Additional Exercises

The Factor Specific Model

Two sectors are producing one identical output using land and labour, and capital. Marginal products of labour in these two sectors are as follows.

Marginal Product of Labour in Bicycles: $\mathbf{MPL_Y = 24-3L_Y}$
Marginal Product of Labour in Vegetables: $\mathbf{MPL_C = 15-2L_C}$

where $\mathbf{L_Y}$ and $\mathbf{L_C}$ Land and the labour force are fully employed in both sectors, Labour force equals 5000 in each sector. After initially rigid in the job market (employees needed to get qualification certificate), both sectors are characterized by the free movement of their labour force between them. are in terms of **1000** workers.

(i) Find the real wages in Bicycles and Vegetables **before** the L labour movement (HINT: to assess the L_y and L_c divide L by 1000).
(ii) Depict the equilibrium of labour market (HINT: use aquarium type graph)
(iii) Calculate Total Real Rent of Land and Capital (HINT: mind that the MPL_i is a linear function. The $TRRL_i$ should be calculated as a field under MPL_i and above w_i/P_i)

What would happen after labour movement?

(iv) Calculate the level of wages in equilibrium.
(v) How many workers will be employed in both sectors?
(vi) We assumed that $P_y/P_c=1$. What would be changed if we increase the P_c by 20%? Recalculate Your answers from (ii)-(v).