

data and description

adam okulicz-kozaryn

`adam.okulicz.kozaryn@gmail.com`

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outline

misc

basic research design [repetition? making sure basics covered]

examples

analytical methods for regional development (Blakely and Leigh, 2009, ch1, 6)

what to look at?

NECESSARY readings

- ◇ https://data.bls.gov/cew/doc/info/location_quotients.htm
 - [if need more reading, some descriptive examples for Indiana: <http://www.incontext.indiana.edu/2006/march/1.asp>]
- ◇ http://data.bls.gov/location_quotient/ControllerServlet—
try to calculate LQ yourself

- BARRO, R. (1999): "Determinants of democracy," Journal of Political Economy, 107, 158–183.
- BLAKELY, E. AND N. LEIGH (2009): Planning local economic development: Theory and practice, Sage Publications, Inc.
- FLORIDA, R. (2008): Who's your city?, Basic Books.
- MACKIE, J. AND J. MACKIE (1980): The cement of the universe, Clarendon Press Oxford.

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what to look at?

presenting results

- ◇ quote data source in detail; give url
- ◇ define variables; maybe table with definitions in the appendix
- ◇ describe sample in detail: time, location, sampling, etc...
- ◇ what is your contribution? how come everybody else got it wrong or missed it?
- ◇ there has to be some contribution in your paper !! data? method? idea?
- ◇ avoid results padding: do not present tables, graphs if they do not mean anything or if you do not discuss them or if they do not help with argument

presenting results

- ◇ eg https://sites.google.com/site/adamokuliczkozaryn/pubs/livability-nov19_aok.pdf?attredirects=0&d=1
- ◇ avoid ugly tables
- ◇ graphs/tables need to have captions that are self-explanatory
- ◇ graphs/tables need to be referenced in text
- ◇ show 2 or 3 decimal points, no scientific notation, no vertical lines
- ◇ do not say “increase by one unit”; what is the unit?
- ◇ all vars must be defined clearly (say key vars in text, others in appendix)
- ◇ annotate/label patterns in graphs

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what to look at?

a research design is a class itself

- ◇ a quick, useful and applied reference is

<http://www.socialresearchmethods.net/kb/design.php>

- ◇ a more in-depth treatment is Lawrence B. Mohr, Impact Analysis for Program Evaluation

spurious correlation

- ◇ say, global warming...
 - we have it—we can measure temperature
 - but the cause: we may think it is CO_2 , but actually it is Sun activity
 - or the other way round...
- ◇ another way to say it: correlation is not causation

the gold standard

- ◇ the experimental design
- ◇ only with experimental design you can confidently argue causality
- ◇ and it is because randomization takes care of the known and unknown predictors of the outcome (draw a picture of 2 groups of people)
- ◇ most of the time we cannot have an experimental design because it is unethical and politically impossible
eg we cannot randomly assign kids to bad school or to smoking
- ◇ <http://www.socialresearchmethods.net/kb/desexper.php>

threats to internal validity

- ◇ history, maturation, regression to the mean
 - something else happened that caused Y
 - things develop over time in a certain way
- ◇ selection bias, self selection
 - does smoking causes cancer ?
 - maybe less healthy people select to smoke ?

you still can have a valid inference

- ◇ but you need to do more work...
- ◇ essentially you want to exclude alternative explanations
- ◇ so you act like a devil's advocate...
- ◇ and try to abolish your story / find an alternative explanation
- ◇ if you cannot find any, then your story is right ...
- ◇ until disproved

two basic designs

- ◇ you can look over time (PRE, POST) (draw a graph)
 - eg you can trace unemployment over time in Camden
 - and, say, you can find that it increased during Reagan administration...
 - but you cannot argue causality right away !
 - there may be lots of alternative explanations, eg shift away from manufacturing during the same time, etc etc
- ◇ and you can look across space
 - eg you can compare Philadelphia to Camden

levels of analysis

- ◇ you are probably familiar with term Unit of Analysis (U/A)
- ◇ in regional development a peculiar thing is that there are many levels
- ◇ there are states, counties, metropolitan areas, cities, etc
- ◇ and you often get different and even opposite conclusions depending on what level you are looking at

aggregate data

- ◇ in regional development research much of the data is aggregate
- ◇ eg income, home ownership rate at county level are sums of person-level values divided by population
- ◇ with aggregate data you are losing information you don't know the variability and the distribution

different levels, different effects

- ◇ variables at different levels may have opposite effects
- ◇ eg if i increase your salary, you'll be happier
- ◇ but if i increase salary of everybody in your county you'll be less happy
- ◇ would you like to live in a world where you make \$100k and the average is \$150k
- ◇ or would you like to live in a world where you make \$75k and everybody and the average is \$50k
- ◇ people chose the second scenario
- ◇ “a rich guy is a one who makes \$100 more than his wife's sister's husband”

contextual effects

- ◇ a closely related concept is of contextual effects
- ◇ whatever you study it takes place somewhere and place matters
- ◇ so it is not only characteristics of the U/A that predict your outcome
- ◇ but also the context (characteristics of larger units in which U/A is nested)
- ◇ student is nested within a classroom, a classroom within school, a school within a district, etc etc
- ◇ a firm is nested within a city/metropolitan area/town, which is nested within a state, which is nested within a country

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what to look at?

comparing Camden, NJ and Plano, TX

- ◇ a quick way is to use QuickFacts
- ◇ <http://quickfacts.census.gov>
- ◇ <http://quickfacts.census.gov/qfd/states/48/4858016.html>
- ◇ <http://quickfacts.census.gov/qfd/states/34/3410000.html>
- ◇ what's interesting here?
- ◇ Camden has about 7 times more Blacks and 8 times fewer Asians
- ◇ homeownership rate: 20% lower in Camden
- ◇ Plano: only 7% of population in poverty; Camden: 36%
- TX almost twice as many people in Poverty as NJ: 17% vs 9%

little more scientific way

- ◇ census is a good source of data, even at neighborhood level!
- ◇ for city/neighb lev probably want 5-yr ACS
- ◇ <https://geomap.ffiec.gov/FFIECGeocMap/GeocodeMap1.aspx>
- ◇ <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>
- ◇ say poverty
- ◇ for 2 census tracts in Philly: 137 and 138 (Brewerytown)
- ◇ <https://geomap.ffiec.gov/FFIECGeocMap/GeocodeMap1.aspx> looks like a great way to find census tracts;
- ◇ always show map of an area! eg <https://www.policymap.com/maps>

paper

- ◇ again, a useful trick is to combine different types of data to come up with a contribution
- ◇ talk to your classmates!
 - eg food deserts and crime
 - eg weather and migration, etc, etc
- ◇ your paper does not have to be quantitative
 - still, can approach your topic from different angles

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what to look at?

data and development

- ◇ development planning begins with understanding of the of the local economy
- ◇ if you cannot measure it, your knowledge is of 'meager kind' (Lord Kelvin)
- ◇ and you also want to keep on measuring to see what is going on
 - is the situation improving?
 - any interesting trends ?
 - how are we doing compared to other similar localities?

- ◇ a terrific website!
- ◇ under regional data you will states and metros
- ◇ and even some smaller areas like counties!
- ◇ http:

`//www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=5#reqid=70&step=1&isuri=1`

some performance measures

- ◇ population and employment growth (Census Quick Facts)
- ◇ unemployment rate (CQF)
- ◇ income levels and poverty rates (CQF)
- ◇ earnings and wage levels (<http://www.bls.gov/bls/blswage.htm>)
- ◇ labor force participation (blswage)
- ◇ firm births, deaths, and relocations
(<http://www.bls.gov/web/empst/cesbdhst.htm>)

some performance measures

- ◇ new development and investment
- ◇ property values and tax revenues
- ◇ analyze trends over time
- ◇ compare to state, metro area, nearby cities
- ◇ variation among demographic subgroups and sub-areas
- ◇ link indicators to key goals & track over time

wages

- ◇ <http://www.bls.gov/bls/blswage.htm>
- ◇ by census division
- ◇ <http://www.bls.gov/ncs/ocs/compub.htm#Division>
- ◇ by state <http://www.bls.gov/oes/current/oessrcst.htm>
- ◇ metro <http://www.bls.gov/ncs/ocs/compub.htm>
<http://www.bls.gov/oes/current/oessrcma.htm>

living wage, poverty

- ◇ Families working in low-wage jobs make insufficient income to live locally given the local cost of living.
- ◇ Recently, in a number of high-cost communities, community organizers and citizens have successfully argued that the prevailing wage offered by the public sector and key businesses should reflect a wage rate required to meet minimum standards of living.
- ◇ living wage calculator by county <http://livingwage.mit.edu/>

property values

- ◇ an indicator of place desirability
 - low in Camden – nobody wants to live here
 - high in Manhattan – everybody wants to live there...
- ◇ also reflect job opportunities:
 - you can afford Manhattan housing if you have a Manhattan job
 - you can afford Camden housing if you have a Camden job

property values

- ◇ <http://www.zillow.com/local-info/> interactive
- ◇ <https://www.zillow.com/research/data/> download
- ◇ <http://www.city-data.com/>
- ◇ a useful calculator
<http://cgi.money.cnn.com/tools/homepricedata/>

tax revenues

- ◇ a measure of local economy health
- ◇ state and local taxes <https://www.census.gov/programs-surveys/ntax.html>

ecology: land, agriculture, etc

- ◇ everything takes place in some ecology
- ◇ and ecology matters
- ◇ <https://www.ers.usda.gov/data-products/>

basic analysis: understanding

- ◇ look by industry/sector over time and across space
- ◇ need to understand economy's strengths and weaknesses and think about what may be driving them
- ◇ a useful concept is that of outcome line <http://books.google.com/books?id=GBxhOT8btFYC&lpg=PA16&pg=PA15#v=onepage&q&f=false>

think of the larger context

- ◇ where are we in the business cycle
- ◇ what are the global trends ?
 - they do affect the local economies
 - outsourcing manufacturing jobs to China
- ◇ local economy is not simply a fraction of the national economy, though
for instance if there is drought in Latin America,
Iowa will benefit more than Nevada (it produces more food)
- ◇ new police lowered crime? crime declining everywhere!

standardize

- ◇ if you go over time, you need to deflate dollar amounts
http://www.bls.gov/data/inflation_calculator.htm/
<http://www.duke.edu/~rnau/411infla.htm>
- ◇ if you go across divide by population: otherwise you cannot compare, say Philadelphia to Camden

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what to look at?

labor force characteristics

- ◇ this is key ! jobs are key !
- ◇ especially in those difficult times
- ◇ key in attracting new employers
- ◇ you want to have people in occupations that have good prospects

labor force characteristics

- ◇ a great resource is BLS occupation outlook:

<http://www.bls.gov/ooh/>

how does your occupation prospects stack up ?

- ◇ you'll find a ton online, eg

<http://www.theatlantic.com/business/archive/2012/02/americas-10-fastest-growing-and-fastest-shrinking-jobs/252712/> scroll down and click on jobs

<http://blog.linkedin.com/wp-content/uploads/2012/06/fluctuations.png>

labor force characteristics

- ◇ low labor force participation for a specific demographic group
 - may suggest lack of opportunity, discouraged workers, discrimination, etc
- ◇ median commute time is interesting indicator
 - if high it suggests a mismatch between housing and job markets
 - and it produces congestion, pollution and unhappiness (people are most unhappy when commuting)

businesses, job supply

- ◇ you also want to look at job suppliers—businesses
- ◇ interesting thing is that many businesses cannot find people to fill open jobs
- ◇ and there is unemployment and underemployment of course, so there is a mismatch
- ◇ <http://www.forbes.com/sites/jacquelynsmith/2012/05/29/the-10-hardest-jobs-to-fill-in-america-2/>
- ◇ <http://www.nytimes.com/2012/06/28/business/smallbusiness/even-with-high-unemployment-some-small-businesses-struggle-to-fill-positions.html?pagewanted=all>

basics to understand (Blakely and Leigh, 2009,

p164)

- ◇ which local parts of the economy are most valued by locals
 - how locals compare themselves to others
 - (can do a survey, interview, focus group)
- ◇ what's the local economic base (LQ)
 - what accounts for most jobs and wealth
 - and what's growing/declining most rapidly
- ◇ multiplier: how growth/decline in one part affects other parts
- ◇ which firms are a part of interdependent cluster

economic base

- ◇ exporting industries are important—they bring the money to the locality
- ◇ imports are important to look at, too, there may be an opportunity for substitution
- ◇ it's businesses that generate wealth that should be targeted for attraction and nurtured
- ◇ we used to focus on industries, but now focus on people, eg creative class (Florida, 2008) — an occupation-centered economic base

LQ (Loc Quotient) (specialization index)

- ◇ $LQ = \frac{\frac{e_i}{E_i}}{\frac{e}{E}}$
- ◇ e_i local employment in industry i
- ◇ e total local employment
- ◇ E_i national employment in industry i
- ◇ E national total employment
- ◇ https://data.bls.gov/cew/doc/info/location_quotients.htm
 - [if need more reading, some descriptive examples for Indiana: <http://www.incontext.indiana.edu/2006/march/1.asp>]
- ◇ http://data.bls.gov/location_quotient/ControllerServlet—
try to calculate LQ yourself

BLS LQ

- ◇ http://data.bls.gov/location_quotient/ControllerServlet
- ◇ let's compare Camden, NJ to Collin, NJ
- ◇ and Camden, NJ to US in different time periods
- ◇ also play with sectors, supersectors, etc at the bottom
- ◇ ex: eds&meds Camden county v NJ (2013):
 $(40/160)/(600/3240)=1.36$

where jobs will be in the future?

- ◇ again, <http://www.bls.gov/ooh/>
- ◇ but also take into account local conditions
- ◇ how is it changing ? look at trends, over-time difference
- ◇ “shift-share” (Blakely and Leigh, 2009, p):
 - how's overall eco doing: “rising or falling tide raises or lowers all boats”
- ◇ proportion shift: change in industry relative to overall growth
- ◇ differential shift change in industry relative to the same industry nationally

shifts formulas (Blakely and Leigh, 2009, p182)

- ◇ proportion shift = $\frac{emp10_i}{emp00_i} - \frac{ref10}{ref00}$
- ◇ differential shift = $\frac{loc10_i}{loc00_i} - \frac{emp10_i}{emp00_i}$
- ◇ *ref00* 2000 employment in reference economy
- ◇ *ref10* 2010 employment in reference economy
- ◇ *emp00_i* 2000 employment in reference economy in industry i
- ◇ *emp10_i* 2010 employment in reference economy in industry i
- ◇ *loc00_i* 2000 employment in local economy in industry i
- ◇ *loc10_i* 2010 employment in local economy in industry i

interconnectedness

- ◇ most things are produced from things that somebody else produces
- ◇ and hence my performance affects that of my suppliers and people whom i supply
- ◇ there is some specialized software
- ◇ beyond the scope of this class
- ◇ a similar idea is that of clusters

clusters are..

- ◇ geo concentrated
- ◇ have competitive advantage because they are concentrated
- ◇ share supplier and buyer (marketing) advantages
- ◇ are supported by advantageous infrastructure in a region eg universities, venture capital

cluster table

◇ to visualize clusters you can produce a following table

not competitive (declining local shift)	competitive (growing local shift)	
transforming industries	growing base industries	high local concentration ($LQ > 1$)
declining industries	emerging industries	low local concentration ($LQ < 1$)

next week

- ◇ we will always end the class by having a quick look at the next class