

CHAPTER ONE

Understanding Rents in the Real Economy

The rent of land is determined by the excess of its produce over that which the same application can secure from the least productive land in use.

— Henry George

Henry George grew up in an era in which America's westward expansion was a primary force in the young country's economic development. Feudal Europe and its economic stasis were, for George, not part of the distant past. Following the breakup of feudalism, he saw agriculture dependent on human and animal power, and manufacturing dominated by small-scale, craft technologies. In post-feudal Europe, rents went to landlords—the former feudal lords—and were paid by capitalist farmers and small business craftsmen. Wages were more related to subsistence than to the productive value of labor. In the United States, however, family farmers generally owned the land (but often subject to mortgages), just as small businesses were owned and operated by families. And in the West there was free land—good, productive land. Anyone in a low-wage occupation could pull up stakes and move west to acquire and cultivate it.

George anticipated many of the ways in which the 19th-century craft economy would change—the growth of monopoly and big business, the development of corporations and joint stock companies. What he could not have anticipated was how

the role of rents, real estate, and monopoly in the economy would change greatly with the arrival of mass production. Rents and monopoly earnings have since been folded into profits; real estate is now valued by capitalized earnings and has been securitized, becoming another part of capital. George did not accept folding rents into profits, and we shall see that he was right to do so. Rent on land and rent from monopolies arise from economic forces that are distinctly different from those that determine profits on capital. George is one of the few, perhaps the only, major economist to have built his theory of long-run development largely around the impact of progress on the behavior of rents, and the consequences for the composition of output and the distribution of income.

Henry George's Idea of Progress

“Progress,” in George’s thinking, is what we call “economic growth”—but it is much more than that. It drives the economy; it leads to prosperity; it means greater command over nature, greater productivity, and new inventions. And it brings about poverty. That is the problem George proposes for political economy: how is it that progress brings about poverty?—a good question, for George’s time and for ours. Contemporary mainstream economics does not ask this question; rather, it asks, how do free markets bring about the best possible use of scarce resources? Optimality, not poverty, is what today economics textbooks give us.

Progress, for George, is disruptive, bringing about turmoil and change. In most mainstream growth models expansion takes place in given, fixed proportions: the system swells up, and all the parts stay in the same ratios—a “growth equilibrium.” This makes measurement much easier and gives the economic model builders greater freedom to deal with problems. Modeling such balanced, equiproportional growth is not important because it never actually takes place in the real world. Growth is always messy, unbalanced, and irregular. Of course, all mainstream growth economists say that their models and methods are idealizations. But this misses the point. The apparent messy irregularity of actual growth is not the result of deviations from an ideal—*growth is unbalanced because changing proportions and distribution is what growth brings about*. Growth is changing the proportions of the economy: agriculture declines, industry expands, services change character (from household to business), white-collar work expands relative to blue-collar, etc. Growth also changes the relative wealth of social classes. George argues that landlords prosper relative to everyone else, and that labor will eventually be driven into poverty. “Progress” affects both the sectoral composition of output and the class shares of income and wealth. Progress transforms the economy; it is transformational growth, as opposed to the common or normal concept of growth as replication.

Growth Models and the Treatment of Rent

When rents are explicitly considered, most schools of economic analysis model the Ricardian process of diminishing returns: rents arise from differentials created by bringing poorer lands into cultivation in response to the increased demand caused by growth. But rents are a transfer from households to landlords, from largely working-class families to landowners or urban developers or property owners. One might easily think that this would imply that purchasing power was being shifted from those with a high propensity to consume to those with a lower propensity to consume, thus weakening aggregate demand. However, the available evidence is inconclusive.

Here is the traditional classical picture:

In spite of the differences among them, Adam Smith, James Anderson, Thomas R. Malthus, Edward West, and David Ricardo considered rent a consequence of the increasing cost of growing agricultural production when productivity declines. Rent is a surplus which depends on the difference between the costs of any production in comparison to the costs incurred in the least favorable production owing either to the decline in land fertility (extensive diminishing returns, which give rise to extensive rent) or to the decline in labor productivity on the same land (intensive diminishing returns, which give rise to intensive rent). The higher cost of the last unit of corn produced, which determines the price, in comparison to the costs of the previous units

of corn, determines rent as a surplus of the "landlord."
(Quadrio-Curzio in Kurz and Salvadori, 1998, p. 289)

The crucial point here is that as the economy expands and more agricultural products are required, productivity on average falls, as poorer-quality land is brought under cultivation. Prices and profits are determined on no-rent land. However, rents play a minor role in contemporary economic analysis.

Most growth models today leave out rents and real estate; rents are widely treated as part of profits. This is understandable but problematic. Rents are widely considered to be 3 percent or 4 percent of GNP, although many real estate experts would put the figure a good deal higher. More importantly, rents and profits have different origins and respond differently to economic conditions. So the practice of lumping rents and profits together must be considered flawed. To be clear, this tendency is not accidental: rents and profits are lumped together in theory because business lumps them together in practice. We will see that this matters when it comes to finance.

Neoclassical models of rents are inconsistent. For example, even models with imperfect competition assume conditions in which factors can be readily and smoothly substituted, and in which agents have extensive and accurate knowledge of markets and technology—that is, marginal productivity theory. Yet this makes no sense. If rents are substantial there must be widespread rigidities and irregularities, to create and sustain differentials, in which case smooth substitution does not make sense. Likewise, most classical or neo-Ricardian approaches assume sufficient

competition to establish a uniform profit rate, uniform wages, and uniform prices. However, as noted, if "differentials" are widespread, rigidities and irregularities must be as well, upsetting uniformity. As for post-Keynesians, they are concerned with the distributional conflict between capital and labor; when rents are mentioned at all, they tend to be lumped together with profits. For most of these approaches, landlords are just a subcategory of capitalists.

Indeed, in many mainstream and some post-Keynesian writings, profits may be referred to as "rents." The underlying idea is that entrepreneurs can be assumed to rent machinery, equipment, and buildings. Some writers (e.g., Alchian [1950]) treat all payments for productive services as "rents": thus wages are the rent for labor, interest is the rent for money, profits are the rent for capital equipment. "Economic rent," from this perspective, is then defined as rent for a "service" (such as land), the supply of which is completely fixed. This overemphasizes fixity and fails to bring out the importance of *differences in technology* in determining rents, calling attention to a need to distinguish scarcity rent and differential rent, and raising the question of "rent-seeking behavior" and "rents" as indicators of wasteful activity.

Modern classical analysis tends to follow Sraffa's version of Ricardo (1951), in which rents arise from the simultaneous operation of two or more techniques for making the same product. Sraffa (1960) has shown how rents can be "handled," but this is sometimes taken to justify setting the issue to one side, to be considered "later." Sraffa shows that Ricardian rents depend only

on differentials, not that returns must diminish as production increases.

Here, a modified version of Sraffa's equations for rents³ will be the basis for the treatment of rent in the growth model. Sraffa treats "land" as the prime example of a "non-basic good of type II"—a good that enters into the production of all goods, either directly or indirectly, but is itself not produced. Non-basics of type II, like land and location—perhaps "space" more generally—are fixed in amount and are often set immovably in place. So "space," being appropriated and needed, commands rents.

The equations for production, exchange, and distribution are given, and are understood to be simultaneous. They represent private sector activity; no analysis of public goods is offered. They are price equations; no analysis of quantities is offered. A uniform period of production with an annual market is assumed; otherwise, the approach abstracts from time. Prices are assumed to be uniform, the rate of profit and the wage rate both uniform and universal. In the equations, the amounts for the various basic inputs are in the first column (on the far left), the labor coefficients are in the next column, and lands and rents are in the third column, before the equal sign. The quantity of labor is assumed to be given and constant, and to be measurable without reference to prices. The size of the system is arbitrary. Barter takes place until the inputs are allocated in such proportion that production could begin again, but there is no growth from period to period. The system reproduces itself; no intertemporal

³ See Sraffa (1960), chap. 11.

issues are dealt with. Land of various qualities is represented by $\Lambda_1, \Lambda_2, \dots, \Lambda_n$, and rents are given by $\rho_1, \rho_2, \dots, \rho_n$, which will be the unknowns.

In Sraffa's notation—for comparison with the original—the system is written:

$$\begin{aligned} (1+r)(A_a p_a + B_a p_b + \dots, K_a p_k) + wL_a + \rho_1 \Lambda_1 &= A p_a \\ (1+r)(A_b p_a + B_b p_b + \dots, K_b p_k) + wL_b + \rho_2 \Lambda_2 &= B p_b \\ \dots & \\ (1+r)(A_k p_a + B_k p_b + \dots, K_k p_k) + wL_k + \rho_n \Lambda_n &= K p_k \end{aligned}$$

and

$\rho_1 \rho_2 \dots \rho_n = 0$. One of the rents must be zero.

Here, A_a is the amount of commodity "a" used in the production of "a," A_b the amount of "a" used in the production of "b," and so on. The letters indicate absolute amounts rather than the usual coefficients,⁴ but why or how the indicated scale was reached is never discussed. Each row represents the cost structure of an industry, while each column shows the allocation of a commodity among the industries.

It is assumed that

$$A > \text{or} = A_a + A_b + \dots + A; B > \text{or} = B_a + B_b + \dots + B_k, \text{ etc.}$$

⁴ Divide the first equation in the text by A, the second by B, and so on; the result will be the equation in its more usual form.

and also that

$$L_a + L_b + \dots L_k = 1$$

(Labor is given in amount, and, it is assumed, can be added up independent of value.)

The equations here are the same as for the discussion of wages and profits, with an expression for land and rents added to the equations where appropriate.⁵ Rents do not enter into the determination of prices and the rate of profits; rents are earnings above the normal profits on no-rent land, so they depend on differentials; “the order of fertility” depends on distribution; and so on.

Ricardians, and some neo-Ricardians, continue to assume that moving to the margin will lower productivity, on average. But such a decline was not to be found on the US western frontier—quite the contrary. In fact, it is not a necessary implication of theory, and the account of rents here will follow the illuminating analysis of Henry George rather than Ricardo.

The Classical View

In a modern classical approach, showing how the economy works requires showing how it can *continue to exist*, operating in a regular fashion, consuming products while producing replacements. This can be abstract, but it should be realistic. Production and

⁵ See Quadro-Curzio, in Kurz and Salvadori (1993); Kurz (1990).

consumption use up things that have been produced; those things must be replaced for the system to continue working. Capital must be maintained intact, retiring workers must be replaced, inventories must be replenished. Consumer goods are used up and must be replaced. Everything essential to the regular reproduction of the economy must be included; other things—luxuries, the intricacies of money and finance, regulation—can be set aside (until needed), but nothing can be distorted, and assumptions must be realistic. When this is properly set out, prices, wages, and profits can be calculated, as in the Sraffa equations above, with growth, consumption, and sector sizes following as the “mathematical dual.” (For non-economists this means that when we set out the equations for the price, wage, and profit side of things, we implicitly define the quantity, consumption, and growth relations too.)

This is very like what George does, though not mathematically. He builds on the division of labor, showing that what he calls “stored-up labor”—that is, capital—contributes to the creation of wealth. He divides the economy into sectors, according to the character of the inputs and the usefulness of the outputs—especially, of course, distinguishing agriculture, industry, and services—and also, separately, government. How these sectors operate depends on the technologies and changes with them, under the influences of history, science, and social pressures, but in George’s view, regular improvement in technology is the norm.

It must not be assumed that we have found the secret key, the permanent and timeless laws of the economy. Yes, these

relationships are essential in that they tell us how the people, places, and institutions of the economy are maintained—how they are kept running. But they don't keep running in the same way period after period, as George very clearly understood. (He had little use for equilibrium reasoning; he repeatedly refers to “dynamics.”) Everything changes as the economy grows and develops—or stagnates, for that matter. The economy innovates and develops. We do need to unearth and set forth these essential relationships, but they are only the beginning. The equations must be updated regularly, and we must keep an eye on all the basic relationships, as they too will be evolving.

Factor Markets

A modern classical (post-Keynesian) approach is the way to reinterpret and reinvigorate the work of Henry George, who wrote at the end of the “classical” period. By contrast, in the patronizing opinion of the modern (neoclassical) mainstream, “George may have contributed the best classical analysis in history, but it was Marshall who constructed the bridge from the classical to the contemporary world of economics” (Bryson 2011).

That bridge, of course, is the theory of factor markets, or “marginal productivity theory,” which tells us that the same principles govern the working of the markets for each of the three “factors of production”—land, labor and capital—which should be understood as working the same way in the marketplace. Of course, they are different, but the differences don't matter, while the similarities do. Each factor supposedly exhibits diminishing

returns at the margin; that is, when more of it is applied to a fixed amount of the others, the addition to output diminishes. In competitive conditions, the resulting marginal product curves (MPs as a function of quantities of the factor) govern the demands for the factors, and these demands, together with supplies, determine the factor prices and returns. The amounts of the factors, multiplied by their prices, “add up” to the value of the product—the so-called “adding up” condition of neoclassical theory.

In true marginal productivity theory each point on the production function is a “long-period” position, the result of “decision makers” making and carrying out a choice of technique in response to factor prices. The solution to the equations for factor markets therefore “explains” the adoption of new technology, of whatever kind, as a result of changes in factor prices, and at the same time explains the distribution of income. The point to be emphasized here, however, is that this is a long-run equilibrium analysis, *not a picture of short-run adjustment* in conditions of small-scale technology. Diminishing returns from applying more labor to *given* plant and equipment plays a significant role in the adjustment of a craft economy; short-run marginal products can be identified, but this is not “marginal productivity theory.” That takes place in models addressing different questions—short-run adjustments to changes in demand—and constructed on different assumptions (fixed plant and equipment, with variable labor). But the history of distribution theory has been haunted by the tendency to confuse the short-run story of adjustment, plausible in the craft technology context, with the serious but

implausible long-run mathematical model of distribution. These sometimes look the same, but they are totally different and incompatible.

Today, the marginal productivity/factor market approach to explaining distribution is widely discredited. The important differences between the factors are generally appreciated. "Land"—more appropriately, "space"—does not "enter into" production at all; it is monopolized, as George said, and rent is the price for permission to use the space. "Labor" is produced by education and supported by consumption, but it is activated only when "on the job"—hired by a capitalist. And "capital" is the aggregated value of means of production owned and managed by a capitalist, most likely a company or corporation, and expressed in money or on the stock market. Marginal products are almost impossible to measure (outside of some very simple cases) and diminishing returns are hard to find. Case studies of technologies provide little or no support for diminishing returns but have uncovered many instances of "network externalities" and increasing returns. Studies of company or corporate costs (e.g., Hall and Hitch, (1939); Andrews, (1949)) find widespread constant costs.

Nevertheless, in early and mid-20th-century academia, marginal productivity theory swept the field; even though unrealistic and problematic, it became the mainstream position. But in the last decades of the 20th century it was upended, first by the great "capital controversies"⁶ and then by the discrediting of empirical

⁶ See Harcourt (1972); Garegnani (1966, 1970); Sraffa (1960); Laibman and Nell (1977); Kurz and Salvadori (1993); Petri (1982); Schefold (1997).

production function studies. The “capital controversy” showed, in a sophisticated set of models, that the relationships required in marginal productivity theory between the rate of profit and the value of capital cannot be presumed to exist. The regular, smooth relationship marginal productivity is based on—namely, a continuous inverse function between the rate of profit and the value of capital—simply need not exist. As for the empirical studies, they are haunted by identification problems: they cannot adequately separate their “production functions” from the income payment identity.⁷

In short, George cannot be criticized for not moving⁷ to the so-called “modern scientific theory of distribution.” That theory, as George sensed, was defective from the beginning, and he understood very well that the “three factors” were not equals: they were seriously different, and different rules and market forces governed their earnings.

Henry George’s Treatment of Distribution

George himself proposed a seriously problematic approach to distribution, on which, unfortunately, one of his central claims rested: that rents would increase in proportion to other forms of income. His account of rents was drawn initially from Ricardo but went well beyond him, recognizing that differentials, not diminishing returns, were the key, and that differentials could as easily arise from *increasing* as opposed to diminishing

⁷This issue is discussed in Nell and Errouaki 2013, pp. 410-15; Shaikh, Ch 5, in Nell, ed., 1980, and Shaikh, in EEJ Symposium, Summer 2005; Kurz and Salvadori (1993).

productivity. In this he stressed the importance of Smithian themes: division of labor, separation of function, cooperation, and trust. The emergence of rents does not have to portend diminishing returns, which would imply a decline of wages; on the contrary, rents could emerge from cooperation and advances in the division of labor, leading to improvements in the technology of farming, fencing, tool making, etc. What can be earned on marginal land might actually increase! This implies that the emergence of rents could conceivably coincide with a rise in wages, because wages, according to George, are set by what can be earned on marginal land.

If, as George argued in the 19th century, wages were set by what could be earned on free land in the west, this would attract workers from the east. This idea became important for Frederick Jackson Turner and Charles and Mary Beard—authors responsible for the “frontier thesis,” a major and influential interpretation of a very significant part of American history. Yes, the wage may indeed be set by the earnings of the self-employed on free, marginal land, adjusted for the cost of moving west. However, what happens when the frontier closes? According to George, the wage will fall to socially determined subsistence. But that did not happen: US wages remained high. Strong growth may have played a role here—a “high-wage economy” seems to have been a viable pattern, especially as the labor movement gathered strength.

George’s account of capital is, at first glance, excessively simple: capital, he argues, is created by restricting consumption and taking the time to make tools. He explains this by

considering a settler moving to new land. The tools the settler makes will increase his productivity, and this increase will compensate for the earlier restriction of consumption. This is a very particular story, and it does not cover the many other ways that capital can emerge (e.g., more recently, mergers and enclosures). In any case, capital became more complex and multidimensional than George's mode—on the one hand, there is capital as machines, buildings, and equipment; on the other, we find capital as marketable financial claims to such real equipment. Both are forms of capital, and they are, of course, related in complex and unstable ways, as we shall see.

However, George proposes a theory of interest/profit that depends on capital's productivity: if capital assists labor by increasing productive output per worker, then lenders of such capital should be able to charge for this, or they might lend and share the proceeds from the activities financed by the loan. But at this point George takes a very interesting, although we think unsuccessful, step: he divides capital into two kinds—ordinary tools, like those of a carpenter, that assist labor but are essentially passive; and agricultural capital (cattle, chickens, wheat, bees, racehorses) that *produces surplus on its own*. Because capital can be shifted about in search of the best return, passive capital and its products must be priced so as to provide a return equal to that earned by active capital on average. This bears some similarity to Sraffa's interpretation of Ricardo, which contended that the rate of profit was determined by the returns in "corn," because corn served as seed and thus was capital, but it also provided the support for labor. So the rate of profit in corn could be expressed

without reference to prices, as corn output, divided by seed corn and corn for the support of labor, or corn wages. Prices must then adjust so that all other goods earn the same returns that appear as a pure ratio in corn. George does not exactly say this (Ricardo didn't either, but Sraffa shows that he implied it), but there is more than the germ of the idea in his discussion. However, he does not see the connection with the standard of value, nor how this idea could be used to understand "plowing back" equiproportional parts of any surplus into growth—that is, a growth model.

Most important for our argument, modern classical and post-Keynesian thinking builds on an *inverse* relationship between wages and profits: higher wages mean lower profits. However, George claimed that interest or profits and wages had to move together—*directly*, not inversely. The reason he advances for this is that at any given time there will be a regular or equilibrium level of capital per worker; wages call forth work, and interest calls forth capital. So, if the ratio changes, then the level of capital per worker will change:

Any tendency on the part of interest to rise above the equilibrium with wages must ... direct labor to the production of capital, ... while any tendency of wages to rise above the equilibrium with interest must ... turn labor from the production of capital. (George 1915, 168)

Higher interest may call forth more capital/savings; lower interest, less. This is a traditional claim, with widespread support,

and it has a ring of plausibility; but the evidence for the relationship is not very strong. The case is different with wages. Higher wages can reasonably be thought to call forth more hours of work, and will likely bring more workers into the labor market. However, more work does not mean less "capital." In particular, higher wages do not mean less *saving*; quite the contrary. In general, higher incomes of any kind will lead to higher savings. So, George's contention that wages and interest must move together is flawed.

The problem is that George takes it that both wages and interest are set, and that they are fixed relative to one another; then growth takes place, with no direct effect on interest, but it drives up rents, which means cutting into the surplus, so wages will tend to fall—which, in George's view, will tend to pull interest down. Thus typically, he argues, rents will increase and wages and interest fall, so inequality will increase, and eventually, so will poverty. But for quite some time rents seemed to rise in proportion to growth, and so did the total wage bill; interest and profits fluctuated more, perhaps, in the early era, but later settled down and grew at more or less the same rate. For a long time, income shares tended to remain constant or vary within fairly narrow limits. Certainly, there was no obvious tendency for the share of rents to increase, and indeed, in conventional accounting they have tended to decline somewhat—though Georgists regard this as mistaken. From a theoretical point of view, however, growth will increase rents if it increases differentials, but it is not obvious that increases in population will lead to a fall in earnings at the margin (especially a margin in the American frontier West). Rents and wages may both go up.

Rents and Real Estate

Reconceptualizing Ricardian rents à la Henry George and relating them to real estate securities reveals a new and very powerful linkage between the real and financial sectors, a linkage that will help to account for recent bubbles and bursts. This linkage is complex but not hard to understand: growth drives up rents, but this does not lead to the dismal results of Ricardo, because rents do not arise from moving to poorer land. They arise from innovation and a more sophisticated division of labor. In the past, rents were normally paid by active economic agents to largely passive landlords, and the economic effects were not very large. In the case of owner-operated family farms and owner-occupied housing (very important in the craft economy and in early mass production) higher rents had no current impact but rather implied higher land values should they sell—a distant and necessarily uncertain prospect. Rents that are actually paid reduce the spendable incomes of wage and salary-earning households and tenant farmers but increase the incomes of landlords, developers, and farmers with extra acreage. Theoretically, this transfer could affect aggregate demand, but it does not seem ever to have had an important impact on it, even in full-scale mass production, with a large part of the working class living in rental units in cities and suburbs. This is partly because the payers and recipients of rents seem to have had similar propensities to consume, and partly, but more importantly, because unionized wages were normally adjusted to cover housing costs.

Today's economy is different in several relevant respects. For the most part, farming is conducted by large corporations,

while real estate development for housing, shopping malls, and offices is performed by corporate entities. These in turn are financed by bonds and stock issues; in effect, today, rents are securitized. It is estimated that between 35 percent and 65 percent of all bank lending in the 17 largest economies is for real estate (Turner, 2015), especially for speculation on future real estate values. It is still the case that the payment of rents by working households and businesses probably does not seriously affect aggregate demand, that is, the current level of overall spending. But now, an increase in rents, due to higher growth, in turn raises the value of real estate, and so drives up the prices of real estate-based securities—and this will tend to lead to portfolio adjustments. These adjustments will in turn disproportionately benefit the wealthier portfolios, an effect that will tend to increase inequality, and this will likely weaken effective demand.

The rise in rents, caused by the greater pressure on fixed resources resulting from growth, will increase the value of current rental properties, thereby increasing competition between real estate and other categories of assets, which will feel pressure to improve their profitability, either by raising productivity or by lowering wage and salary costs. This will prove significant in our forthcoming analysis of financial crises.