

4.2 AGRICULTURAL GROUND-RENT

(This text is a translation of J.Gouverneur, *MANUEL DE THÉORIE ÉCONOMIQUE MARXISTE*, 1987, p.138-143. The terms “industry” and “industrial” refer to all capitalist activities, excluding agricultural production.)

The land is a special type of asset from several points of view: it is a « gift of nature » which, in its natural state, involves no human labour (so it has no value, in the strict sense); moreover, it only exists in limited quantities (it is not reproducible, as are the majority of commodities); it admits of private property (unlike other natural goods : the air, for example); finally it is indispensable for the exercise of various activities, particularly building and agriculture. These characteristics enable the landowner to demand the payment of a price (the *ground-rent*) from the builders or farmers to whom he hands over the use or ownership of the land.¹ This price does not correspond to any value or to any labour; it has as its origin the sole fact of the private ownership of the land; the owner’s revenue, as such, must therefore involve a charge on other revenues.²

In order to examine the ground-rent issue *in its specificity*, we must *disregard all other possible sources of surplus revenue transfers*. We therefore assume that all production is of a capitalist nature and that all branches of production, including the agricultural branch, have an identical composition of capital (C/V).³

Moreover we assume that the *supply of agricultural land is inelastic* (agricultural land only exists in strictly limited quantity, unlike factories it is not reproducible) and that this supply of land is controlled (monopolized) by *landowners distinct from agrarian capitalists*. The latter compete with each other to get the right of exploiting the soil (the right of having surplus revenue produced by peasant wage-earners), and the landowners only hand over this right against the payment of a suitable ground-rent.

The *demand for agricultural products* is assumed to be given and fixed (it depends on the number of people, the customary diet, etc.). As for the *supply of agricultural products*, it depends on the number of farms run by capitalists and the volume of production obtained on each of them. For the sake of simplicity, we assume that all farms are identical in every respect but one. They are identical, among other things, as far as size and production techniques are concerned (the latter are assumed to be given and fixed). But they differ in the natural fertility of the soil, which gives rise to differences in productivity (quantity produced per hectare or per wage-earner) and in unit value (past and present labour per unit produced).

Table 1 is based on the preceding assumptions. The composition of capital is the same in industry and agriculture (C/V = 4). The agricultural branch comprises three farms which are identical in every respect (K, L, C, V, S), except natural fertility and thus quantities produced: farm 1 is the most productive (unit value = 3.6), farm 3 is the least productive (unit value = 4.5). The total quantity produced by the agricultural branch amounts to 900, which is supposed to exactly match demand.

¹ Ground-rent takes the form of periodical payments when the landowner simply rents the land, the form of a single payment when he transfers the ownership of the land.

² Where the land has been *worked* (improved by the use of fertilizers, for instance), the price obtained corresponds partly to the value created and transferred by the labour in question and partly to the fact of private ownership as such. For the sake of simplicity, we assume here that the land embodies no labour.

³ Most authors, on the contrary, consider that the agricultural branch has a lower composition of capital, which makes it lose part of its surplus revenue through the « equalization of profit rates ». See for instance E. Mandel, *Traité d'économie marxiste*, Paris, Union générale d'éditions, 1962, vol. 2, chap. IX, p. 172 onwards, and M. Gutelman, *Structures et réformes agraires*, Paris, Maspero, 1974, p. 94 onwards.

Table 1 : Agricultural ground-rent

	Farm 1	Farm 2	Farm 3	Whole agricultural production	Whole industrial production
A. Starting data					
K (= C + V)	1,000	1,000	1,000	3,000	30,000
L	50	50	50	150	1,500
C	800	800	800	2,400	24,000
V	200	200	200	600	6,000
S	200	200	200	600	6,000
C + V + S	1,200	1,200	1,200	3,600	36,000
Q	333 1/3	300	266 2/3	900	---
c	2.4	2.66	3	2.66	---
v	0.6	0.66	0.75	0.66	---
s	0.6	0.66	0.75	0.66	---
c+ v + s	3.6	4	4.5	4	---
S/K	20 %	20 %	20 %	20 %	20 %
B. Setting up the agricultural price					
<i>1) Price corresponding to social value (simple price)</i>					
Unit price	4	4	4	4	---
Total revenue	1,333 1/3	1,200	1,066 2/3	3,600	---
Total profit	333 1/3	200	66 2/3	600	---
Capitalist profit	333 1/3	200	66 2/3	600	---
Profit rate	33 %	20 %	6 %	20 %	20 %
Ground-rent	0	0	0	0	---
<i>2) Price securing the average profit rate to the capitalist on the marginal land ("DR" price)</i>					
Unit price	4.5	4.5	4.5	4.5	---
Total revenue	1,500	1,350	1,200	4,050	---
Total profit	500	350	200	1,050	---
Capitalist profit	200	200	200	600	---
Profit rate	20 %	20 %	20 %	20 %	20 %
Differential rent (DR)	300	150	0	450	---
<i>3) Price securing a ground-rent to the owner of the marginal land ("AR" price)</i>					
Unit price	5.1	5.1	5.1	5.1	---
Total revenue	1,700	1,530	1,360	4,590	---
Total profit	700	530	360	1,050	---
Capitalist profit	200	200	200	600	---
Profit rate	20 %	20 %	20 %	20 %	20 %
Total rent	500	330	160	990	---
Differential rent (DR)	300	150	0	450	---
Absolute rent (AR)	200	180	160	540	---

The unit social value of the agricultural branch, and thus the simple price, is obtained as usual dividing total value by total quantity ($3600 : 900 = 4$). In an industrial branch in free competition, this price would be the actual market price. However, if the market price of the agricultural product were equal to the simple price, the agrarian capitalist running farm 3 would leave agriculture and start business in industry: indeed, his profit rate in agriculture would only be 6% (see table 1), whereas starting business with an average technique in any industrial branch would secure him a profit rate of 20% (and entering an industrial branch in free competition is always possible since factories, unlike soils, can be reproduced). On the other hand, if the agrarian capitalist n°3 leaves agriculture, total production falls below the 900 units necessary to meet demand: an adequate agricultural supply requires that the three farms be run, including farm n°3, the least fertile. But the latter will only be run if it ensures the capitalist a profit rate at least equal to 20% : the market price of the agricultural product must therefore be higher than the simple price.

Let us assume that the market price is 4.5. At this price farm n°3 yields a profit rate equal to the average rate of 20%⁴: the marginal land is thus farmed and the agricultural supply meets demand. But at this price (which is enjoyed by every farm) total revenue and total profit increase for each farm (see table 1). The agricultural branch thus offers capitalists profitability prospects above the average, which gives rise to competition between capitalists to farm the soils. Since land only exists in limited quantity, landowners can increase rents; eventually they leave capitalists a profit of 200 (which is enough to ensure each of them the average profit rate of 20%) and thus obtain a ground-rent, the level of which depends on the fertility of the soil (hence the name of « differential rent ») : the higher the fertility, the higher this rent.

If the market price is 4.5, the capitalist is prompted to cultivate the marginal land n°3, since he can obtain the average profit rate of 20%. However, if the capitalist obtains the required profit rate, the landowner, on the other hand, does not get the least ground-rent: he thus is not prompted to rent his piece of land to a capitalist entrepreneur ! Therefore, the agricultural price must be raised again in order to meet a twofold requirement : not only must the capitalist obtain the normal profit rate on the marginal soil (so as to be prompted to cultivate it), but the owner of this marginal soil must also obtain a rent (so as to be prompted to rent it). This rent is called the « absolute rent »: it is the ground-rent obtained by the owner of the marginal soil, and at the same time it is an additional rent obtained by the owners of the other soils (since the increased price applies to the product of all farms).

Let us assume that the market price is eventually set at 5.1 (see table 1)⁵. At this price, total revenue and total profit still increase on each farm. However, due to competition between agrarian capitalists and the landowners' monopoly on soils, each capitalist eventually gets no more than the average profit rate of 20%, while the landowners obtain a higher total ground-rent (990, of which 450 is differential rent and 540 is absolute rent).

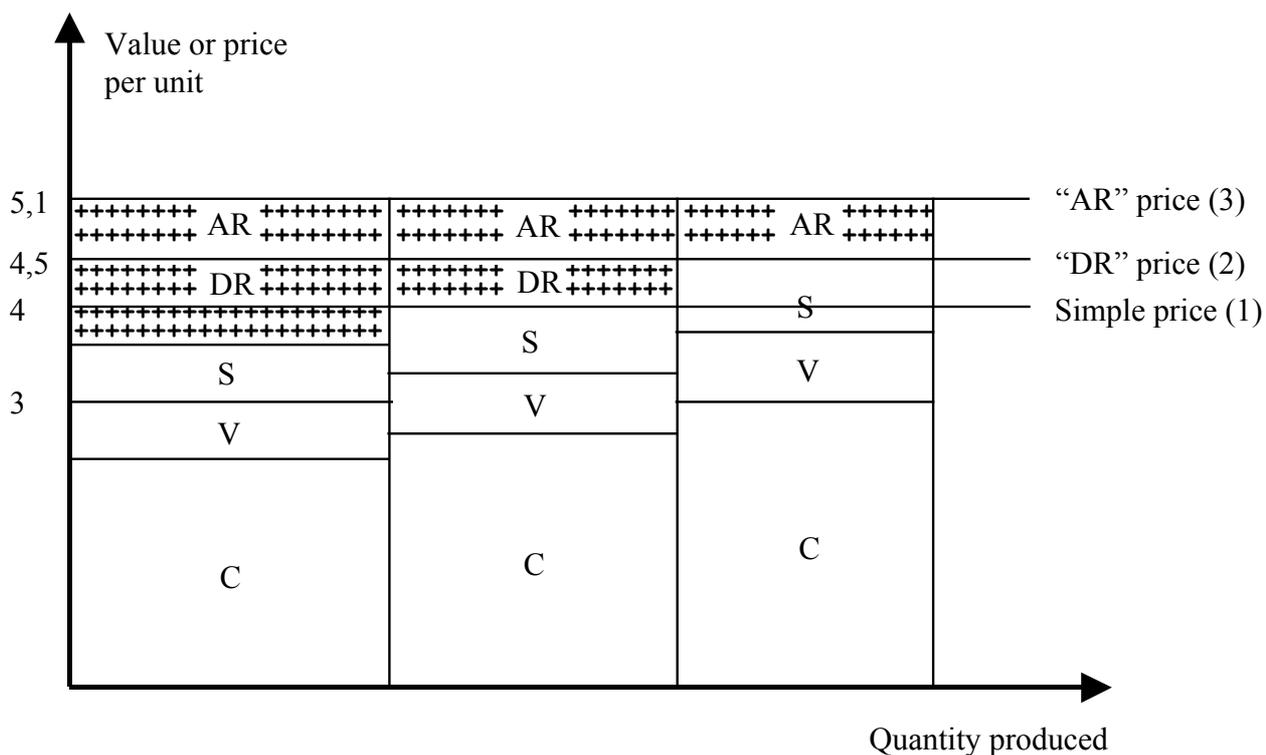
The data of the above example are synthesized in figure 1. The latter clearly shows the differential rent earned by the landowners of farms 1 and 2, as well as the absolute rent earned by all landowners (including on farm 3, the least fertile)⁶.

⁴ A profit rate of 20% on an invested capital of 1000 (C+V) involves a profit (P) of 200. So C+V+P must be equal to 1200, which implies a market price of 4.5 (= $1200 : 266 \frac{2}{3}$).

⁵ As they seek to maximize their rent, it is in the landowners' interest that agricultural prices be as high as possible. The level of agricultural prices, as well as the exact distribution of total agricultural surplus between capitalist profit and ground-rent, will depend on the balance of forces between all groups concerned (agrarian capitalists, landowners, industrial capitalists purchasing agricultural raw materials or labour-power consuming agricultural products).

⁶ Let us also note that the *absolute* rent is identical *per unit produced*, whatever the farm (but total absolute rent varies according to farms, since the quantities produced are different).

Figure 1 : Agricultural ground-rent



Farm 1	Farm 2	Farm 3
Q = 333 1/3	Q = 300	Q = 266 2/3
S/V = 100%	S/V = 100%	S/V = 100%
C/V = 4	C/V = 4	C/V = 4

Notes :

- Figure 1 uses the same data as Table 1.
- Meaning of the various prices :
 - (1) simple price = monetary expression of social value.
 - (2) "DR" price = price that secures the average profit rate to the capitalist on the marginal land and a differential rent to the owners of the other farms.
 - (3) "AR" price = price that secures a ground-rent (absolute rent) to the owner of the marginal land and an additional rent (absolute rent) to the owners of the other farms.

What is the source of all these ground-rents (both absolute and differential) ? As has already been mentioned, ground-rents originate from the sole fact of the private ownership of the land : they do not correspond to any labour, they do not derive from a creation of value or revenue by landowners. This being so, ground-rent necessarily involves a charge on other revenues, a *deduction from the surplus revenue created in the whole economy*.

This deduction is made explicit in table 2. Total surplus revenue created in the whole economy (industry + agriculture) amounts to 6600. Landowners charge a total rent of 990, capitalists (both industrial and agrarian) must share out a total profit of 5610. In accordance with the usual process of equalization of profit rates, the average profit rate declines to 17% both in industry and agriculture. Therefore, the ground-rent accruing to landowners reduces the profit rate accruing to capitalists (and thus their potential for accumulation).

Table 2 : Agricultural ground-rent and surplus revenue transfers

	Whole industrial production	Whole agricultural production	Ground-rent	Total
C/V	4	4	---	4
K (= C + V)	30,000	3,000	---	33,000
L	1,500	150	---	1,650
C	24,000	2,400	---	26,400
V	6,000	600	---	6,600
S	6,000	600	---	6,600
C + V + S	36,000	3,600	---	39,600
S/K	20 %	20 %	---	20 %
P or R	5,100	510	990	6,600
P/K	17 %	17 %	---	17 %
P (or R) – S	- 900	- 90	+ 990	0