Lies of the Land

Illusions in US property appraisal methodologies

Michael Hudson

Land prices are rising in nearly every economy in the world, which primarily reflects the lending of excess savings to mortgage borrowers, argues Dr Hudson. The upshot is a mushrooming real estate debt, which means that an increasing share of land's rental revenue is being paid as mortgage interest. As these payments are charged off as a tax-deductible expense, the tax collector is crowded out.

In the US, commercial real estate owners further minimise their tax liability by over-depreciation. Buildings can be amortised at higher prices each time they change hands, even though much of the increased value actually represents land-price inflation. A large part of the seeming economic return to capital invested in buildings is actually a gain in the value of land.

Dr. Hudson explains how official statistics disguise the free rent that is available to be collected by the public sector. He concludes that real property should not receive the tax privileges it has received over the past half-century.

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ECONOMIC THEORY emphasises labour and capital, innovation and profits. Yet the largest category of tangible assets is not industrial plant and machinery but real estate, and its primary objective in today's world is to not obtain rent (which appears in national income statistics as profits on one's investment), but to make capital gains, above all with borrowed funds. Rent is pledged to pay interest on the debt run up to buy property. Real estate magnates seek to buy as much property as possible with as little of their own money as possible, hoping to ride the next real estate bubble. After paying out the property's income to their mortgage lenders, they capture the capital gain.

This "capital gain" is a land-price gain, although public statistics euphemise it as a return to capital. I say "euphemise" because most people regard capital gains as being more deserved than gains that accrue passively to real estate holders. Capital gains are depicted as accruing to individuals who provide start-up capital for new enterprises, new technology and other innovations, rather than merely benefiting from assets already in place.

Ever since antiquity, most surplus income and wealth has been invested in land. But only recently has the path to wealth lain in borrowing against it, for land bubbles have been only temporary and they have usually burst in short order. Throughout most of history, pledging one's land for debt ("mortgaging the homestead") has been the first step in a process that often ended with its forfeiture to foreclosing creditors or forced sale under distress conditions.

As economies have grown richer and even as they have "post-industrialised," most of their surplus likewise has been spent on acquiring real property, both as a prestige good and as the economic asset par excellence as its flow of rental income grows with society's rising prosperity. This is why lenders treat real estate as the economy's primary form of collateral in which to place savings and extend credit creation.

Most new entries into the Forbes or Fortune lists of the richest men consist of real estate billionaires, or individuals coming from the fuels and minerals industries or natural monopolies. Those who have not inherited family fortunes have gained their wealth by borrowing money to buy assets that have soared in value. Land enables its owners to extract *rentier* income in the forms of rent and interest. Society has a legitimate interest in knowing the share of national income that may be attributed to land, and yet this information is camouflaged out of existence.

Capital Gains from credit creation

THE US FEDERAL RESERVE Board publishes an annual balance sheet of assets and liabilities showing *real estate* to be the economy's largest asset, comprising two-thirds of America's tangible wealth. Land represents most of this real property

(upwards of 60 percent, depending on what assessment methodology is used). It is hardly surprising that most capital gains are land-value gains.

What is less widely recognised is that these gains have been spurred largely by credit creation. On the liabilities side of the balance sheet, mortgage debt absorbs 70 percent of private sector bank loans. And mortgage credit in turn absorbs some two-thirds of the real estate sector's *ebitda* – earnings before interest, taxes, depreciation and amortisation.

The reason why developers are willing to pay their mortgage lenders so much of the rent roll (often their entire net earnings) is that they hope to emerge with a sizeable capital gain. This price appreciation actually is a "land gain," as it does not represent a rising capitalisation of profit on capital investment as economists use the term. It results from the value of properties increasing in neighbourhoods that are upgraded, or from a financial bubble that provides credit to inflate a real estate bubble. Political factors also enter the picture. Quantum leaps in land value typically result from re-zoning, from farmland on the outskirts of cities to gentrification of the core to create high-income high-rise residential developments.

Political asymmetry at work?

OVER THE PAST 40 years I have specialised in the study of the factors that raise or lower the nation's overall real estate prices – rising income and savings levels, shifting interest rates and the financial sector's supply of mortgage credit, as well as changes in the tax laws and related market-shaping rules. This work for Wall Street banks and institutional investors was burdened by the absence of reliable data on the value of land and buildings. The official nationwide real estate statistics suggest that a politically motivated asymmetry is at work in the economy, which I shall now attempt to identify.

Beaudelaire observed that the devil wins at the point where he convinces humanity that he does not exist. The Financial, Insurance and Real Estate (FIRE) sectors seem to have adopted a kindred philosophy that what is not quantified and reported will be invisible to the tax collector; and what is not taxed will be pledged for mortgage credit and paid out as interest. It appears to have worked. The economic magnitude of land rent and land-price gains have become invisible to academic theorists, so breathlessly are these economists focusing on their own particular hypothetical world.

In the real world, however, the objective of most investors is to pick properties in locations where price will appreciate at a faster pace than the interest charges. Their main concern is with the land values that do not accrue as a result of earnings on man-made capital. But anyone trying to trace the relevant price trends – and above all, how values for land and buildings change at different rates – comes up against a serious empirical

problem. The official statistics are either lacking or nonsensical. The appraisal of values has become so problematic that the agency delegated to publish such estimates – the Federal Reserve Board – has stopped doing so.

This reduction in information flies in the face of the needs of competitive markets and public regulation alike, both of which rely on full knowledge and the principles of transparency in the dealings between buyers and sellers. How has this situation arisen? The answer appears to be based on a methodological dispute, but I suspect that the real explanation is to be found in the realms of ideology and the pursuit of economic self-interest. Empirical statistics have been turned into fodder for public relations lobbying.

Chicago School economists insist that no free lunch exists. But when one peers beneath the surface of national income statistics and the national balance sheet of assets and liabilities, one can detect that modern economies are all about obtaining a free lunch. However, to enlarge this free lunch, it helps if the rest of the world does not see that anyone is getting the proverbial something for nothing – what classical economists called *unearned income*, most characteristically in the form of land rent.

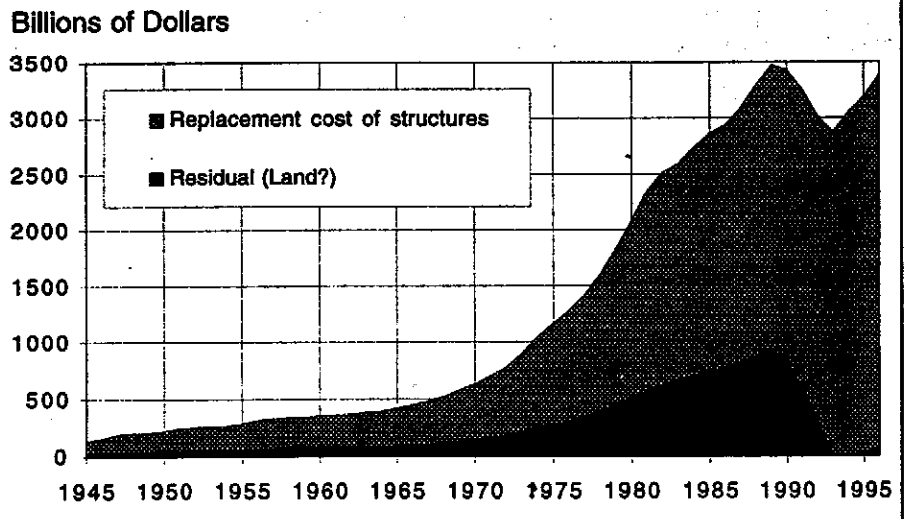
Two methods for appraising land

WEALTH APPRAISAL is at the heart of the matter. There are two approaches to the appraisal of land and building values. Both start by estimating the property's market value.

The **land-residual approach** subtracts the value of buildings from this overall value, designating the remainder as the value of land. Building values may be estimated in terms of their *replacement cost* (which usually produces a very high estimate, leaving little land value) or their *depreciated value* (which gives an unrealistically low building estimate, inasmuch as maintenance and repairs compensate for wear and tear). Using the depreciated value method leaves a higher residual land value. The Federal Reserve Board recently experimented with a hybrid intermediate method that values buildings on the basis of their "historical costs". (*See the two graphs on page 116*)

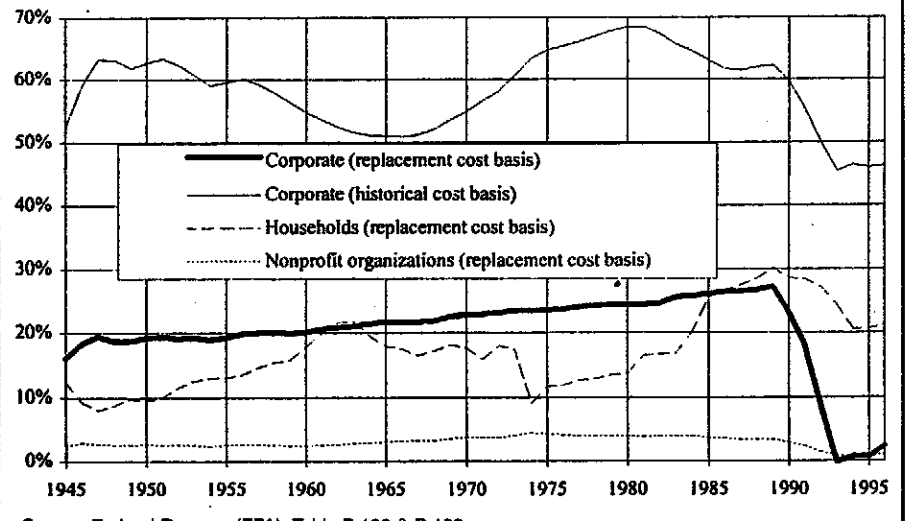
The **building-residual approach** starts by valuing the land, and treats the difference as representing the building's value. The first step is to construct a land-value map for the district or city. This displays fairly smooth contours for land values. Most of the variations in property prices around this normalised map will be for structures, along with a sizable component of "errors and omissions". This approach is rarely used, and most assessed land values vary drastically from one parcel to the next. The problem is especially apparent in the case of parking lots or one-storey "taxpayers," that is, inexpensive buildings whose purpose is simply to be

Figure 1 Real Estate Valuation
Replacement cost of structures in the non-farm, non-financial corporate sector



Source: Federal Reserve (FFA), Table B.102

Figure 2 Land as a percentage of real estate market value



Source: Federal Reserve (FFA), Table B.100 & B.102

rented out at enough to carry the property's tax bill, not to maximise the site's current economic value.

The Fed's land-residual appraisal methods *do not acknowledge the possibility that the land itself may be rising in price*. Site values appear as the passive derivative, not as the driving force. Yet low-rise or vacant land sites tend to appreciate as much as (or in many cases, even more than) the improved properties around them. This price appreciation cannot be attributed to rising construction costs. In fact, inflationary building costs should make such parcels less valuable, not more so, for older buildings have a great cost advantage.

If every property in the country were built last year, the problem would be simple enough. The land acquisition prices and construction costs would be recorded, adding up to the property's value. But many structures were erected in the 19th century. How do we decide how much their value has changed in comparison to the property's overall value?

The Federal Reserve multiplies the building's original cost by the rise in the construction price index since its completion. The implication is that when a property is sold at a higher price (which usually happens), it is because the building – not the land site – has risen in value. However, if the property must be sold at a lower price, falling land prices are blamed.

Land prices may even give the statistical appearance of turning negative when real estate bubbles burst. Overall property prices fall, but construction prices continue to rise. Yet if it is agreed that any explanation of land/building relations should be symmetrical through boom and bust periods alike, then the same appraisal methodology should be able to explain the decline of property values as well as their rise. The methodology should be as uniform and homogeneous as possible. By that, I mean that similar land should be valued at a homogeneous price, and buildings of equivalent worth should be valued accordingly.

If these two criteria are accepted, then I believe that economists would treat buildings as the residual. Yet just the opposite usually is done.

Where did all the land value go?

THE DRIVING FORCE behind the anomalies is the political lobbying by the FIRE sector which is eager to depict real estate gains as "protecting capital from inflation". In reality, it helps land owners and their creditors get a free ride out of asset-price inflation – The Bubble.

Statistics on economy-wide real estate values are published by the Federal Reserve Board in its Flow-of-Funds statistics, Table Z.1 (Balance Sheet of the U.S. Economy). For many years these estimates were broken down between land and buildings for a number of categories, including residential, non-profit, government, corporate and non-corporate financial and non-financial real estate. Since 1997, however, the conceptual

problems underlying the allocation of value between land and buildings have led the Fed to stop publishing comprehensive real estate statistics. 1994 is the last year for which it has estimated economy-wide land and building values.

The problem arose when the Fed discovered that its methodology produced a *negative* value of $4 billion for all land owned by non-financial corporations in 1993. This number resulted from imputing land values by subtracting the estimated replacement cost of buildings from overall property market prices. The "land residual" method left little room for land value, as replacement values were viewed as rising even when market prices were declining. In such downturns the inputed replacement value absorbed nearly all the market value of corporately owned real estate.

In operational terms, government statisticians multiply the original cost of buildings (or, in cases where buildings are sold, their assessed share of the property at the new transaction's price) by the annual rise in the Commerce Department's construction price index. The fact that this price index tends to rise steadily appears to explain the rise in property values by wage inflation and rising costs of materials. On this logic real estate prices seem merely to keep up with inflation. There is no hint of unearned gains.

In view of real estate's dominant role in the economy, it is ironic that no attempt has been made to provide better statistics. My research has shown that the Fed's methodology *undervalues* land by as much as $4.5 trillion. As matters stood in 1994, for instance, the Fed estimated the U.S. economy to hold some $20 trillion in real assets (excluding human capital, for which no official statistics are published). The land's value was calculated to be $4.4 trillion, and building values $9 trillion.

However, my estimates based on historical values suggests that land rather than buildings represents two-thirds of the nation's real estate value – $9 trillion, leaving building values at just half this amount.

Land value disappears in the statistics

A PARTIAL SELECTION of real estate statistics is published. The Fed estimated that, for 1996, households and non-profit institutions held $11.4 trillion in tangible assets. Nearly 80% ($8.2 trillion) of gross household wealth took the form of real estate (whose $3.6 trillion in mortgage debt represented nearly two-thirds of the household sector's liabilities). Non-profits held $0.8 trillion. Real estate also accounted for nearly half ($3.4 trillion) of the $6.9 trillion in tangible assets owned by non-financial corporate business.

Land value was made to disappear by multiplying the original purchase price or new construction price by the annual rise in construction costs, which typically rise at an average annual rate of 3%. In economic

downturns, however, market values for properties dip below the estimated replacement-cost trend of their structures. The Fed estimated that it would cost more to rebuild the corporately owned structures than the overall market price of their properties would justify. On the basis of this calculation *land was assigned a negative value so as to account for the excess of replacement cost over the market price.*

One obvious problem with this land-residual approach is that many buildings would not be rebuilt in their existing form. Occupancy use changes over time. In Lower Manhattan and many other inner-city areas, industrial factories, commercial loft buildings and even office buildings on Wall Street have been gentrified into residential properties. After New York City's near bankruptcy in 1975 over 40,000 manufacturing spaces in Manhattan were shifted from commercial to residential purposes. A similar conversion of industrial structures to residential or high-density commercial use is found in most large American cities. It is part of the economy's de-industrialisation (euphemised as "the post-industrial economy"), as described for instance in Robert Fitch's *The Assassination of New York.** As formerly commercial and industrial districts have changed their character, site values have skyrocketed.

Most people would not want to reproduce existing buildings as they now stand. For instance, Manhattan's highest-rent district until the World Trade Center bombing of September 11, 2001, was Tribeca, the downtown TRIangle BElow CAnal Street into which artists and other individuals (including myself) seeking large roomy spaces at low prices moved in the late 1980s. These buildings had lost their value after New York City almost went bankrupt. Many landlords simply walked away from their properties and let them revert to the City, which auctioned them off at distress prices.

The commercial loft building in which I lived rose in price from $40,000 in 1986 to $120,000 in 1980 and $4,000,000 in 2000. This sharp increase cannot be explained by rising building costs. The building itself steadily deteriorated. All that increased was its site value. Today, of course, that property a block from the World Trade Center has fallen back in price. The site's value changed without any significant reference to construction costs. One must infer that it is the site that determines the property's value. As real estate agents explain to prospective buyers, the three keys are "location, location, and location". So we are brought back to the role played by land-value gains in the strategy pursued by investors and developers.

A percentage-composition chart of the Fed statistics shows that while loft conversions were occurring prior to the 1993 downturn, land's share

* London: Verso, 1993.

of the total remained remarkably constant. Indeed, they are so stable that the land-value estimates for corporately owned property seem to have been cooked to remain at 20 percent of the overall value. Much of this business property represented obsolete industrial plant. When real estate prices turned down in 1993, the entire decline was attributed to land, because hypothetical replacement costs continued to climb. The estimated proportion of land to building values plunged precipitously, even as cities were becoming post-industrial as old rust-belt factory sites were turned into high-rise developments.

For real estate owned by households and partnerships (the latter being the preferred legal instrument for holding residential apartment buildings and office buildings), the Fed estimates also overvalue buildings relative to land. Every time a property changes hands at a higher price, building assessments are raised proportionally – *and begin to be re-depreciated for these higher valuations, regardless of how often the buildings have been written off!*

The problems inherent in the land-residual method of appraisal are most apparent in the cyclical downturns to which real estate markets are prone. While overall prices fall, replacement costs rise inexorably. Land estimates suddenly plummet, changing the historical land/building proportions. The upshot was that in 1996, after completing its calculations for the year 1994 in which land prices stagnated, the Fed stopped publishing land estimates rather than run the risk of further embarrassment.

Everyone recognised the absurdity of calculations depicting all the corporate land in America as having a negative value. Suppose somebody came to you and said: "I'll give you $4 billion, but there's a catch. Along with the $4 billion in cash, you will have to accept ownership of all the land owned by every non-financial corporation in the United States". Most people no doubt would see that they were being given assets much more valuable than $4 billion, and would jump at the offer. The Fed's statistic would be dismissed as a comic exercise showing how economists tend to lapse into otherworldly speculation. But in this case the motive is all too worldly. Looking beneath the surface, one finds the not-so-invisible hand of the real estate industry and its financial backers.

To give the Fed economists their due, they evidently came to the conclusion that their statistics were fatally flawed. The September 1997 balance sheet estimates made a start along new lines by including a calculation reflecting the original (historical) cost of buildings. This gave land a positive value. But nationwide totals were no longer compiled. No longer was there a line labelled "land," nor does the Fed publish a residual number for market value less the historical cost (or even the replacement cost) of buildings. Instead of making better land

estimates, the Fed has dropped what had become a political and statistical hot potato.

This leaves in limbo the macro-economists and business analysts whose job is to explain the FIRE sector's dominant role in the economy. According to land-residual appraisal, high-rise buildings seem to have the lowest land values. Real estate interests argue that this is realistic, because at least in New York City the higher a building is, the more of a subsidy its developers need, given the economics of space involved for elevators, surrounding air space and so forth. The land itself is assigned a negative value as a statistically balancing residual reflecting the difference between the building's high construction costs and its lower market value.

On this basis much of New York's most highly built-up land would seem to have a negative value, including the World Trade Center even before its Sept. 11 destruction. While a low-rise building might be built on this site without subsidy, a skyscraper would need a subsidy, implying a negative land value.

Cycles fuelled by mortgage credit

IF THE APPRAISAL controversy is framed in terms of business cycle analysis, the statistician finds no reasonable alternative to seeing that when the cycle rises and falls, the difference must be in the land, not buildings. People are not buying reproduction costs, whose fluctuations over the course of the credit cycle are relatively minor. They are buying site value, which is in limited supply, akin to a natural monopoly. Most of all, investors and homeowners are buying the right to resell their property as prices are bid up by what they expect to become an increasingly affluent economy that is fuelled by an abundant supply of mortgage credit.

The land-residual approach appears to work as long as a fairly constant proportion of land to buildings is maintained. Statistically, this can occur only when property prices are rising at about the same rate as commodity prices and wages. But business cycles snake around the economy's basic trends, rising steadily and then plunging sharply. This fluctuation is what causes the most serious problems for statisticians.

In a thriving real estate market appraisers typically use a rule of thumb to allocate resale prices between land and buildings to reflect their pre-existing proportions. Buildings are assumed to account for between 40% and 60% of the value. As a result, building values are estimated to grow along with a property's overall sales value. This appraisal practice is made to appear plausible as the pace of asset-price inflation tends to go hand in hand with rising construction costs.

The anomaly occurs when real estate prices fall. They are volatile, while construction costs rarely dip more than slightly, if at all. When real

estate prices turn down, they often plunge below the reproduction cost of buildings. Hence, the residual ("land") rises and falls much more sharply than do building replacement costs (which are estimated as rising at a fairly steady pace) and overall property values.

The result is a curious asymmetry. Building prices seem to be responsible for the rise in real estate prices, while land prices are held responsible for their decline. When the fall in property values intersects the rising reproduction-cost trend, the land residual turns negative.

Because this land value often represents the owner's equity, this decline may prompt heavily indebted owners to default on their loans or even to walk away from their property, which reverts to the bank or other mortgage holder. In this sense the financial system itself is based largely on real estate, as the economy learned in the savings and loan (S&L) deposit insurance crisis of the late 1980s. Real estate prices reflect the supply of property (including a fixed supply of land) as compared with the fluctuating supply of mortgage credit, which tends to be a function of the economy's overall liquidity.

The 'credit sink' and price waves

TO CLARIFY MATTERS it may help to think of "land" in the broad sense of comprising all elements of property value that cannot be explained in terms of capital investment and its profits. This category includes the site's location value. Site value is the essence of long-term planning by developers at the local level. But an examination of the economy-wide figures shows property prices to be determined by broad macroeconomic factors, headed by the availability of mortgage credit. Real estate is the major recipient of bank credit, and price waves or cycles are determined largely by the supply of mortgage loans and their interest rates.

Stated the other way around, the costs of reproducing buildings and structures are "sunk costs". Price trends are determined not by yesterday's supply prices but by today's market demand as supplemented by mortgage credit. If anything, buildings, plant and equipment wear out and depreciate, but their obsolescence is offset (and indeed, usually more than offset) by the rise in the site value. This rise reflects the desirability of real estate as an investment vehicle.

After 1990, for instance, when commercial banks found real estate to be largely "loaned up", they reduced the rates paid to depositors, as they did not have an alternative use for these deposits. The allocation of America's savings shifted away from banks and their real estate lending to money-market funds invested mainly in bonds, and then into mutual funds invested largely in stocks. This was largely responsible for the stock market's remarkable takeoff, substantially in advance of the real estate recovery.

One would think that land prices would play a central role in modern business cycle analysis, if only because a large share of stock market value consists of corporately owned real estate. Since the late 1940s "concealed value" in the form of properties carried at outdated book values reflecting low acquisition prices was a major factor behind corporate raiding, mergers and acquisitions (Known in Britain as "asset stripping"). Aggressive firms employed accountants to pour over the Stock Exchange's 10K reports searching for such hidden values. But macroeconomists lacked the statistics needed to follow how the business cycle affected land prices, that is, the "non-building" aspect of real estate value. This made it difficult to provide meaningful analyses of corporate net worth and the causes of its rise and fall.

How, then, can business cycle statistics be assembled without land values as a prime indicator? After all, it is the inflation of real estate asset prices that provides owners with the collateral to justify further borrowing from banks to acquire yet more property. And by the same token, falling land prices extinguish the collateral that backs the banking system's savings, leading to financial insolvency.

The real estate cycle is essentially a credit cycle. Traditionally, land acquisition has been the object of recycling savings and extending new credit. Site values are the economy's "credit sink" as well as its ultimate "savings sink". This is why real estate values reflect the economy's rising and declining financial surplus. Profits fall as business upswings approach their crest and the economic surplus available for saving declines. A lower volume of loanable funds means that less credit is available to real estate developers, speculators and homebuyers, curtailing their ability to bid up prices with borrowed funds. Borrowing to buy buildings is discouraged by the fact that when interest rates rise, more of the rental income must be paid to lenders.

In sum, just as real estate lending fuels land speculation, so the withdrawal of such credit leaves property markets to decline, sometimes with a crash, as occurred in Japan after 1990 when its financial bubble burst. Should this rise and fall be attributed to buildings or to land? It seems to me that inasmuch as the price rise and fall is homogeneous, applying to parking lots as well as to skyscrapers, we should attribute it to land. This achieves logical symmetry for the downturns as well as upturns in the real estate cycle.

One clear sign of land-price inflation is that one category of land rises or falls much more rapidly than others. A widening disparity usually reflects a financial inflation. In Japan, for instance, high rates of saving were recycled to a remarkable extent into construction and real estate acquisition. Japanese authorities produced detailed land-value statistics for each category of land, showing property values rising at an

accelerating pace until 1991, and then turning downward. The A-shaped rise and fall was steepest for the most expensive land surrounding the Tokyo palace, while land for single-storey wooden residential housing rose and fell least steeply.

A land-value map placing the highest values at the centre and the lowest values in the outlying areas would tend to reflect a land-price bubble when price ratios steepened. On the other hand, a fairly level set of land values between the central city and its outskirts would indicate relatively less rent of location, and hence less land-value disparities. Using this analogy to examine New York City's midtown area, the steep land-value curve has been fed by credit as affluent buyers sought the most prestigious locations. Land sites have become the receptacle of the economy's surplus savings.

The building-residual appraisal technique would help to prevent the financial sector from lending against land values, deterring the financial system from financing land-price inflation. It would also help prevent over-depreciation, that is, depreciation of building values that are in reality land prices.

Real estate industry's vantage point

REAL ESTATE developers champion the land-residual method of assessment, especially for major new urban projects. They claim that if they were not given a subsidy, typically in the form of a tax abatement, they could not afford to construct major office buildings or high-rise residential developments. It often does indeed cost more to build a property than is reflected in the overall surplus price. Statistically, fiscal subsidies such as New York's J-51 tax rebates appear as a negative value for the land.

This argument is valid as far as it goes, but its scope is only microeconomic. Precisely because real estate development is largely about improving the value of well-located sites, this makes sense from the real estate investor's vantage point, yet macroeconomic factors play a role even here. Developers seek to leverage their equity by borrowing funds. To obtain the financing needed to buy properties, many are willing to pay most of their rental earnings in the form of interest. As I have noted above, the availability of mortgage credit is a "non-building" factor, that is, it is linked to land-value levels rather than to the replacement costs of buildings.

Another factor also comes into play when real estate investors seek to maximise their returns by minimising their federal income taxes and local property taxes. Their political lobbying toward this end is backed by the financial and insurance industries, which recognise that the revenue collected as rent tends to be paid out as interest. The FIRE sector hires lobbyists to depict property values as residing in buildings, not the land, and hence to qualify for depreciation allowances. Also, the FIRE sector

has led the campaign to lower capital gains tax rates below normal income-tax rates.

The real estate industry depicts rising property prices simply as enabling investors to break even after adjustment for inflation. According to this logic, property values rise not because of asset-price inflation or rising rental charges, but because of the rising replacement costs for structures already built. Thus, the return to real estate investment is not presented as an unearned "free lunch", such as land-value gains are often depicted. Their logic is that capture of the replacement value is not a real profit and hence should not be taxed. An investor should be permitted to recoup the original investment's replacement cost, and pay interest only on the gain. This view explains asset-price inflation of land values not by the supply of mortgage credit on the "demand" side of the equation, but rather by the old-fashioned wage and commodity-price cost inflation on the "supply" side.

This is the same logic that the oil industry put forth for many years in arguing for its notorious depletion allowance. Assuming diminishing returns for mineral reserves as low-cost supplies were the first to be exploited, oil and gas producers argued (speciously) that it would cost more and more to find new sources of supply. They were allowed to deduct about 25% of their revenue as a depletion allowance, to provide them with the income to go out and find new supplies. The effect was to make the oil and gas industry tax-exempt, along with mining. *To the extent that real estate and stock market investors may "index" the cost of their investment to a construction-price index, their capital gains are rendered tax-exempt.*

Residual valuations and tax dodging

REAL ESTATE LOBBIES recognise that *what is not seen is less likely to be taxed.* What is not quantified for public policy-makers to see clearly may avoid taxes, leaving property owners with a larger after-tax return.

This explains the seeming irony that investors in an industry dealing primarily with the development of land have campaigned to minimise the statistical treatment of land. Relegating land to merely secondary status enables the industry to depict its "capital" gains as resulting from cost inflation and hence the reproduction costs of buildings. This is the value that is allowed to be depreciated and re-depreciated at rising values over time. The free lunch of land-price gains is unseen as attention is diverted from the land-price bubble to building costs.

These fiscal considerations help to explain why it has been so hard to get Washington to produce national land value statistics. The real estate industry and its creditors have lobbied successfully to get the tax laws

written in their own interest rather than the public interest. Their gain has been the tax collector's loss. They prefer land-residual statistics at the national level, even as individual investors seek site-value gains at the local level.

Income-tax liability may be minimised in two ways. The most general – and also the most economically pernicious – is through the tax deductibility of interest. The working assumption is that interest charges are a truly inherent business expense, not simply the result of a business decision taken by investors to leverage their equity. For interest to be an inherent business expense, interest-bearing debt would have to be a factor of production, which it is not. Properties would yield their rent regardless of how they are financed. Investors choose to rely on debt rather than equity financing because the tax laws favour it, thanks to the political lobbying of institutional creditors ("the debt lobby").

Building depreciation is the most unique tax advantage enjoyed by real estate. *Investors depreciate their buildings based on their assessed acquisition price*, regardless of the actual building costs involved or the level of economy-wide land-price inflation. Buildings are re-depreciated even when prior owners have depreciated the structures once or even many times. *There is no limit to the number of times a building can be re-depreciated.* What matters is simply how often the property changes nominal hands.

This has created a phantom real estate economy. Buildings acquire death-defying lives, metamorphosing time and again for the purpose of enabling their owners to avoid paying income taxes. For commercial real estate investors as a whole, the repeated depreciation of buildings has made commercial real estate investment largely exempt from the income tax. (Homeowners are not permitted to charge depreciation on their owner-occupied residences, but only on buildings that they rent out.)

The tax laws governing depreciation thus turn largely on how much value is assigned to buildings relative to the land, which is not depreciable. Like manufacturers, real estate owners are permitted to count part of the revenue over and above their current expenses as a return *of* their capital investment, as distinct from taxable earnings *on* capital. No income taxes are levied on this part of their revenue. That is only fair, because an investor who buys a $100 bond only pays tax on the interest, not on the original $100 principal. Likewise, industrialists can recover their initial investment in plant and equipment without being taxed. Their "sunk cost" is reimbursed, so that they get their capital back by the time the equipment wears out.

For real estate, however, the economics are unique. Machinery rarely can be re-depreciated, but this is not true of buildings as long as they are

kept in proper repair. Maintenance and repairs typically consume about 10% of the rent. For business owners, the explicit purpose of this expenditure is to maintain the building's value intact, so that it can survive year after year and avoid obsolescence while its site value rises.

The problem is that when Congress passed the tax laws and turned to the fine print, it accepted the argument that if real estate investors pay $1m for a building, they should get this back tax-free. Congress let them recover the building's capital cost so rapidly that nothing was left as taxable income over and above direct operating costs and interest charges. Matters reached a peak with the 1981 depreciation schedules passed at the beginning of the Reagan administration. These rules let property owners write off their buildings according to a double declining-balance schedule that enabled income to be taken tax-free at a rate that would cover the entire cost in just over seven years. Even the industry's Washington lobby, the Real Estate Round Table, opposed this tax giveaway on the ground that their accelerated depreciation rates were excessively short and would contribute to overbuilding. So Congress took the lead in spurring the latest bubble, and the financial industry that jumped on the bandwagon to spur the thriving mortgage credit market it created.

New-for-old building deals

ONCE A BUILDING is written off, investors have a tax motive to sell the property and buy another. The sales price obviously will be higher if the new buyer can begin depreciating the building all over again, for the property will yield more after-tax revenue. This financial trick turns the real estate sector into a game of musical chairs. The end result is to free more cash flow to pledge to mortgage lenders as interest, in exchange for loans to buy more and more property that is rising in price.

The land-residual appraisal method has helped catalyse the real-estate bubble. If a building is sold at a higher price, its assessment is usually raised. Suppose a property is sold for twice the price the owner paid for it. The local appraiser is likely to say: "I see you've sold your building for $2 million. Under my rule of thumb, I appraise the land as half this value, and the building as half, so that gives you a $1 million dollar building". Under this rule, the building that was formerly priced at $500,000 can be re-depreciated at a price that builds in this $500,000 gain. *In this way, a substantial portion of the rise in site value is treated as depreciable building value.*

In sum, the land-residual method of appraisal creates the statistical illusion of capital being used up in production at rising transfer prices. The upshot is to leave land and other investments, whose return takes the form mainly of capital gains, as the most seriously neglected area in today's economic thought. The economy is taking its returns less in the form of

profits (which are eaten up increasingly in the form of interest payments), and more in the form of capital gains, which rely mainly on asset-price inflation. This is what makes the FIRE sector's economic behaviour different from that of manufacturing and other industries whose profits are based on direct tangible capital investment.

To explain the economy properly, it is necessary to draw a reasonable picture of the lines of causation. Real estate, construction and financial investors take a microeconomic perspective as to what they need in order to build. But a macroeconomic perspective must distinguish between whether property owners are increasing their asset values by making direct investments to increase output, or merely by sitting and waiting for their holdings to appreciate in value.

The 2001 Nobel Prize was awarded to economists who recognised the asymmetry of market knowledge. It would seem that this asymmetry exists especially in real estate. Investors and developers know that the name of the game is capital gains. They use one set of statistics to calculate their Total Returns, but support a different logic to calculate their tax returns. *(See Box 1)*

Macroeconomists need statistics that measure and explain the total returns for real estate. Without such statistics their theorising will miss the economy's largest sector and the modern financial innovation of asset-price inflation that has become its driving dynamic.

A truly functional format would give a sense of proportion to the motivations of investors and their degree of success (or failure), while tracing the linkage between land prices, property values, and the economic and financial dynamics that affect these prices.

Box 1 Asset-price gains and invisible quasi-saving

A NEW KIND of economy has emerged over the past two decades. Price/earnings ratios play a shrinking role in determining stock market prices as successful investors plan their portfolios to yield capital gains rather than dividends and interest.

A realistic set of national statistics would explain the shift toward Total Returns, that is, current earnings or cash flow plus asset-price gains. Integrating such "capital" gains into national income statistics would explain how America's declining savings rate has gone hand in hand with soaring asset values, which in turn have been financed by running more and more deeply into debt.

Some critics worry about the fact that the savings rate has turned negative when foreign inflows of savings are segregated out. But though the U.S. economy on balance is not saving out of current income (as new savings have been offset by new borrowings), it certainly is enjoying rising asset prices!

The major asset for some two-thirds of people is their home. Indeed, while real take-home earnings for most of the population has drifted down over the past two decades, house prices have soared. The ratio of household debt to income has increased sharply, but much of this debt is "carried" by rising real estate value. Most household debt is home mortgage debt.

When these "capital" gains for households are taken into account, financial analysts find less cause for concern. It is part of the new phenomenon that has been popularised as "labour capitalism." As Margaret Thatcher's dialogues have put it, "Sorry you've lost your job; I hope you've made a killing on your Council House or home in the property market."

For the two-thirds of Americans and Britons whose homes are owned, asset-price inflation has proved to be a silver lining in the post-industrial economy. For the remaining third of the population, however, the price of access to home ownership is receding rapidly. Today it hardly is possible for most renters to earn the money to acquire their own homes, as the entry price has been bid up by asset-price inflation.

One might say that the economic tragedy of modern economies is this divergence of saving away from financing new direct investment and employment, to inflate a financial and real estate bubble. When the bubble bursts there will be little new tangible wealth creation to show for it, only a wave of bankruptcy and foreclosures as Western economies begin to look more like that of Japan since its bubble burst a decade ago. The statistical description of this phenomenon will remain invisible to economic analysts and policy makers, who are denied realistic land, building and other asset-value statistics in the national income and product accounts.