

RICARDO: ECONOMIC RENT and OPPORTUNITY COST

David Ricardo (1772-1823): one of the founders of the Classical School of Economics

1. David Ricardo's Concept of Economic Rent:¹ Definition:

Economic rent on land is the value of the *difference in productivity* between a given piece of land and the poorest [and/or most distant], most costly piece of land producing the same goods (e.g. bushels of wheat) under the same conditions (of labour, capital, technology, etc.).

Productivity is defined here in terms of both:

- (a) the natural fertility of the soil; and the productivity of the existing technology in utilizing currently available labour and capital;
- (b) and also the relative distance from the same market:
 - (i) we are discussing this in terms of regional economics with one market.
 - (ii) This part of theorem, on the 'distance from the market', did not originate with Ricardo, but rather with a German economist: Johann Heinrich von Thünen (1783-1850), who noted, some years after the publication of Ricardo's *Principles*, that the closer a piece of land was to the urban core the higher was its market rent (reflecting economic rent).²
 - (iii) You can readily appreciate the significance of this by noting that Toronto rents in the heart of the financial district on Bay or University are higher than those in, say, Orangeville or Bolton to the north of Toronto.
- (c) Thus productivity differences reflect the cost differences in supplying grain to that one market from that piece of land.

This concept of economic rent involves the following six suppositions:

(1) in the initial stage of development, our starting point, with a stable and low level of population, only the very best lands are under cultivation: lands that are the most fertile, the most easily worked, and the closest to the market -- the lowest cost lands for producing grain.

(2) with population growth, the eventual diminishing returns on existing cultivated lands force into

¹ David Ricardo, *Principles of Political Economy and Taxation* (1817; 3rd edn. 1821); Marc Blaug, *Economic Theory in Retrospect*, 3rd edn. (Cambridge and New York: Cambridge University Press, 1978), chapter 4: "Ricardo's System," pp. 91-112.

² Johann H. von Thünen, *Der isolierte Staat in Beziehung auf Landwirtschaft und Nationalökonomie*, vol. I (1826); vol. II.i (1850), Vol. II.ii and Vol. III (1863); in English translation as *The Isolated State*, ed. P. Hall (Oxford, 1966). Most of the rent theory is in the posthumously published Vol. III.

cultivation new, but inferior or ‘marginal lands’: lands that are less fertile, more difficult to work, and further from the market, involving higher production and transportation costs.

(3) Thus the necessary consequence of adding on more and more inferior or marginal land is the rising cost of producing those extra bushels of grain to feed that growing population. We assume that all people are fed.

(4) We must also assume that for any given region, for any one given market zone, there is only one price, the prevailing price that clears the market in that region.

(5) The final or ‘equilibrium’ market price for grain will thus equal the cost of producing that last bushel of grain (under diminishing returns) on that last unit of land forced into production to feed that larger population. Nobody is going to produce grain for very long at a cost higher than the market price; and nobody will be foolish enough to sell grain at lower price than the prevailing market price. In fact, as you can now deduce, the level of population and of demand has really determined the market price of grain; for without that increased demand, that last unit of land would not be producing grain for the market.

(6) On that last piece of land put under cultivation, total sales revenue equals total costs, with no surplus or ‘profit.’ The farmer earns just enough to keep him in production, without seeking alternative employment. But conversely, on the other lands -- the more productive and lower cost lands that were put into cultivation earlier -- total sales revenues exceed total costs, because costs on those better lands are lower -- very much lower on the best lands. That differential produces a surplus or a ‘profit’ called **ECONOMIC RENT**, which can be seen on the graph: the difference between production costs and the market price.

2. The Power of Landlords to Expropriate Economic Rent: according to Ricardo and Marx

Ricardo, and Marx after him, argued that all of that surplus, or profit, or ‘economic rent’ (to use the proper term) was ‘captured’ or expropriated by the landlord: that the landlord could evict those tenants that refused to hand over the surplus, and replace them with those working marginal lands or with landless peasants. Furthermore, the peasant’s costs of production, in producing grain on this land, include his own implicit wage or salary income, which, in terms of opportunity cost, must equal his ‘transfer earnings’: i.e., must be an income sufficient to dissuade him from seeking an alternative employment (or some alternative rental land). Therefore, denying the peasant the economic rent on this land will not cause him to leave: see the next item in this discussion..

In historical reality, however, landlords rarely had such powers of expropriation; and instead that surplus was more usually shared between peasant farmer and his landlord, according to the bargaining power of each, and according to any contract between them.

3. A Related, More Modern Definition of Economic Rent, related to Opportunity Cost:

The excess or surplus of total payments given to any factor of production (land, labour, capital) over and above its 'transfer earnings': that is, over and above what that factor could earn in its next best use.

This must be understood in terms of **OPPORTUNITY COST: the opportunity cost of doing A is the value of any benefit foregone, or given up, by not doing B;** i.e., the value that would have been produced by using that factor of production in the next best **alternative** 'opportunity.' Thus, in order to secure the use of that factor, the employer has to pay something more than its opportunity cost: i.e. its 'transfer earnings,' defined as the amount necessary to keep that factor employed in its present use. Thus any payment beyond that opportunity cost, or 'transfer earnings,' is economic rent, or more simply 'rent'.

4. The Relationships between the Two Concepts of Economic Rent

What is the relationship between the two concepts of economic rent?

Ricardo, in constructing his economic rent model, assumed that: (a) the land under consideration had only one use -- growing grain (wheat) -- and (b) in the short run, the land was in fixed supply (perfectly inelastic) and in full constant use. Nothing had to be paid, therefore, to prevent this land from being transferred to uses other than grain growing -- no transfer payment was necessary -- because this land had no other use.

Therefore, by this model, all of the payment to land, i.e. all the rent, is a *surplus* over and above what is necessary to keep it in its present use of growing grain. Finally, given the short-run fixed supply of land, the price of land, or the rent for its use, will depend upon the demand for land, which in turn is a function of the price of grain.

Thus, because of the Ricardo theorem, the term 'rent' in Classical Economics became the term for payment of any such a 'surplus' to a factor of production over and above what was necessary to maintain that factor in its present use or form of production, above its opportunity cost.

5. Subsequent elaborations of the theory of rent:

(a) for labour:

This term was also applied to other factors of production, especially including various forms of labour. A movie star, for example, with a talent in very scarce and fixed supply, and enjoying a very high demand, will earn a very large 'rent' over and above his/her 'transfer earnings,' i.e. if his/her *opportunity cost* is low, when any other available *alternative* occupation would pay so much less.

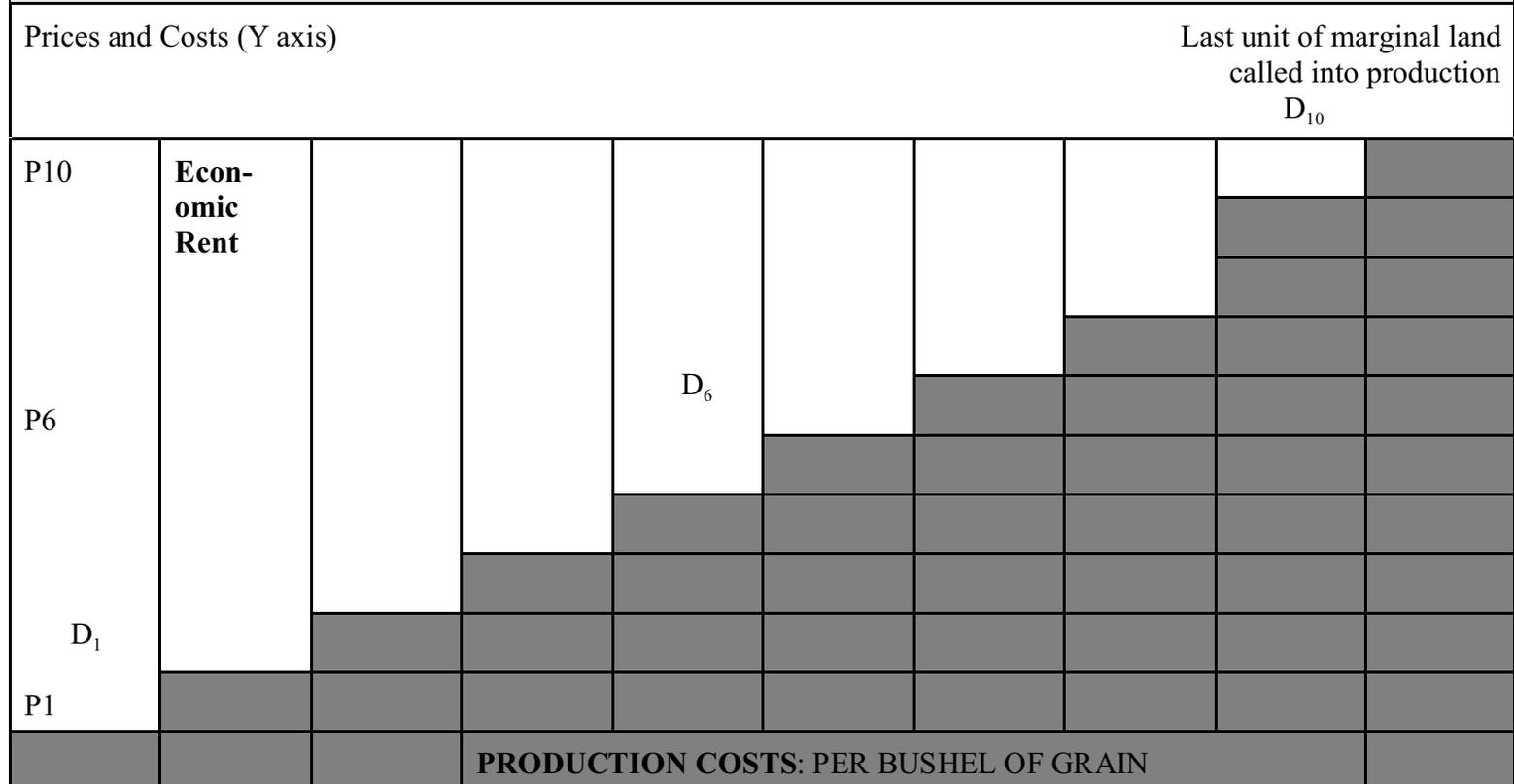
(b) for land:

Most land, however, was seen to have other, alternative uses: i.e., livestock raising, growing other crops, industrial applications, housing. And thus, from the point of view of any one use, part of the

payment made for the use of land would necessarily be a 'transfer payment,' to keep it in its present use (e.g., grain growing).

(c) **Thus all factors of production are really similar:** and payments for most factors of production usually consist both of a *transfer payment* and an *economic rent*.

THE RICARDO MODEL OF ECONOMIC RENT IN GRAIN PRODUCTION



UNITS OF LAND ADDED TO PRODUCTION (X axis)

- production costs per bushel of grain: shaded area
- economic rent per bushel of grain: blank area

DAVID RICARDO (1772 - 1823)

ECONOMICS OF POPULATION GROWTH

(1) RISING GRAIN PRICES:

- population growth forces higher cost marginal lands into production, so that the market price of grain is determined by the marginal cost of producing the last unit of grain on that last unit of land called into production
- Law of Diminishing Returns: declining marginal productivity of labour, on existing lands in production

(2) RISING ECONOMIC RENTS

- higher grain prices determine the rent (rent does not determine prices)
- see Ricardo Economic Rent model
- in Ricardo's view, the landlord has the power to expropriate the entire rent

(3) FALLING REAL WAGES

- adverse change in the land:labour ratio, with diminishing returns, and falling marginal productivity of labour
- Note: In Classical Economic Theory, the Wage Rate = MRP_L ; i.e. the Marginal Revenue Product of Labour (the market value of the last unit of production produced by the last unit of labour added to a fixed stock of land and capital)
- higher cost of living (rising grain prices)
- the real wage is the quantity of goods and services acquired with the money wage; and it is calculated as: $RW = NWI/CPI$

i.e., the Nominal Wage Index (of money wages paid in current silver coin) divided by the Consumer Price Index (the money value of a basket of consumables plus services).

DAVID RICARDO (1772 - 1823)

ECONOMICS OF POPULATION DECLINE

(1) FALLING GRAIN PRICES:

- which would hurt those landlords operating commercial farms,
- but also hurt those peasants similarly producing grain surpluses for the markets.

(2) FALLING ECONOMIC RENTS:

- which would certainly hurt landlords,
- but also those peasants who had earlier managed to hold or to secure some portion of those economic rents produced by prior population growth

(3) RISING REAL WAGES: as a result of both:

(a) much more favourable land:labour ratio

- that should have increased the marginal productivity of labour (at least in agriculture, if not so obviously in industry)
- note: in Classical Theory, the Wage Rate = MRP_L , i.e. , the Marginal Revenue Product of Labour

(b) falling food prices and land/housing rents:

- a fall in the cost of living, with falling food prices
- note: the real wage is calculated as: $RW = NWI/CPI$
i.e. , the Nominal Wage Index (money wages in silver) divided by the Consumer Price Index (the money cost of a basket of consumables and services).