Principles of Applied Microeconomics

Ross Summer Connection (2022) Elird Haxhiu

Migration Intro & Markets

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Last time

- Definitions of economics: institutional vs. technical
- Models as simplified representations of reality
- What models teach us: positive vs. normative statements

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- Today: migration intro + supply/demand model

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 - AKA migration constraints
- Migrants are an exception to this global legal regime
 - International students
 - Guest, or seasonal workers
 - Refugees/asylum seekers
 - Research scientist visa
 - Undocumented workers

Migrants comprise $\sim 3\%$ world population

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Observed gaps in economic outcomes

- One way to unify topics this term
- The largest gap we observe is between workers in poor vs rich countries
- Best predictor of the economic status of any human being alive today is where they were born
- Not their skills, education, experience, entrepreneurial ability, luck, perseverance, connections, or anything else...

We live in a world of global apartheid

- Apartheid based on nation of your parents, rather than their race
- This system is immoral: legalized segregation designed to economically discriminate a group of people based on their nationality (or race or gender or...) is not right

We live in a world of global apartheid

- Apartheid based on natio
- This system is immoral: le economically discriminate nationality (or race or ger
- Also bad economic policy

LET THEIR PEOPLE COME

Breaking the Gridlock On Global Labor Mobility

LANT PRITCHETT

CENTER FOR GLOBAL DEVELOPMENT



Clemens (2011)

- Largest existing <u>distortion</u> in the world economy: **migration constraints**
- Other barriers to mobility exist (credit constraints, information, risk) but legal restrictions are clearly binding...
 - Gallup poll (2008): 40% of adults in poor countries want to move
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 - Gallup poll (2008): 40% of adults in poor countries want to move
 - US diversity visa lottery (2010): 50k visas, 13.6 millions applications
- **Question**: how large are the gains from <u>open borders</u>?

Answer

Table 1

Efficiency Gain from Elimination of International Barriers

(percent of world GDP)

All policy barriers to merchandise trade

- 1.8 Goldin, Knudsen, and van der Mensbrugghe (1993)
- 4.1 Dessus, Fukasaku, and Safadi (1999)^{*a*}
- 0.9 Anderson, Francois, Hertel, Hoekman, and Martin (2000)
- 1.2 World Bank (2001)
- 2.8 World Bank (2001)^{*a*}
- 0.7 Anderson and Martin (2005)
- 0.3 Hertel and Keeney (2006, table 2.9)

All barriers to capital flows

- 1.7 Gourinchas and Jeanne $(2006)^b$
- 0.1 Caselli and Feyrer (2007)

All barriers to labor mobility

- 147.3 Hamilton and Whalley (1984, table 4, row 2)^{*c*}
- 96.5 Moses and Letnes (2004, table 5, row 4)^{*c*}
- 67 Iregui (2005, table 10.3) ^{c,d}
- 122 Klein and Ventura (2007, table 3)^e

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Answer ≈60-140% world GDP

- Four important questions about these estimates
 - 1. What are the external effects of (skilled) emigrants' departure on the productivity of non-emigrants back home?
 - 2. What is the elasticity of labor demand in origin and destination countries?
 - 3. What are the relative contributions of inherent traits vs. location in the observed gap in wages between rich and poor country workers?
 - 4. What future levels of emigration are feasible, given current world?

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- We will dive into these issues more next week!
- But first, **markets**: for labor, goods/services, and in general...

Break!

• See you in about 10 minutes :)

What is a market?



What is a market?

- Definition: a market structure is some function $f: X^n \to Y$, where
 - Set of inputs Xⁿ includes people, resources, production (aka work!), eventual income/wealth profiles, level of competition ...any other?
 - Output Y is an allocation (aka description of how resources are divided)

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• We study a **<u>competitive market</u>**

- 1. There are many producers and consumers
- 2. Everyone in the market is a price-taker
- 3. There is a homogenous good or service
- 4. There is free entry and exit

Non-competitive market structures

- Definition? Strategy? Game theory...
- Examples that lead to non-competitive behavior/interactions
 - 1. Small number of <u>sellers</u> in a goods market
 - 2. Small number of firms <u>hiring</u> workers in each place/time (monopSONY)
 - 3. Imperfect information, etc.

(monopoly)

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- Competitive markets? Keep for basic intuition and benchmark...

(monopoly)

(monopSONY)

Market Participants

- Consumers, whose behavior is summarized by the demand curve
 - Plots the relationship between price and quantity demanded
 - Aggregates individual demand curves, from people's willingness to pay
 - Slopes downward by the Law of Demand

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 - Slopes downward by the Law of Demand
- Producers, with a supply curve
 - Plots the relationship between price and quantity supplied
 - Aggregates individual supply curves, derived from firms' marginal cost curves
 - Slopes upward due to increasing marginal costs of production

Market Equilibrium

• Definition: we say that a perfectly competitive market is in equilibrium whenever quantity demanded equals quantity supplied

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- Let $Q_D(p)$ and $Q_S(p)$ be the demand and supply functions
- Then the equilibrium price p^* is the solution to the equation

 $Q_D(\boldsymbol{p}^*) = Q_S(\boldsymbol{p}^*)$

and equilibrium quantity is $Q^* = Q_D(p^*) = Q_S(p^*)$

Moving Towards the Equilibrium

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- Suppose the price is above equilibrium: $p > p^*$
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- Below equilibrium price implies <u>shortages</u>

Shifts in Supply and Demand

- In general, when there is a shift in the supply or demand curves, the old price and quantity will no longer be an equilibrium
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- **Demand** shifters
 - 1. Changes in income (normal vs inferior goods)
 - 2. Changes in the price of other goods (complements vs substitutes)
 - 3. Changes in consumer preferences, or the number of consumers

Shifts in Supply and Demand

- In general, when there is a shift in the supply or demand curves, the old price and quantity will no longer be an equilibrium
- Prices must adjust to a new equilibrium
- Supply shifters
 - 1. Changes in input prices or the price of production-related goods
 - 2. Changes in the production function or the number of producers
 - 3. Changes in expectations

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Shifts in Supply <u>or</u> Demand

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Shifts in Supply or Demand

- We can make unambiguous predictions about what happens to the equilibrium price and quantity in the market
- Demand shifts imply positively correlated responses by (p, Q)
 - Increase $\Rightarrow p \uparrow$ and $Q \uparrow$
 - Decrease $\Rightarrow p \downarrow$ and $Q \downarrow$
- Supply shifts lead to <u>negatively correlated</u> changes
 - Increase $\Rightarrow p \downarrow$ and $Q \uparrow$
 - Decrease $\Rightarrow p \uparrow$ and $Q \downarrow$

Simultaneous shifts

• Cannot determine changes in <u>both</u> *p* and *Q* anymore

Simultaneous shifts

- Cannot determine changes in <u>both</u> p and Q anymore
- Albrecht (2022) on AS/AD model

- Easy reading, which uses all the new skills we learned this week
- Current, real-world issue you will hear a lot about in coming years

Is Inflation Demand or Supply Driven?

Basic economics says both 💽

Brian Albrecht Jun 16

♡19)(D3)

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You could say it's been a big week in U.S. economics headlines. The <u>May CPI inflation</u> number increased to 8.6%, the highest number since 1981. Yesterday, <u>the Fed raised interest</u> <u>rates by 0.75%</u>, the largest increase since 1994.

Conclusion

- Recall LEC1: examples of models, predictions, ceteris paribus etc.
- Supply & demand is an example of an economic model
- The supply & demand model makes predictions
 - Positive and normative predictions
 - We will first focus on <u>positive</u> ones (welfare theorems later!)

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- Causal inference = theory of testing these predictions with data

Next time

- Keep working on HW1! Come with questions!
- READ: Clemens (2011) "trillion-dollar bills" paper, an inspiration <3
- How to do academic reading
 - 1. Title + abstract + intro + conclusion...
 - 2. Section titles + major figures...

figure out the main claim(s)
overview of support for claim(s)

- 3. Dive in... interrogate the support given, ask questions, make connections to theory (the "tools" I show you) and related research (any other topics)
- 4. Elevator pitch to your (mom, dog, wall, voice in your head) in < 1 min
- 5. A list of <u>questions</u>, <u>comments</u>, <u>concerns</u>, and <u>critiques</u>