax of 50 percent on the return to the stock with a 10 percent return, but no tax on the stock with a 5 percent return. So net of taxes, you'd receive $5 from each stock and at the end of the year you would be $10 richer.

The story doesn't end there however. Notice that because you have to buy the stocks in equal quantities, the tax on the returns to the 10-percent return stock imposes an effective tax on the return to the 5-percent return stock.

The effective tax on the returns to each stock is 33.3 percent (one-third).

To see that more clearly, assume that you had to pay a 33.3 percent tax on the returns to each stock. Your after tax return on the stock with a 10 percent return would be $6.67 and your after tax return on the stock with a 5 percent return would be $3.33.

At the end of the year, you would be $10 richer – exactly the same as if you only paid a tax of 50 percent on the return to the stock with a 10 percent return.

The point of this exercise was to show that when two different assets are "complements," imposing a tax on the returns to one asset imposes an effective tax on the returns to the other, so part of the tax burden is shifted from the one asset to the other.

relevance of portfolio allocation to land value taxation

By this point, you're probably wondering why I went into a lengthy explanation of the theory of optimal allocation of assets in a portfolio. You're probably wondering: "how could this possibly be relevant to land value taxation?"

Remember that returns on assets of equal risk should be equal at the margin to maximize profit.

Remember that when two assets are complements, a tax on the return to one asset imposes an effective tax on the return to both assets – some of the tax burden is shifted.

The Feldstein article (that I keep alluding to) suggests that there are problems with the LVT proposals that you are considering. Feldstein demonstrated that when a government taxes the value of land, some of the tax burden will be shifted onto capital. There's no way to tax land only – a "land-only" tax would still impose an effective tax on capital.

Feldstein considered a case where two assets enter an individual's portfolio – land and capital. ("Capital" basically means machinery or buildings).

Unlike my examples above, which assumed that each asset has a constant return, Feldstein assumes that the returns on an asset decrease as you employ more of that asset (while holding the other constant).

The assumption that assets have diminishing marginal returns is similar to the "too many cooks in the kitchen" problem.

If you are cooking a big Thanksgiving dinner, it's helpful to bring a second cook into the kitchen because the two of you will be able to produce more in the same amount of time. If there are four cooks in the kitchen, the cooks will get in each other's way and you won't necessarily be able to produce much more than two cooks can produce.

The same is true of land and capital.

If you build a two family home on a property, you might be able to rent each apartment for $1000 a month, but if you build a building with 50 apartments on that same property, you might only be able to rent each apartment for $500 each. If you build a building with 1000 apartments, you will have so massively increased the housing supply in [redacted] that you won't be able to rent each apartment for much more than $200 a month.

Consequently, capital (in this case, the apartments) has diminishing marginal returns. The rent decreases as you build more and more apartments on a single property.

Similarly, if you restore an old building, you will increase its rental value, but each additional improvement brings smaller and smaller returns. Replacing the wiring and plumbing and repairing damage to the walls will greatly increase its rental value (which, of course, is the return on capital). If, after installing new wiring and plumbing, you line the walls with 14 carat gold, you might still increase the rental value, but don't expect a much higher return!

Land also has diminishing marginal returns. If you buy an acre of virgin land in [redacted], you might be able to rent it to the City as park space for $10,000 a year. If however you bought all of the land in [redacted] Township, don't expect to be able to rent it for $10,000 an acre!

Now let's return to Feldstein's discussion of optimal allocation of assets in a portfolio, where the assets face diminishing marginal returns.

If the City of [redacted] increases the tax on land and decreases the tax on capital, the net return on land will fall, while the net return on capital will rise.

If individuals optimally allocate assets in their portfolios of land and capital, they will increase their holdings of capital and decrease their holdings of land until the net returns on each assets are once again equal. To increase their capital holdings they will renovate their buildings, increasing their rental value – the return on capital.

the problem with land value taxation

Feldstein's contribution is that there is some complementarity between land and capital. Farming is a classic example of complementarity between land and capital. You need both land and tractors to produce wheat. There is of course some complementarity between land and capital in a city as well. After all, a building can't float in the sky. It has to sit on land.

Due to the complementarity, some of the burden of land taxation would be shifted onto capital. The degree of tax shifting depends on the degree of complementarity between land and capital. If land and capital are "perfect complements" (they must be employed in rigidly fixed proportions), then the shifting will be large. If, on the other hand, land and capital can be substituted for one another (the opposite of complementarity), then the shifting will be small.

Now here's the problem with Land Value Taxation. Zoning regulates the type of building that can be built on a given piece of property. If you own a single family home, you can't simply tear it down and build a skyscraper.

Zoning enforces near perfect complementarity between land and capital, so the shifting of the tax burden would probably be large under the proposal that you are considering.

Consequently, a two-tiered property tax system might encourage renovation of existing buildings within the city as the owners of property add to their capital stock by renovating existing buildings, but due to zoning and tax shifting, these effects will be very, very small.

conclusion

If the City Council passes LVT, it's not going to hurt, but it's definitely not the magic bullet you're looking for.

More flexible zoning laws would increase the effectiveness of LVT by reducing the mandated degree of complementarity between land and capital.

As a practical matter however (and thinking particularly of what used to be the [redacted] neighborhood), if you are trying to restore the look and feel of a vibrant downtown shopping and residential neighborhood, then you may want to impose more stringent zoning requirements, such as: maximum setbacks from the street and adjacent properties, mandated mixed-use commercial and residential (i.e. apartments above the shops), etc.

After all, the level of economic activity in a city depends on the number of businesses within the city. The overwhelming majority of businesses in a vibrant urban area are downtown merchants and downtown merchants cannot survive without a client base.

To attract (and retain) businesses and families, you need good urban planning. In the long run, good urban planning will be much more effective than tinkering with the tax code.