

Principles of Economics
When Competitive Markets Cannot Work
Optimally

**Modes of Market Failure:
Instructor Reality-Check Time...**

J. Bradford DeLong
U.C. Berkeley

Time for Reality Checks...

- Let's start this off with a series of reality checks for me...
- Let's see if I am talking to myself alone...

Ladies and Gentlemen, to Your i>Clickers: Maldistribution

- A series of reality checks for me: markets go wrong when there is **maldistribution** of wealth because:
 - A. It is not possible to charge the proper price for the commodity being produced.
 - B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.
 - C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.
 - D. All of the above
 - E. None of the above

Ladies and Gentlemen, to Your i>Clickers: Maldistribution: Answer

- A series of reality checks for me: markets go wrong when there is **maldistribution** of wealth because:
 - A. It is not possible to charge the proper price for the commodity being produced. **B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.** C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **Yes. I am looking for B. The market (competitive market in equilibrium, with rival and excludible commodities, no externalities, no information asymmetries, no miscalculations) is an engine for making win-win deals and so maximizing money-value surplus.**

Ladies and Gentlemen, to Your i>Clickers: Maldistribution: Answer: Digression I

- A series of reality checks for me: markets go wrong when there is **maldistribution** of wealth because:
 - A. It is not possible to charge the proper price for the commodity being produced. **B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.** C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **Yes. I am looking for B. The market (competitive market in equilibrium, with rival and excludible commodities, no externalities, no information asymmetries, no miscalculations) is an engine for making win-win deals and so maximizing money-value surplus.**
- **The market works by dividing potential suppliers into two groups: those with opportunity cost of production below market equilibrium price, and those with OCOP above MEP, and thus makes the first happy to produce and the second happy not to produce.**
- **The market works by dividing potential purchasers into two groups: those with willingness-to-pay above MEP, and those with WTP below MEP, and makes the first happy to buy and the second happy not to buy.**
- **The market thus (a) gets the right amount bought and sold, (b) gets it produced by the right people, (c) gets it consumed by the right people, and thus (d) maximizes money surplus.**

Ladies and Gentlemen, to Your i>Clickers: Maldistribution: Answer: Digression II

- A series of reality checks for me: markets go wrong when there is **maldistribution** of wealth because:
 - A. It is not possible to charge the proper price for the commodity being produced. **B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.** C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **Yes. I am looking for B. The market (competitive market in equilibrium, with rival and excludible commodities, no externalities, no information asymmetries, no miscalculations) is an engine for making win-win deals and so maximizing money-value surplus.**
- **The market works by dividing potential suppliers into two groups: those with opportunity cost of production below market equilibrium price, and those with OCOP above MEP, and thus makes the first happy to produce and the second happy not to produce.**
- **The market works by dividing potential purchasers into two groups: those with willingness-to-pay above MEP, and those with WTP below MEP, and makes the first happy to buy and the second happy not to buy.**
- **The market thus (a) gets the right amount bought and sold, (b) gets it produced by the right people, (c) gets it consumed by the right people, and thus (d) maximizes money surplus.**
- **AND THAT'S FINE IF YOUR DISTRIBUTION OF WEALTH IS FINE—IF YOUR RICH DESERVE THEIR RICHES, AND IF THEIR IS NO SENSE IN WHICH THE NEEDS OF THE POOR TRIUMPH THE DESERTS OF THE RICH**
- **IF NOT, NOT**

Ladies and Gentlemen, to Your i>Clickers: Externalities

- A series of reality checks for me: markets go wrong when there are **externalities** because:
 - A. It is not possible to charge the proper price for the commodity being produced.
 - B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.
 - C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.
 - D. All of the above
 - E. None of the above

Ladies and Gentlemen, to Your i>Clickers: Externalities: Answer

- A series of reality checks for me: markets go wrong when there are **externalities** because:
 - A. It is not possible to charge the proper price for the commodity being produced. B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. **C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.** D. All of the above E. None of the above
- **Yep. We are looking for (C) here. The market obtains efficiency by making every deal it can where the WTP of the purchaser exceeds the OC of the seller—but that will be the wrong thing to do when there are external effects in play...**

Ladies and Gentlemen, to Your i>Clickers: Non-Rivalry

- A series of reality checks for me: markets go wrong when there is **non-rivalry** because:
 - A. It is not possible to charge the proper price for the commodity being produced.
 - B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.
 - C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.
 - D. All of the above
 - E. None of the above

Ladies and Gentlemen, to Your i>Clickers: Non-Rivalry: Answer

- A series of reality checks for me: markets go wrong when there is **non-rivalry** because:
 - A. It is not possible to charge the proper price for the commodity being produced. B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above. **E. None of the above**
- **The answer I am looking for is (E).**
- **Markets go wrong when there is non-rivalry because the OC of production is the *marginal cost*—what it would cost to produce unit $N+1$ given that you are already producing units 1 through N .**
- **But a producer can only cover his or her costs if he or she charges each customer the average cost—and with non-rivalry, AC is higher than $MC = OC$.**
- **And with $P > MC = OC$, some people who ought to purchase are rationed out by the thinness of their wallets**

Ladies and Gentlemen, to Your i>Clickers: Miscalculation

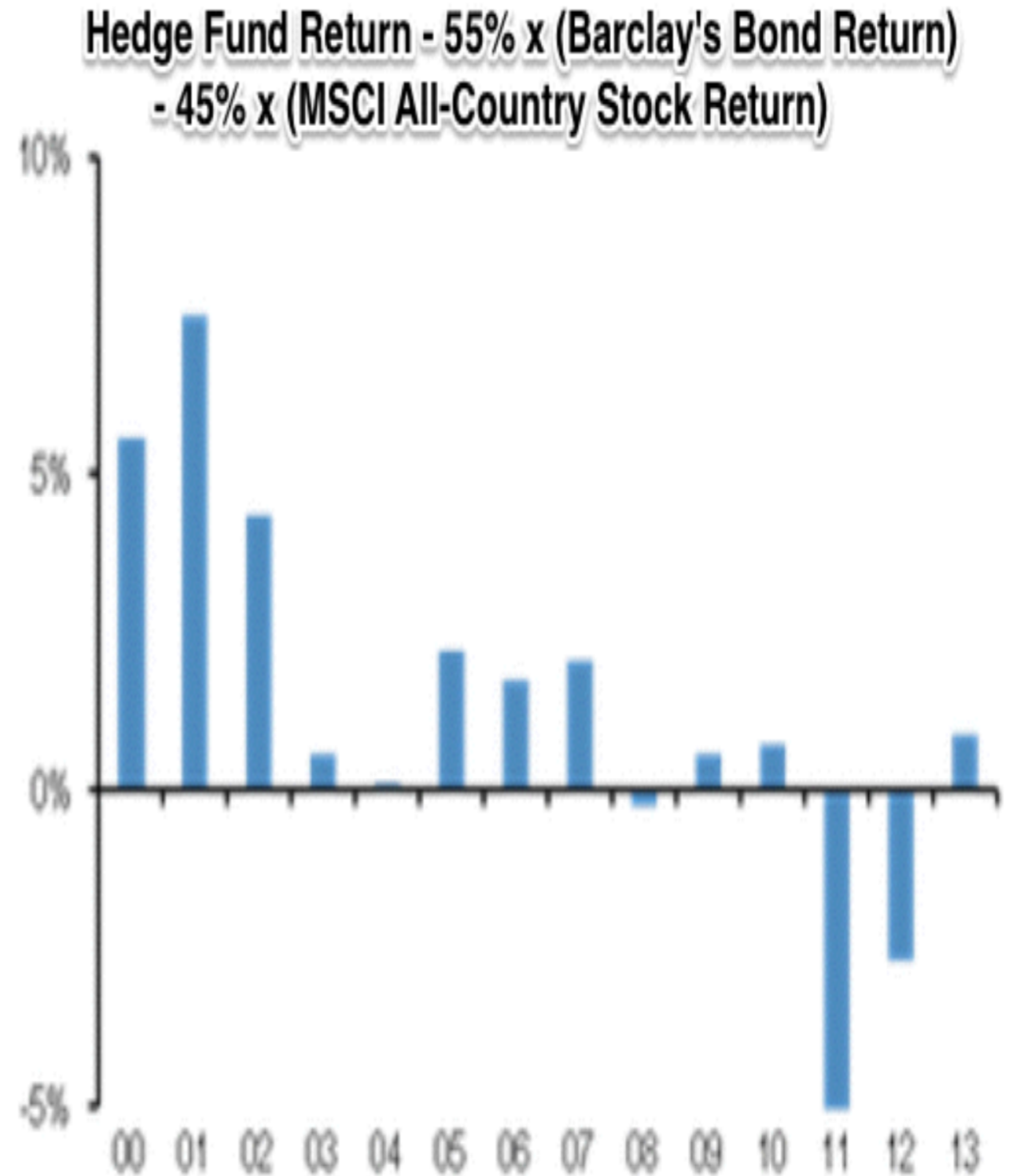
- A series of reality checks for me: markets go wrong when there is **miscalculation** because:
 - A. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.
 - B. People are fooled and exploited by others who set up situations in which the suckers are highly likely to fail to understand what their interests are.
 - C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.
 - D. All of the above
 - E. None of the above

Ladies and Gentlemen, to Your i>Clickers: Miscalculation: Answer

- A series of reality checks for me: markets go wrong when there is **miscalculation** because:
 - A. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. **B. People are fooled and exploited by others who set up situations in which the suckers are highly likely to fail to understand what their interests are.** C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **The answer I am looking for is (B)...**
- **Can I give an example of this? Yes...**
- **The hedge fund industry...**

Ladies and Gentlemen, to Your i>Clickers: Miscalculation: Answer: Digression

- A series of reality checks for me: markets go wrong when there is **miscalculation** because:
 - A. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. **B. People are fooled and exploited by others who set up situations in which the suckers are highly likely to fail to understand what their interests are.** C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **The answer I am looking for is (B)...**
- **Can I give an example of this? Yes: the hedge fund industry...**
- **For this you pay 2% and 20%?**
- **Plus 1% more, if you hire Anthony Scaramucci...**



Ladies and Gentlemen, to Your i>Clickers: Adverse Selection

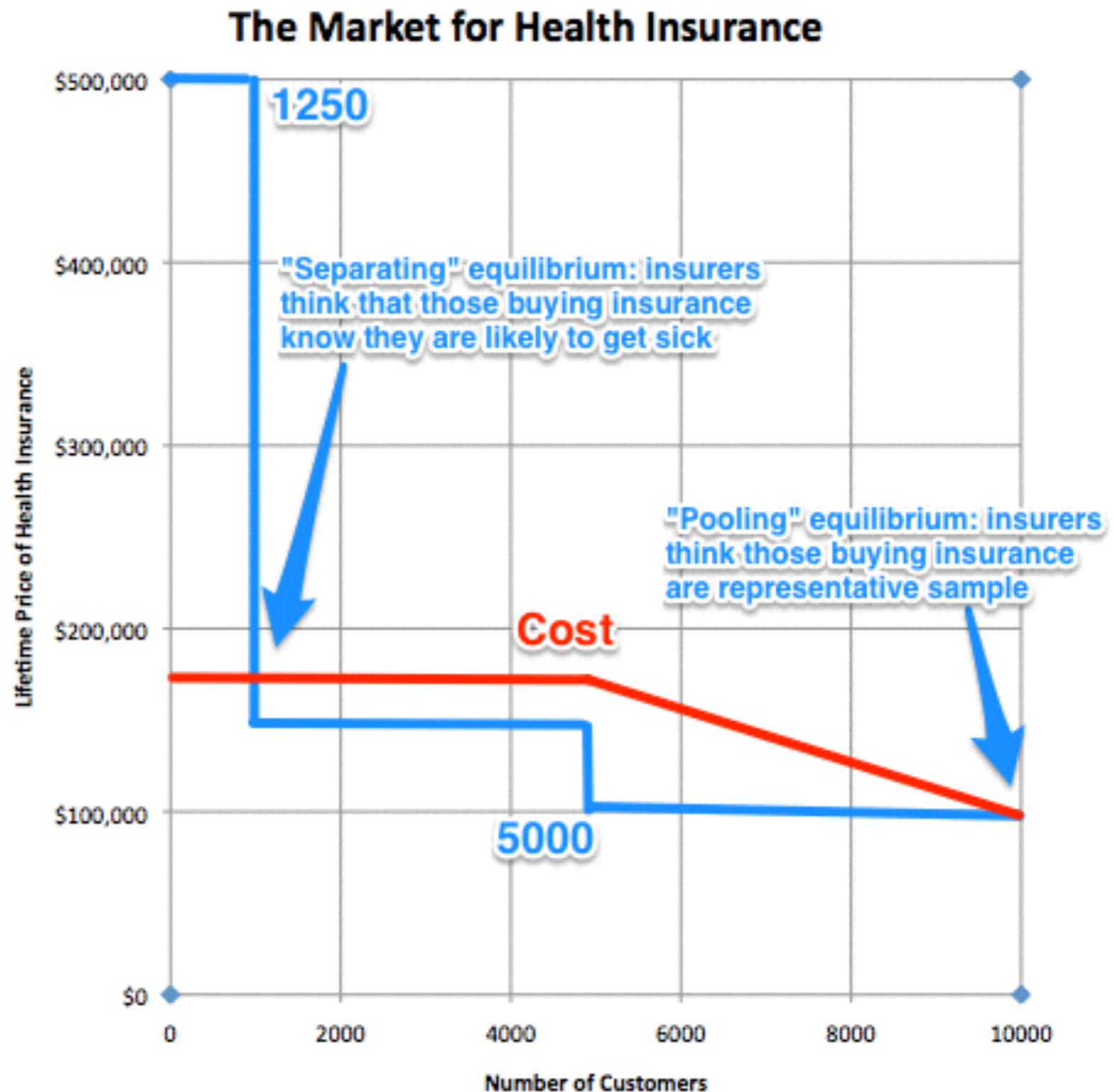
- A series of reality checks for me: markets go wrong when there is **adverse selection** because:
 - A. It is rational to fear to buy from someone who knows more about what they are selling than you do, and so markets break down because of a lack of trust.
 - B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.
 - C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.
 - D. People are fooled and exploited by others who set up situations in which the suckers are highly likely to fail to understand what their interests are.
 - E. None of the above

Ladies and Gentlemen, to Your i>Clickers: Adverse Selection: Answer

- A series of reality checks for me: markets go wrong when there is **adverse selection** because:
 - **A. It is rational to fear to buy from someone who knows more about what they are selling than you do, and so markets break down because of a lack of trust.** B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. People are fooled and exploited by others who set up situations in which the suckers are highly likely to fail to understand what their interests are. E. None of the above
- **It is A. We saw this last time. Insurance companies would be happy to sell insurance at an actuarially fair price—if they could be confident that those who showed up to buy insurance were representative of the population...**
- **But if they are not confident, they will charge a higher price to guard against adverse selection. And without some sort of a mandate, once they are charging a higher price the low-risk customers will not purchase**
- **And we will have an adverse-selection meltdown of the market...**

Ladies and Gentlemen, to Your i>Clickers: Adverse Selection: Digression

- We saw this until January 1, 2014 in the market for individual as opposed to group health insurance.
- Prices charged UC for its employees, vs.
- Prices charged in the individual or small-group market
- The importance of the tax preference...



Ladies and Gentlemen, to Your i>Clickers: Non-Excludibility

- A series of reality checks for me: markets go wrong when there is **non-excludibility** because:
 - A. It is not possible to charge the proper price for the commodity being produced.
 - B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.
 - C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.
 - D. All of the above
 - E. None of the above

Ladies and Gentlemen, to Your i>Clickers: Non-Excludibility: Answer

- A series of reality checks for me: markets go wrong when there is **non-excludibility** because:
 - **A. It is not possible to charge the proper price for the commodity being produced.** B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **The answer is: A. If you cannot keep people from making use of what you produce *without* paying, then how do you raise money in order to fund production?**
- **Answers are: government funding, charity, reforming property rights in order to make what was non-excludible excludible, changing technologies (locks, etc.), selling ancillary services**

Seven Devils All Around You

- (I know, I know, I have been talking about the six types of failure of competitive markets, but I have been listening to Florence and the Machine...)
- Seven devils:
 - Maldistribution
 - Miscalculation
 - Externalities
 - Adverse Selection
 - Non-Rivalry
 - **Non-Excludibility**—our topic for today
 - Market Power
- So I have added market power to make seven...

Market Power

- I have been talking about the six forms of market failure that can afflict a *competitive* market in equilibrium...
- It's that word *competitive* that takes care of market power.
- But what is wrong with market power?

Ladies and Gentlemen, to Your i>Clickers: Market Power

- A series of reality checks for me: markets go wrong when there is **market power** because:
 - A. The proper price for the commodity being produced is not charged.
 - B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich.
 - C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market.
 - D. All of the above
 - E. None of the above

Ladies and Gentlemen, to Your i>Clickers: Market Power: Answer

- A series of reality checks for me: markets go wrong when there is **market power** because:
 - A. The proper price for the commodity being produced is not charged. B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **Yes. I am looking for (A).**
- **When there is market power, producers think: if I produced less than at where $P = MC$, that would affect the price, and given that it would be cheaper to produce less the price might go up enough that I would actually make more money.**

Ladies and Gentlemen, to Your i>Clickers: Market Power: Answer: Digression

- A series of reality checks for me: markets go wrong when there is **market power** because:
 - A. The proper price for the commodity being produced is not charged. B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **Yes. I am looking for (A).**
- **When there is market power, producers think: if I produced less than at where $P = MC$, that would affect the price, and given that it would be cheaper to produce less the price might go up enough that I would actually make more money.**
- **Hence with market power $P > MC$, and too-few people will get to purchase—some will be rationed out by the thinness of their wallets**
- **Note the similarity between this and non-rivalry**
- **Indeed, if there is no non-rivalry someplace in the system, no producer can raise $P > MC$ without attracting entry and having to immediately drop its price back**

Ladies and Gentlemen, to Your i>Clickers: Market Power: Answer: Digression II

- A series of reality checks for me: markets go wrong when there is **market power** because:
 - A. The proper price for the commodity being produced is not charged. B. The market counts a dollar of surplus as just as good whoever it goes to, but we think the needs of the poor are more important than the wants of the rich. C. The market does not take proper account of the fact that market transactions affect the well-being of people who do not participate in the market. D. All of the above E. None of the above
- **Yes. I am looking for (A).**
- **When there is market power, producers think: if I produced less than at where $P = MC$, that would affect the price, and given that it would be cheaper to produce less the price might go up enough that I would actually make more money.**
- **Hence with market power $P > MC$, and too-few people will get to purchase—some will be rationed out by the thinness of their wallets**
- **Note the similarity between this and non-rivalry**
- **Indeed, if there is no non-rivalry someplace in the system, no producer can raise $P > MC$ without attracting entry and having to immediately drop its price back**
- **Is there any upside to market power? There are two:**
 - **Market power is *inevitable* in situations of non-rivalry if you are not going to nationalize—so you have to figure out how to deal with it**
 - **Market power can be *useful* in situations that also have non-excludibility: it takes a heap of Harberger triangles to neutralize one Bell Telephone Laboratories**

Equilibrium

- Come to think about it...
- I have been talking about the six forms of market failure that can afflict a competitive market in *equilibrium*...
- And that word *equilibrium* also has mojo.
- How about situations of disequilibrium?
 - Hard to analyze because lots of people are taking actions on mistaken beliefs and leave the market disappointed...

Equilibrium II

- Paul Samuelson's correspondence principle
- Disequilibrium is hard so we won't do it
- We will bet that the economy is nearly always in equilibrium
- And the "dynamics" we will do will involve a jump from one equilibrium position to another in a very short time in response to changes in forcing variables in the economic environment
- Is this a good bet to have made?

Recasting the Course

- I think next year I am going to have to move from Florence and the Machine to the Buddha, and talk about the eightfold path of market righteousness:
 - Competition
 - Equilibrium
 - Rivalry
 - Excludibility
 - No externality
 - Right information
 - Right calculation
 - Right distribution