why do cities exist? economic regional development theories

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this version: Friday 28th September, 2012 11:41

outline

development theories (Blakely and Leigh, 2009, ch3)

axioms (O'Sullivan, 2009, ch1)

why cities exist? (O'Sullivan, 2009, ch3)

city size (O'Sullivan, 2009, ch4)

urban growth (O'Sullivan, 2009, ch5)

NECESSARY readings

- Wirth (1938)

Barro, R. (1991): "Economic growth in a cross section of countries," The Quarterly Journal of Economics, 106, 407–443.

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Glaeser, E. (2011): Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier, New York NY: Penguin Press.

Green, G. and A. Haines (2012): Asset building & community development, Sage Publications, Incorporated.

Haidt, J. (2012): "Religion, evolution, and the ecstasy of self-transcendence," Ted Talk, http://www.ted.com/talks/lang/en/jonathan_haidt_humanity_s_stairway_to_self_transcendence.html.

Jacobs, J. (1993): The death and life of great American cities, New York NY: Random House.

Mankiw, N., D. Romer, and D. Weil (1992): "A contribution to the empirics of economic growth," The quarterly journal of economics, 107, 407–437.

O'Sullivan, A. (2009): Urban economics.

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ps1

- there are comments in your assignments–ask me questions about the comments... Haidt (2012)

ps1 comments

- be specific; e.g. instead of saying that there is Whites flight from Camden, show numbers...
- think about the phenomenon–is it big or small?
- maybe there are fewer Whites everywhere ?
  - lower fertility than other races...
  - lots of Asian and Hispanic immigration, etc etc

ps1 comments

- is a number big or small ?
- it depends on the comparison
- all numbers mean nothing without a comparison/base case/yard stick
- say, is my income of $40,000 big or small?
  - yes in Camden, no in NYC (given median)
  - yes for a HS dropout, no for a PhD (given median)
  - yes for a person in 20s, no in 40s (given median)
  - yes in rural China, no in Beijing (given median)
  - yes in 1870, no in 2012 (given median)
- and you can repeat the above given your family, given your field, etc etc

show most meaningful quantities

- number of single-parent families, number of people in poverty etc
- should be adjusted for population !!!
- all dollar values should be adjusted for inflation !
  - when you present something ask yourself "so what?"
  - why does it matter ? how it matters? how i can rephrase/redo it so it's more meaningful
- what's new ? what's unexpected ? otherwise, what's the point of creating n-th document that reiterates what everybody knows
- surprise me; in-depth analysis, or broad approach (several disciplines), unique data, etc, etc...

show me some sophistication

- do something that only a PhD can do
- e.g. a basic impact analysis of, say a policy enacted, e.g. Ashley's govt takeover
- just graph it...
  - e.g. 1918 pandemic is an "intervention"

    `http://www.ats.ucla.edu/stat/stata/library/GraphExamples/code/line4.htm`
- RD
  - `http://www.caldercenter.org/research/methodregression.cfm`
  - `http://www.socialresearchmethods.net/kb/quasird.php`
  - `http://changingminds.org/explanations/research/design/regression_discontinuity.htm`
  - the effect of a new policy in CA:

    `http://www.mit.edu/~jhainm/Paper/ccs.pdf`

population flight

- many of you complain about population decline in Camden, Philadelphia
- fine, but... also important who is leaving: most energetic entrepreneurial, etc?
- the other thing is whether we should care about places or about people or both
- maybe better give every poor person in Camden a check for $100,000 than spending millions on the city...
  (with some spending restrictions, so they won't buy LV bags, Lexuses, and drugs)
- `http://are.berkeley.edu/~ligon/Teaching/EEP100/glaeser05.pdf`

lit

- since many of you are doing ps about cities and cities that need redevelopment
- you may have a look at Glaeser (2011), Jacobs (1993)

Glaeser's Triumph of the city

- some overviews
  - http://www.economist.com/node/18111592
  - http://www.economist.com/blogs/prospero/2011/11/triumph-city
  - http://www.governing.com/topics/economic-dev/is-it-time-to-retire-jane-jacobs-vision-city.html
  - slums are a sign of cities vitality...poor will be worse off in less dense areas
  - better market forces than community preservation and organizing

when presenting/comparing data

- graphs are best, second tables, and third numbers in text
  - unless you just have a 1 or 2 numbers put them in text
  - if it's several, e.g. 6, have a table
- if more than that have a graph

data quality...

- ...is important
- especially for the paper
- an especially if you use non-government(e.g. census) , non-scholarly(e.g. PAR) sources
- compare several sources and see if you get similar numbers
- do the numbers look right?

cite!

- most of you don't cite sources enough...

quality over quantity

- i'd rather have two very meaningful, careful, to the point pages
- than 20 pages of everything that comes to your mind...

ted talks

- about the future of the cities
  - convertible cars and apartments

    `http://www.ted.com/talks/kent_larson_brilliant_designs_to_fit_more_people_in_every_city.html`
- become a good friend of your computer, learn programming: `http://www.ted.com/talks/andrew_mcafee_are_droids_taking_our_jobs.html`

general notes on theories

- whatever you believe in, you'll find a theory to support it
- hence, testing is important !!! (your paper: have theory(ies) and test)
- i am trying to be impartial...and present a wide range
- O'Sullivan (2009): economics: market forces
- Green and Haines (2012): sociology, public policy: social forces
- Blakely and Leigh (2009) somewhere in the middle...
- today we'll focus on economics, next week on others

some key economics papers

- Barro (1991) Mankiw et al. (1992)

discussion

- starting today, I'll be talking less and you'll be talking more
- let's have some class discussions
- when i talk about things, please jump in and share your perspective

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neoclassical economic theory (M. Friedman)

- also called "the invisible hand", based on Adam Smith
- equilibrium of economic systems
- mobility of capital
  - if capital can flow without restrictions, all economic systems will achieve equilibrium
  - it would mean that ghettos would attract capital because of low cost; but they don't...
- if the model worked, all areas would have about the same level of development; obviously, it doesn't work...
- but still it influenced deregulation in banking, utilities, etc
- and still an useful theory

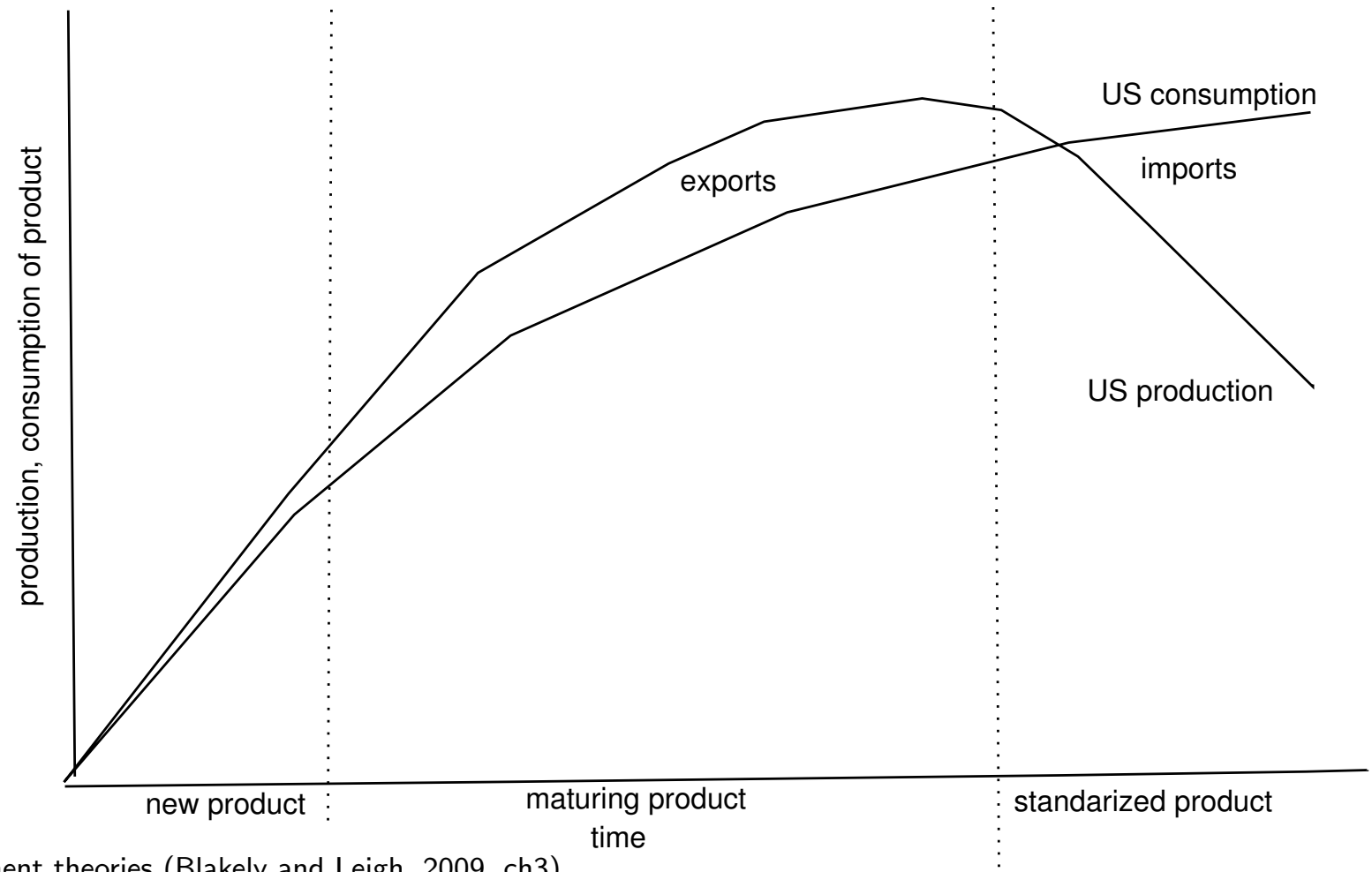
economic base

- localities should use local labor and materials and export it outside
- provide incentives (tax breaks, subsidies) for firms to start export-based businesses
- useful for hi-tech (it can be exported anywhere; e.g. ipad)
- but it risks being solely reliant on export and hence sensitive to demand fluctuations
- [but most things are produced globally (e.g. ipad)]

product cycle

- production of a product goes through cycles
  - first, it is expensive to produce, and finds demand among educated and rich
  - then it matures and starts to find buyers in the larger scales, also production process becomes more widely available and less expensive
  - finally product declines

product cycle



location

- how firms chose location? and hence how places grow and decline
- firms chose location that minimizes costs of production and transport
- if a final product weights less than inputs, firm would locate at inputs source
- they are called weight loosing or input oriented
  - e.g steel, ore refining, fruit canning

location

- if a final product weights more than its inputs firm would locate close to the market
  - e.g. auto assembly, baking
- but transportation costs declined so it makes more sense to think in terms of logistics rather than transport

location

- other things matter too: cost of energy, education, local government, Waite management
- and other things matter more and more–World is changing fast...
- e.g. data centers would locate where energy is cheap and where it is cold
  (computers like cold, otherwise need to use A/C)

central place

- most relevant to retail activity
- each urban center is supported by series of smaller places that provide resources (industries and raw materials) to the central place which is more specialized and productive
- and these smaller places are surrounded by even smaller places, and so on

central place

- the urban center contains specialized stores and services that serve the entire region
  - corporate lawyers, investment bankers, heart surgeons, symphony orchestra
  - haircuts and car repairs are everywhere
- theory says that the development of the central place will improve the whole region

  more about central theory later today...some graphs etc

theory in practice-attraction models

- to attract people and businesses...
- ...by offering incentives and subsidies
- it used to be about attracting businesses
- now also attracting population, e.g the creative class (Florida, 2008)
- people bring buying power and skills that attract employers
- just saw an ad on Cooper st: become a homeowner in Camden, get $15k in incentives
- R faculty were encouraged during the orientation to live locally

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the axioms...

- ... are self-evident truths

  actually, they are not that self-evident, but still useful when thinking about regional development
- economists are like physicists – they're pretty sure they know the truth
- the five axioms of urban economics follow

prices and locational equilibrium

- prices adjust to achieve locational equilibrium

  it happens when no one has an incentive to move

- prices for better spots are higher
  - e.g. you'll pay \$1,500 rent for a 1 bdrm in Philly, and \$200 in Camden
  - had the prices been the same, everybody would move out of Camden
  - (yes, Camden is loosing population, but there are also other reasons, and if the housing prices were higher it would lose much more people)

self-reinforcement→extremes

- self-reinforcing effects generate extreme outcomes
- like a vicious(virtuous) cycle
- self-reinforcing effect is a change in something ... that leads to additional changes in the same direction
- e.g. many artists may locate in some city
  - then they will share ideas, collaborate, compete
  - share studios, tool suppliers, etc
- and all of the above would attract more artists and so forth...

externalities→inefficiencies

- externalities cause inefficiencies
- (for economist an inefficiency means that not only the buyer/seller gets benefits/costs)
- externality is something external to a transaction
  - e.g. driving a car produces air pollution, and its cost is borne not only by you, but by everybody else
  - e.g. paying for education not only improves myself, but also my social network, community, etc
- [probably there's no transaction with exactly zero externalities]

economies of scale

◇ production is subject to economies of scale: cost decreases as output increases (think Wallmart); 2 reasons:

- indivisible (lumpy) inputs that cannot be scaled down
  e.g. to produce a CPU, you need a bunch of equipment, whether you produce 1 or 1,000 per day
- factor specialization: the more people you employ, the more they specialize and the more efficient they become:
  continuity: you don't spend time switching from one task to another; proficiency (experience and learning)
  " A jack of all trades is master of none"

◇ it's critical for urbanization; if not economies of scales, there would be no cities...

competition and profit

- competition generates zero economic profit
- when there are no restrictions on the entry into a market, firms would enter until profit is zero
  (there are always some restriction on the entry)

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regional development vs cities

- much of regional development is about cities
- over 80 % of the US population is urban
- even more of production, R&D and innovation is urban

why do cities exist?

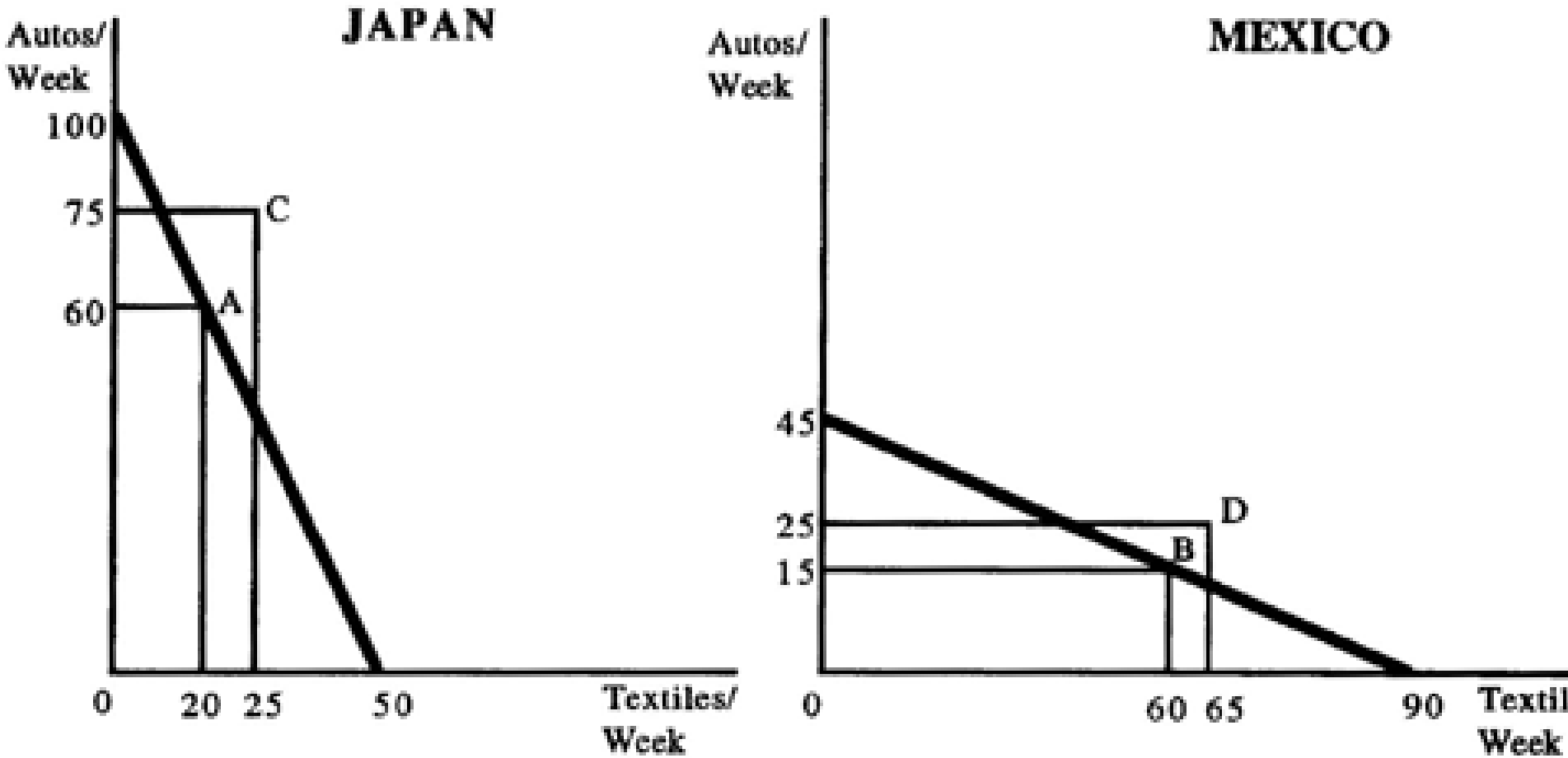
- because people are not self-sufficient (Smith's labor specialization)
- and production, consumption and exchange are easier done in cities
- think of everyday things you use, even the simple ones like a coffee table...

...coffee table

- grow a tree, cut the tree, process it, paint it, ship it from China,
- and you need some equipment that somebody else needs to produce (axe, saw, chemicals for paint, etc)
- how about a car, airplane, washing machine, etc etc
- in everyday life we rely on work of thousands of other people
- and the know-how accumulated over centuries...

comparative advantage

◇



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comparative advantage

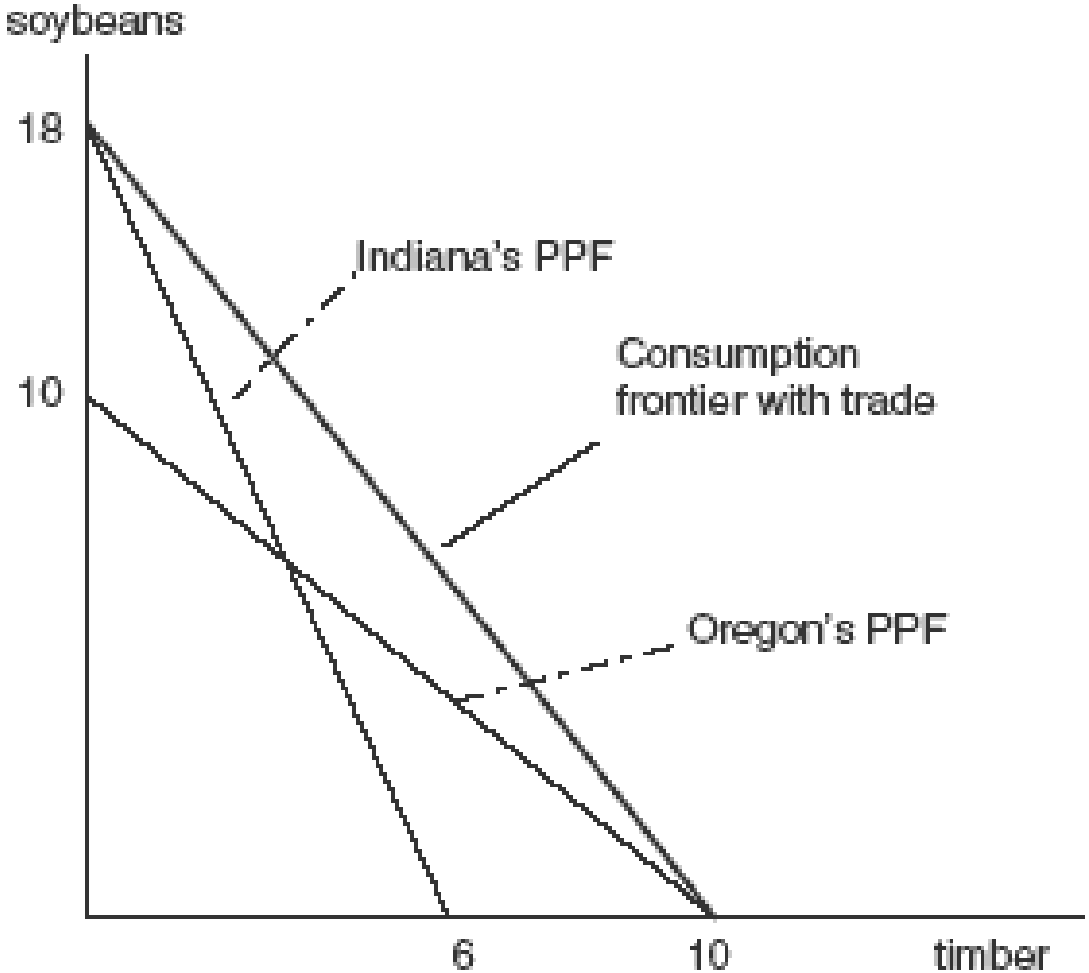
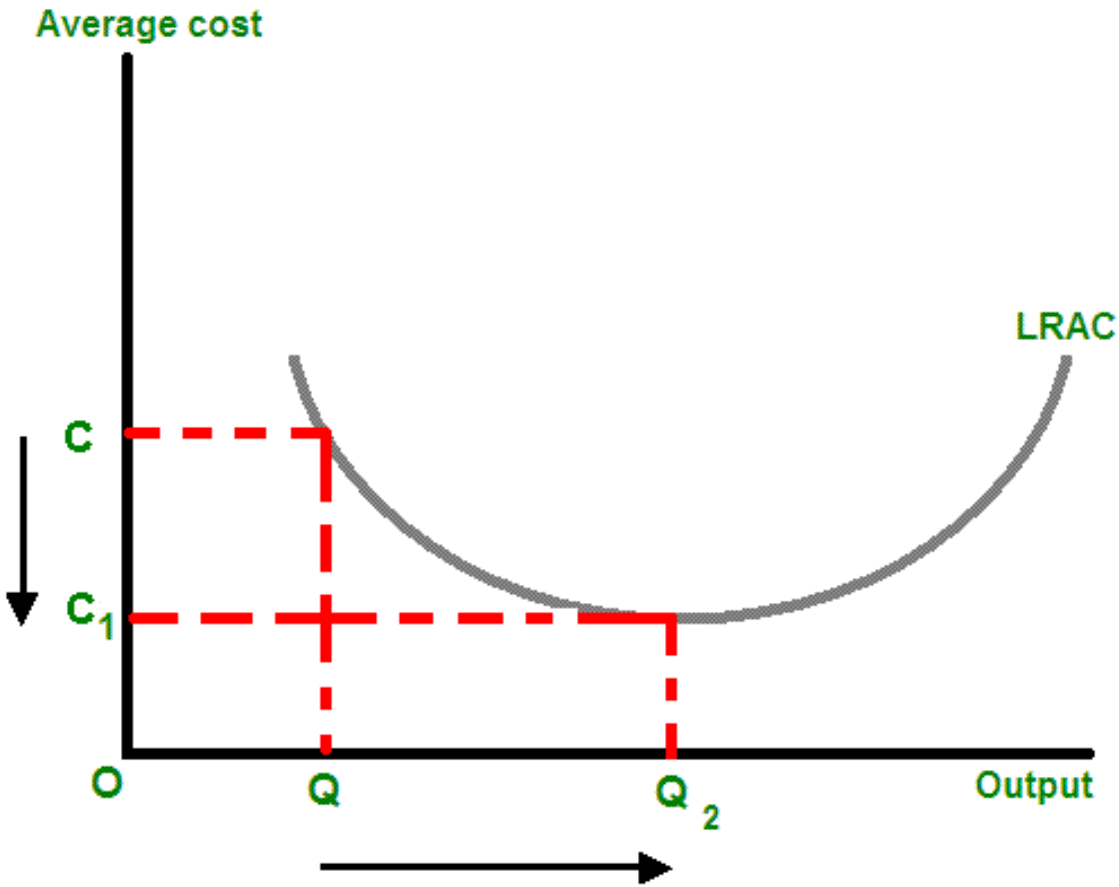


Figure 17.3

◇ http://www.education.com/study-help/article/comparative-advantage-gains-trade/

economies of scale

- increasing returns to scale
- think Wallmart vs your neighborhood store



- http://en.wikipedia.org/wiki/Economies_of_scale

clustering

- businesses cluster...
- counterintiutive, you would imagine competitors to locate far apart in order not to steal customers
- competing firms may cluster to share inputs:
  - labor, raw materials, capital (machines, equipment, etc)
  - e.g. if you want to start producing movies, you may want to locate in Hollywood for easy access to actors, camera operators etc
  - if you are an IT startup, Sillicon Valley would provide you with an unparalleled opportunities for venture capital

reasons for clustering (O'Sullivan, 2009, p 62)

- to share a supplier of an input that is subject to economies of scale
- to share labor pool
- large cities provide better skill matches leading to higher productivity and wages
- large cities facilitate knowledge spillovers, learning and social opportunity
- agglomeration economies cause self-reinforcing changes in location: the movement of a firm to a city increases incentives of other firms to move, and you end up with NYC, Tokyo, etc

agglomeration (dis)economies

- a term stressing (dis)advantages of economies of scale/clustering
  - input sharing, labor pooling, skills matching, knowledge spillovers
  - crowding, congestion, noise, pollution, alienation, crime

(Wirth, 1938)

trading countries/regions/cities

- and you observe comparative advantage economies of scale and clustering all around
- China with cheap labor produces much of the simple goods
- Iowa is producing lots of agricultural output
- Silicon Valley produces much of the software
- Detroit used to produce lots of cars
- Many stores are located in malls

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laws

- it's interesting that there are some laws governing the city size
- see my paper for instance: Berry and Okulicz-Kozaryn (2012)
- there are few big cities, some medium cities, and lots of small towns

Zipf's Law

- the number of people in a city is inversely proportional to the city's rank among all cities
- in other words, the biggest city is about twice the size of the second biggest city,
  three times the size of the third biggest city, and so on

are big cities good or bad?

- where do you live ? Philly ? Rural NJ ?
- apart from agglomeration dis(economies):
- most of the economic growth, innovation, R&D happens in the cities (Glaeser, 2011)
- but people are less happy in big cities (Berry and Okulicz-Kozaryn, 2009), and
- there's lots of alienation, impersonality, shallow soc capital in big cities (Wirth, 1938)
- but it's even worse in the suburbs (Jacobs, 1993)
- little towns and villages are the best for non-homo-oeconomicus

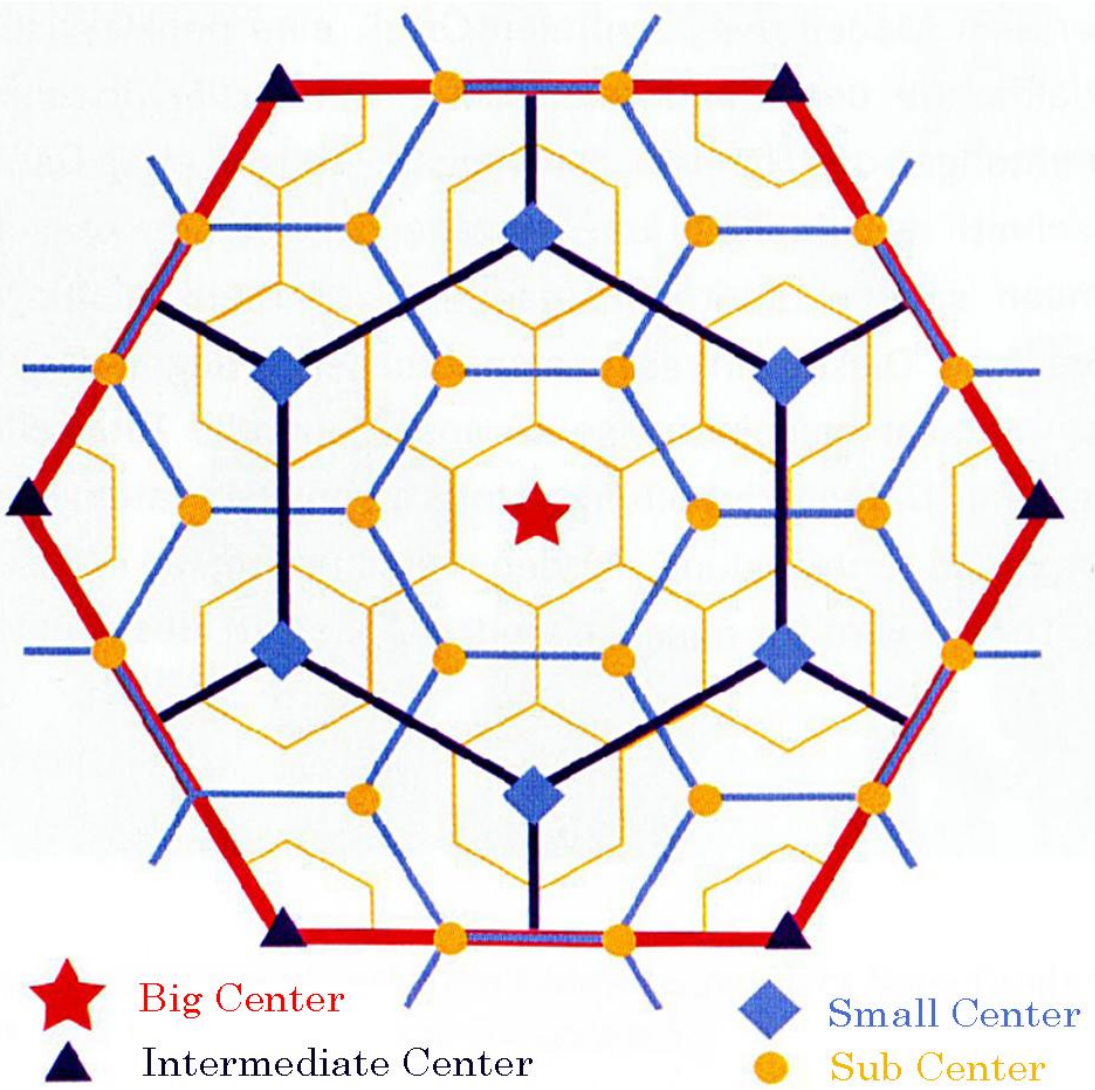
happiness research...

- people are most unhappy when commuting (Stutzer et al., 2003, Frank, 05)
- and they overestimate utility from big houses in suburbs (Stutzer et al., 2003, Frank, 05)
- and underestimate costs of congestion, think California (Schkade and Kahneman, 1998)

central place theory (O'Sullivan, 2009, p86)

- market areas of businesses vary by industries
- e.g. brain-surgery per capita demand is low
  and equipment for it generates large economies of scale
  so brain surgeons will be in big cities serving people from smaller areas all around
- with haircuts it's the other way round

central place hierarchy



◇

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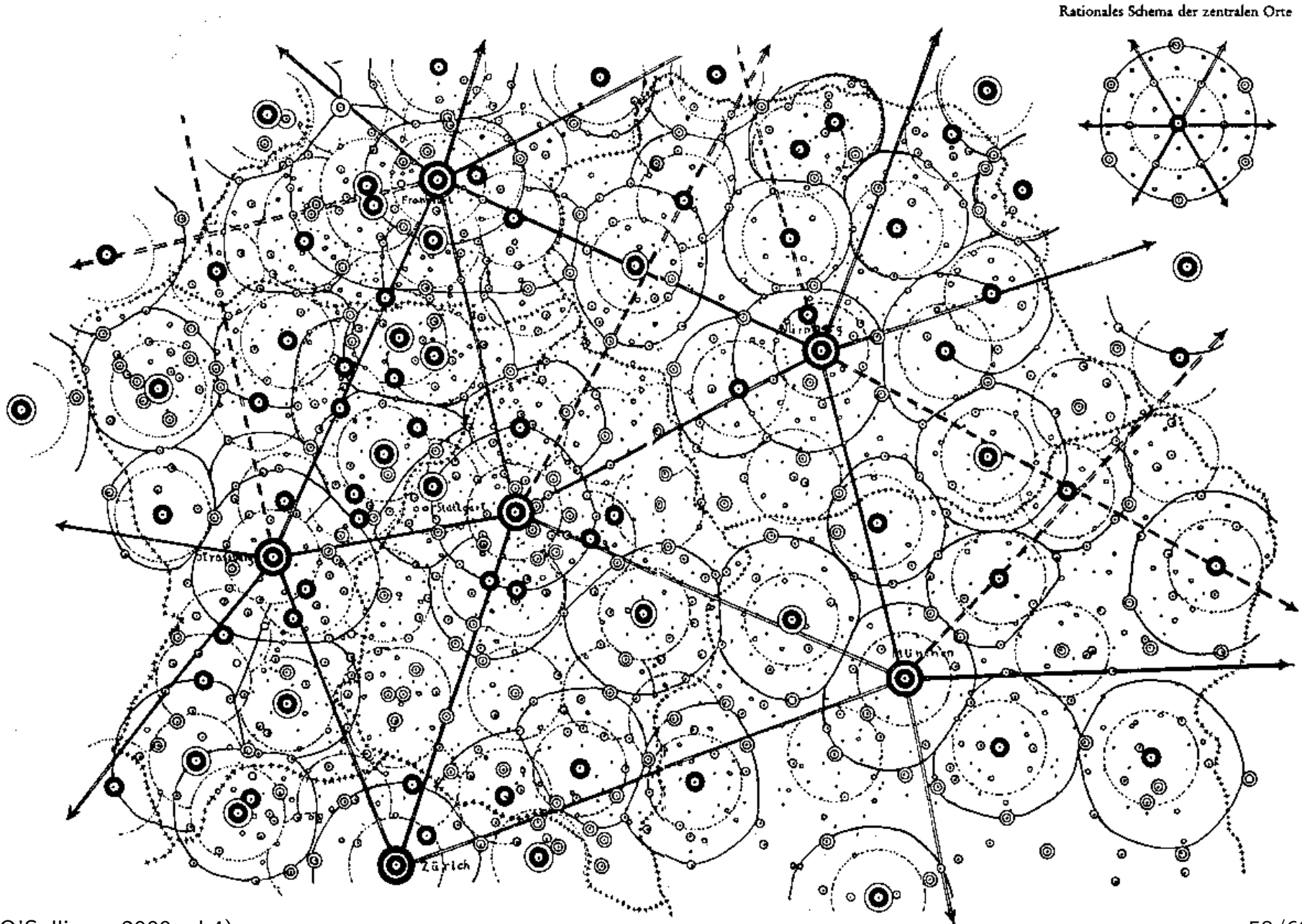

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economists see two kinds of growth

- economic growth: increase in per capita income
- employment growth: increase in employment

economic growth comes from:

- capital deepening: more physical capital per worker
- increase in human capital: knowledge, skills from education and experience
- technological progress (innovation Christensen (1997))
- agglomeration economies (input sharing, labor pooling, labor matching, knowledge spillovers)

human capital

- lots of talk about it everywhere...
- politicians talk about headstart, community colleges
- lots of talk everywhere, e.g. on TED

human capital and other capitals

- it not only increases person's knowledge
- but also persons learn from each other
  so there are network effects
  (that's why you are on campus, not on-line (class))
- also it increases technological innovation
  - HS dropouts don't innovate that much...
  - on the other hand, Jobs and Gates are both college dropouts
- and we will talk more later about creative class (Florida, 2008)

but wait, innovation is key...

- there is a lot of talk about innovation these days
  especially among business people
- an important term is a disruptive innovation...
- it's an innovation that disrupts the industry
  like Netflix for a Blockbuster
  - and Blockbuster spend millions fighting traditional
    competition
  - only to find out it fought the wrong war
- see Christensen (1997) and
  `http://www.claytonchristensen.com/`

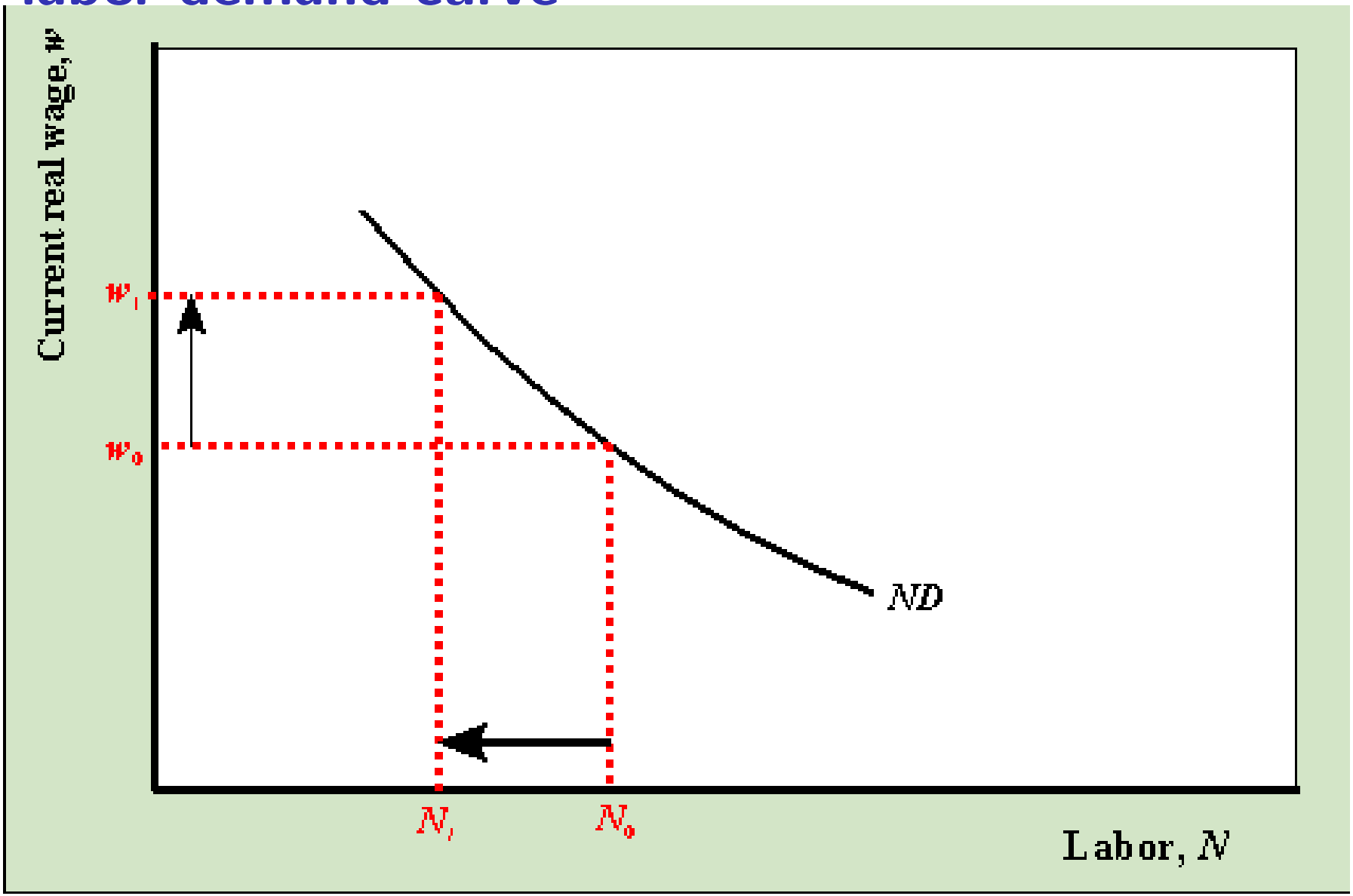
production and employment(O'Sullivan, 2009, p96)

- local: haircuts, bakery
- export: steel, software...etc
- multipliers: increase in export employment is great for local employment

labor demand curve

- labor demand is negatively sloped:
- substitution effect: increase in wages leads to firms to substitute capital, land, materials for relatively expensive labor
  - and droids !(airport automatic check in; airline customer service; air-force drones, etc)
  - again, better become a friend with droids (learn programming)
- output effect: wage increase leads to product's price increase

labor demand curve



◇ http://faculty.washington.edu/ezivot/econ301/labor_demand.htm

next week...

- let's have a look at next week...