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Market-hampering Land Speculation:

Fiscal and Monetary Origins and Remedies

By FRED E. FOLDVARY*

ABSTRACT. Market-hampering land speculation destabilizes and distorts development, and shifts income unjustly to landowners. Its fiscal origin is the lack of public collection of the site rent. The monetary origin is a centrally controlled money supply that injects excessive credit, fueling malinvestments in real estate. The remedies are both the public collection of land rent and a free market in money and banking, hence a money supply that responds flexibly to market demand while maintaining a stable unit of account. Rent collection option contracts could increase the scope of market-enhancing land speculation that spreads and reduces risk.

I

The Nature and Effects of Asset Speculation

IN THE MOST BASIC SENSE, SPECULATION IS a method of dealing with the uncertain future. Faced with uncertainties, people need to adjust their actions to accomplish their ends relative to the expected actions of others and of the physical world. This requires every person to speculate and understand the future, to think and conjecture about various probabilities and options. J.R. Hicks (1939, p. 56) remarked that "The demand for money itself is necessarily and always speculative in a wide sense" because it involves expectations. Ludwig von Mises (1966, p. 113) went deeper, recognizing that "Every action is speculation."

Information about the future differs from conjectures about the future, the latter being "noise," which can be confused with information. Fischer Black (1986, p. 529) defines noise as "the arbitrary element in expectations." Noise is "information that hasn't arrived yet." "Noise makes financial markets possible, but also makes them imperfect." If information about the

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future is completely lacking, there is only noise, and the rational expectation of a future variable is the present value. Typically, there is some information, but it is incomplete, and it is not easy to differentiate some of it from noise, so people engage in differing financial speculations.

In the financial sense, speculation is the utilization of one's opinion of the future in order to make a profit. More specifically, asset speculation consists of the purchase or short sale of an asset with the aim of profiting from a favorable movement in the price due to changes in demand by others or due to supply shifts. John Maynard Keynes (1936, p. 156) compared asset speculation to a beauty contest, in which the speculator does not pick who he or she feels is the prettiest, or even who the public views as the prettiest, but rather the person who fits "what average opinion expects the average opinion to be."

Financial speculation differs both from gambling and from investment. A gambler gives up a fixed amount of money in the hope of obtaining a greater amount, based on some probability of gain. Economic investment is an increase in capital goods or an increase in human capital. A financial investment consists either of funds spent for economic investments—either directly or indirectly (by loaning funds to investors)—or of loans to consumers and to government as an investor or consumer.

The payoff from economic investment is the increase in the productivity of an enterprise due to enhanced capital goods. Overall, market-based economic investments tend to be positive sum because an increase in capital goods and human capital normally increases productivity. Gambling is a zero-sum game, after the overhead taken by the sponsor, because the gain from one party is due to the loss of another. The money gains from asset speculation is typically zero sum, financial instruments having an equal number of sellers and buyers, but the speculation has nonzero externalities.

A speculator buying an asset often expects demand to increase because on net, some pessimists or neutral players become optimists, possibly from changes in the financial environment, which the speculator places greater weight on than the median speculator. In other cases, the speculator is betting that an enterprise or commodity will have favorable luck on the supply side. A firm might strike oil or find a large vein of gold, or the price of an agricultural commodity might rise due to weather conditions, or there might be a favorable change in legislation and government expenditure, making a venture more profitable because of lower costs or a subsidy.

Speculators also speculate on changes in mass psychology, as noted by Keynes (1936, p. 155).

Among the financial instruments held by speculators are actual commodities (such as metals, currency), real estate, stocks and bonds, indexes on a range of stocks and other financial instruments, forward and futures contracts on commodities, derivatives related to interest rates, and options to buy (calls) or to sell (puts) stocks, commodities, and indexes during some time interval at a certain price.

The three players in the purchase of financial vehicles are *investors, speculators, and hedgers*. The hedger has an aim opposite to that of the speculator; he or she owns some asset and wishes to fix the price at a moment in time rather than be subject to a change in the price. The hedger sells a financial instrument equivalent to the real asset owned and to be sold in the future, or buys a financial instrument equivalent to the real asset to be purchased in the future. Farmers and miners can sell their output in advance of the maturing or extraction of their product, and purchasers such as bread and cereal manufacturers or metals refiners can purchase their inputs at a known price in advance of obtaining the physical items. Hedging is only one way of avoiding the risk of owning an asset. As noted by Frank Knight (1921, p. 258), enterprises using assets such as land that are subject to price risks can avoid the risk by renting rather than owning them. Another common way to avoid asset risk is through diversification.

II

Market-Enhancing Speculation

THE MOST IMPORTANT MARKET-ENHANCING FUNCTION of speculation is to transfer risk from those who buy and sell goods for production, investment, and consumption to those who buy and sell for speculation. Producers hedge against the risk of adverse price fluctuations in the products they sell as well as in their inputs, along with hedging against changes in currencies and interest rates.

Futures markets not only transfer risk, but also transform uncertainty into hedgeable risk. As stated by Frank Knight (1921, p. 256), "Most fundamental among these effects in reducing uncertainty is its conversion into a measured risk or elimination by grouping." The future price of a commodity is uncertain, due to uncertainty in supply factors, such as the weather, and

to demand factors such as economic conditions, but the median expectation of the future price creates a current risk benchmark. The uncertainty of the future price is overcome because at any moment there exists a price at which the hedger can buy or sell price insurance. Economic risk is insurable, whereas economic uncertainty has no probability distribution and is thus, by itself, not insurable.

Risk is transferred not just from hedger to speculator, but also from both of these to the commodity exchanges. The hedger does not have a contract with a specific speculator, but with the exchange as a whole. If one speculator defaults, the loss is borne by the exchange, by all the participants.

Speculators also “thicken” a market, creating more buyers and sellers for the financial instruments such as futures contracts, stocks and bonds, commodities, and real estate. This thickening is helpful to investors and hedgers because it is easier to find ready partners for transactions.

Professional speculators also add to the knowledge embedded in market prices. As Friedrich von Wieser (1924, p. 365) pointed out, “The speculator devotes his entire acumen and often extraordinary effort to the calculation of the prices of goods sold on the exchanges. In many instances, he corrects and refines the calculations of the producer and the merchant.” For this service, said Wieser, “the gains of legitimate speculation are true entrepreneur’s profits” (p. 366).

As pointed out by Irving Fisher (1930, p. 221), speculation can also reduce risks by shifting risk to those with more knowledge, because risk varies inversely with knowledge. Kyle and Wang (1994) differentiate three levels of speculative knowledge. There are informed speculators with both public and private information, uninformed speculators with only public information, and “noise traders” who are not information-driven.

In addition, speculation, acting as intertemporal arbitrage, can reduce the amplitude of price oscillation by correctly anticipating shifts in supply and demand. For example, suppose speculators expect a reduction in the supply of corn and thus a price increase because of predictions of unfavorable weather. By buying financial instruments representing a claim on corn, the speculators increase the demand for corn and its price at the present time, ahead of the expected reduction in supply. They then sell corn when they think the price is at its peak, thus increasing supply and reducing the price when the physical supplies are actually lower. This action, therefore, reduces the price differences, lowering the price peak and

increasing the price prior to the reduction in physical supply. Henry George (1879, p. 267) likened this equalizing function of speculators, along with their thickening of markets, to “an action analogous to that of a flywheel in a machine.” The empirical evidence from futures markets is that they reduce the volatility of the cash market (Case, Shiller, & Weiss, 1993).

III

Market-hampering Speculation

BECAUSE THE FUTURE IS UNCERTAIN, speculators often fail to anticipate correctly the peak and subsequent decline in prices. Speculation can thus also increase the amplitude of price oscillations. As noted by Joan Robinson (1953, p. 20); “as soon as speculators become an important influence in the market, their business is to speculate on each other’s behavior. The market then becomes unstable.” Not only is the initial price increased, but if speculation continues as the price increases, additional speculation can occur in anticipation of more price increases. As expressed by Neil Smelser (1963, p. 213), “a new source of profit arises—capitalizing on rising prices and profiting by time rather than real returns. This constitutes the derived or speculative phase of the boom. Seekers of profits are not interested in real returns, but are reacting to the fact that others are buying and selling rapidly. It is this speculative phase that gives the boom its rapid upward sweep.” Smelser notes that a land boom can initiate a secondary speculative boom in banks and other financial agencies which provide credit for speculation.

Ludwig von Mises (1924, p. 289) distinguished between professional speculators, who know their market well, and “camp followers” who seek to ride on the speculative boom. “These camp followers strengthen the movement, started by the few that trust to an independent opinion, and send it farther than it would have gone under the influence of the expert professional speculators alone.” Camp followers often lose money, being noise traders blindly following the more-informed professionals. But even the professionals can become overconfident.

Speculative demand can thus drive the price higher than that set by the users all the way up to the peak, increasing the peak price substantially. This is even more so in the case of assets such as land whose quantity cannot be expanded. After a peak, when the price falls, speculative sellers

can drive the price to a trough below that which would have taken place in the absence of speculation. Smelser (1963, p. 215) notes that “When speculation is rampant, the turning-point is sharper.” When actual users reduce buying because the price is too high, and investors whose intention is to profit from actual user demand and from productivity suspect that the gains are instead coming from speculation, the reduction in demand can accelerate into panic selling, often triggered by some event such as the tightening of credit by the monetary authority. The panic then feeds on itself as those observing the panic also panic.

The economic impact of speculation depends on how well the speculators anticipate the nonspeculative peak and trough of the oscillation. Correct anticipation has a favorable effect in reducing the price during a reduction in supply, and by stimulating additional production (in the case of produced or mobile assets) by increasing the price prior to the physical supply shift, speeding up the adjustment of the quantity to the anticipated demand. Incorrect anticipation has a negative effect in making the price higher for actual users (and reducing the profits of enterprises using the input) when the reduction in quantity occurs, and by driving the price lower after the peak, reducing the profits of the producers.

Because people place different weights on the variables that affect the future price of an asset, there are divergent speculative views of the future price. The “Brown effect,” named by Nicolaus Tideman after Harry Gunnison Brown, posits that those expecting the highest price movements engage in speculative buying or selling, and these can quite likely turn out to be incorrect. As expressed by Wieser (1924, p. 366), such thoughts “arise during periods of generally increasing business prosperity and persistent increases of values the speculative errors that end in disastrous crises.”

Another negative type of speculative activity is the attempt to “corner the market” and take control [of] a great share of some commodity, reducing supplies available to the market to drive up the price. Wieser (1924, p. 367) recognized that this attempt to obtain market power is a quite separate function from that of pure speculation. “They are akin to kartels [sic] in that they strive to gain a monopolistic power. [T]hey have no other purpose than the control of prices. Their profits have nothing of the character of entrepreneur’s profits. They are unearned, call for no

services of leadership, and are extorted merely by the application of superior external means of force.”

Such has especially been the case with land speculators who obtained cheaply huge blocks of land in order to sell parcels at much higher prices. The history of land in the United States has been a continuing series of the appropriation of lands by such “land speculators” (Foldvary, 1997b). For example, by 1783, “Five years after the Kentucky country was opened, the lands had been so engrossed by absentee speculators that the settlers pleaded for Virginia to take corrective action” (Friedenberg, 1992, p. 214). In Georgia, the Yazoo companies (named after the Yazoo River in Mississippi) obtained grants of over 25 million acres in 1789, comprising most of Alabama and Mississippi, for \$200,000 (Livermore, 1939, p. 148).

As Peter Barnes (1971, part 1) explained, “the typical speculator’s gambit was to form a ‘company’ which would bid for massive grants from Congress or the state legislatures, generally on the pretext of promoting colonization. Once a grant was obtained—and it never hurt to be generous with bribes—the land would be divided and resold to settlers, or, more likely, to other speculators.” Henry George (1871, p. 46) wrote of “the ease with which a few great rings wrest the whole power of the nation in their aggrandizement.”

As noted by Wieser, such land speculation goes beyond pure speculation over the future, being a monopolization of an asset to obtain market power, and thus much of the impact, such as on the concentration of land tenure, was due to monopolization as such rather than to pure speculation. Nevertheless, the activity was still the attempt to profit from higher prices and thus tied to the market-hampering realm of speculation.

IV

Land Speculation

LAND SPECULATION HAS CHARACTERISTICS that make its effects different from effects of other types. Most speculation in commodities and stocks are for uniform products obtained through central exchanges. Those who own or produce the physical commodities are able to protect themselves from the possible negative effects of speculation, that is, the extreme swings in price, by hedging, and the thicker markets provided by speculators enable them to more easily protect themselves from such speculation. Long-term inves-

tors can ride through the price swings or even take advantage of them, by buying at the trough or with techniques such as periodic buying, which buys more when prices are low.

Land, in contrast, is heterogeneous. Each plot, having a unique location, is different from all others, and is bought and sold as an individual property. Indirectly, a real estate investment trust (REIT) can securitize land as shares of stock trading in centralized exchanges. A REIT with assets only in land and no improvements would provide for liquid shares in land speculation as well as income from rent. However, the REIT would still own individual properties and buy and sell them as such, so the underlying real estate market is still heterogeneous and decentralized. It is therefore not as easy to hedge against increases in real estate prices. If a tenant fears a hike in the rent in the neighborhood due to speculative buying, there is no market in which to hedge with put options or short sales. There is no ability to spread risk over time and across owners.

Another distinguishing feature of land is its capitalization of public goods and externalities. Public works—streets, freeways, water and sewers, street lighting, security, fire protection, schooling, parks, and public transit—all increase the demand for land and therefore increase rent and land value. Speculators who anticipate where the next subway will be built or influence where government will lay out the infrastructure servicing a new development can reap the subsequent rents. Moreover, landowners have not been passive recipients of rent and land value, but have attempted to influence legislation (zoning and exemptions) as well as expenditure in their favor, being rent seekers in two meanings, land rent and economic rent. This rent seeking by land speculators has little or no parallel in other forms of speculation, especially because currency, metals, grain, and stock markets are global. It would be difficult and expensive to buy favorable legislation from several national governments.

A third distinguishing feature of land speculation is its importance in the economy. Markets for particular metals, grains, and stocks have only minor macroeconomic effects. Currency speculation can have significant aggregate effects, but it is normally not speculation that is the original cause of the damage but previous intervention that makes the value of a currency deviate substantially from the values it would have in an unhampered market. Currency speculators anticipate the breakdown of the price fixing and exploit the opportunity, perhaps pushing the market toward a faster and

swifter change, but still a restoration of realistic prices that would have taken place anyway.

Land as one of the basic factors of production is a key resource in any economy. The construction industry has amounted to a quarter or more of total investment (Matthews, 1967, p. 98), and many durable goods such as furniture, kitchen appliances, and office equipment are complementary to new housing, hotels, and office buildings. Much of the new infrastructure services newly developed areas. If construction slows down because land prices rise too high, the economic impact is substantial.

A fourth aspect of the land market is its dependence on borrowing, and its tie-in to the banking system and sensitivity to interest rates. With derivatives such as futures contracts, the speculator controls an asset worth many times the margin or equity, but he or she does not borrow funds, nor pay interest. The time discount for commodities is built into the prices of the contracts of future months. The time discount with options is built into its nature as a wasting asset. Stocks are bought on margin but usually for short-term trading. In contrast, real estate is bought with mortgages lasting many years, for which a substantial amount of interest is paid, funds that in actuality largely consist of rentals paid from the owner to the lender via the bank intermediary. When property values fall and the loan value exceeds the property value, the loan can default, and with multiple defaults, the banks can fail. With interest making up a substantial part of the cost, real estate transactions and values are highly influenced by the long-term interest rates.

A fifth characteristic of the land market is the fixed supply of land sites. The total quantity of three-dimensional space available within a market area or some governmental jurisdiction is fixed. Filling in water does not create more space, but only makes it more useful, and building higher stories does not create vertical space but only encloses the space that was already there. In contrast, some commodities such as grain can in the long run have greater supplies, while the extraction of raw materials in the ground can expand as higher prices warrant greater costs. The supply of other commodities, such as currencies or stocks, are exogenous to the exchange market and, in some cases, are at least temporarily fixed. Land being completely inelastic in supply, the rent and price of land are very responsive to changes in demand, unlike other assets for which quantity can also change with price.

Alfred Marshall (1920, p. 432) differentiated between the speculator in the stock and commodity exchanges, who “renders a public service by pushing forward production where it is wanted,” and “a speculator in land” who can “render no such public service, because the stock of land is fixed. At the best he can prevent a site with great possibilities from being devoted to inferior uses in consequences of the haste, ignorance, or impecuniosity of those in control of it.”

V

Market-Enhancing and Market-hampering Land Speculation

AS JUST DISCUSSED, SPECULATION CAN BE BENEFICIAL to an economy if the speculators anticipate correctly future supply and demand. Land speculation is not an exception; it can also have such a beneficial, market-enhancing effect. If there is a plot of bare land, the owner may speculate that rapid growth will warrant a larger building in the future than at the present time, and that demolishing the smaller building would be more costly than the net rental income to be gained from it. Overbuilding at present would result in costs and vacancies that would be more costly than the opportunity cost of foregone rentals. The speculator will leave the land idle or put it to low-cost uses such as a parking lot, waiting until the time is ripe for the larger development. By maximizing the present value of the future profits, the speculator allocates resources efficiently, and this land speculation is market-enhancing.

However, such market enhancement presumes an absence of subsidies or unpaid-for benefits that induce a higher rent and are capitalized into higher land values. When the higher prices are due to infrastructure that is not paid for from the increased rents, this is a forced redistribution of income to landowners and not a market process. Rent and land value rise to levels higher than would be warranted by a pure market. Archer (1973) reports a 1962 study showing that landowners holding their land out of the market were receiving an average increase in land rent of \$129 per acre per year while generating social costs of \$1360 per year. He concludes that “the land market will only ensure the efficient use of urban-fringe land if the landowner, developer, and homebuyer participants in the market are confronted with the full costs and benefits of their respective decisions” (p. 370).

The destabilizing effect of speculation on the amplitude of the price rise, discussed earlier, makes the intervention more severe, as speculators buy more because they anticipate further speculative demand as well as user demand. Current site tenants and those seeking new sites have to pay a speculative premium for space, and this increase in their costs and decrease in their expected profits acts to reduce investment.

Besides the land itself, a cost of obtaining land is the cost of credit and the "Gaffney effect" regarding the availability of credit. Purchasers of land have different credit risks. A speculator with better credit might borrow at a lower rate of interest and thus offer a higher price for land than someone wishing to use the land for current use, resulting in allocative inefficiency. This affects not only the timing of improvements but also the distribution of land ownership (Gaffney, 1973). John Lowe (1975) also points out that the wealthy can more easily accumulate land because their better access to credit exacerbates the inequality of income distribution.

There is one territory where the Georgist fiscal program was substantially implemented, the German colony of Kiaochow, China, also called Chiaochou and now Jiaoxian, whose main city was Qingdao (Tsingtao) in Shangdong (formerly Shantung) province. In the German territories obtained during the latter 1800s, development had been accompanied by land speculation. The Imperial Commissioner for Kiaochow, Ludwig Wilhelm Schrameier, was a member of the German Land Reformers. At the founding of the colony in 1898, Schrameier established a land tax of six percent, collecting about half the land rent. The collection of the rent not only served as the source of government revenue, but successfully prevented land speculation while Tsingtao developed into a modern city (Silagi, 1984). The colony was taken over by Japan in 1914, reverting to China in 1922. The legacy of Kiaochow continued in China as Schrameier became a consultant to Sun Yat-sen, whose program of land reform, inspired both from the writings of Henry George and the example of Kiaochow, was passed onto the Nationalists and implemented by Chiang Kai-shek in Taiwan in 1950.

As Mason Gaffney (1994, p. 93) put it, land speculation has two effects. In what Gaffney calls "type A," buyers "force the future" by developing for future rather than present-day demand. "Type B landowners just hold land unused or underused." They "free-ride on the future."

These types of land speculation become market-hampering when infrastructure is not financed from the rents generated by the public works. As

stated by Mason Gaffney (1994, p. 92), "In a speculative land boom, land prices go prematurely high. Prematurely high land values profoundly distort the character of capital investment. High land prices stimulate land-saving, land-enhancing, and land-linking investments." Or, as expressed by George (1879, p. 264), "land values are carried beyond the point at which, under the existing conditions of production, their accustomed returns would be left to labor and capital."

It is not just local markets that become destabilized, but the entire economy because the financial (banking and interest-rate) factors are economy-wide and the business cycle tends to affect an entire economy.¹ Real estate construction plays a leading role in the recovery from a depression, and then as vacancies decline and rents rise, speculation sets in, anticipating further increases in rent. Construction and land purchases are spurred more if interest rates are below the natural or noninterventionist rate. The high price of land chokes off investment, while much of the construction is a malinvestment not warranted by consumer demand. Construction slows down along with other investment, decreasing aggregate demand and thus leading to a recession and depression. Lowe (1975) notes that in a contraction, it is more difficult to sell land, and the lack of liquidity intensifies the drop in the demand for land. Fred Harrison (1983, p. 65) finds that historically, peaks in building follow peaks in land values and precede the general recessions.

Because much of bank lending goes to real estate buying and construction, when land values fall below loan amounts and borrowers default, the collapse of land prices results in bank failures. During the recession of 1990-1, Rhode Island declared the first banking holiday in the United States since 1933 as "the speculative bubble in real estate has burst, with office vacancy rates soaring" (Miller, 1991, p. 5). More than 1,000 banks failed from 1988 to 1990, not including savings and loans (p. 7).

Fred Harrison (1979, p. 201) cites Flamant and Singer-Kérel (1970) as providing evidence that land speculation during the nineteenth century contributed to panics of that era, namely in 1816 in Britain, 1825 in South America, 1836-1869 in the U.S., 1847 in France, 1853-1857 in the U.S., 1866 in Germany, and so on.

The effects of market-hampering land speculation go beyond depressions—speculation has profoundly affected global history. A key example is Germany, where land speculation during the 1920s after the monetary

reform was a key factor in the subsequent depression and hence the fall of the German republic to the Nazi regime (Heilig, 1941). As high rentals and real-estate prices increased the cost of living, workers demanded higher wages. By 1931, there was an economic crisis, as industrialists faced debt, high costs for land and labor, high taxes, and insufficient demand for their products. There were massive layoffs, which further reduced demand, leading to the collapse of the economy. The Nazi party exploited the crisis, much as predicted in Henry George's (1879) chapter "How Modern Civilization May Decline."

Critics of George's dynamic model of rent and land speculation, such as Collier (1979), point out that George's theory depends on speculators' holding land out of use. George (1879, p. 270) expressed the withholding as "a lockout of labor and capital by landowners." Murray Rothbard (1970, p. 513) derided this, saying that "any withholding of land from use is simply silly; it means merely that he is refusing monetary rents unnecessarily." Withholding land superficially seems irrational because speculators profit from renting out a site, even if they do not put it to the most productive current use. As Collier (1979, p. 90) puts it, there is "no reason for output to fall and for recessions to begin."

But first of all, the withholding is not necessarily an absolute lack of use, but only relative to the full potential current use. The withholding is rational if it is more costly to build and tear down a structure, collecting rents in the interim, than to avoid building and forego the extra income. Rothbard (1970, p. 513) recognizes this, stating that "The speculative site-owner is, then, performing a great service to consumers and to the market in not committing the land to a poorer productive use." In that case, he refutes his own earlier statement that withholding is "silly." Moreover, such a speculator only provides the service if the speculator is not subsidized by government and if he or she correctly anticipates future demand for actual use. When speculators speculate on the demand by other speculators and overshoot the price for actual use, they perform a disservice by their ill timing and failure to distinguish usage demand from speculative demand.

Henry George did not base the depression on idle land or underused land as such, but on the decline in the rate of investment. The growth of investment slows down because land becomes too costly to build on or use. It is not that landlords do not wish to have tenants, but that they have

priced them out of the market. They do this because they anticipate even greater returns from the increasing site value.

In mathematical terms, the second derivative of the growth of output (the change in the rate of growth) goes negative, eventually making the first derivative (the rate of growth) drop to zero and then become negative. As George (1879, p. 264) put it, as land values rise, "Production, therefore, begins to stop. Not that there is necessarily, or even probably, an absolute diminution in production; but that there is, what in a progressive community would be equivalent to, an absolute diminution of production in a stationary community—a failure in production to increase proportionately, owing to the failure of new increments of labor and capital to find employment at the accustomed rates." Note that George says it is "new increments" that fail to become invested and employed. Also, speculation does often hold off development until the time the speculator thinks will yield a greater return, leaving land underused relative to its current potential.

George's theory was, however, incomplete. The key missing elements, the role of interest rates and the distortion of the structure of capital goods, were provided later by the theory of the Austrian school, and this complementary theory is readily synthesized with the Georgist theory. What Austrian theory adds is that there is malinvestment in capital goods not warranted by ultimate consumer demand. Georgist theory points to speculative real estate construction as the key malinvestment. Reciprocally, the Georgist theory complements the Austrian theory with the proposition that land speculation both adds to malinvestment by shifting financial capital away from investment in capital goods to buying land, and that speculation also contributes to distortions by making the land appreciation due to unpaid-for public works part of the profit (Foldvary, 1997a).

Another market-hampering effect of type-B land speculation is that it lowers wages and increases rent. One advance that Henry George had made over previous classical economics is the theory of the wage level being determined at the extensive margin of production (Foldvary, 1994). In this "geoclassical" theory, by keeping the more productive land underused, speculative holdings push production to margins of lower productivity, decreasing wages. As George (1879, p. 256) put it, the speculation forces "the margin of cultivation farther than required by the necessities of production," and this generalizes to all production. With the wage level determined at this lower margin, the production of super-marginal lands,

after paying for capital goods, goes to rent, which is increased as less of the product goes to wages.

Land speculation can also distort the geographic pattern of development. With land priced for anticipated future uses rather than present-day uses, current development often shifts to lower-priced areas where speculation has not set in. The area where development would have taken place is left less developed as the speculation turns out to be incorrect and self-defeating. Land speculation also induces urban sprawl as developers skip over lands awaiting future development. The margins of urban development thus extend further than they would in the absence of market-hampering speculation. Such sprawl increases the cost of infrastructure as well as lengthening commuting time. The lower density of new development makes it less efficient to provide public transit, increasing congestion and pollution. The entire Los Angeles metropolitan area consists of sprawl that was instigated by land speculators who made development itself the key industry in the area (Davis, 1990). Lopez, Adelaja, and Andrews (1988) find that speculative suburbanization also distorts agricultural production because farmers' incentive to invest is reduced. This is the "impermanence syndrome" that makes land more a speculative commodity and less a factor of production.

VI

The Monetary Remedy for Market-hampering Land Speculation

THE TWO BASIC ORIGINS OF DYSFUNCTIONAL LAND SPECULATION and malinvested construction are first, artificially low interest rates that transfer wealth from savers to borrowers and second, the implicit transfer of wealth from wages to land rent during the upswing of the business cycle. The remedy for market-hampering land speculation is therefore the elimination of the monetary and fiscal interventions that cause these transfers.

Currency speculation has been blamed for the downfall of the East Asian countries in 1997, but it was the policy that made the currencies vulnerable that made the speculation profitable. The problem goes beyond poor macroeconomic policy. Flood and Marion (1996, p. 2) find that "Even governments with disciplined stabilization policies may be susceptible to successful attacks" (p. 2), although "it must be the case that historical or current macroeconomic policies have made the exchange rather vulnerable to an

attack.” To eliminate speculation, the potential profit must be squeezed out, which implies a currency not just backed by some commodity, but which is that commodity, such as gold.

Interest-rate distortions derive from the money-supply policy of the central bank and from other interventions in the supply of credit. Centrally planned money suffers from the two major flaws of any central planning, the problems of knowledge and incentive. When the economy is depressed, the incentive of the governing agencies is to stimulate the economy to quicken the recovery, and so monetary policy becomes expansive. This does stimulate total production, but at the cost of distortions in the mix of products. As explained by the Austrian-school capital theory, there is a structure of goods from the lowest order consumer goods to capital goods of higher order that produce the consumer goods and then goods of even higher order that produce the capital goods that produce the consumer goods, and so on up the pyramid of goods. Lower interest rates deepen the structure, making the more roundabout production profitable. Monetary expansion that lowers interest rates artificially stimulates investment in high-order capital goods. This provides employment in the short run, but later, when this investment turns out to be unwarranted by actual consumer demand, the resources turn out to have been wasted, and the diminution of such investment then results in unemployment and a reduction in aggregate demand that leads to a recession.

Gordon Tullock (1988, p. 75) criticizes this Austrian-school theory, saying that the malinvestments are a sunk cost, but “There is no reason why this equipment should stop being used,” and the added capital goods increase the demand for labor. But there are two reasons why the “equipment” is not used. First, capital goods, especially real estate such as hotels, shopping centers, office buildings, and housing, have been produced for which there is insufficient consumer demand for profitable operation, even to cover operating costs. Second, the price of real estate may be slow to decline because the owners have not yet realized that there is a major glut. The problem is not the past production but the fact that too much financial capital has become tied up in unproductive fixed capital goods. Future investment declines because malinvestments do not generate profits for investment, and because creditors become more cautious due to the defaults. Finally, that Tullock notes that “producer goods industries are always a fairly small part of the economy” (p. 76) indicates not that Austrian

theory is faulty, but rather incomplete in not identifying the key and major affected industry, real estate.

Aside from the incentive problem, a central bank faces an inevitable knowledge problem. There is no way to know for sure how fast to expand the money supply. The demand for money depends on the velocity of the circulation of money as well as foreign demand and the growth of population and commerce. The money supply and interest rates also affect the value of the currency relative to foreign money. There is also uncertainty regarding the relationship between unemployment and price inflation. Fears that growth and low unemployment will lead to price inflation can lead the monetary authority to reduce the growth of the money supply to increase interest rates and slow the growth, but the theory behind this relationship may well be flawed or not apply to the current environment. The policy of slowing the economy to prevent wage increases may act to prevent labor from obtaining its warranted share of increased productivity. The central bank can, therefore, sometimes expand too rapidly, and other times contract too much.

The effective way to solve the knowledge and incentive problems is to avoid central monetary planning and allow decentralized market processes to determine the money supply. This is the "free banking" policy of unrestricted branch banking and the freedom by banks to issue their own notes as money substitutes or "inside money" convertible into the monetary base or "outside money." Until World War I, base money consisted of gold. Now, with fiat money used worldwide, a free-banking policy could be implemented by freezing the supply of central bank notes, such as the federal reserve note dollars used in the United States.

The future expansion of purchasing media (money and money substitutes) would be done by the private banking system with competitive private bank notes of circulating paper notes and bank deposits. With bank notes redeemable into base money as well as convertible into the notes of other banks, the banks would not issue more notes than warranted by market demand. Redemption into a frozen base, as well as convertibility among bank notes, would prevent monetary inflation (Selgin, 1988).

VII

The Fiscal Remedy for Market-hampering Land Speculation

THE FORCED REDISTRIBUTION OF WEALTH from workers to landowners that stimulates market-hampering land speculation can be remedied in two

ways. First, the provision of infrastructure can be shifted from government to the private sector. Not being able to tax labor to finance the infrastructure, the providers would have to obtain the funds from the beneficiaries, the users of land sites. This is how residential associations, condominiums, hotels, shopping centers, and industrial parks finance their internal developments (Foldvary, 1994).

Second, if government provides the infrastructure, then rather than taxing wages, the financing of the public works can be obtained from the very rents generated by the works. When the owners of land pay a community rent that funds the infrastructure, a rent equal to that which the infrastructure generates as well as the rent generated by the general increase in commerce and population, landowners cease receiving the implicit subsidy of rent and land value. With land having an explicit carrying cost, any land speculation that occurs becomes market-enhancing because the social costs of delaying development are known.

The complete remedy for market-hampering land speculation thus consists of free banking and the community collection of rent (CCR). Both the monetary and fiscal remedies are required in order to avoid the interest-rate and tax distortions causing the problem. CCR is a subset and usually the greatest part of the more general public collection of rent (PCR) that includes rents generated by natural advantages apart from those created by infrastructure and commerce.

VIII

Rent-collection Futures and Options Contracts

ONE PROBLEM LANDOWNERS FACE when CCR is in place is that increasing rent may make existing investments in improvements obsolete. Without CCR, the increasing value of the land and lack of an explicit carrying cost can maintain the accounting profits of the enterprise at that site until the opportunity cost of foregone rental income becomes too high. With CCR, the increasing explicit carrying cost and lack of any capital or land gain would induce the owner to shut down the enterprise and convert the site to the more productive use.

Once CCR is in place, some investors may wish to hedge against the risk of higher rent. If everyone had the same expectations of the future, hedging would be impossible because no speculator would arise to off-

set the hedging. But the future is uncertain, so market-enhancing speculation takes place due to differing expectations. In any futures contract, a seller is offset by a buyer, the price equilibrating the bears and the bulls. Although an investor in improvements may fear an increase in the community rent to be paid, some speculators will expect the rent to stay the same. The price of the contract will be such that the bulls match the bears.

If there is a widespread desire by investors in improvements to hedge against the risk of rising community rent, a market may arise to shift the risk to speculators. A local market could be created for rent-collection futures contracts (RCFC) as well as rent-collection options (RCO) based on such contracts. These would, until the expiration of the contract, freeze the community rent payable by the land holder.² Local contracts could be assembled to create contracts on the national land market. A real estate futures contract operated briefly in the United Kingdom in 1991 until it was suspended due to volume manipulation (Case, Shiller, & Weiss, 1993). With over 300 real estate investment trusts (REITs) trading in stock exchanges holding properties worth \$125 billion, REIT indexes and options based on them have already been established, including one (named RIX) at the Chicago Board of Trade and the Morgan Stanley index (RMS) on the American Stock Exchange.³ As suggested by Case, Shiller, and Weiss (1993), there could be contracts for the various types of real estate, such as residential, commercial, and agricultural.

Landholders would buy options or futures contracts correlated closely with the property they own or they may wish to purchase later. The contract would obligate the seller to pay any increase in CCR in the future. If the rent decreases, the buyer would pay to the contract holder the difference between CCR and the contract rent. The futures contract would require collateral. If the rent does not increase, the interest from the option payment would provide a continuous profit to the option seller.

Hypothetically, a real estate property could be transformed into a REIT just for that property, with a number of shares that could then be held by many owners. Derivatives such as put and call options and futures contracts could be created for these shares. Ownership and risk could be spread among owners and of properties of similar nature.

When the actual or anticipated community rent increases, the price of

buying the RCO would increase. A new RCO would freeze the rent at a higher level, so for an existing RCO with a lower level rent, a seller would require a higher price so that more interest could be obtained to offset the obligation of the greater community rent. If the speculator, facing higher rent payments, wishes to sell the RCO, he or she would have to pay the new owner more than the previous owner paid to him or her. Suppose the original owner paid \$100,000 for the RCO. The speculator unloading the option now pays the next option holder \$120,000, for a loss of \$20,000. If the community rent decreases, then the option holder has a profit because he or she would pay the next holder less than \$100,000.

Because the community rent on each plot is still being paid, whether by the landholder or a contract holder, there is no dysfunctional subsidy to landholders. Hence, the speculation in the contracts would be market-enhancing. With RCFCs and RCOs, builders would be able to obtain land for development with a fixed carrying cost, that is, a frozen rent and a fixed price for the contract, shifting the risk of obsolescence to the speculators. Eventually, when the site rent rises to a level much higher than warranted by the current use, the option holders would buy out the properties rather than pay the high CCR, and then redevelop them. The market would determine how far into the future the contracts would extend.

With an RCFC or RCO, a speculator could obtain a plot at the edge of a city for the price of the land and the contract. Later, when the rent has risen, the plot will have a positive land value because the title holder does not pay the community rent above that frozen by the option. It would then be profitable to buy land for speculation if the price of the RCO is low enough. The speculative role of holding until the time is ripe for development would be maintained. But if the speculative gains do not include any transfers to rent from wages, and if interest rates are not distorted, this speculation would not be distortional. Case, Shiller, and Weiss (1993) suggest that real estate derivatives could dampen the real estate cycle by reducing the transaction costs of owning real estate assets and by enabling owners to hedge against declines in price.

It could be that RCFCs and RCOs would be priced so high that such a market would not develop, and possibly there may not be much of a demand for them, but these are a hypothetical possibility that would increase the scope of land speculation even when all the land rent is collected.

IX

Conclusion

MARKET-HAMPERING LAND SPECULATION needs to be distinguished from market-enhancing land speculation. Speculation that involves land holding or real estate construction is distortional and destabilizing when policy artificially lowers interest rates or when taxation transfers income to the owners of land. A policy of free banking lets the market process determine the money supply and interest rates, while CCR and the absence of taxes on labor and capital eliminates the fiscal distortions in land speculation as well as transfer rent seeking by developers and landowners. Under the community collection of rent, the scope of benign land speculation could possibly be increased with rent-collection futures contracts and options.

Notes

1. See Foldvary (1997a) for a "geo-Austrian" theory of the business cycle involving both real estate and banking.
2. My thanks to Lee Maclin for introducing the possibility of call options on future increases on land-value tax (LVT), and discussing this with me and others in the e-mail forum "potpourri" in 1997. See also Case, Shiller, and Weiss (1993) on real estate futures contracts and options.
3. For information on REIT options and indexes, see the web site <http://www.inrealty.com/restocks/reits.htm>

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