ECON 336 HW 2

Due: Monday, Sep 27

Short answer questions:

1) Briefly define the following terms:
   a. Capital output ratio
   b. Solow residual
   c. Market failure
   d. Dualism
   e. Net saving ratio
   f. Structural transformation

   Please check the PowerPoint slides for these definitions.

2) What are the main differences between the linear stages and international dependency models of development?
   Lack of development is generated internally with the linear stages model, and is attributed to a lack of savings and investment. It is generated externally in the dependency model, and is the result of actions taken by the developed countries.

3) Describe one important criticism of Rostow's stages of economic growth theory.
   The stages are only necessary and not sufficient conditions, savings is too aggregate a measure, the theory does not take into account the constraints of the international economic order, and there are counter-examples such as Argentina.

4) Dependency theory characterizes countries as being either in the center or on the periphery. Explain these two concepts. If this theory is correct, what are the implications for development strategy?
   Inward looking trade policies, regional economic integration, collective action to increase bargaining power in relation to multinational corporations, as well as creation of state-owned enterprises.

5) Assume a closed economy, perfectly elastic labor supply, and linear technology. Suppose the incremental capital-output ratio (ICOR) is 3, the depreciation rate is 3%, and the gross savings rate is 10%. Use the Harrod-Domar growth equation to determine the rate of growth. What would the gross savings rate have to be to achieve 5% growth? Assuming a perfectly elastic labor supply, state one criticism of this model from an exogenous growth theory viewpoint and another criticism of this model from an endogenous growth theory viewpoint.

$$\frac{\Delta Y}{Y} = \frac{s^G}{c} - \delta$$

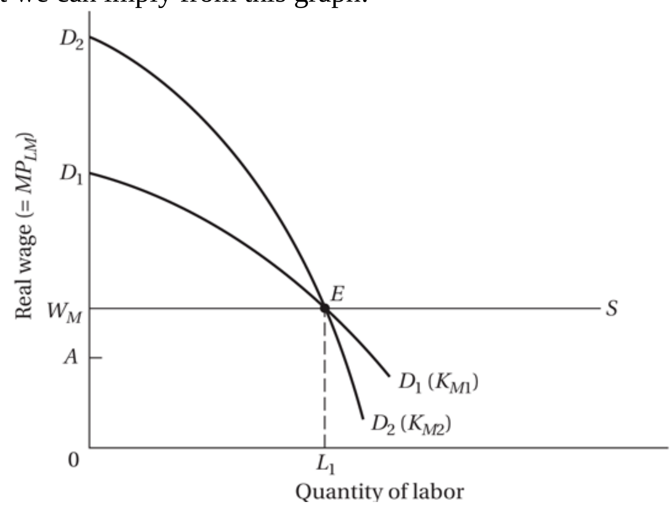
   Growth = 0.1/3 - 0.03 = 0.03
   Growth rate of 0.0 03, that is 0.3%, and 0.24, or 24% savings rate.

0.05 = s/3 - 0.03, Therefore, the saving rate is 24%.
Exogenous: does not allow factor substitution; endogenous: does not address sources of productivity growth, or the savings decision. Constant return to saving rate. Both: Constant return to each factor of production.

6) What are the key assumptions of the Lewis model that give rise to its conclusions? How would the theory's conclusions differ if these assumptions do not hold?
The existence of surplus labor in the rural sector that guarantees an infinitely elastic labor supply in industry until the surplus is exhausted and a propensity to save by industrialists equal to one. The lack of rural surplus labor (and infinite labor supply) would imply that when industrialists reinvest their profits there is no guarantee that their surplus increases. A low marginal propensity to save by industrialists puts a break on the labor transfer process.

7) What would be effects of an increase in the saving rate on GDP and GDP growth in the Solow model? What about the Harrod-Domar growth model?
Solow: Increase in GDP and a temporary increase in GDP growth.
Harrod-Domar: A permanent increase in GDP growth.

8) Briefly Explain what we can imply from this graph.



This graph shows the equilibrium in the labor market in the industrial sector based on the Lewis model. If business owners re-invest their profit into labor saving capital, they do not attract more labor from the agricultural sector and thus, the labor surplus in the agricultural sector will persist.