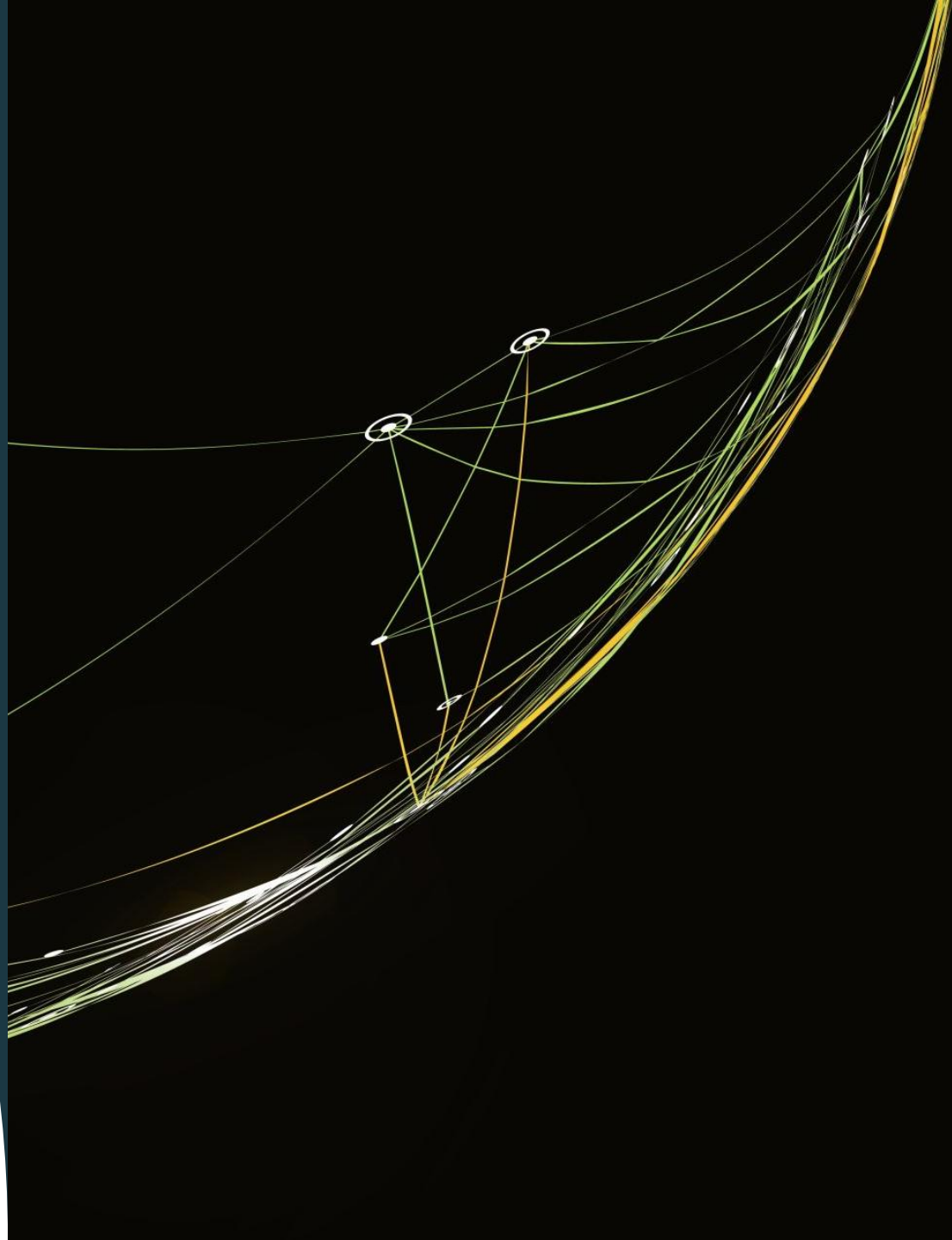
International Trade and Income Distribution



The Specific Factors (SF) Model

Opening a country to trade generates winners and losers. The Specific Factors model helps explain who gains and who loses.

It is called the specific-factors model because land is specific to the agriculture sector and capital is specific to the manufacturing sector; labor is used in both sectors.

The Ricardian model implies that free trade increases relative prices in the export sector and decreases relative prices in the import sector, and this in turn affects the earnings of factors of production.

Production Structure in the SF Model

Unlike the Ricardian model, production is subject to diminishing returns, i.e., marginal products are decreasing.

To produce the Agricultural good (A) you need Labor and Capital.

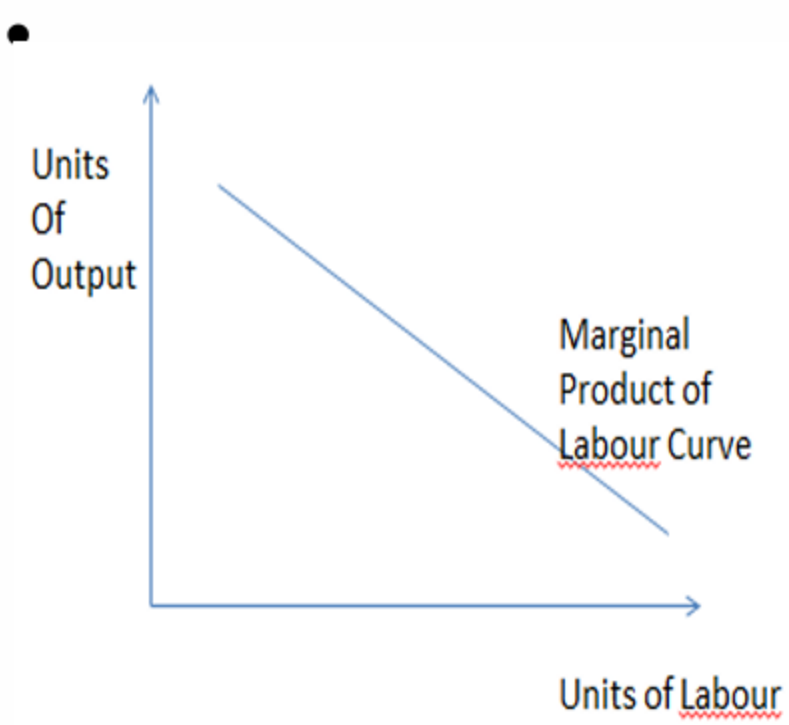
To produce the Manufacturing good (M) you need Labor and Land.
Thus, Capital (K), and Land (T) are used in the production of one good only – they are the Specific Factors (SF)

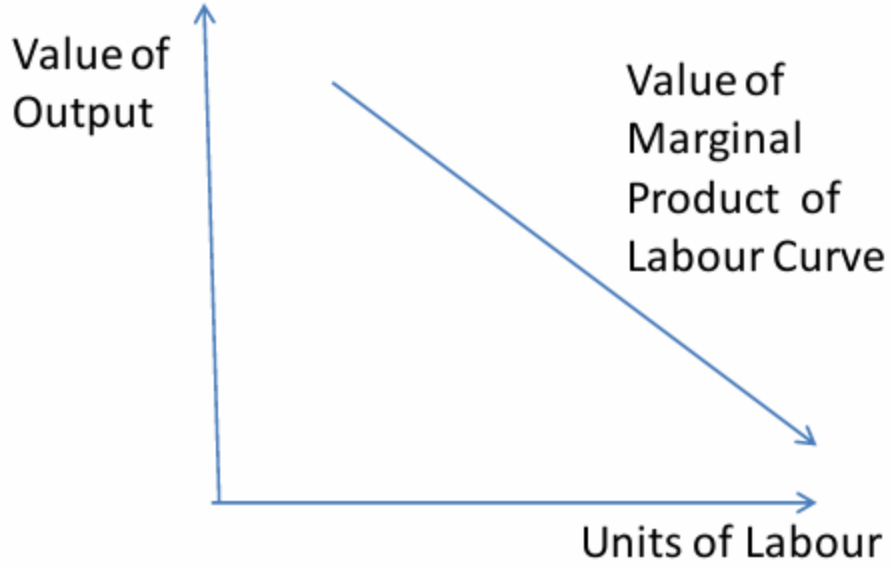
Labor (L) is used in the production of both goods – it is the mobile factor.

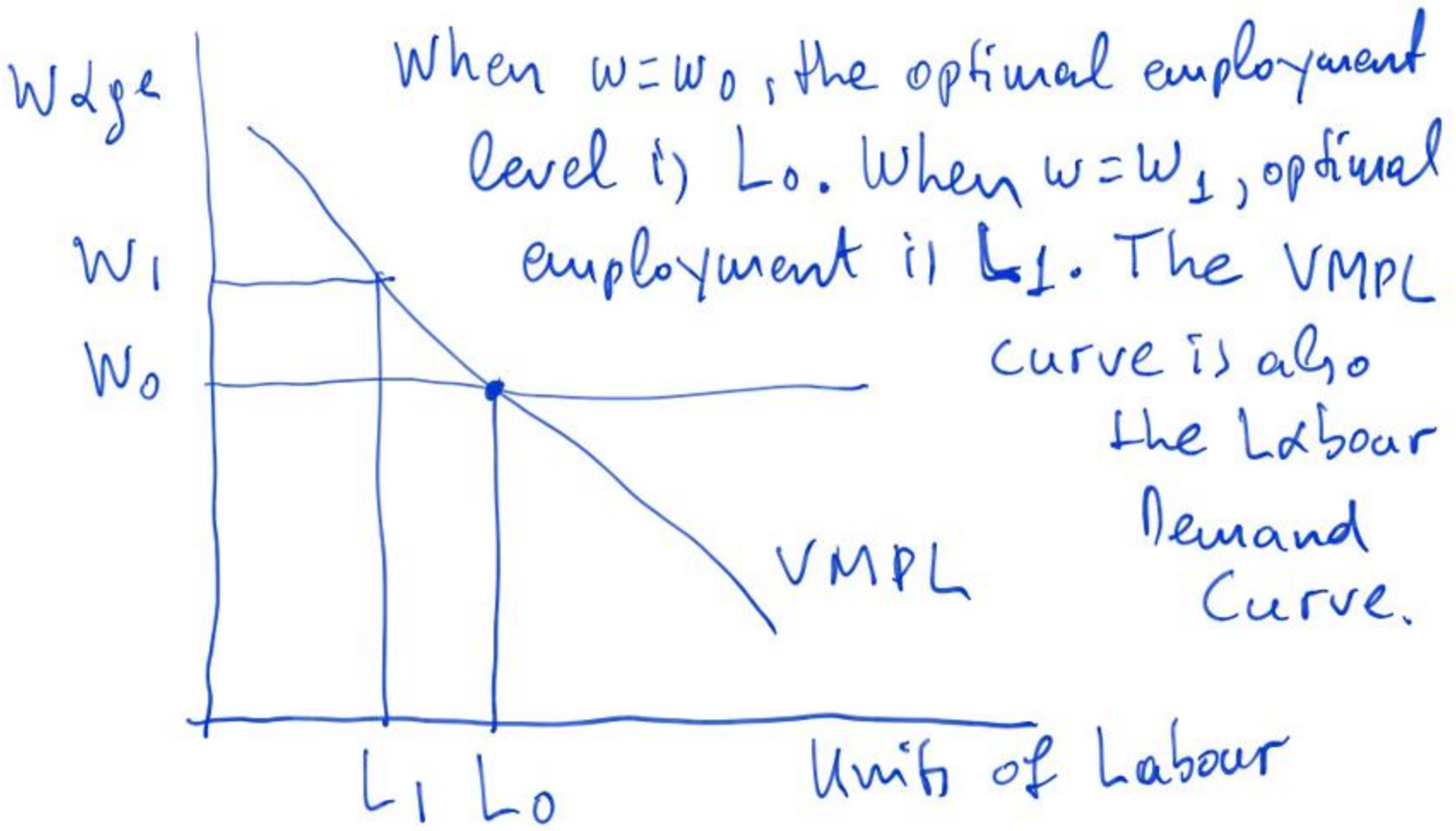
Employment of Labor in the production of A is denoted as L_A and employment in the production of M is denoted as L_M.
$L = L_A + L_M$

In the SF model, unlike the Ricardian model, a country produces both goods after FT, one of which it exports (exportable), while it imports the other (importable).

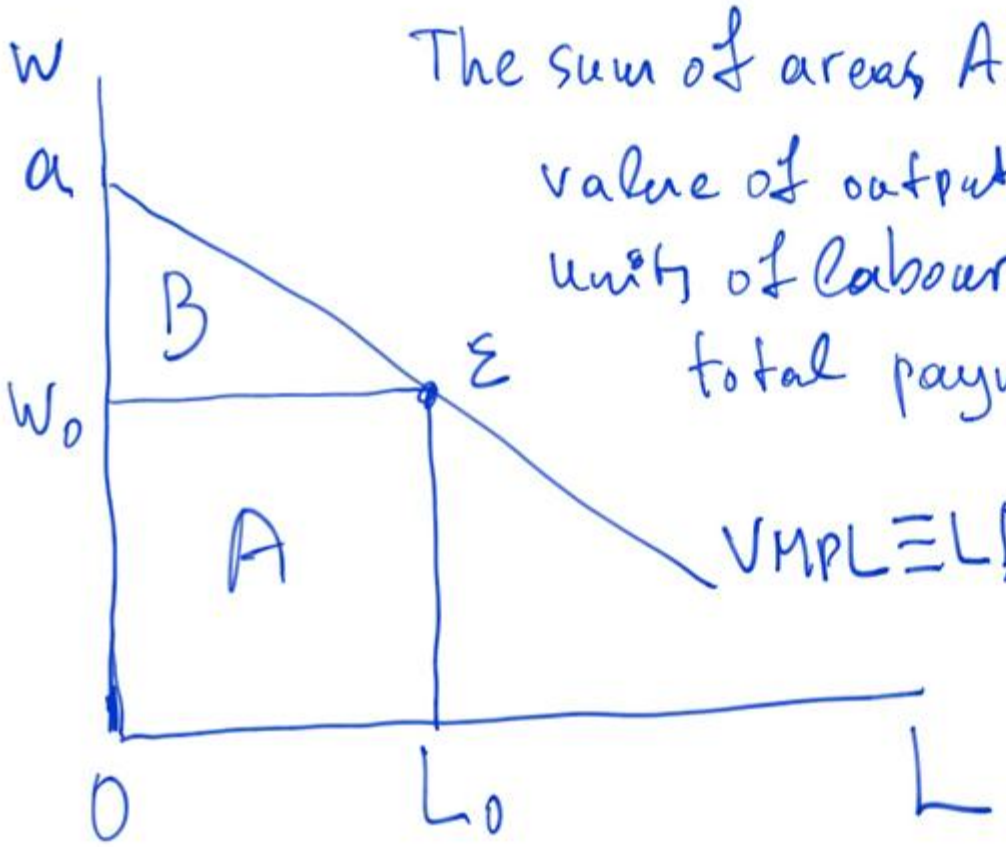
We assume that as each unit of labour is added to production, the additional output is getting smaller and smaller, i.e. the marginal product of labour declines as the labour input increases., as depicted in the left-hand-side diagram below. The **value** of what is produced by each worker is equal to the marginal product of Labour (MPL) times the price of the product, i.e. VMPL= P x MPL, and is depicted in the right-hand-side diagram below.






When w=w0, the optimal employment level is L0. When w=w1, optimal employment is L1. The VMPL curve is also the Labour Demand Curve.
Wage
W1
W0
VMPL
L1 L0
Units of Labour

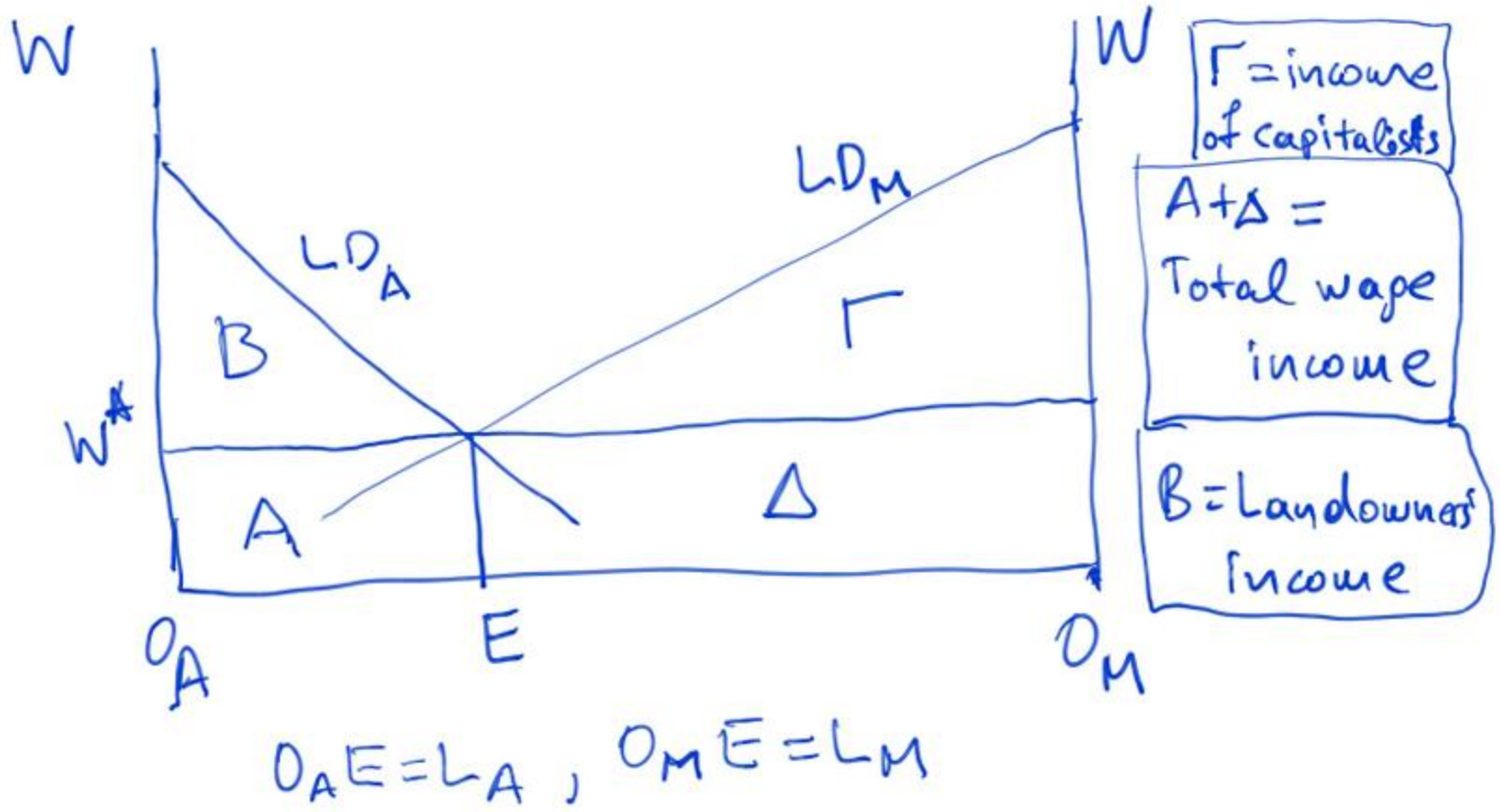
The Distribution of Income between Wage Income and Profits



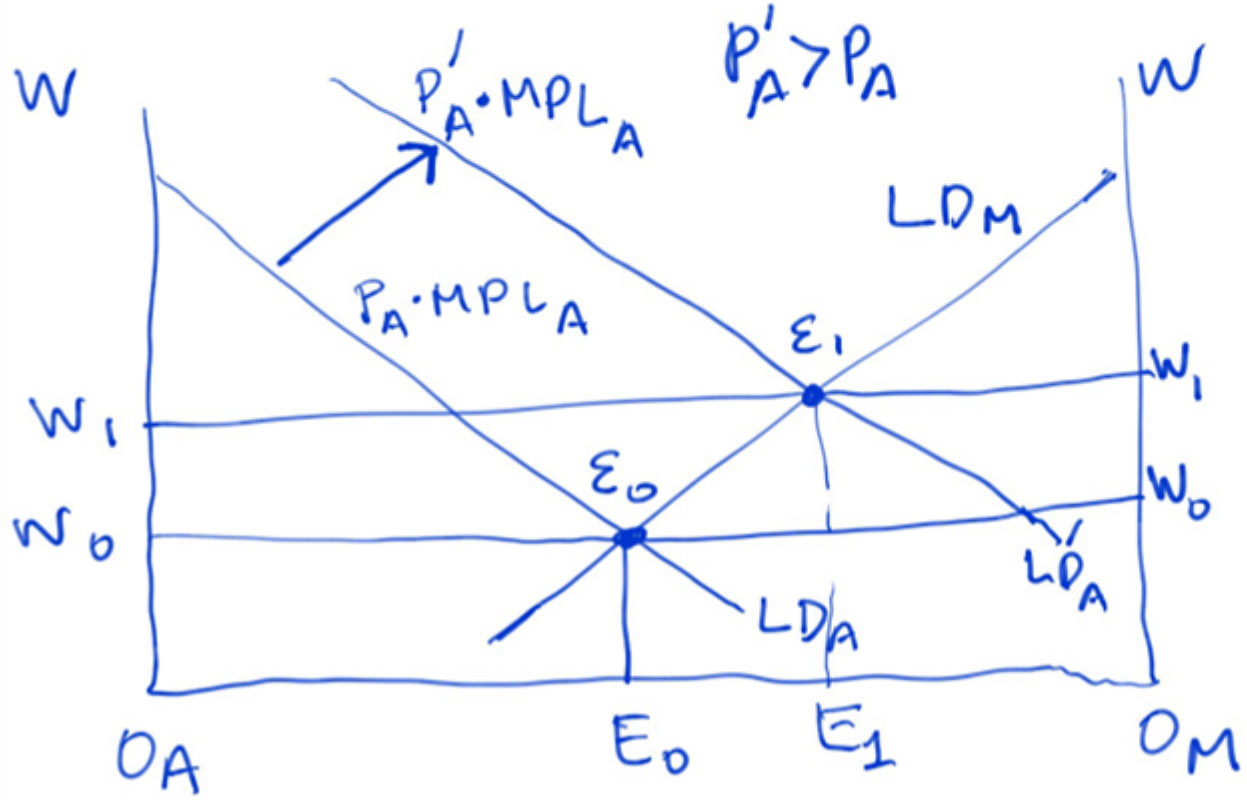
The sum of areas A and B is the total value of output produced by L_0 units of labour. Area A is the total payments made to the L_0 workers, thus area B represents the profits.

The equilibrium allocation of labour between sectors

Note: The size of the horizontal axis is equal to the total units of labour in the economy, i.e. $O_A O_M = L$



Opening an economy to international trade (IT) implies that the relative price of the exportable good (i.e. the good in which the country has CA) will rise. As a result the demand for labour curve in the exportable sector (assumed to be good A) will shift upwards as shown in the diagram below. Without loss of generality, we assume that the price of the M good remains constant. The new equilibrium involves a rise in the **(nominal)** wage rate and an increase (decrease) in employment in the exportable (importable) sector. As a result, the real income of capitalists declines, while the real income of landowners increases. Real wages may rise or fall. As a result, IT generates winners and losers.



Initially, the equilibrium is at point E_0, with $L_A = O_A E_0$, and $L_M = E_0 O_M$. After $P_A \uparrow$, LD_A shifts outwards and the new equilibrium is at point E_1.