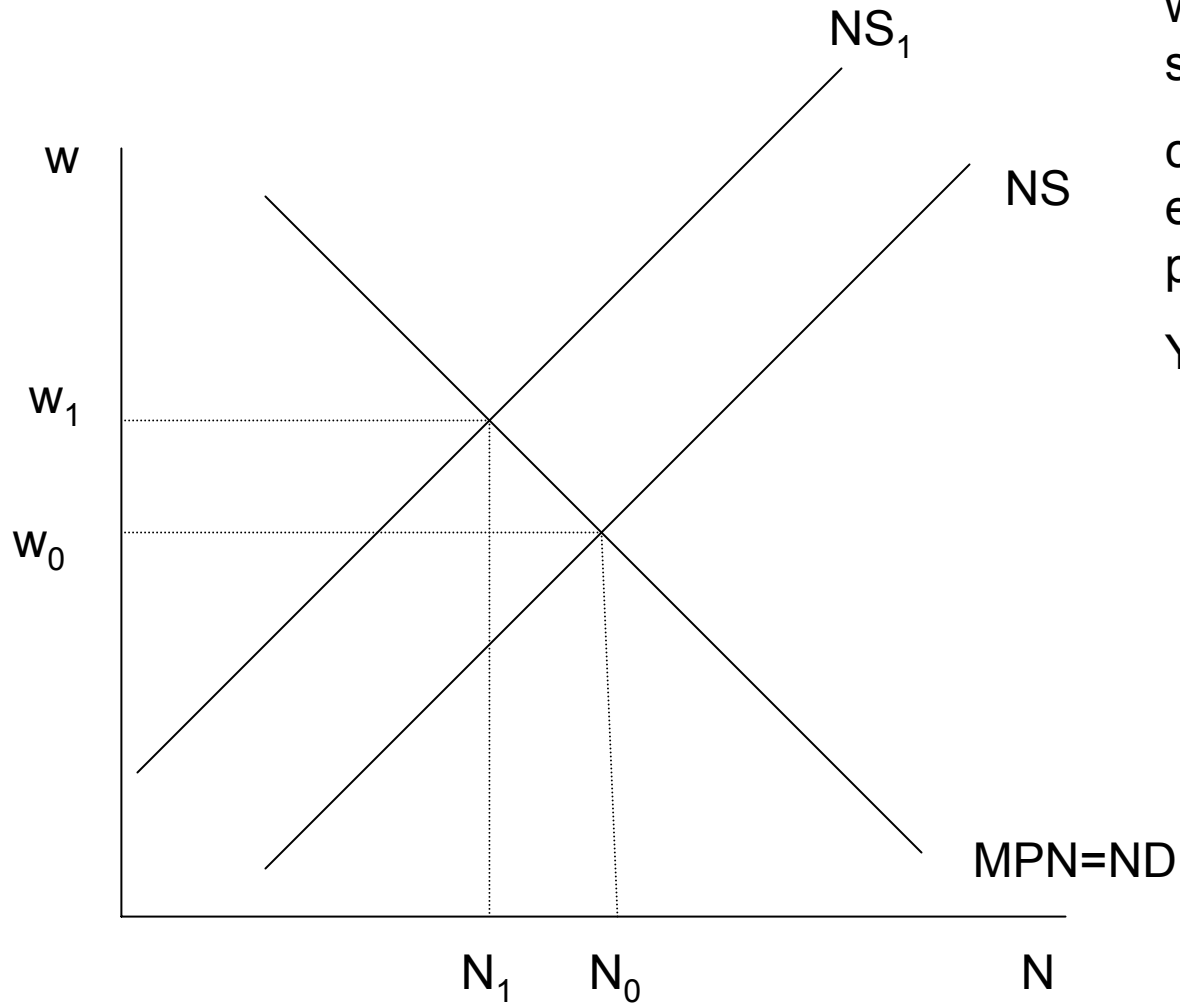


1

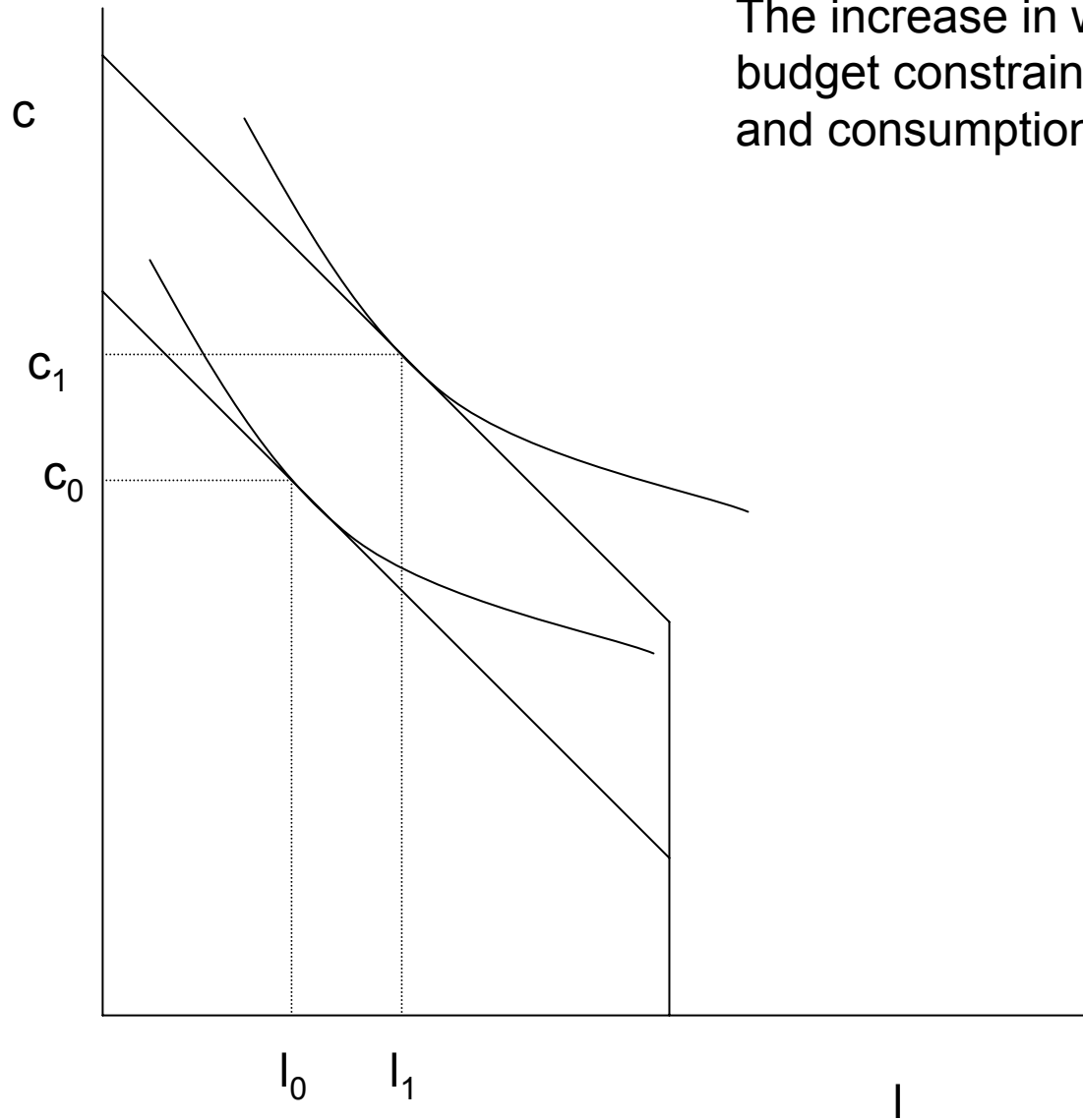


b. The increase in wealth shifts labor supply left.

c. The fall in employment reduces potential output.

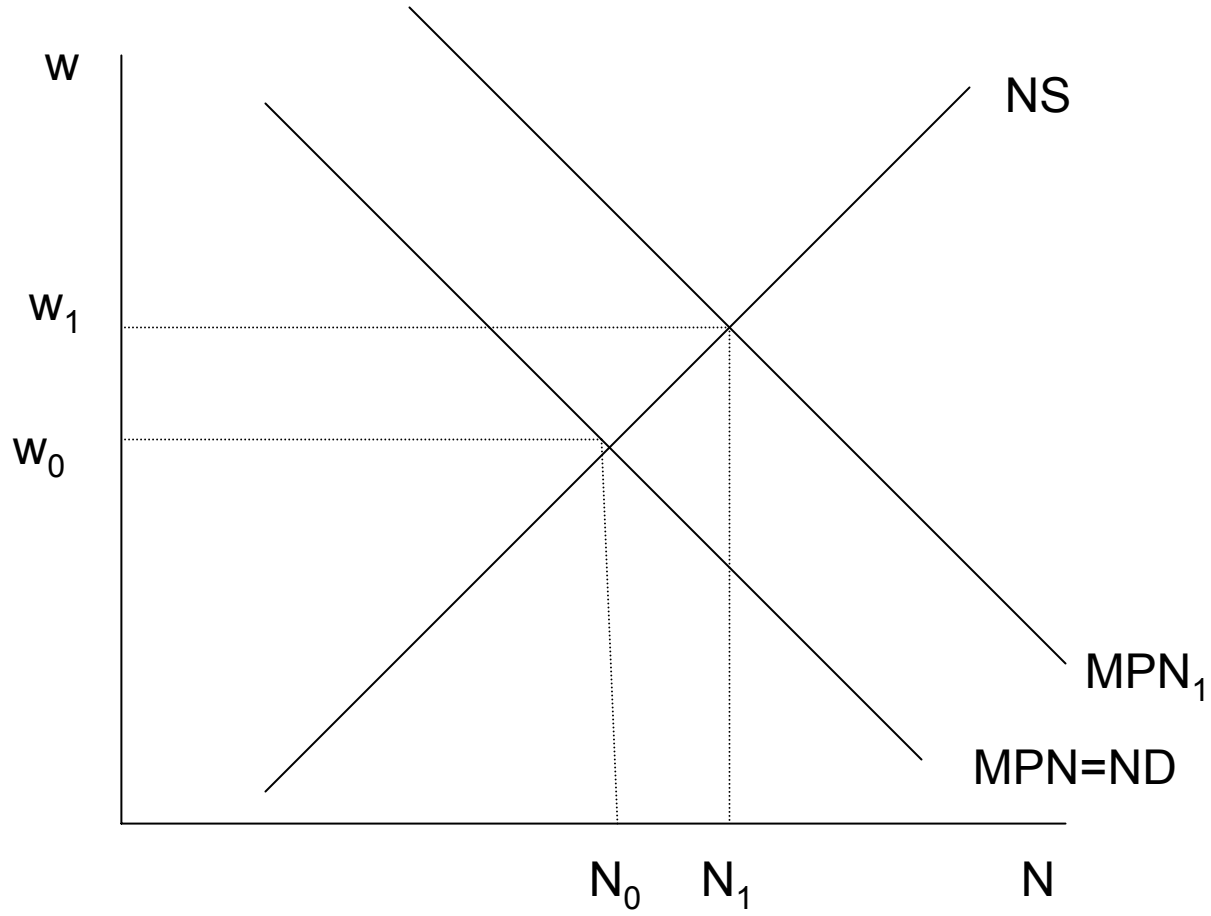
$$Y = AK^\alpha N^{1-\alpha}$$

1a

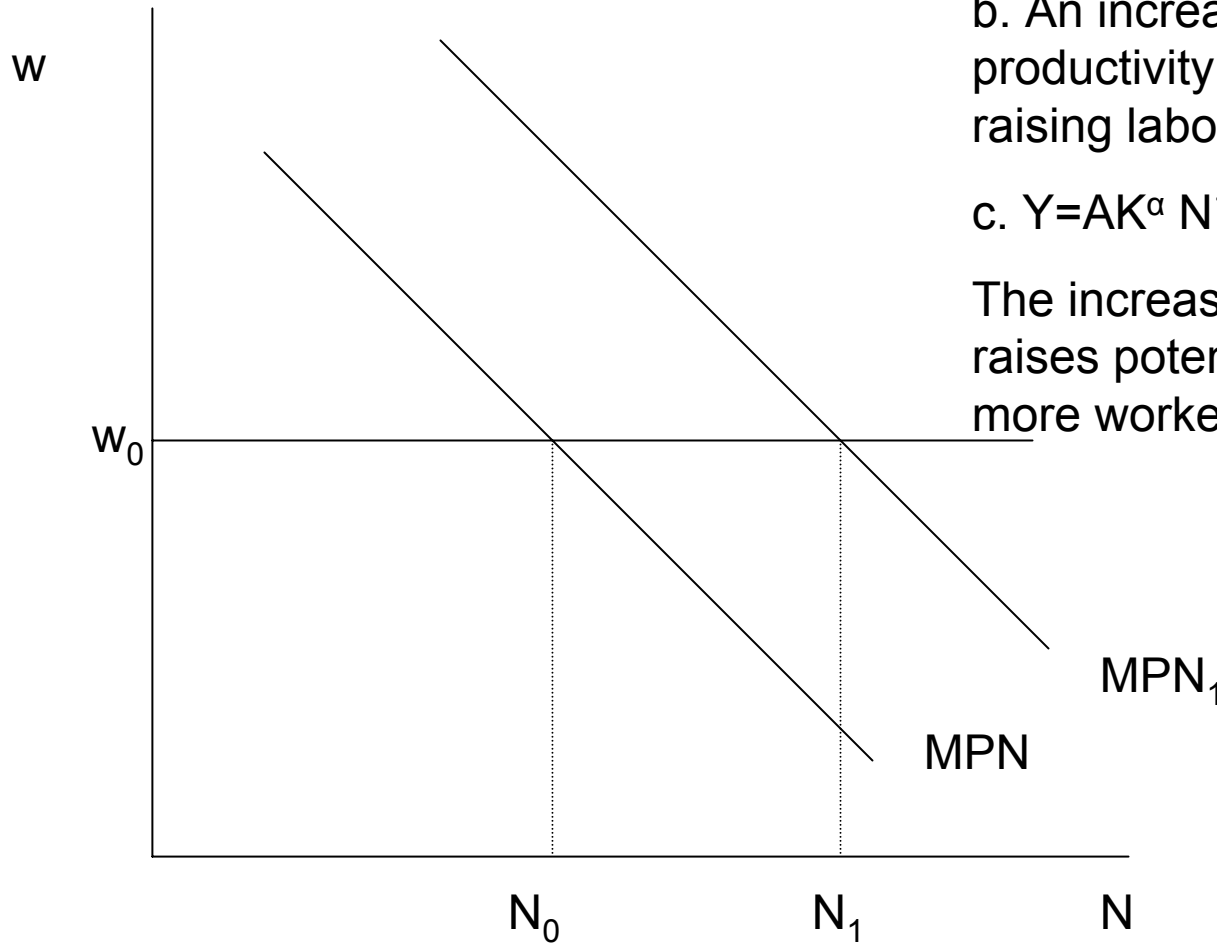


The increase in wealth shifts the budget constraint out, raising leisure and consumption.

2



2a



The firm hires until MPN equals the real wage. Labor demand is MPN.

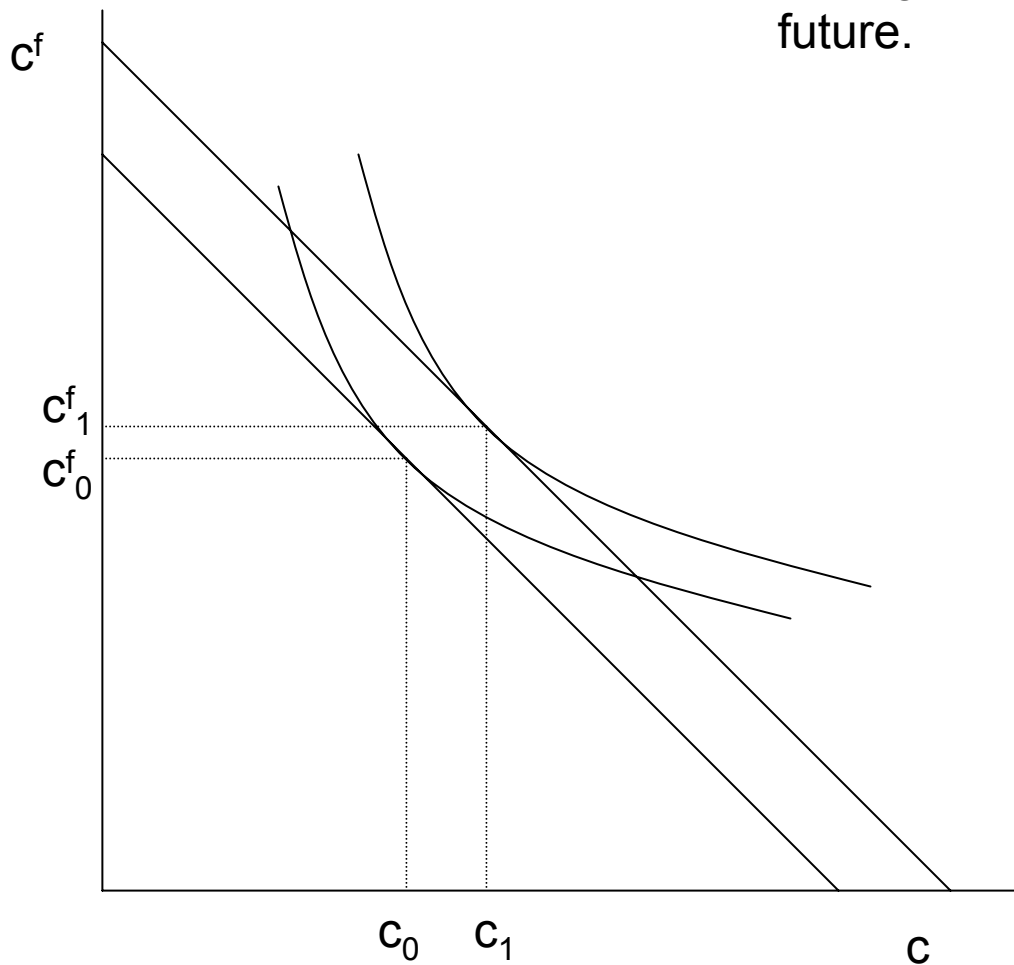
b. An increase in total factor productivity raises the MPN raising labor demand.

c.  $Y = AK^\alpha N^{1-\alpha}$

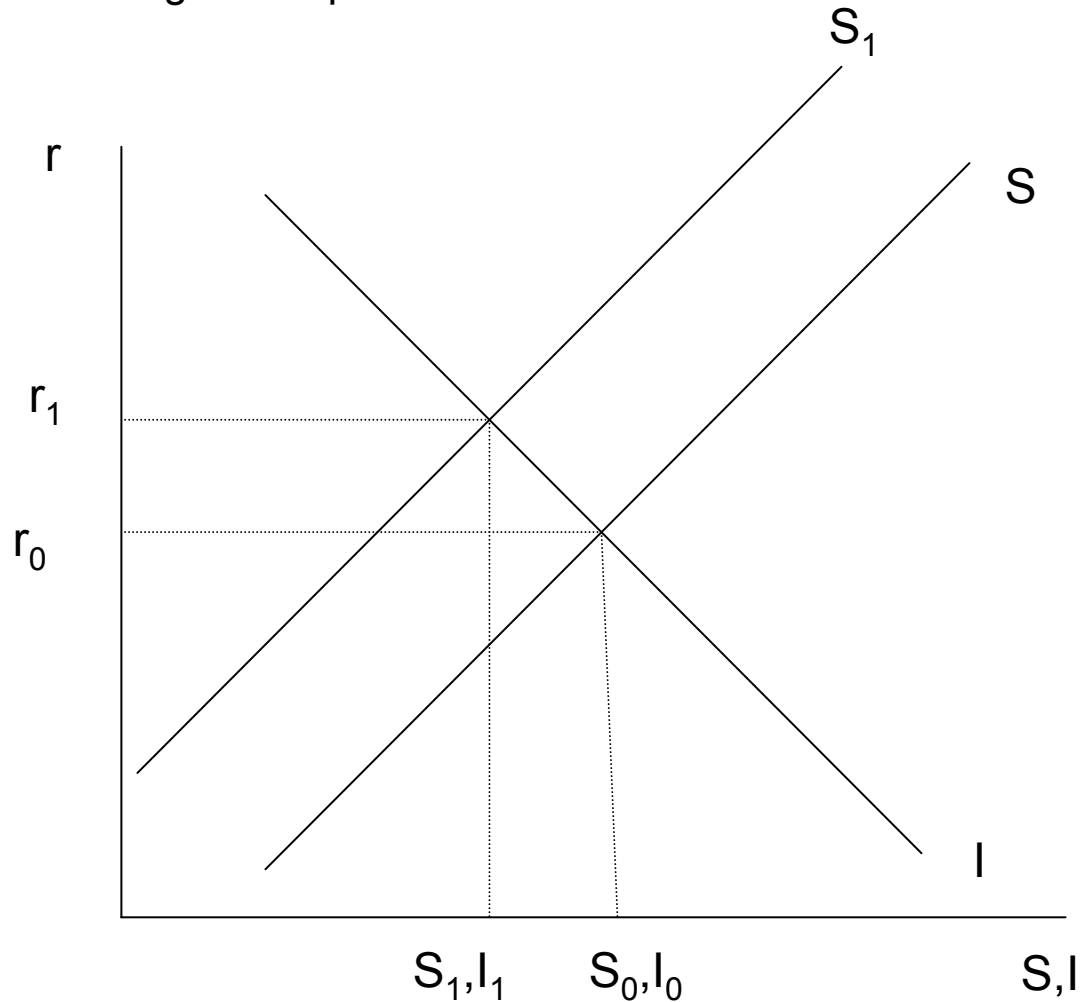
The increase in employment raises potential output because more workers are employed.

3a

a. The increase in wealth raises the PVLR shifting the budget constraint out, raising consumption today and in the future.



- 3 b. The increase in wealth reduces saving demand by increasing desired consumption with no change in output.



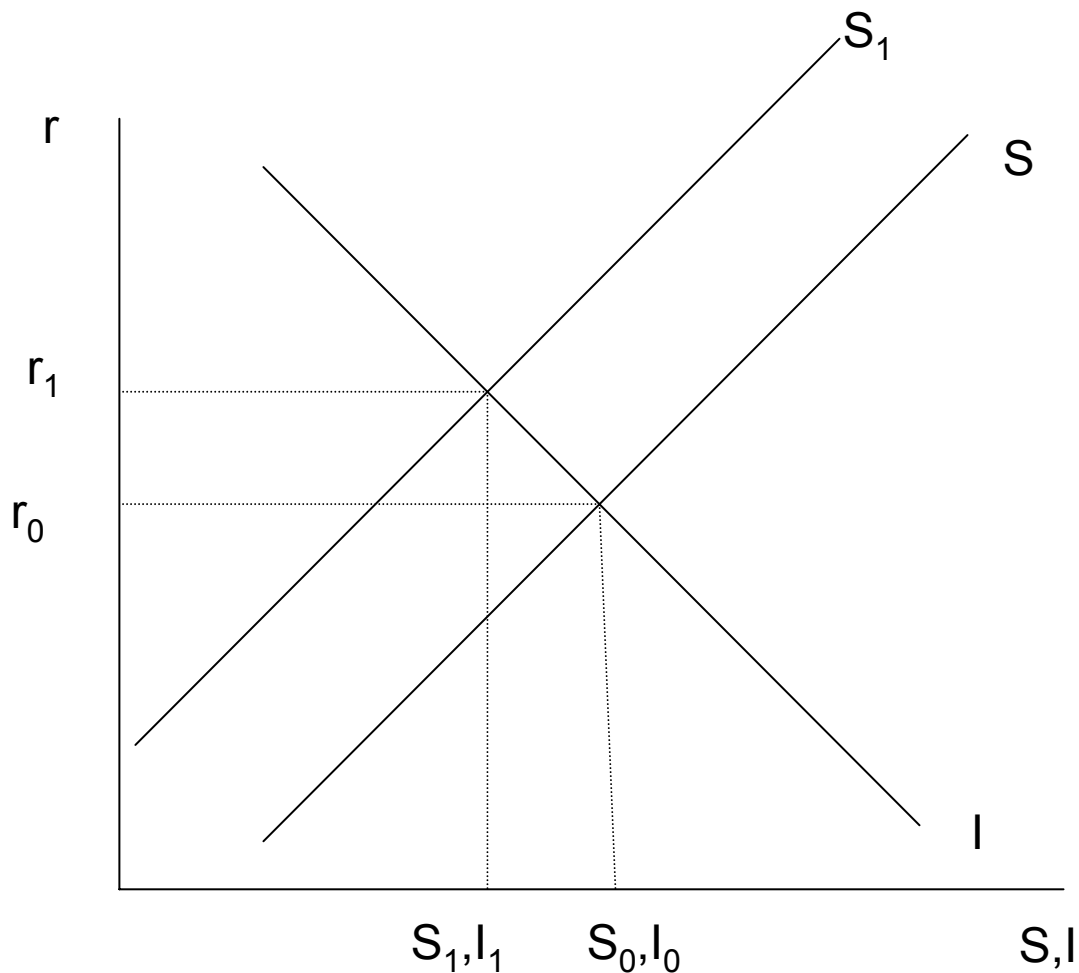
c. Equilibrium investment falls because the interest rate rises.

d. The capital stock today is determined by past decisions and is unaffected. The capital stock in the future falls since investment falls.

$$K_{t+1} = K_t(1-d) + I_t$$

e. Potential output today is unchanged. It falls in the future.

- 4 d National savings is given by  $S = Y - C - G$ . Consumption falls by less than  $G$  and  $T$  rise as agents spread the tax increase across both periods. National savings falls.



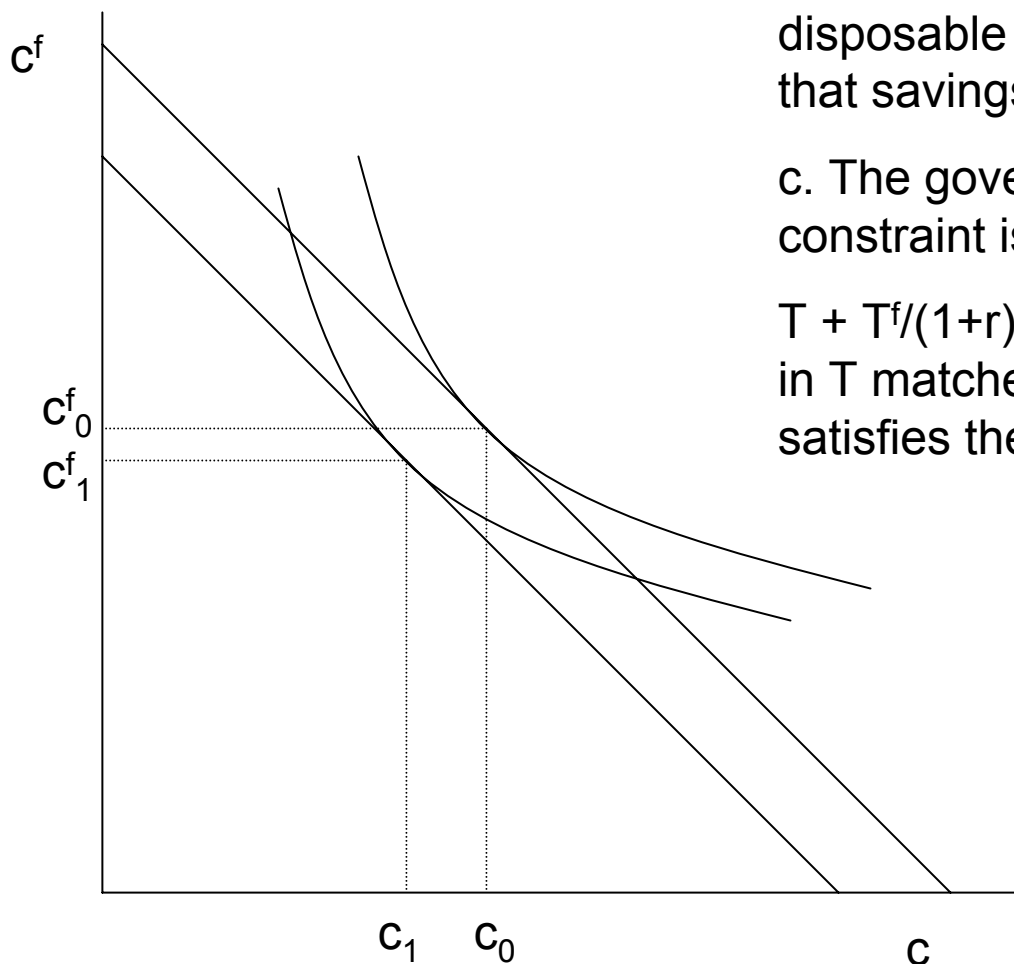
e. Equilibrium investment falls because the interest rate rises.

d. The capital stock today is determined by past decisions and is unaffected. The capital stock in the future falls since equilibrium investment falls.

$$K_{t+1} = K_t(1-d) + I_t$$

e. Potential output today is unchanged. It falls in the future.

4a

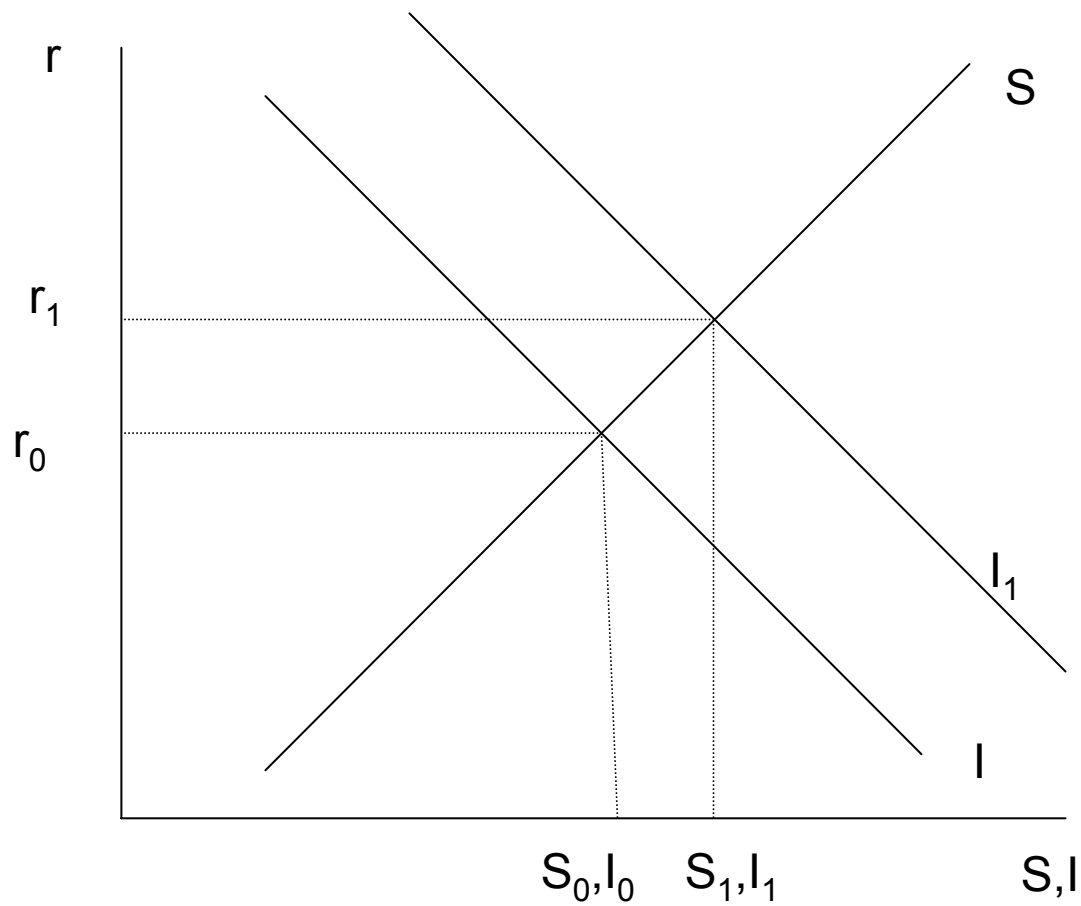


b. The tax increase reduces PVLR reducing current and future consumption. Current consumption falls by less than disposable income ( $Y - T$ ) falls, implying that savings rises ( $S = Y - T - C$ ).

c. The government's intertemporal budget constraint is given by

$T + T^f/(1+r) = G + G^f/(1+r)$ . The increase in  $T$  matched by an equal increase in  $G$  satisfies the budget constraint.

# 5 c. Investment demand increases

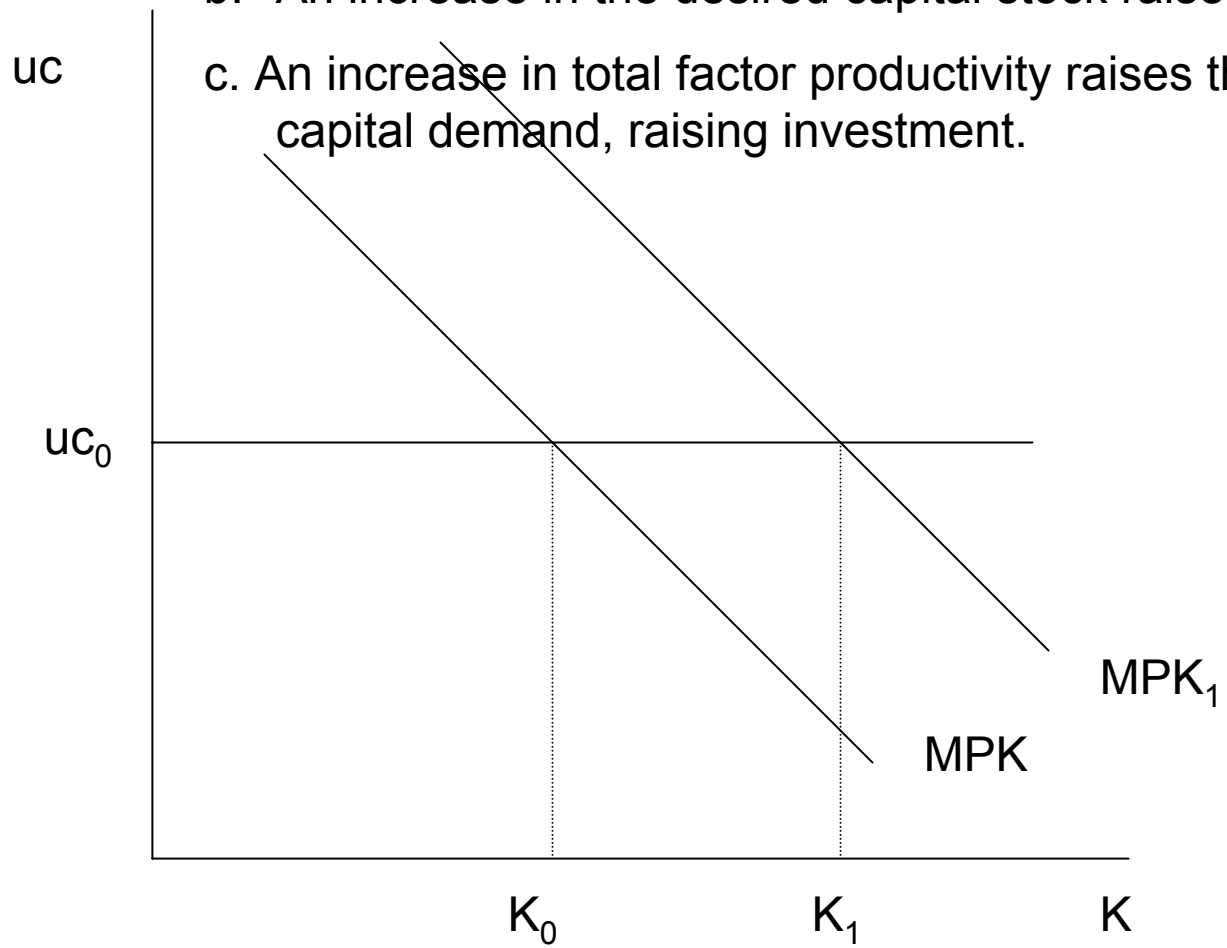


5a

a. The firm buys capital until MPK equals the real user cost. Capital demand is MPK.

b. An increase in the desired capital stock raises investment.

c. An increase in total factor productivity raises the MPK raising capital demand, raising investment.



d.  $K_{t+1} = K_t(1-d) + I_t$   
 $Y = AK^\alpha N^{1-\alpha}$

The increase in K raises potential output.