

Innovation and Technology Adoption in Health Care Markets by Jena and Philipson

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Federal Trade Commission

Monday, September 22, 2008

AEI

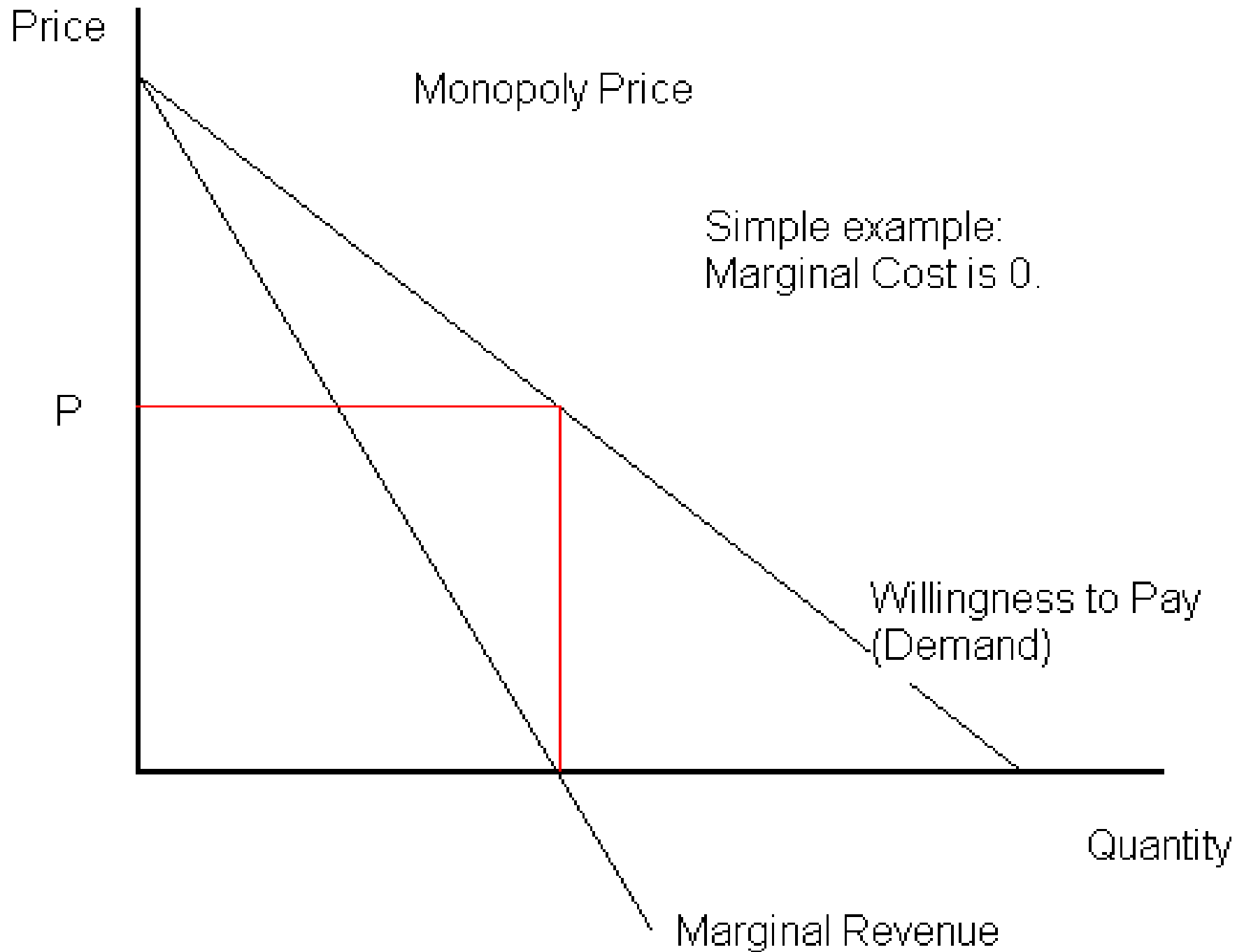
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Book Summary

- **Two main points**
 - **Cost-effectiveness analysis may reduce investment in drug development.**
 - **Investment in drug development may be substantially lower than optimal.**
- **Case study of AIDS/HIV drugs**
- **Generalize results to a number of categories.**

Cost Effectiveness Analysis

- **Authors argue firm profits are inversely related to cost effectiveness.**
- **By emphasizing cost effectiveness analysis it will tend to lower profits to drug firms.**



Price

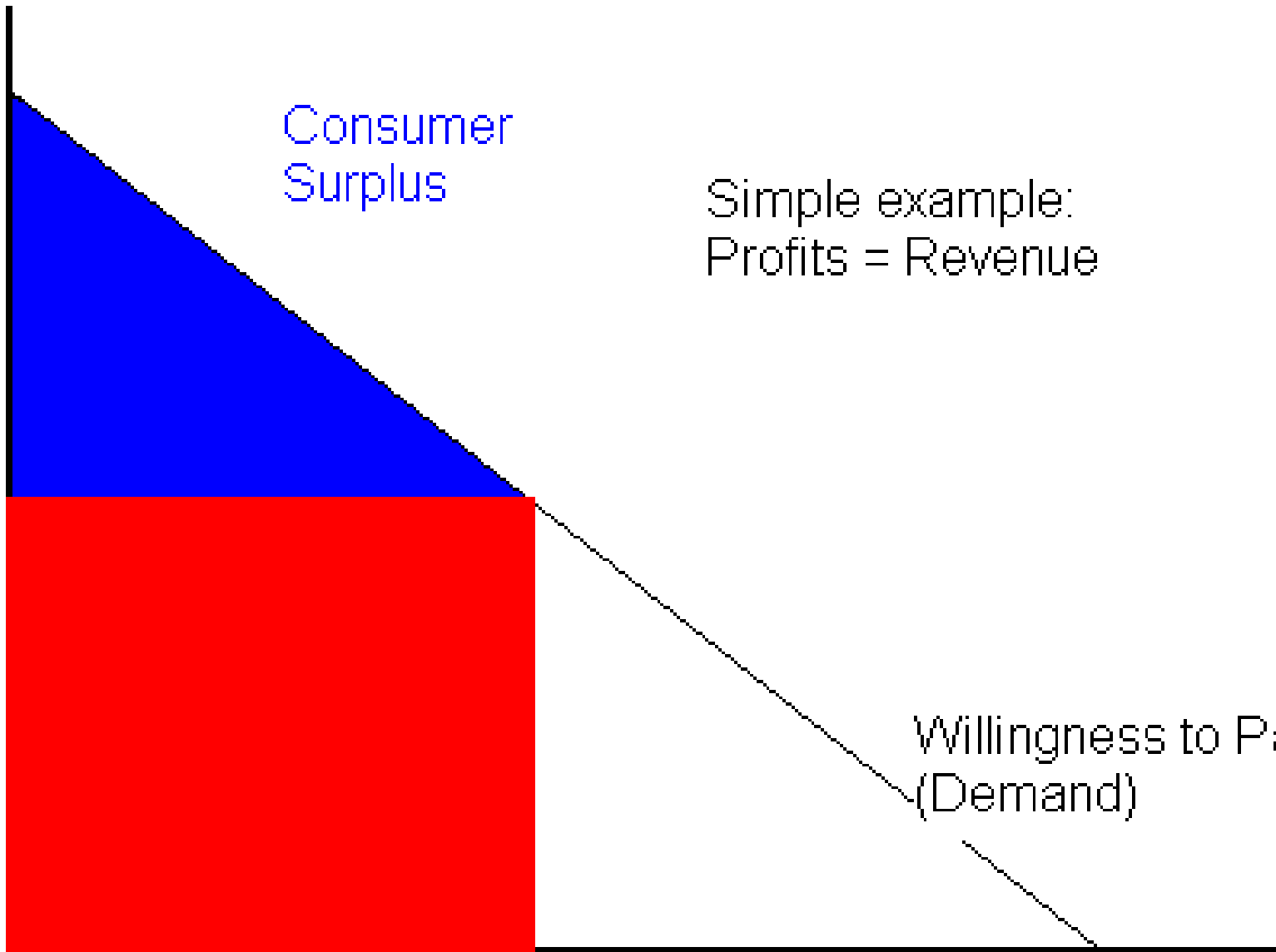
Consumer
Surplus

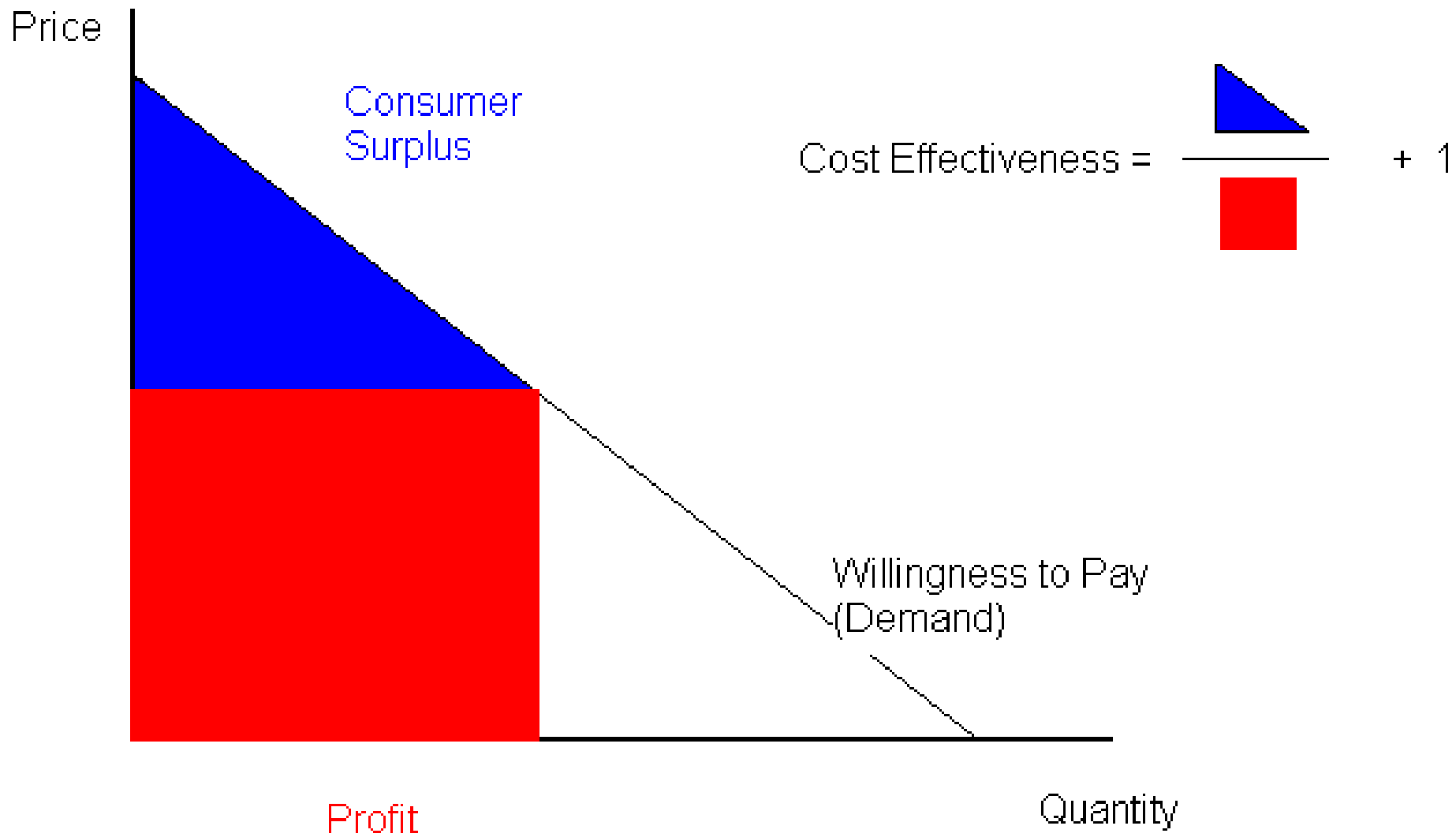
Simple example:
Profits = Revenue

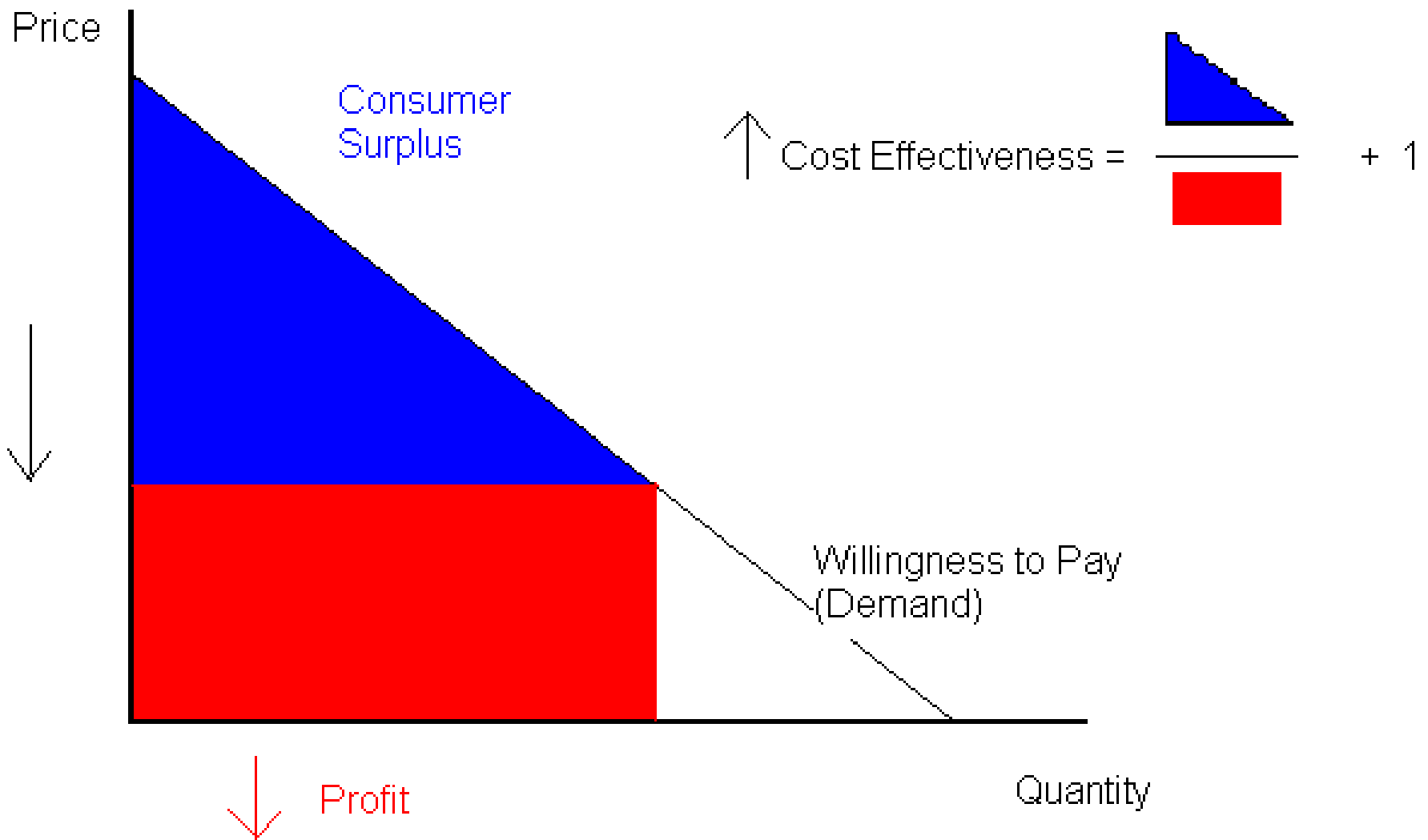
Willingness to Pay
(Demand)

Profit

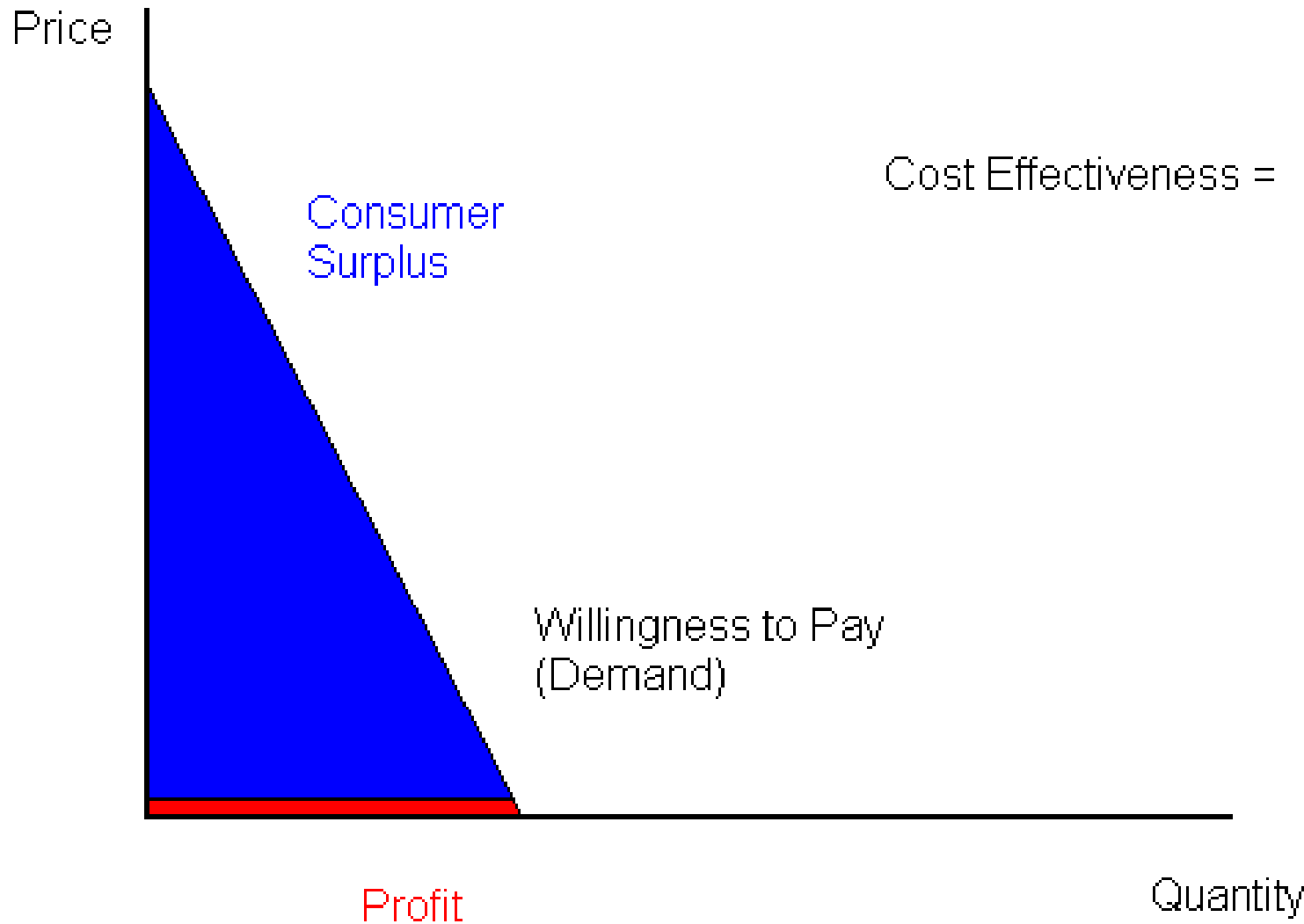
Quantity







Jena and Philipson
HIV/AIDS Estimates



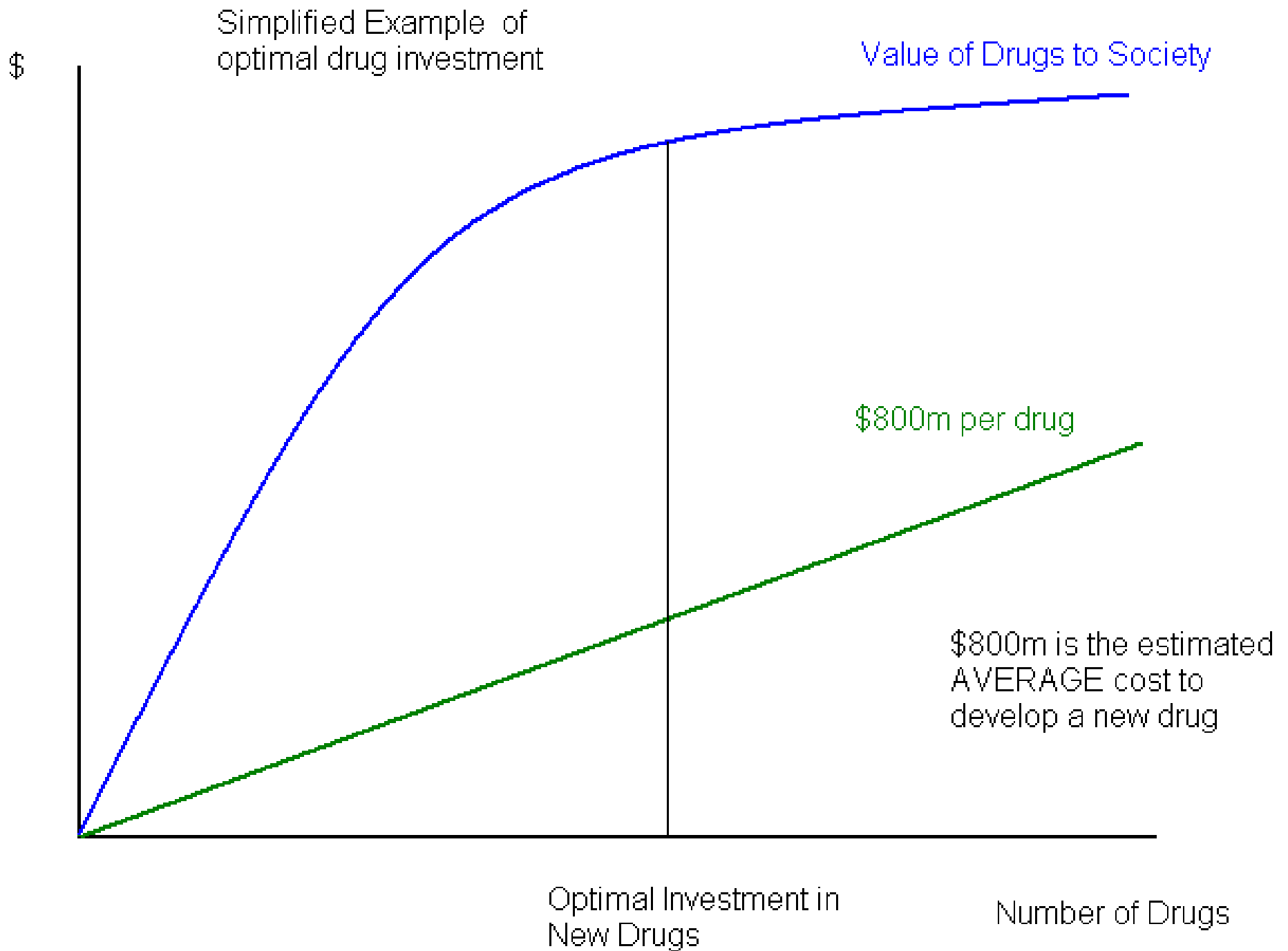
Cost Effectiveness = $\frac{\text{Consumer Surplus}}{\text{Profit}} + 1$

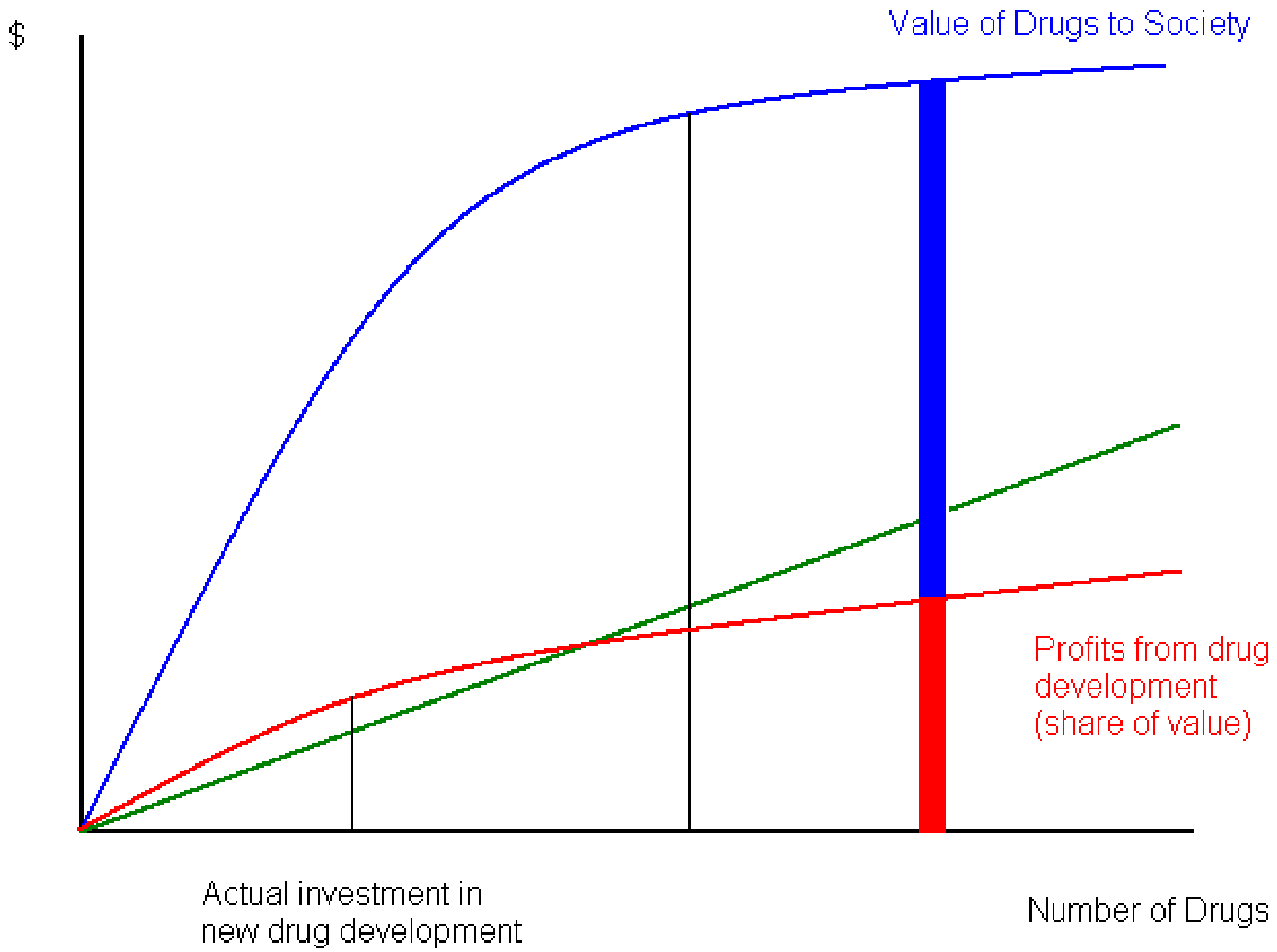
Cost Effectiveness Analysis

- **Lower profits means lower incentive to develop new drugs.**
- **Lower incentive to develop new drugs means fewer drugs in the future.**

Incentives to Develop New Drugs

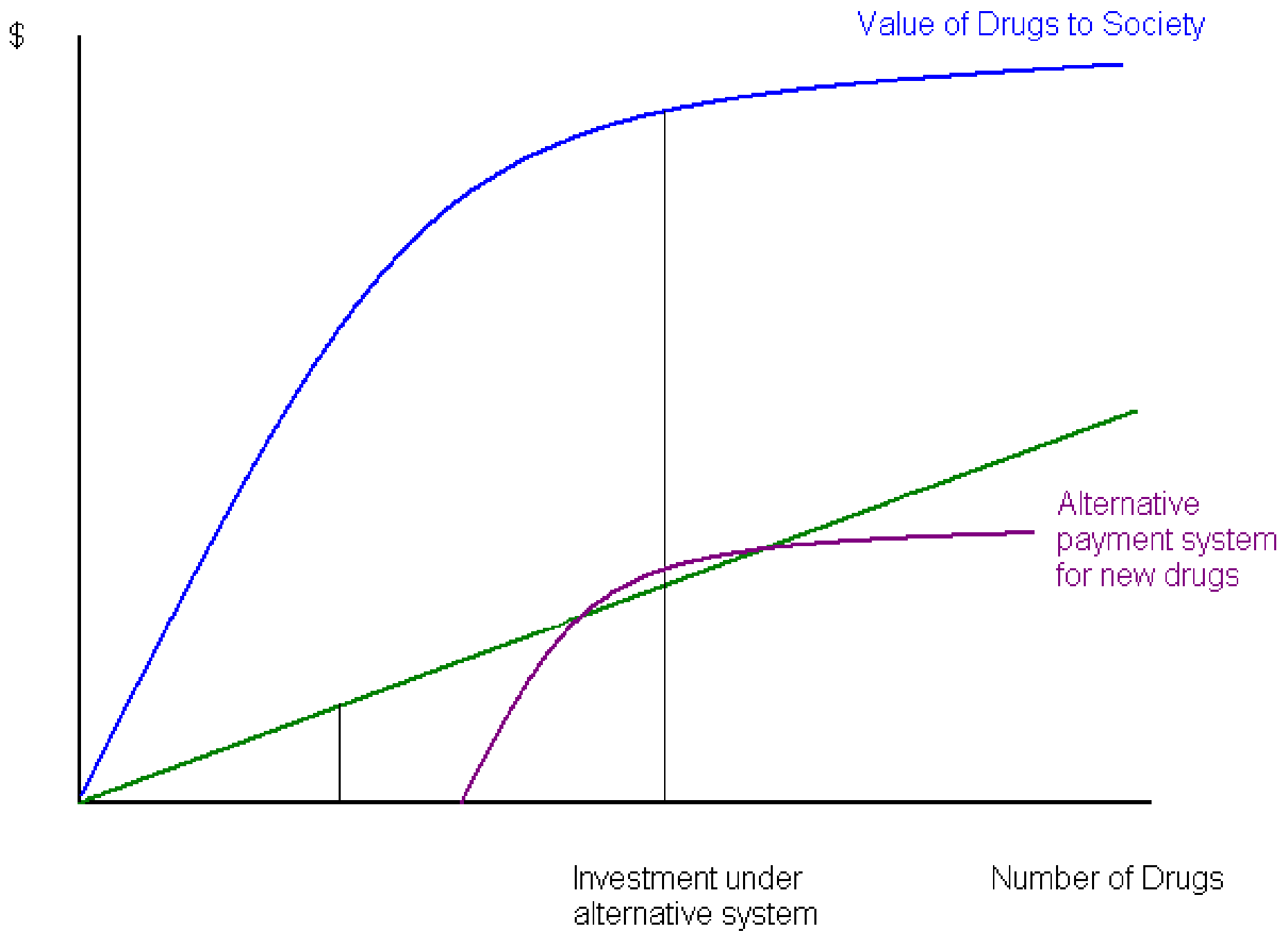
- **Authors find that drug firms receive only a small share of the total value to society of new drug development.**
- **Authors argue a low share of the value means less than optimal investment in new drug development.**





Incentives to Develop New Drugs

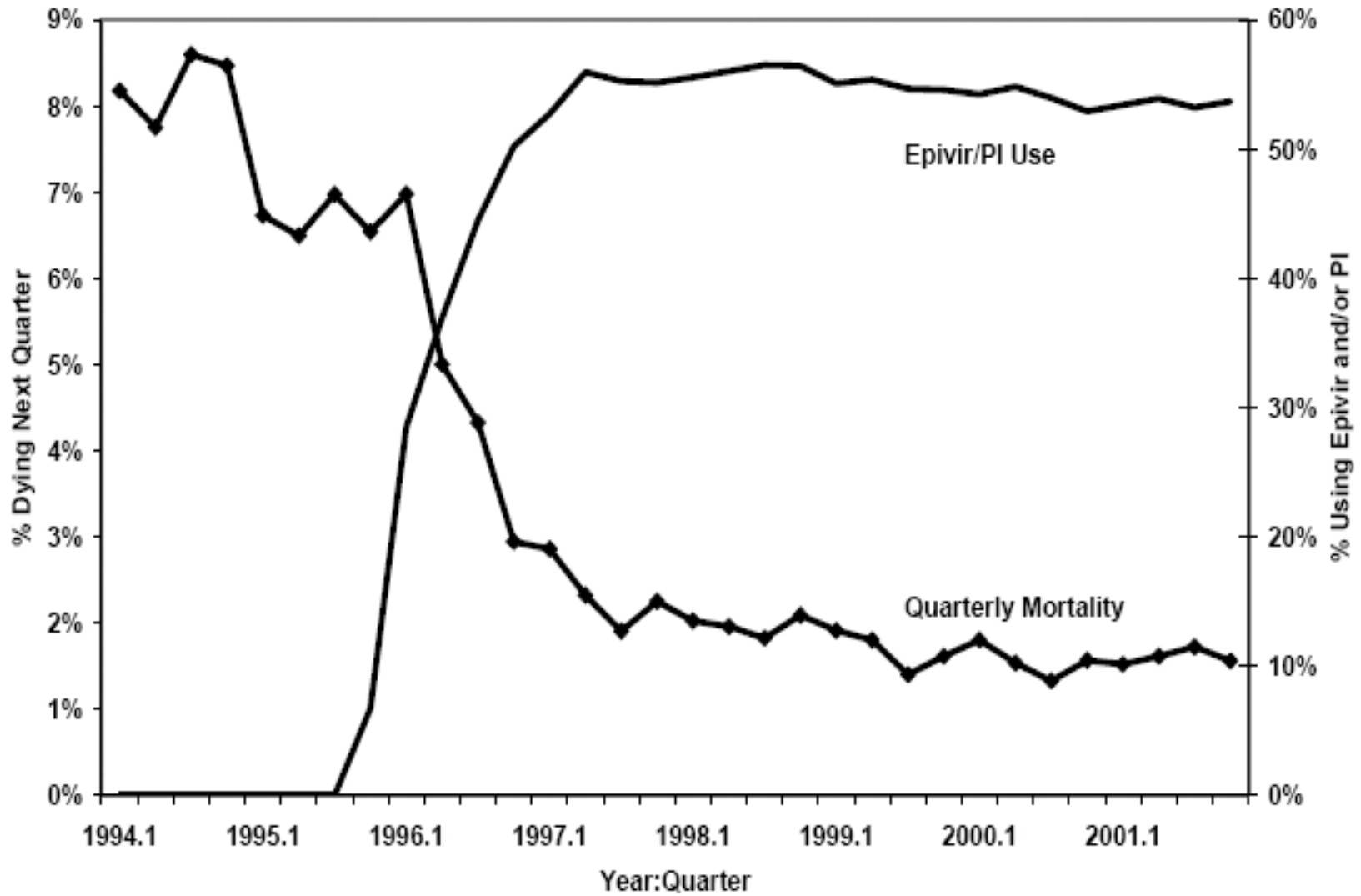
- A low share **MAY** mean less than optimal investment in new drug development.
- There may be alternative payment systems that provide the correct incentives but at low shares.
- What is the correct level of investment in new drug development?



Summary

- **Cost effectiveness analysis may reduce incentives to develop new drugs.**
- **Drug firms may have too low incentive to develop new drugs.**
- **Questions**
 - **What is the incentive to develop new drugs?**
 - **What should it be?**

Figure 5: Quarterly Mortality Rate and Use of PI/Epivir



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Incentives to Develop New Drugs: Deciles of Drug Revenue

