

# Telecommunications Economics



## Nonlinear Pricing

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## Agenda

- Rationale
- Nonlinear Pricing
- Multi-part Tariffs
- Peak-Load Pricing

## Rationale

- Efficient Prices

## Rationale

- Efficient Prices
  - ▶ Welfare Highest
  - ▶ Sum of PS & CS

## Rationale

- Efficient Prices
- Winners Compensate Losers

## Rationale

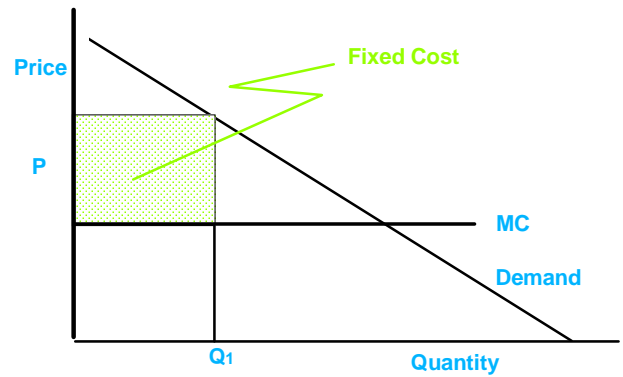
- Efficient Prices
- Winners Compensate Losers
- Break-even Constraint Lowers Welfare

## Rationale

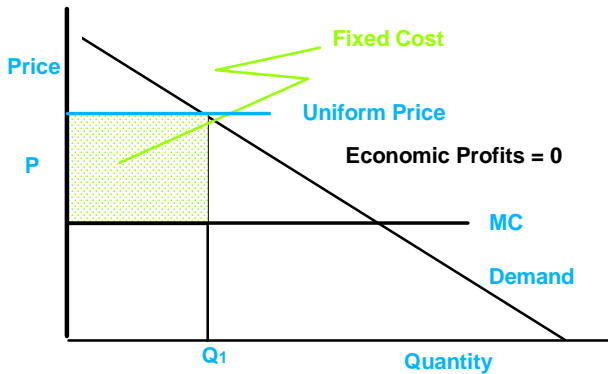
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- **Efficient Prices**
  - **Winners Compensate Losers**
  - **Break-even Constraint Lowers Welfare**
  - **Pricing examples**
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## Two-part Pricing



## Two-part Pricing

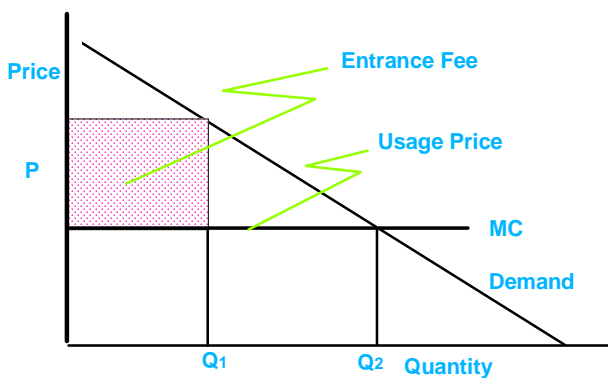


## Two-part Pricing

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- **Entrance Fee + Usage Charge**
- 

## Two-part Pricing

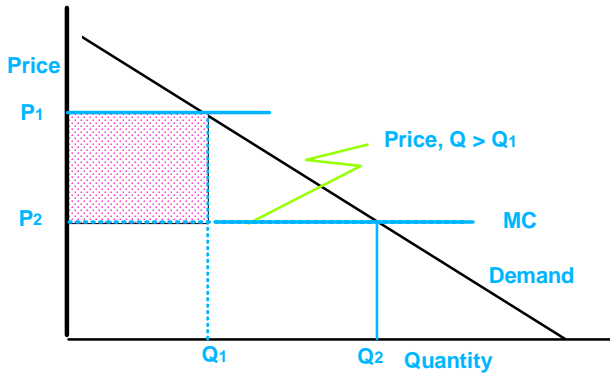


## Two-part Pricing

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- **Entrance Fee + Usage Charge**
  - **Declining Block Tariff**
-

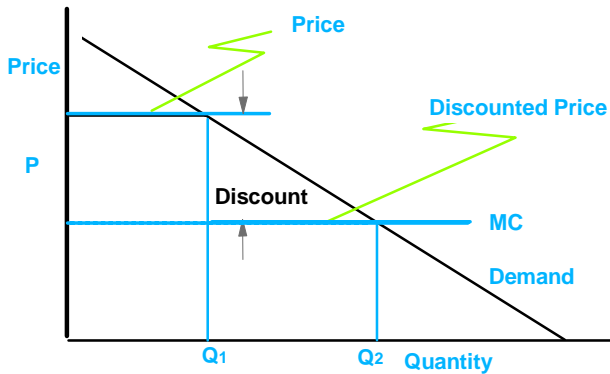
### Two-part Pricing



### Two-part Pricing

- Entrance Fee + Usage Charge
- Declining Block Tariff
- **Volume Discount Tariff**

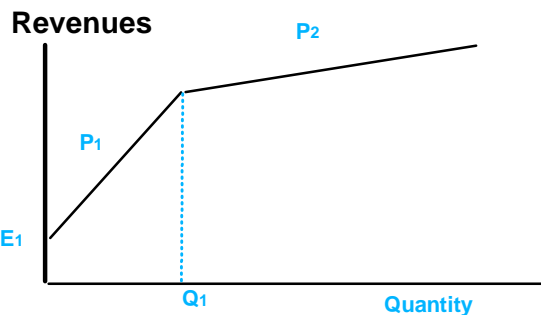
### Volume Discount



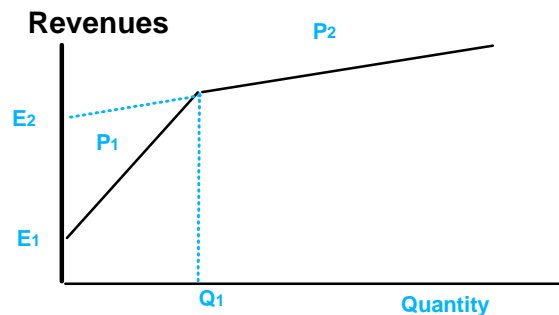
### Two-part Pricing

- Entrance Fee + Usage Charge
- Declining Block Tariff
- Volume Discount Tariff
- **Self-selecting Two-part Tariff**

### Two-part Pricing



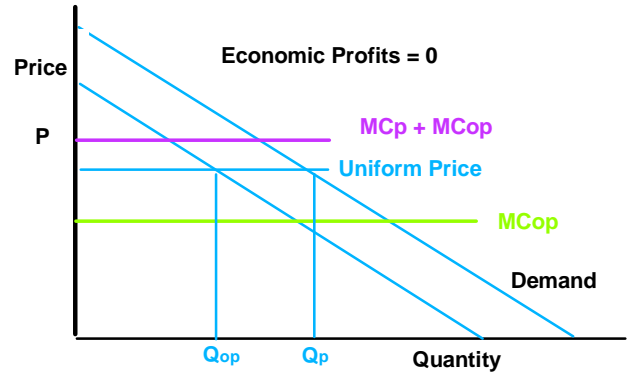
### Self Selecting Two-part Pricing



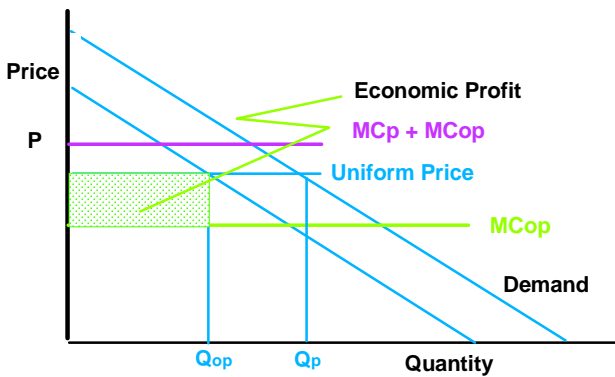
## Two-part Pricing

- Entrance Fee + Usage Charge
- Declining Block Tariff
- Volume Discount Tariff
- Self-selecting Two-part Tariff
- **Peak-load Pricing**

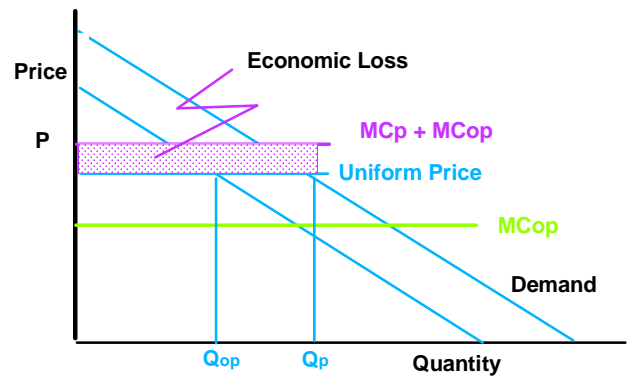
## Peak-Load Pricing



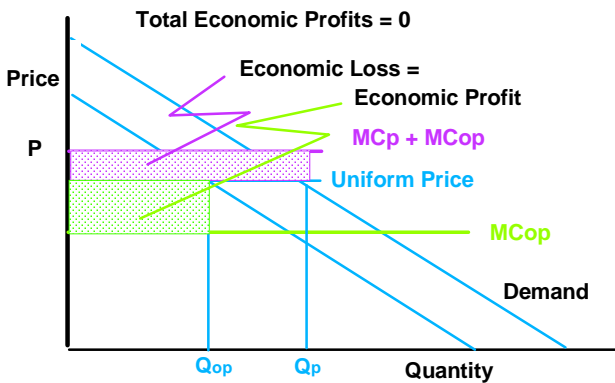
## Peak-Load Pricing



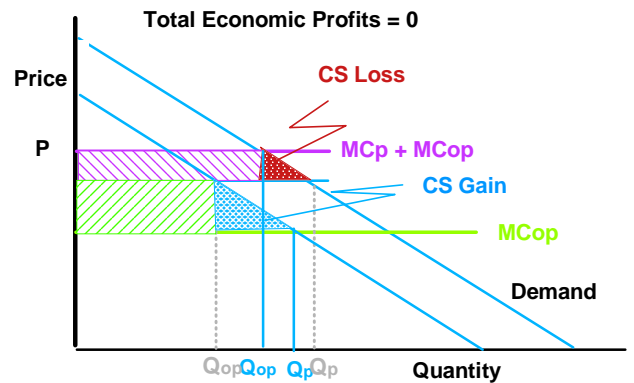
## Peak-Load Pricing



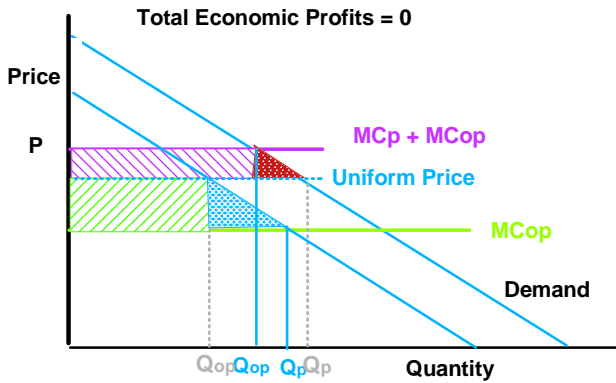
## Peak-Load Pricing



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## Peak-Load Pricing



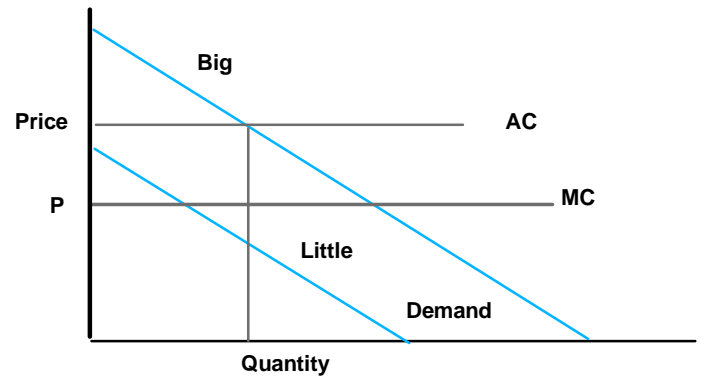
## Peak-Load Pricing

- Cost on the Cost Causers
- Peak Users Cover Peak Investments
- Valid even if Peak Demand not repressed

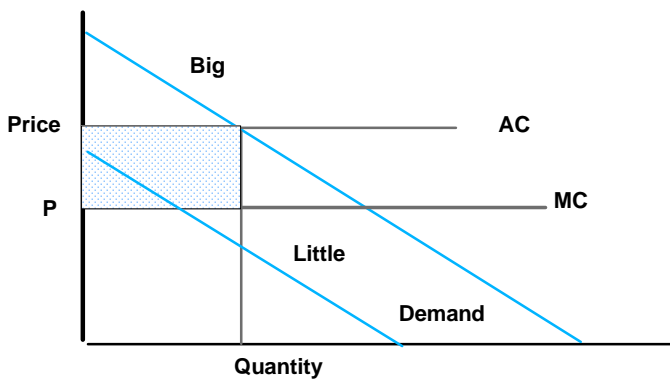
## Multi-part Tariffs

- Nonlinear
- Entrance Fee and Usage Charge
- Improve Efficiency
- Big/Little Example

## Multi-part Tariffs



## Multi-part Tariffs



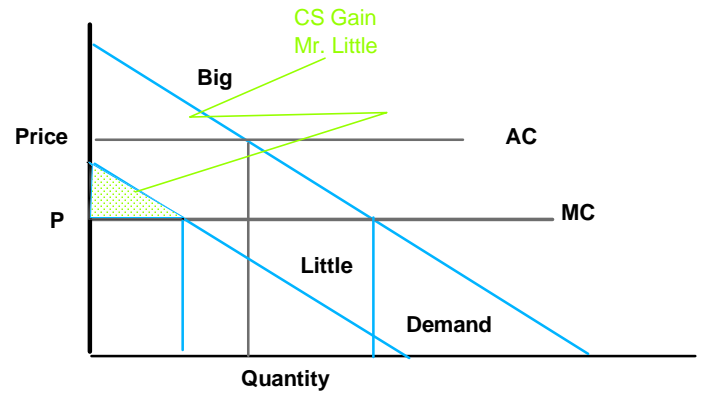
## Multi-part Tariffs

- Mr. Little is excluded from the Market
- Mr. Big Covers the "Fixed" Cost
- Can Improve Welfare?
- Yes! -- with a Two Part Tariff

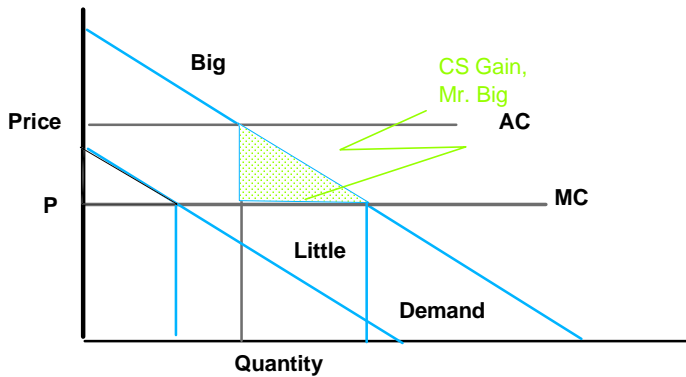
## Multi-part Tariffs

- Charge Mr. Big the "Fixed" Costs & the Marginal Costs
- Mr. Little the Marginal Costs
- No Profit Change, but Welfare increase for both

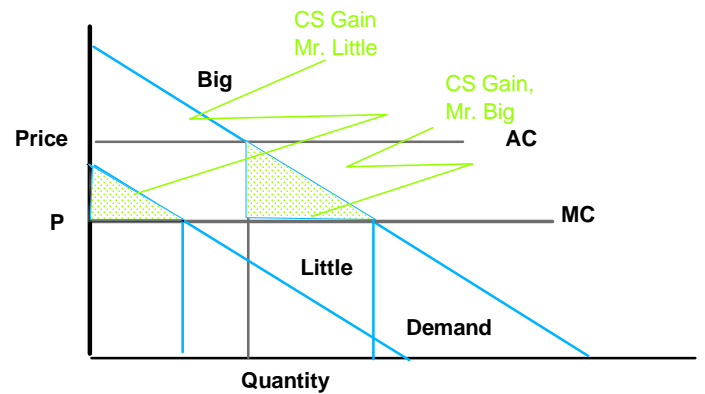
## Multi-part Tariffs



## Multi-part Tariffs



## Multi-part Tariffs



## Two-part Tariffs

- Self-selecting Two-part Prices
- Pareto Dominating
- Equivalent to Declining Block Prices

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