

# “What have learnt about growth?” SESSION

RES 21 April 2009

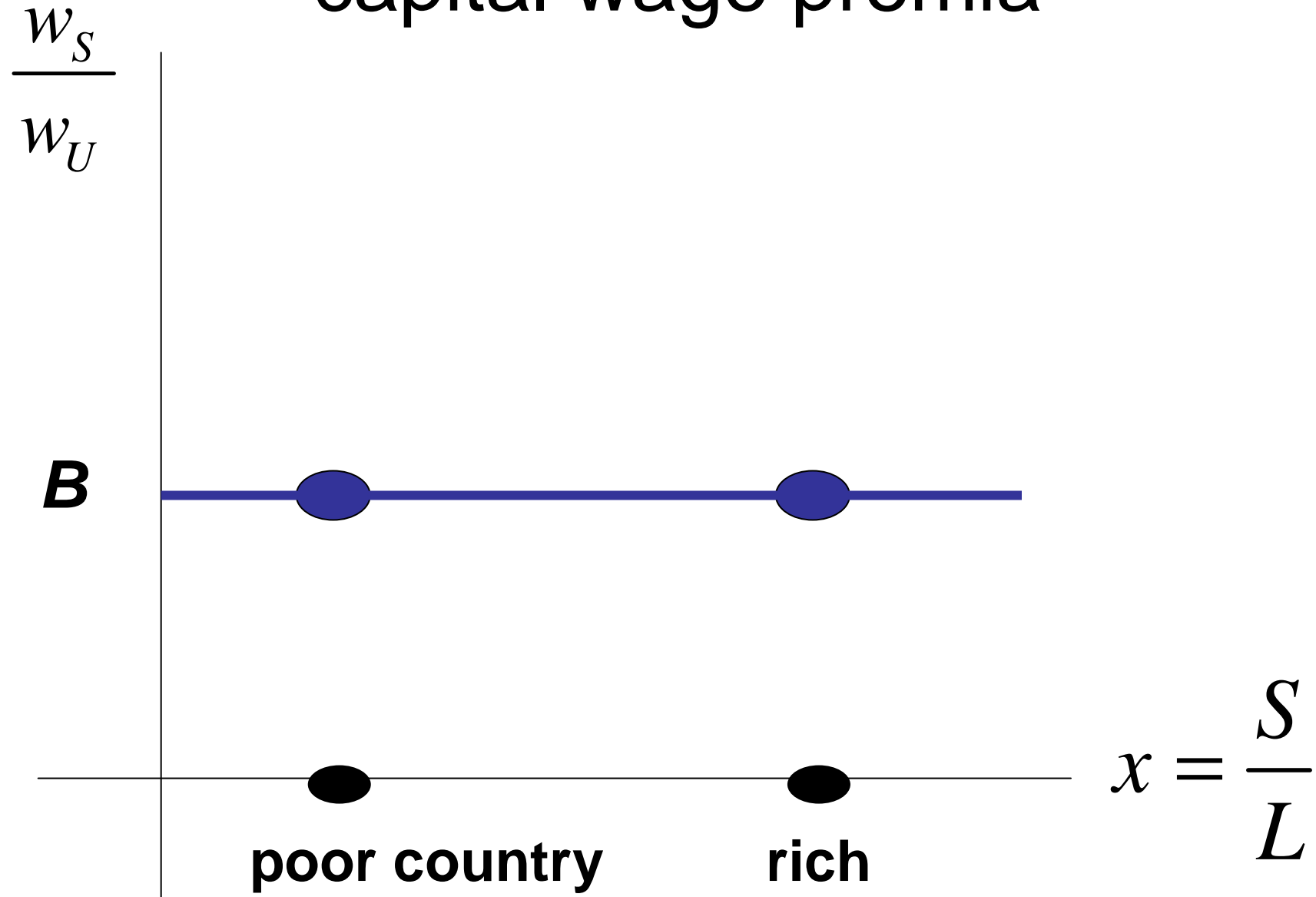
University of Surrey

Antonio Ciccone UPF

# FOCUS ON: Role of human capital?

- why does human capital vary across countries?
- how much of income differences does human capital account for?

# Cross-country data on human capital wage premia



# Implies that

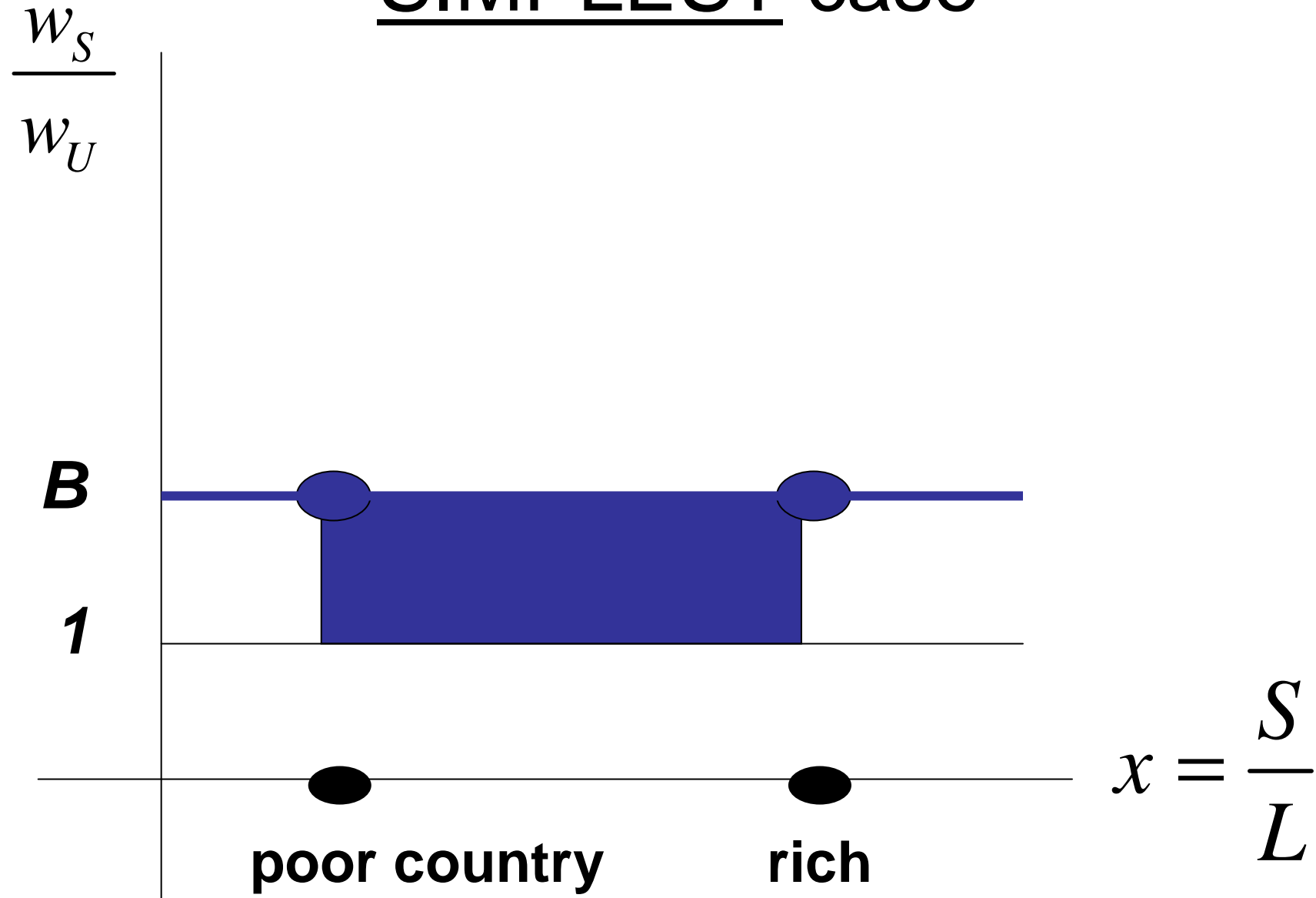
- cannot explain from production side why human capital varies across countries

- 

$$Y_c = A_c (BS_c + U_c)$$

$$\frac{Y_R}{Y_P} = \left( \frac{A_R}{A_P} \right) \times \left( \frac{BS_R + U_R}{BS_P + U_P} \right)$$

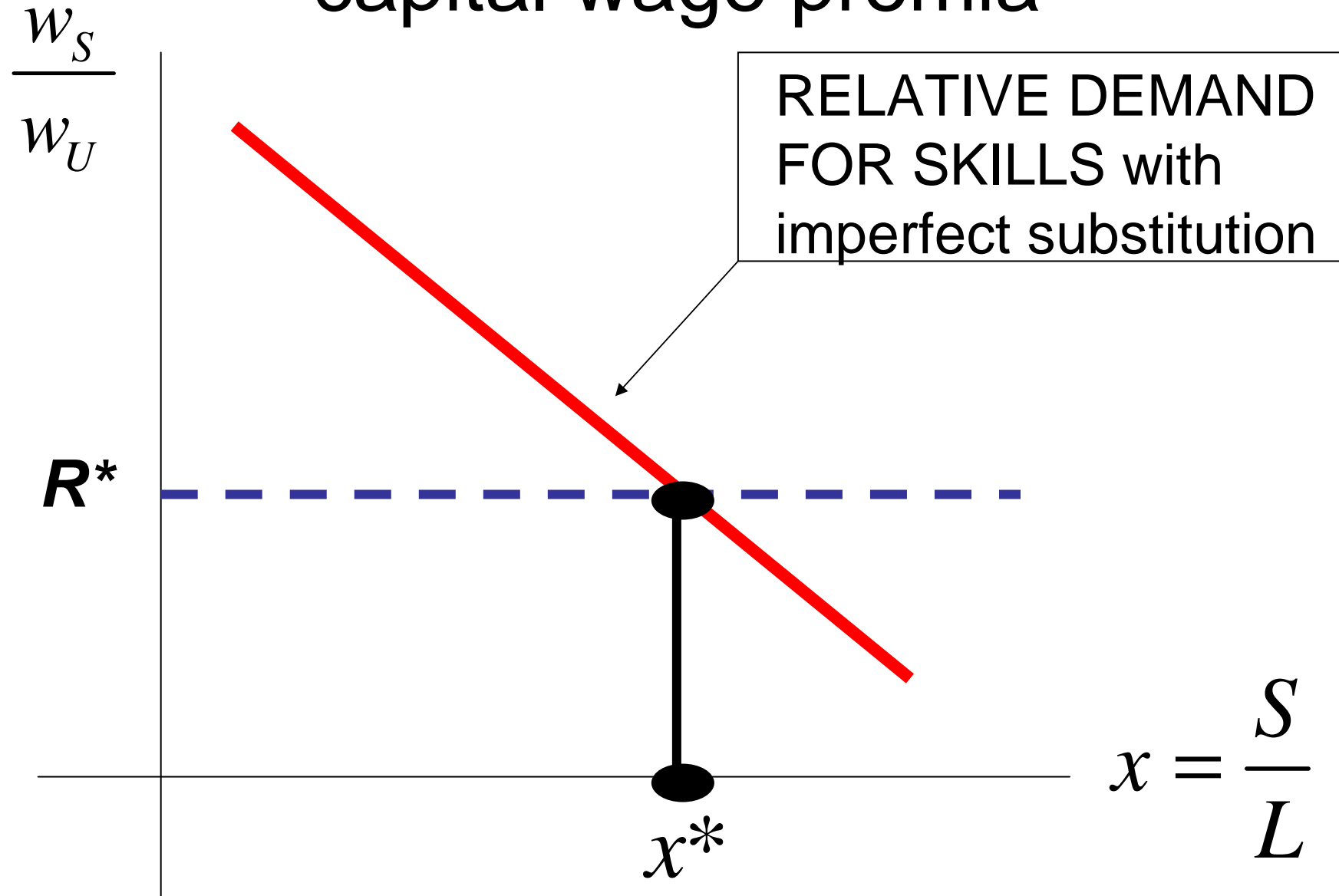
# Accounting for output per worker: SIMPLEST case



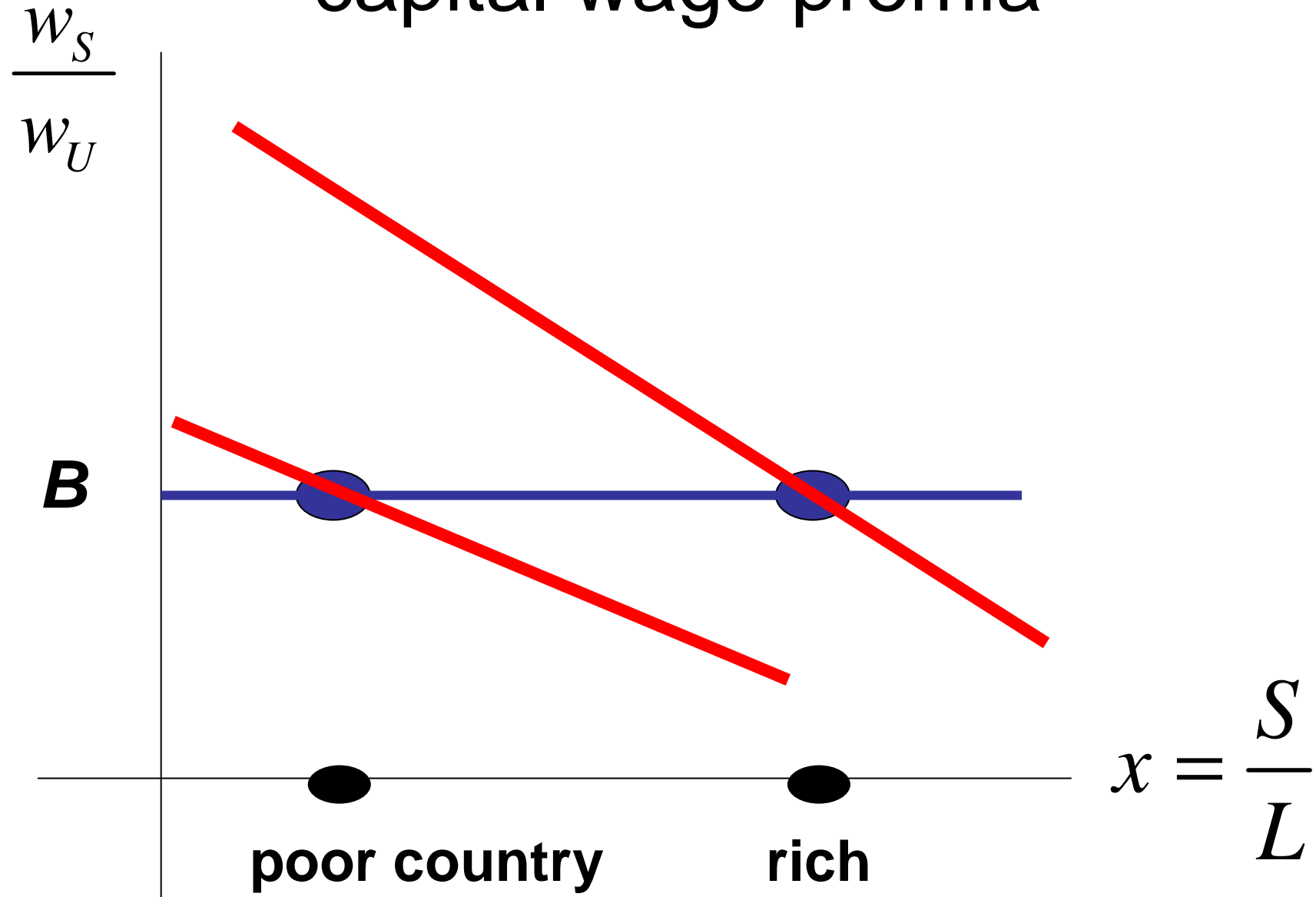
# Imperfect substitutability across skills

- empirical evidence suggests that different levels of schooling are imperfect substitutes in production
- implies that the demand for skills is decreasing in the share of skilled workers

# Cross-country data on human capital wage premia

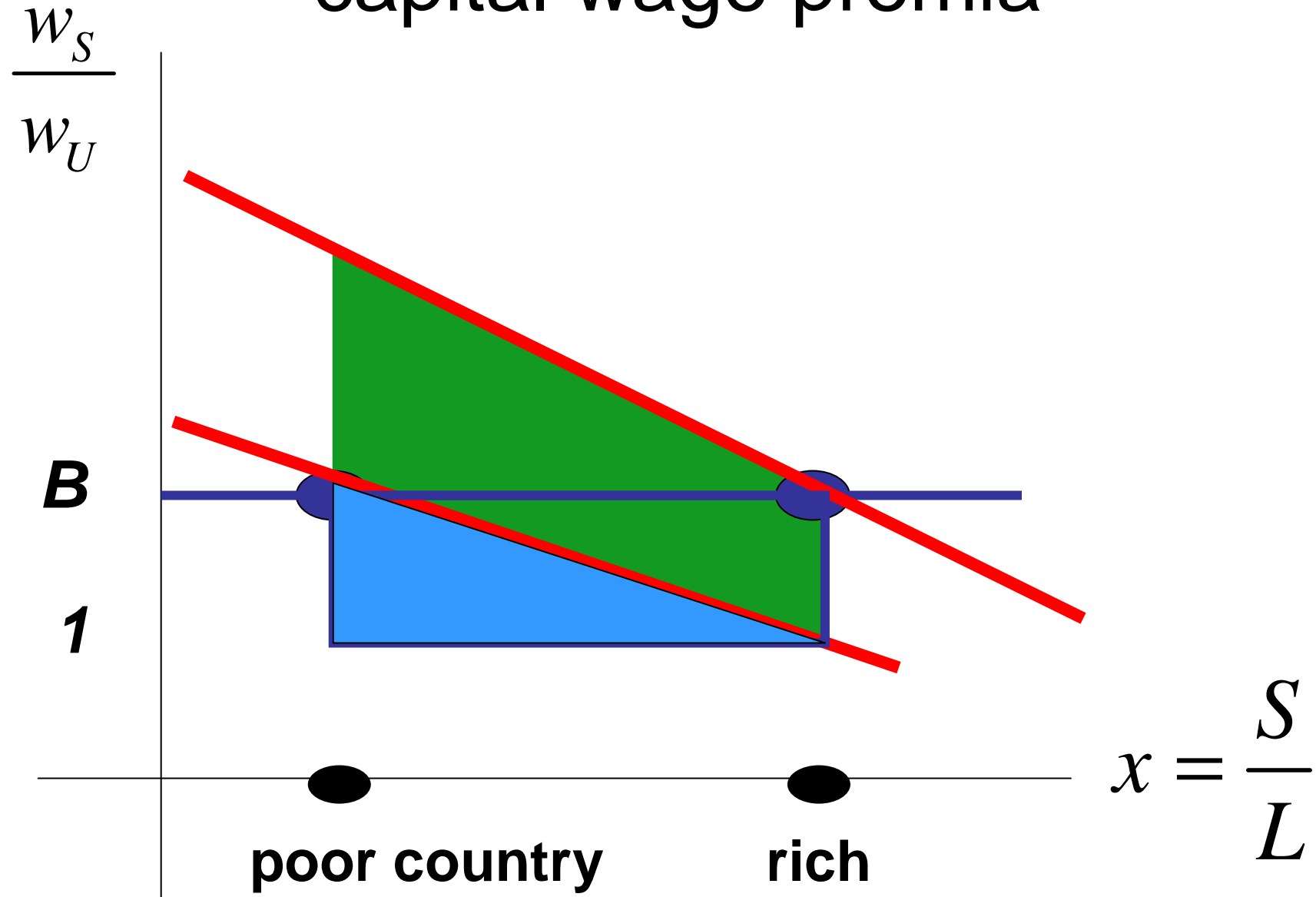


# Cross-country data on human capital wage premia





# Cross-country data on human capital wage premia



Formally:

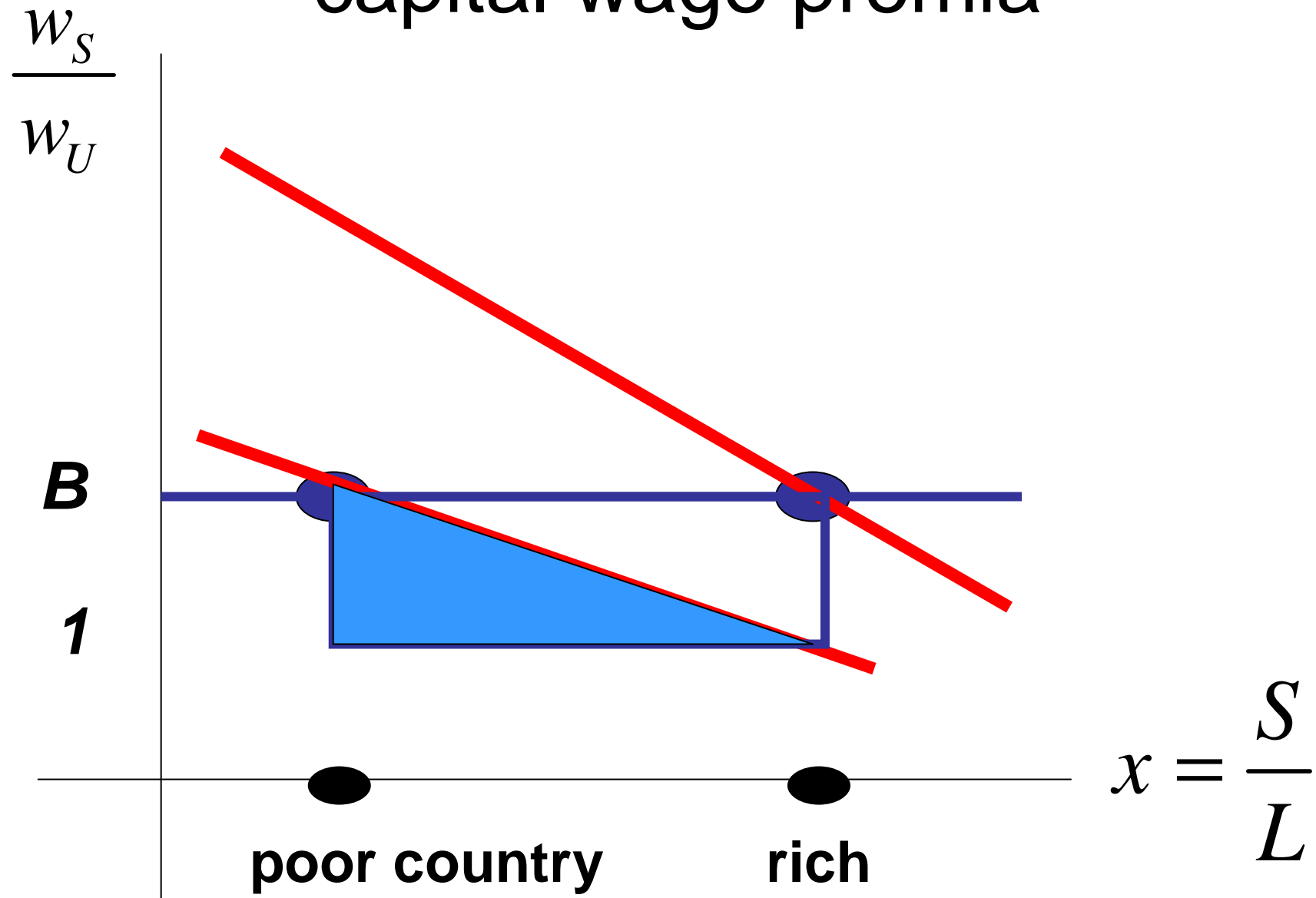
$$Y_c = A_c F_c (B_c H_c, L_c)$$

$$\frac{Y_R}{Y_P} = \left( \frac{A_R}{A_P} \right) \times \left( \frac{F_R (B_R H_R, L_R)}{F_P (B_P H_P, L_P)} \right)$$

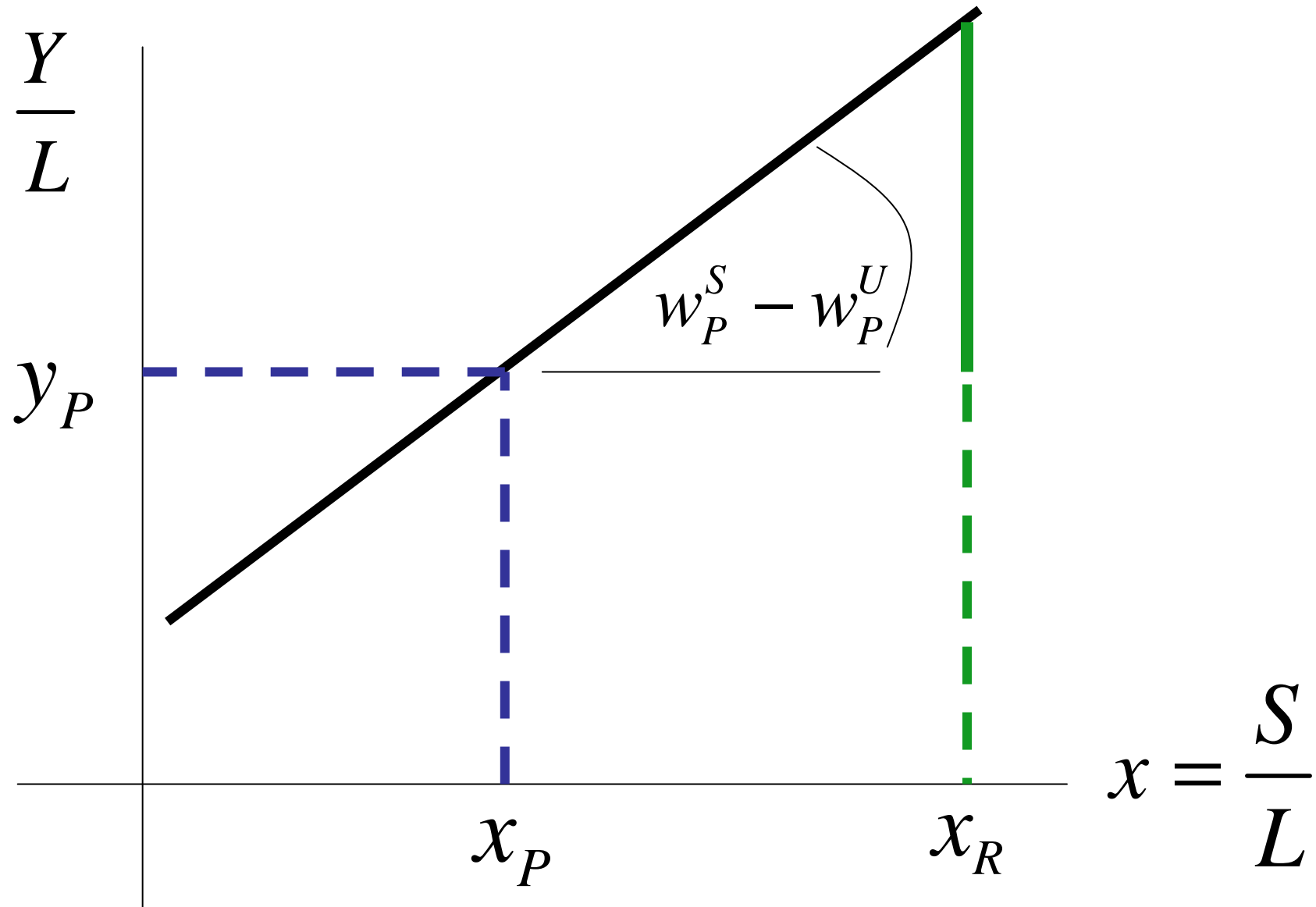
# New situation:

- how much of the output per worker differences between rich and poor can be accounted for by human capital?  
→ difficult question to answer
- how much can human capital alone raise output per worker in poor countries?  
→ easy to find a general upper bound

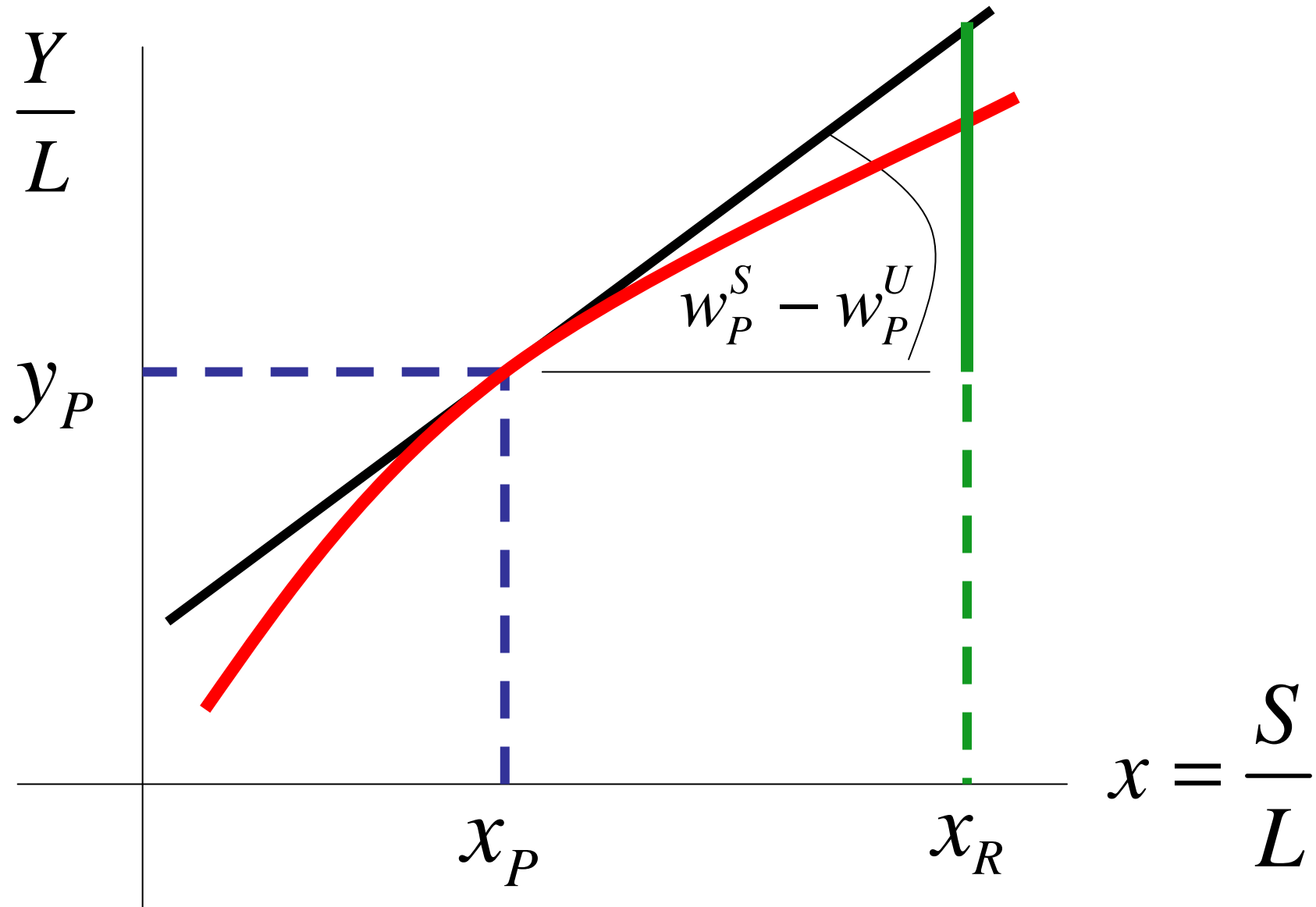
# Cross-country data on human capital wage premia



# Development accounting: SIMPLEST case



# Production function perspective



# Conclusion

- human capital-development accounting sensitive to slope of skill demand
- but the simplest case yields a general upper bound to the question of how much of the output gap can be closed by more human capital in poor countries
- poor countries would not close much of the output gap with rich countries even if they had the same human capital endowment