

David Ricardo — Rent, the Margin, and Profit

Quiz 5 · HL ch. 5 · Thursday, Oct 22 · 20 points

Name _____

Twenty minutes. Pencil or pen, on this sheet. **Write clearly: if I cannot read it, I cannot grade it.** Show the arithmetic where there is arithmetic.

1. The question Ricardo set himself

4 pts

“The produce of the earth—all that is derived from its surface by the united application of labour, machinery, and capital, is divided among three classes of the community, namely, the proprietor of the land, the owner of the stock of capital necessary for its cultivation, and the labourers by whose industry it is cultivated.”

Ricardo, preface to the *Principles* (1817), quoted in HL p. 92

Finish the thought. In the next sentence Ricardo says what the principal problem of political economy is. What is it, in your own words or his? Then say, in two or three sentences, what that problem has to do with the corn model we built in class.

“To determine the laws which regulate this distribution is the principal problem in Political Economy.” The corn model is that problem worked out: competition and the margin divide the produce into rent, profit, and wages, and show how the shares shift as worse land comes in. Full credit: “laws of distribution” plus the link to the three shares.

The farm. Five parcels of land. With one dose of capital and labor each, they yield this much corn (quarters). The subsistence wage of the labor on a parcel is **60 quarters**.

Parcel	1	2	3	4	5
Total produce	120	110	95	85	70

Definitions. Net produce = produce – wages. It is the surplus, and it goes to rent or to farmer profit, nowhere else. Farmer profit = net produce – rent. In equilibrium, rent on a parcel = its produce – produce on the marginal parcel, and the rate of profit r = farmer profit per parcel ÷ wage.

2. The static picture: three parcels, posted rents

3 pts

Parcels 1, 2, and 3 are farmed. A land agent has posted these rents: 30 on parcel 1, 10 on parcel 2, 5 on parcel 3. Fill in every cell, including the totals row.

Parcel	Produce	Wages	Net produce	Posted rent	Farmer profit
1	120	60	60	30	30
2	110	60	50	10	40
3	95	60	35	5	30
Total	325	180	145	45	100

Total surplus (net produce) = total rent + total farmer profit: $145 = 45 + 100$.

3. The equilibrium

3 pts

Now let the farmers compete. Fill in the equilibrium rents and profits, then the totals.

Parcel	Produce	Wages	Net produce	Equilibrium rent	Farmer profit
1	120	60	60	25	35
2	110	60	50	15	35
3	95	60	35	0	35
Total	325	180	145	40	105

Compare with question 2. What is the same, what changed, and why would the posted rents not last?

Same: wages 180, surplus 145. Changed: the split (landlords 40 not 45, farmers 105 not 100) and every farmer now keeps 35. Posted rents fail because parcel 2's farmer kept 40 while others kept 30, so they bid his rent up, and parcel 3 is the margin, so it pays nothing.

4. Population grows

3 pts

Parcel 4 (85) comes in, then 5 (70). Fill both rows at equilibrium; the last four columns are totals.

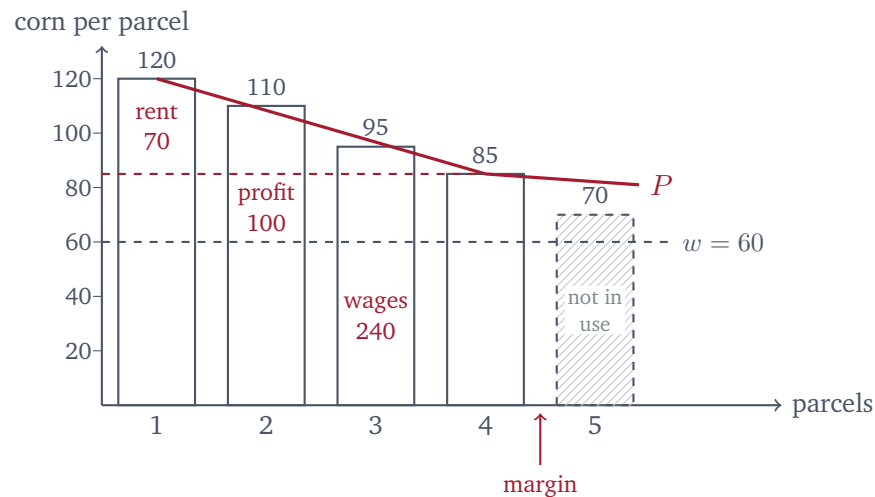
In use	Margin produce	Profit / parcel	r	Rent	Farmer profit	Wages	Surplus
4	85	25	0.42	70	100	240	170
5	70	10	0.17	130	50	300	180

The wage per parcel is now 60. Has it changed since question 2? *No.* Cultivation stops when the next parcel produces 60. Ricardo's name for it: *the stationary state*.

5. Draw it

3 pts

The bars are the five parcels; **four are in use**. (a) Draw the line through the bar tops and label it P . (b) Mark the margin. (c) Shade and label **rent**, **profit**, and **wages**. (d) Write each total below.



Rent total: **70** Profit total: **100** Wages total: **240**

6. Who took the farmers' profit?

2 pts

Between question 3 and question 4 total rent went from 40 to 130, while profit per parcel fell from 35 to 10. The landlords did nothing. In Ricardo's terms, explain why profit fell, and why the answer "because the landlords took it" is wrong.

The margin moved out: marginal produce fell $95 \rightarrow 70$ while the wage held at 60, so profit at the margin fell and competition equalizes every parcel to it. Rent is the residual, "never a new creation of revenue" (HL p. 97). Landlords are passive.

7. The Corn Laws

2 pts

Foreign corn can now be imported at a cost equal to a parcel that produces **95**. (Population still needs five parcels' worth of corn.)

Parcels still farmed: **1, 2, 3**. Rent on parcel 1: **25**.

Profit per parcel: **35**. $r = 35/60 \approx 0.58$.

Who votes to keep the Corn Laws, and what did Ricardo say about that class's interest?

Landlords only: the ban pushes the margin to parcel 5, rent $40 \rightarrow 130$, r $0.58 \rightarrow 0.17$. "The interest of the landlord is always opposed to the interest of every other class in the community" (HL p. 96).