

# CREDIT MARKETS

MPA 612: Economy, Society, and Public Policy

March 11, 2019

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on Learning Suite*

# PLAN FOR TODAY

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**Money and time**

**Barriers to smoothing**

**Monopoly practice**

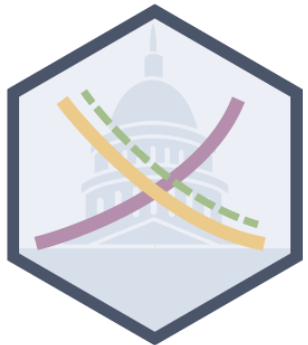
## Capitalism, markets, and public policy

Growth      Social dilemmas  
Measurement      Fairness

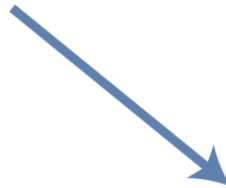


## Scarcity, power, and inequality

Preferences      Institutions      Rights



# ECONOMY, SOCIETY, AND PUBLIC POLICY



## Evaluating and implementing policies

Cost-benefit analysis      Experiments  
Causal inference      Politics



## Market failures, governments, and politics

Externalities      Public goods      Rent seeking  
Monopolies      Government intervention



## Economic models

Firms and markets      Credit markets  
Labor markets      Macroeconomics

# MONEY AND TIME



# What is money?

Something that stores value

Something that can be converted  
into goods and services

# STOCKS AND FLOWS

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**Wealth**

Stock

**Income**

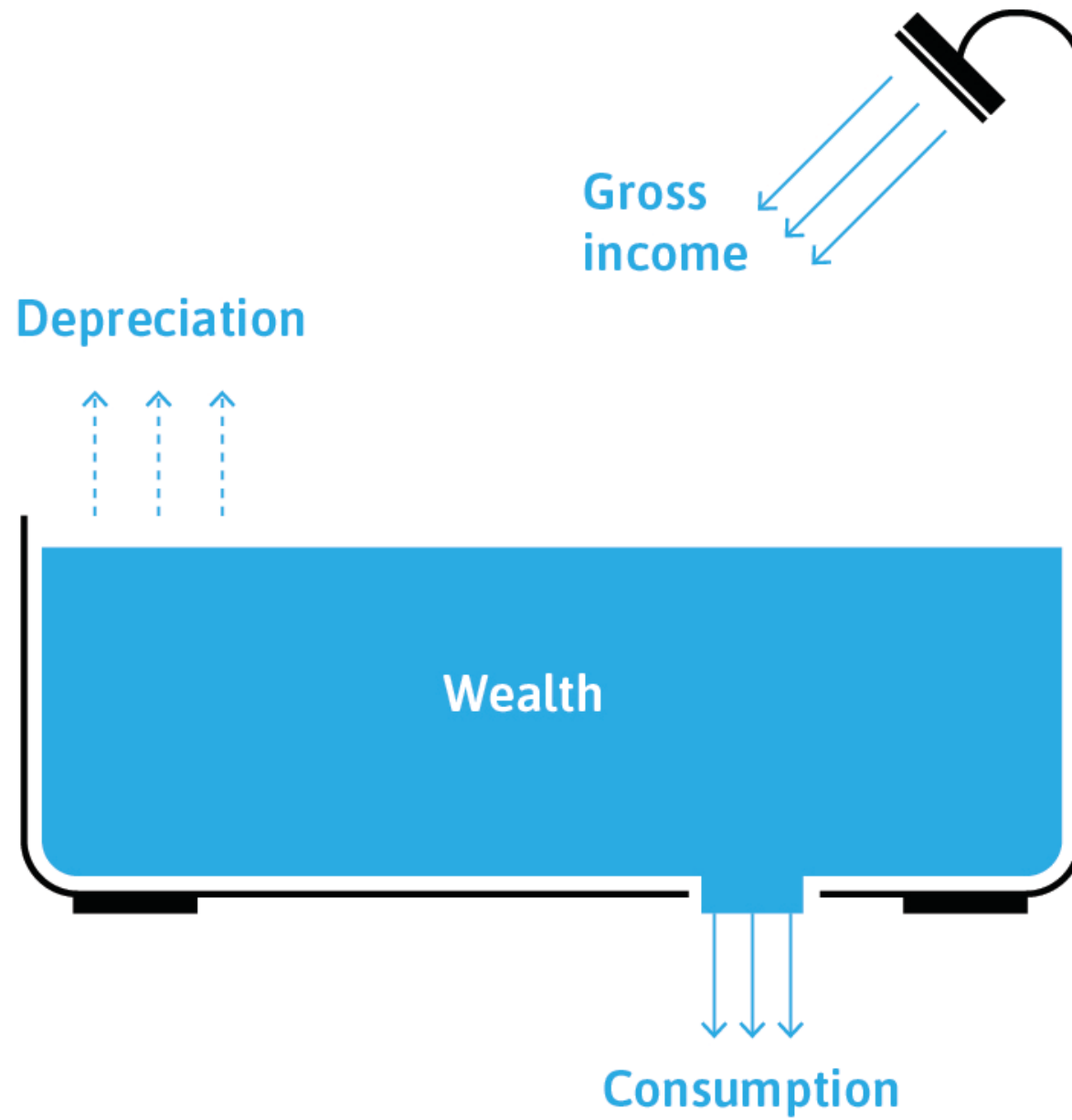
Flow

**Depreciation**

Flow

**Consumption**

Flow



# UNEVEN FLOWS

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**What should we do with money  
when flows aren't steady?**

Consumption smoothing







# UNEVEN FLOWS

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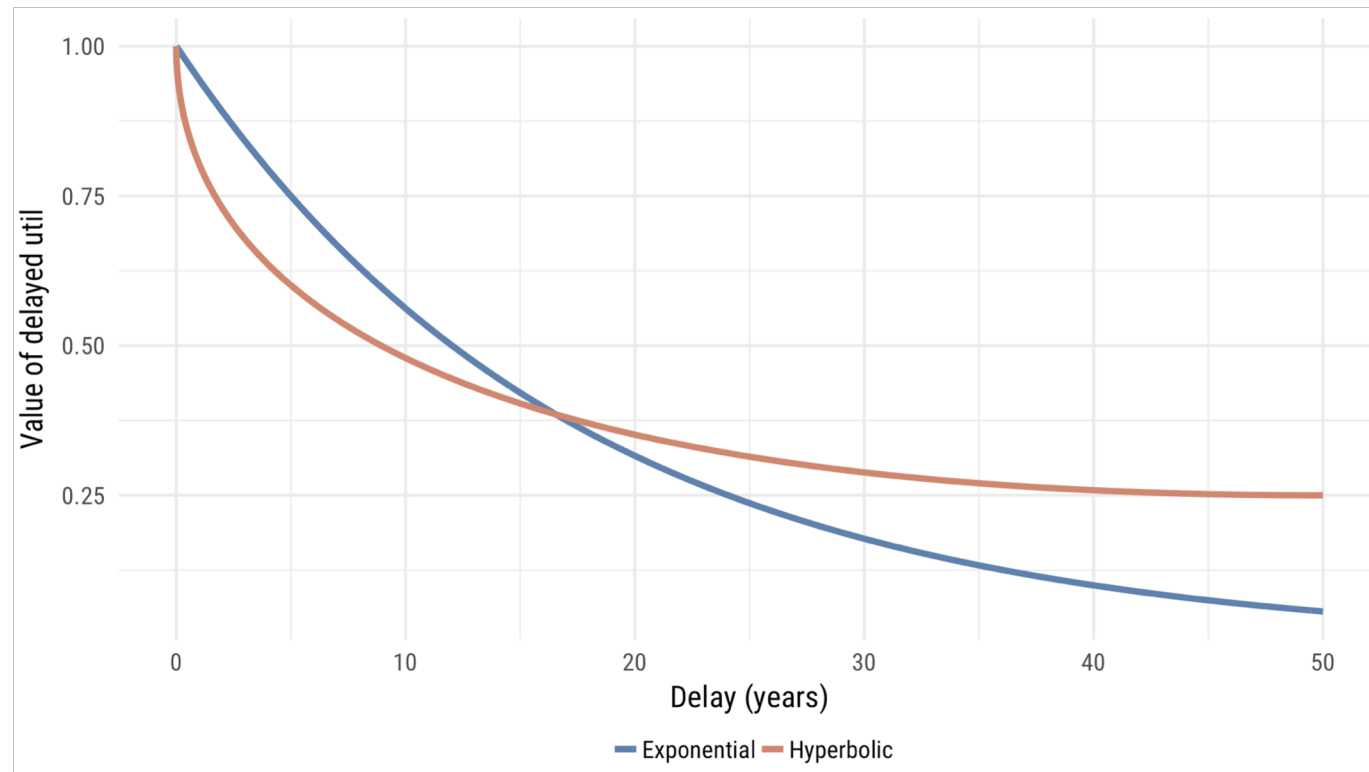
**What should we do with money  
when flows aren't steady?**

Consumption smoothing

**Why do we like smooth flows?**

# Hyperbolic discounting

We prefer immediate payoffs more than future payoffs



# FIXING UNEVEN FLOWS

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**Move future consumption  
to the present**

Credit; borrowing

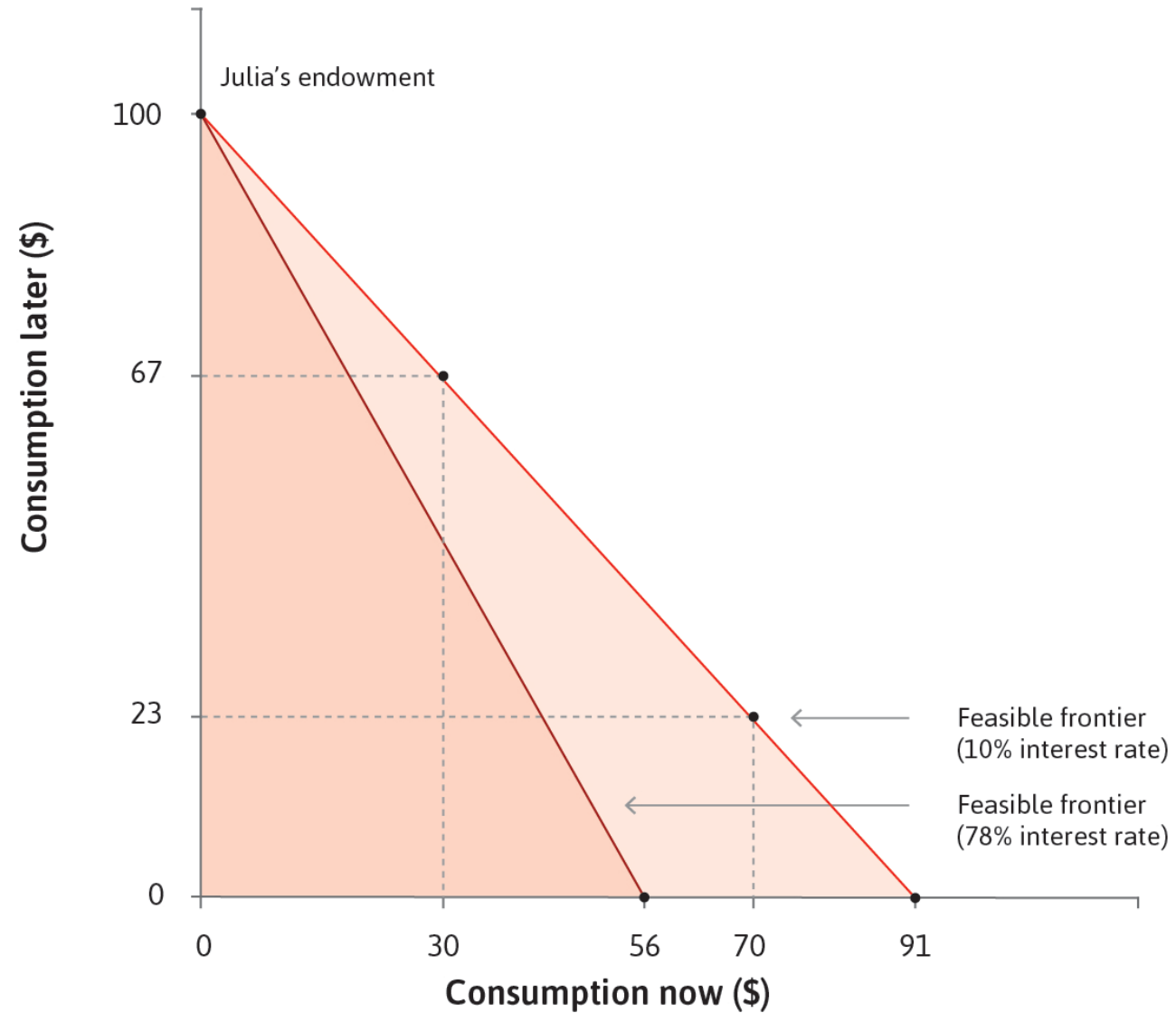
**Move present consumption  
to the future**

Saving and investing; storing

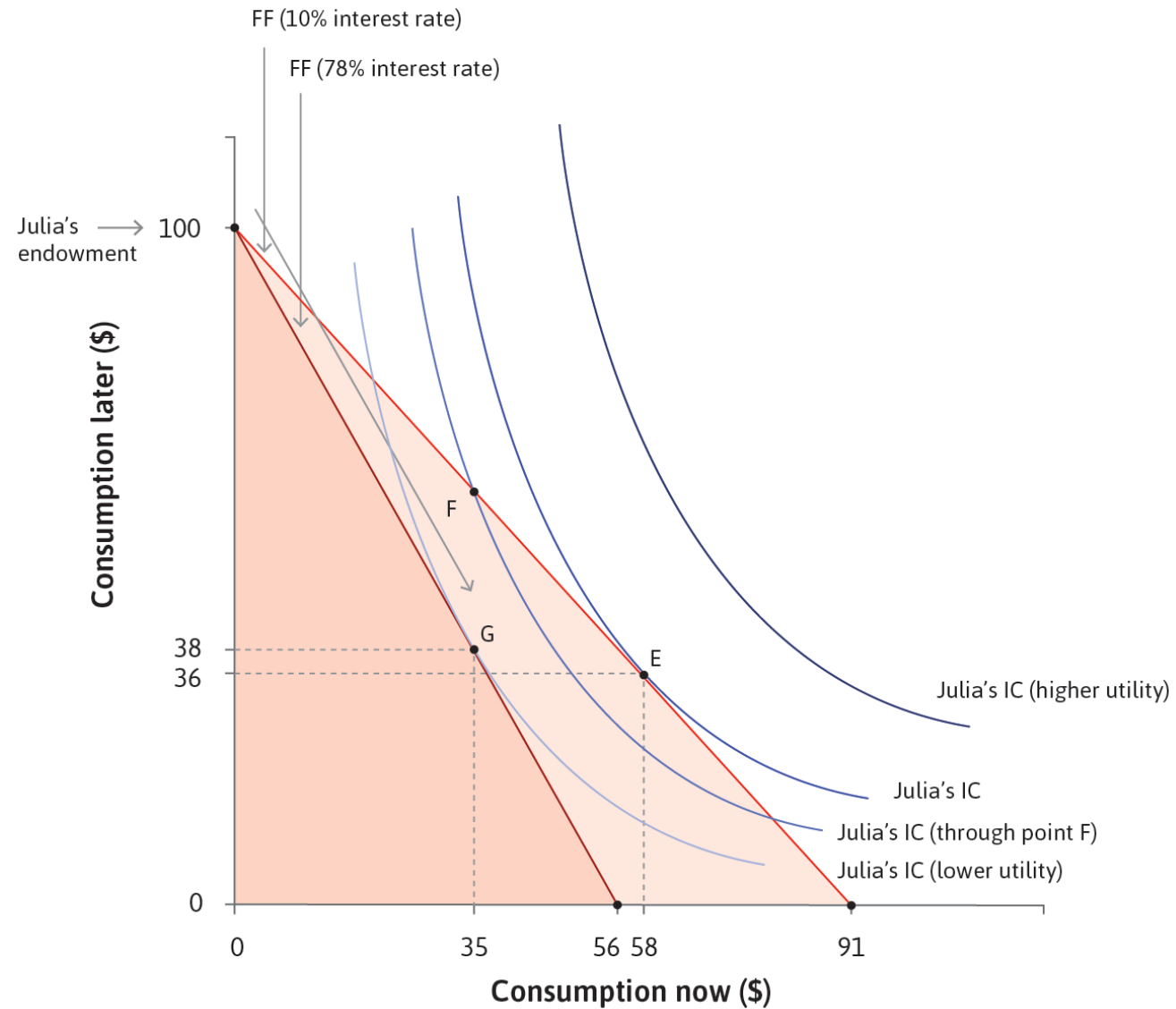


# BORROWING

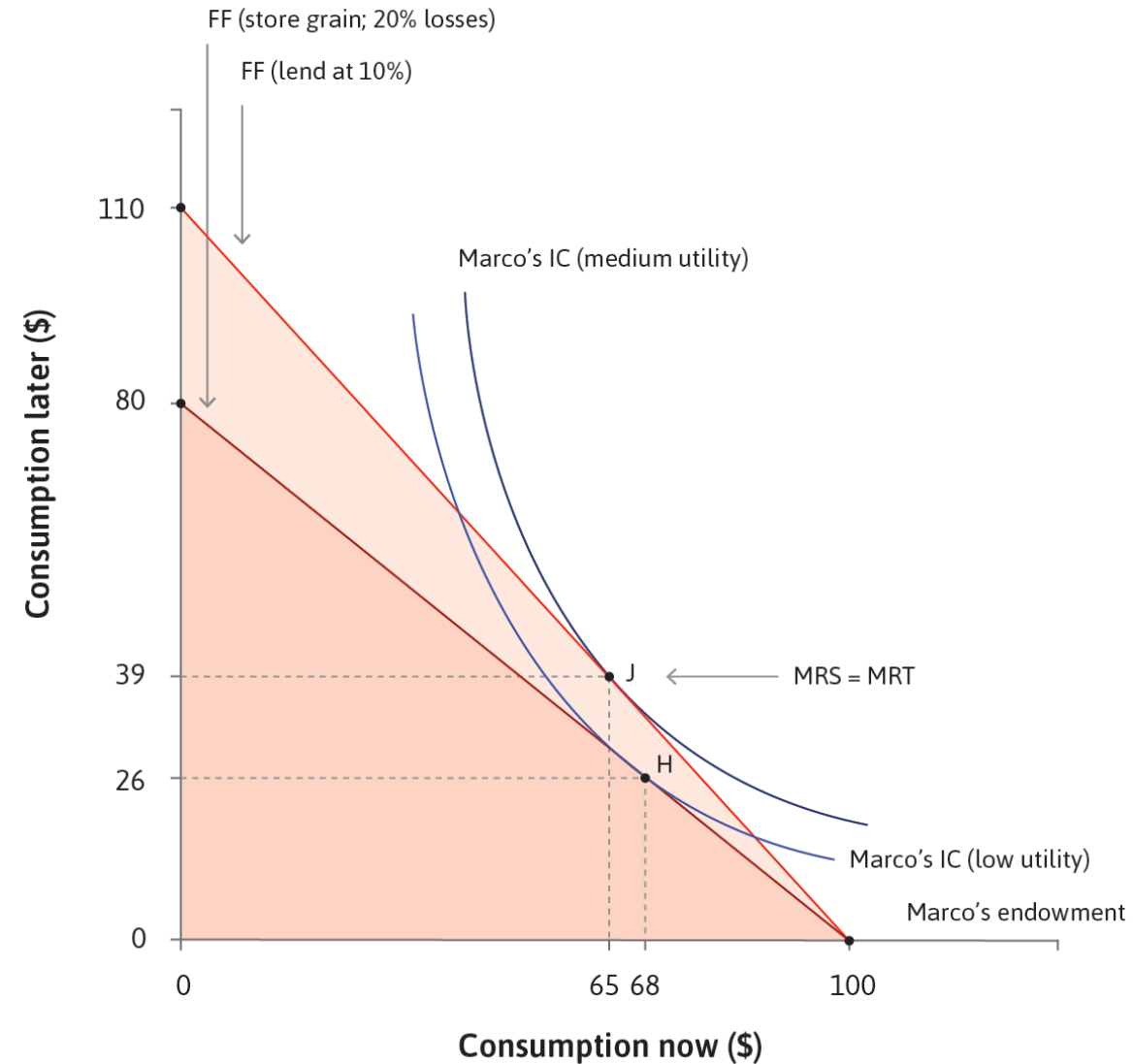
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# BORROWING



# SAVING AND LENDING



**Do we save too little?**

**Do we spend too little?**

# BARRIERS TO SMOOTHING

# BARRIERS TO SMOOTHING

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**Principal agent problems**

**Institutional barriers**

# ASYMMETRIC INFORMATION

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**Lenders face risk of  
non-repayment**

Adverse selection?

**Equity**

Moral hazard?

**Collateral**

# WEALTH BEGETS WEALTH

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**Having wealth makes it  
easy to provide equity  
and collateral**



**What happens if you don't have enough wealth to provide equity or collateral?**

**Credit rationing**

Credit-constrained

Credit-excluded

**Lack of wealth begets lack of wealth**



**Dave Ramsey** ✓

@DaveRamsey

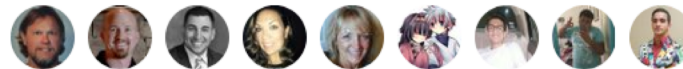
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If you do rich people stuff, eventually you will be rich. If you do poor people stuff, you will eventually be poor.

7:02 AM - 7 Mar 2019

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**But nope. Causal arrows are backwards**



Planet **Money** THE ECONOMY EXPLAINED



14:34

+ QUEUE

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PLANET MONEY

## Episode 466: DIY Finance

February 10, 2016 · 6:06 PM ET



## LEADERSHIP



**Raj Chetty**

Director



**John Friedman**

Co-Director

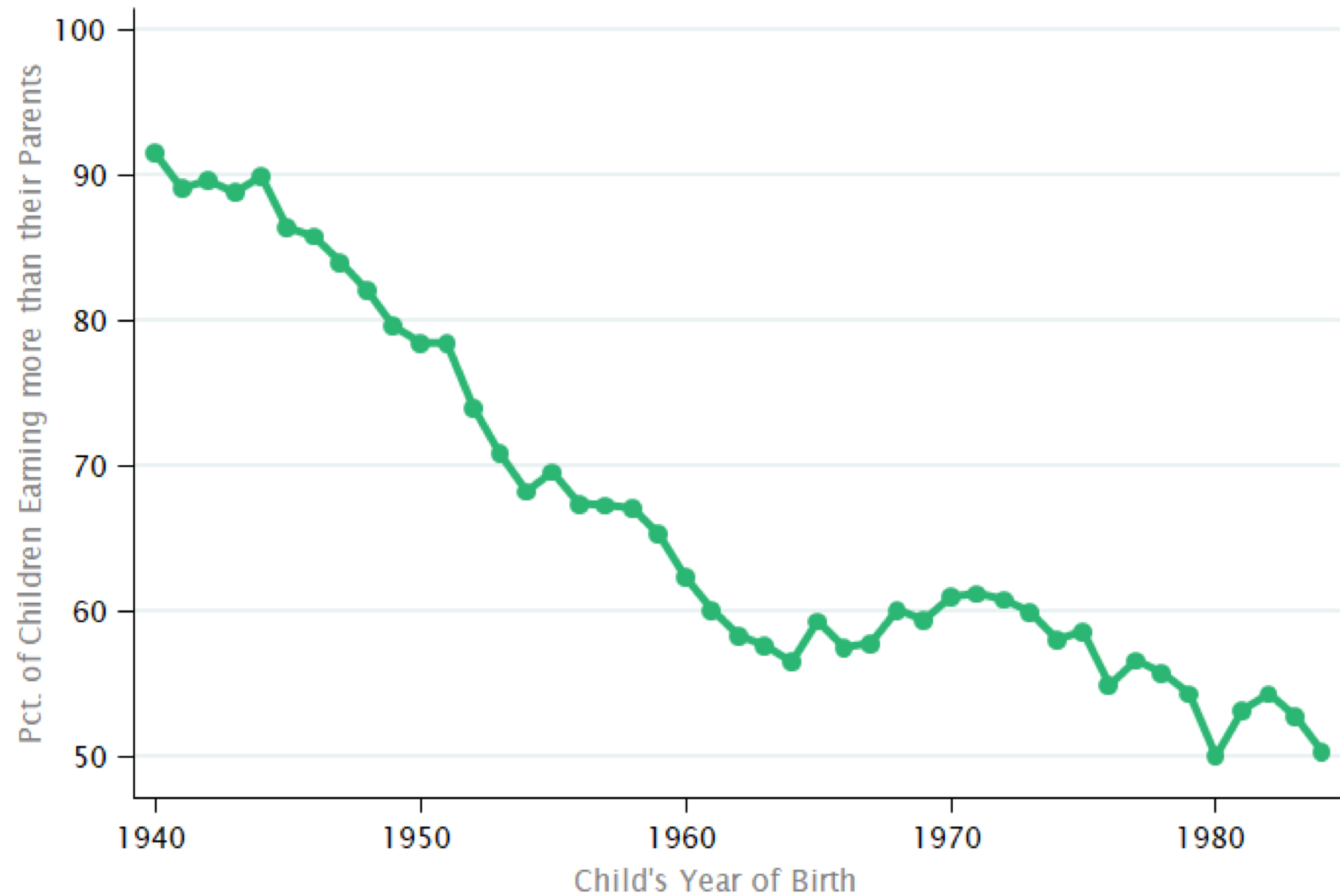


**Nathaniel Hendren**

Co-Director

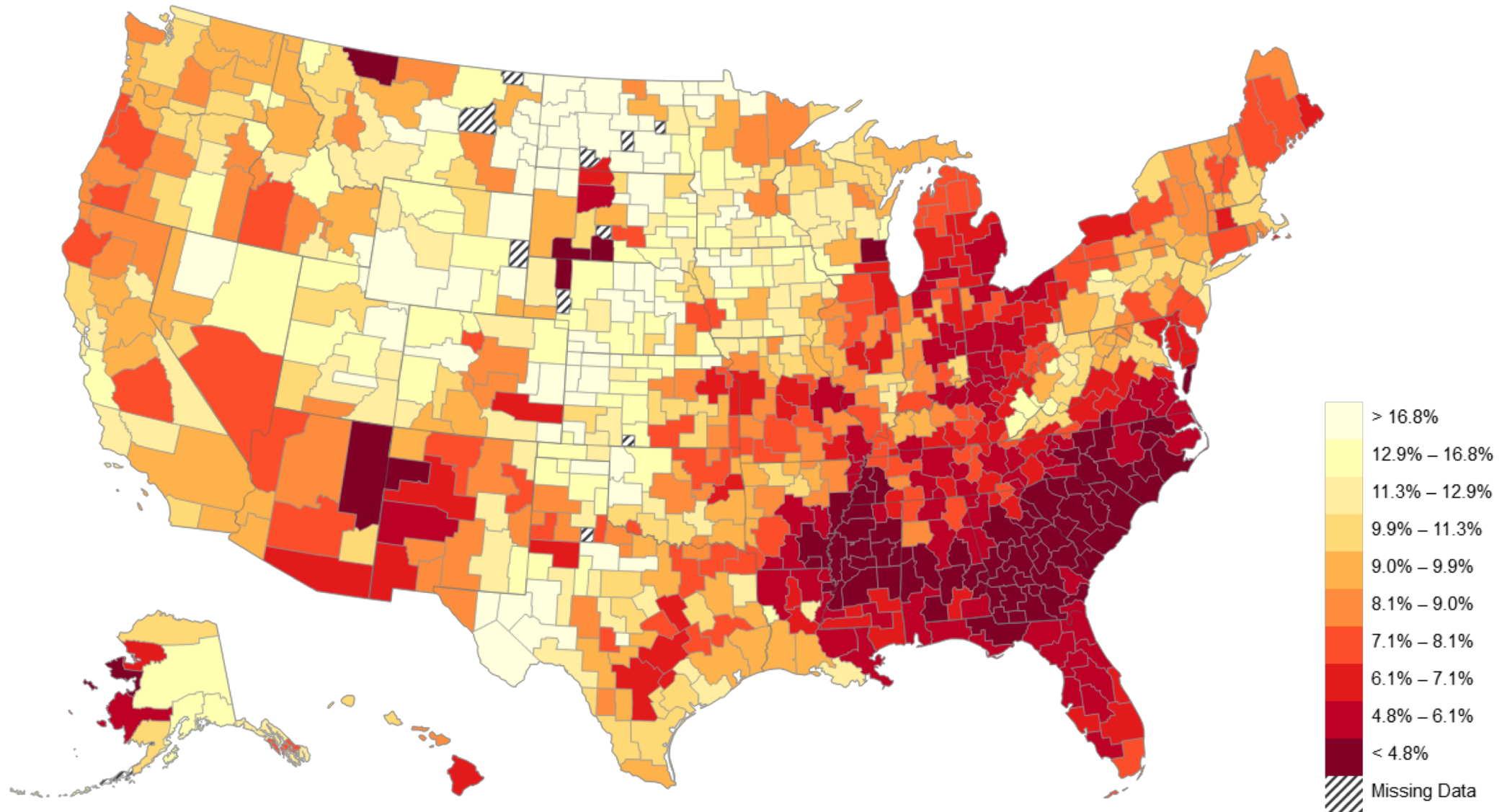


Percent of Children Earning More than Their Parents, by Year of Birth





# Probability of reaching top 20% income if parents are in bottom 20%





AMERICA

## U.S. Kids Far Less Likely To Out-Earn Their Parents, As Inequality Grows

December 9, 2016 · 2:39 PM ET

[BILL CHAPPELL](#)



Results also vary depending on where children are raised. As their map of metro and rural areas in the U.S. shows, the researchers found large areas where kids had markedly better chances of moving from the bottom fifth of income levels to the top fifth.

The study also found that children who are moved to a better environment get a sharp boost in their chance to reach economic success — and that the earlier such a move takes place, the greater the effect.

Some cities have been able to buck the trend, with researchers citing Salt Lake City and Minneapolis as two places where children have a good chance to emerge from poverty. Such cities tend to share important qualities, the economists say: "lower levels of residential segregation, a larger middle class, stronger families, greater social capital, and higher quality public schools."

# MONOPOLY PRACTICE

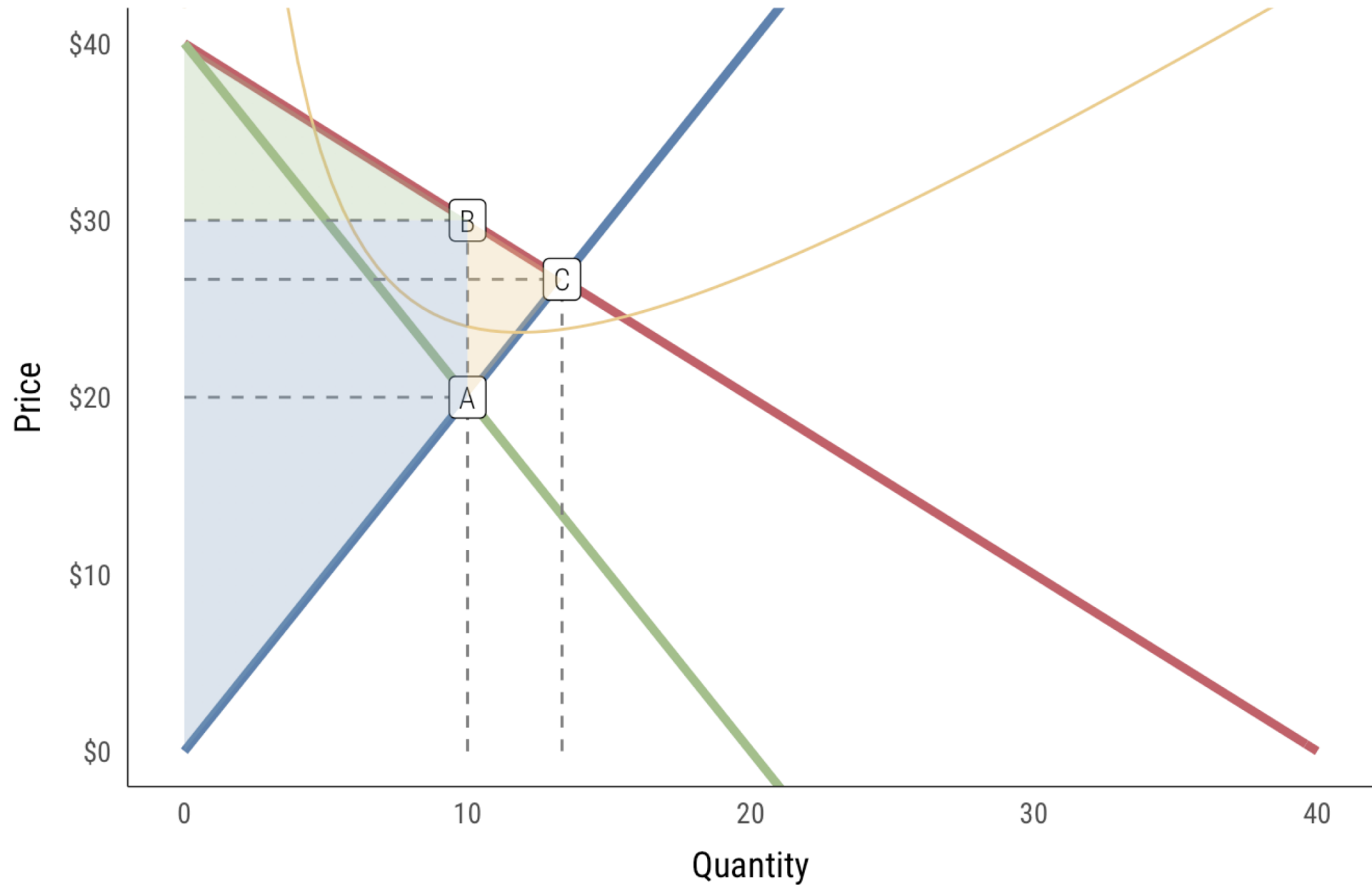


**Firms should set MR to MC  
to maximize profit ( $\pi$ )**

**Under perfect competition,  
MR is the preexisting price**

**Market power lets firms  
use their own MR curve**

**Monopolies will underproduce  
and overcharge**



- |  |  |  |  |
|--|--|--|--|
|  Average total cost |  Marginal cost    |  Consumer surplus |  Producer surplus |
|  Demand             |  Marginal revenue |  Deadweight loss  |  |

# THINGS YOU NEED TO FIND

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**Demand**

$$P = -0.25Q + 50$$

**Total revenue (TR)**

$$TR = PQ$$

$$TR = (-0.25Q + 50)Q$$

$$TR = -0.25Q^2 + 50Q$$

**Marginal revenue (MR)**

$$MR = -0.5Q + 50$$

---

**Total cost (TC)**

$$P = 0.1Q^2 + 3Q + 10$$

**Marginal cost (MC)**

$$MC = 0.2Q + 3$$

# SPECIAL POINTS

Maximum revenue  $MR = 0$

Social Q and P  $MC = Demand$

Maximum  $\pi$   $MR = MC$

Max  $\pi$  for monopolist  
Q from max  $\pi$ ;  
P from demand

# ELASTICITY

$$\varepsilon = - \frac{\% \text{ change in demand}}{\% \text{ change in price}} \quad \varepsilon = - \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

Coefficient for P if demand curve is written as  $Q = aP + b$

Demand :  $P = -2Q + 60$

Total cost :  $P = 0.25Q^2 + 10Q + 100$

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**Max revenue Q and P**

**Social Q and P**

**Max  $\pi$  Q and P**

**€ at P = 20**

**€ at P = 5**

**Producer/consumer surplus & DWL**

$$\text{Demand : } P = -\frac{1}{3}Q + 25$$

$$\text{Total cost : } P = 0.1Q^2 + 3Q + 50$$

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**Max revenue Q and P**

**Social Q and P**

**Max  $\pi$  Q and P**

**€ at P = 20**

**€ at P = 5**

**Producer/consumer surplus & DWL**