1. Klausur zu KV "Wachstum und Verteilung", 3.11.2008

Sie müssen in jedem der drei Partiale mindestens 30% erreichen und insgesamt mindestens 50%!

1. Classical one-commodity model

1. Assume that there is a process of production which in obvious notation can be given as

$$(a, l) \rightarrow 1 \quad (a < 1).$$

How much must be employed of the commodity ("corn") *as a whole* as a means of production in order to produce a surplus or net product such that

- exactly one unit of corn can be consumed and
- there is a net investment that allows the system to grow at rate g?

How much labour is needed as a whole in the situation described?

2. Establish the corresponding $w(r)$- and $c(g)$-relationship.

What is meant by the duality of the two?

3. In the *Wealth of Nations* Adam Smith distinguishes between "productive" and "unproductive" labour. Assume (!) now that the labour employed in agriculture is productive, whereas the labour employed in the financial sector is unproductive. Assume in addition that all labour can consume b units of corn and that $a + bl < 1$. Determine the maximum number of unproductive units of labour that can be supported by one unit of productive labour.

4. Assume that the numerical specification of

$$(a, l) \rightarrow 1$$

is

$$(\tfrac{1}{2}, 1) \rightarrow 1$$

The wage per unit of labour in terms of corn paid at the end of the production period is $\frac{1}{4}$.
Calculate the corresponding rate of profit r?

Assume now that there are no savings-alias-investments out of wages and 50% out of profits. What is the rate of capital accumulation g?

An invention makes available a further process of production:

$$(\tfrac{2}{3}, \tfrac{1}{2}) \rightarrow 1$$

Will it be addopted by cost-minimizing producers at the going wage rate? If yes, what will be the new rate of profit?

5. Interpret the following passage in David Ricardo's writings:

> "A diminution of the proportion of produce, in consequence of the accumulation of capital, does not fall wholly on the owner of stock, but is shared with him by the labourers. The whole amount of wages paid will be greater, but the portion paid to each man, will in all probability, be somewhat diminished." (Ricardo, *Works*, VI, p. 162-3.)

Use the following graph in order to illustrate your argument. Specify carefully the assumptions you employ.
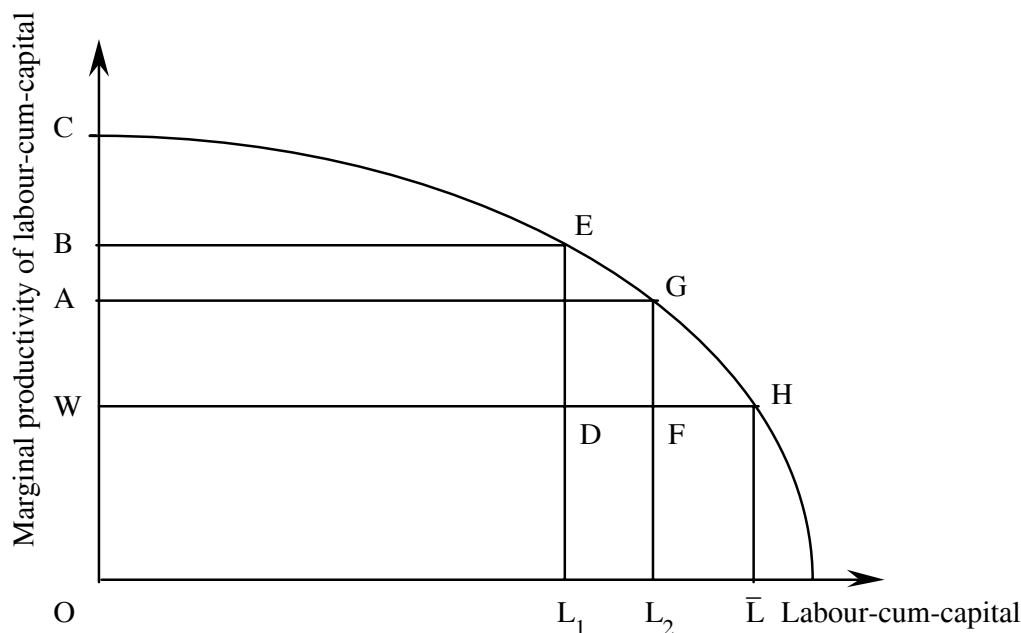
2. Classical model with two commodities

1. Define *basic* and *non-basic* products!

What is *a cost-minimising system of production* at a *given* rate of profit r^*? (Assume that both commodities are basic products.)

Define in this context the concepts of "extra costs","extra profits" and "long-period position of the economic system".

Illustrate your argument graphically.

2. In the context of a discussion of Schumpeter's approach to innovations and profits you have come across a typology of cases. Give a summary account of this typology and explain briefly what is happening in each case.

3. Keynesian growth theory

1. What is the meaning of "Says law"?
What is the meaning of the "Principle of effective demand"?

2. Investments have (at least) two effects. Explain these effects and illustrate them in terms of a simple macroeconomic model.

3. Assume that in the conventional notation $s = 0{,}15$ und $v = 3$. Which condition must be met in order for the capital stock to be continually fully utilised? Provide a full explanation of this condition.

4. Assume that the economic system expands at the *warranted rate of growth* (Harrod). Explain what that rate is, and why!

Then assume that a financial superbubble bursts. How can this event affect the "real economy". Why are fears of a depression well founded? Explain this by using Harrod's *Instability Principle* in combination with Keynes's concept of *liquidity preference*.