A Reader's Guide to the Economic Analysis of Immigration

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Why do we need a Guide?

- economic studies are widely cited in discussions about immigration
- most econ. research is both technical (often model-based) and narrow
- economists are divided on the 'big picture' and many sub-issues re: immigration
- need to pinpoint: What is the question in a specific study? How does the answer fit into the overall narrative?

Immigration v. Births v. Trade

- immigration, natural pop. growth, and trade all have potential spillovers
- economists often assert the "equivalence" of trade and immigration
- but births and immigration are arguably closer equivalents (demographic perspective)
- important to understand: how are these equivalent (or not)?
- clearly **different** to voters/policy makers

Spillover Domains

1. labor market
2. product markets: prices/quantities of goods and services (also: profits/rents)
3. gov't budget ("fiscal surplus")
4. neighborhoods: housing prices, nbd. and school composition (white flight), crime, "social capital"
5. efficacy of political institutions (did Mexican immigration *cause* Trump?)

Degrees (orders) of Spillover Effects

- 1st order: +1 immigrant = +1 person/worker -- the pure population effect
- 2nd order: accounting for the "type" (skill, human capital, ...) of the extra person
- 3rd order: accounting for the evolution of her type (economic assimilation)
- 4th order: accounting for her children..

Need to think through spillovers in each domain at each level

Immigration v. Births

- immigration & birth = +1 person
- immigrants are:
  - older (often finished school) implying a saving in education and health care costs
  - BUT also ***different***
- key diffs: education, language, race/ethnicity, religion, location, preferences(?), ability (???)
- are there distinct spillover effects from +1 person and from different "types" ?

Immigration v. Trade

- trade expands/contracts product mkts (in theory, with balance: Δimports = Δexports)
- ⇒*indirectly* shifts demand for native labor
- these shifts may have skill and geographic dimensions – like immigration flows from specific source countries
- BUT: traditional analyses assume no spillover effects on gov't budget, neighborhoods, or political efficacy

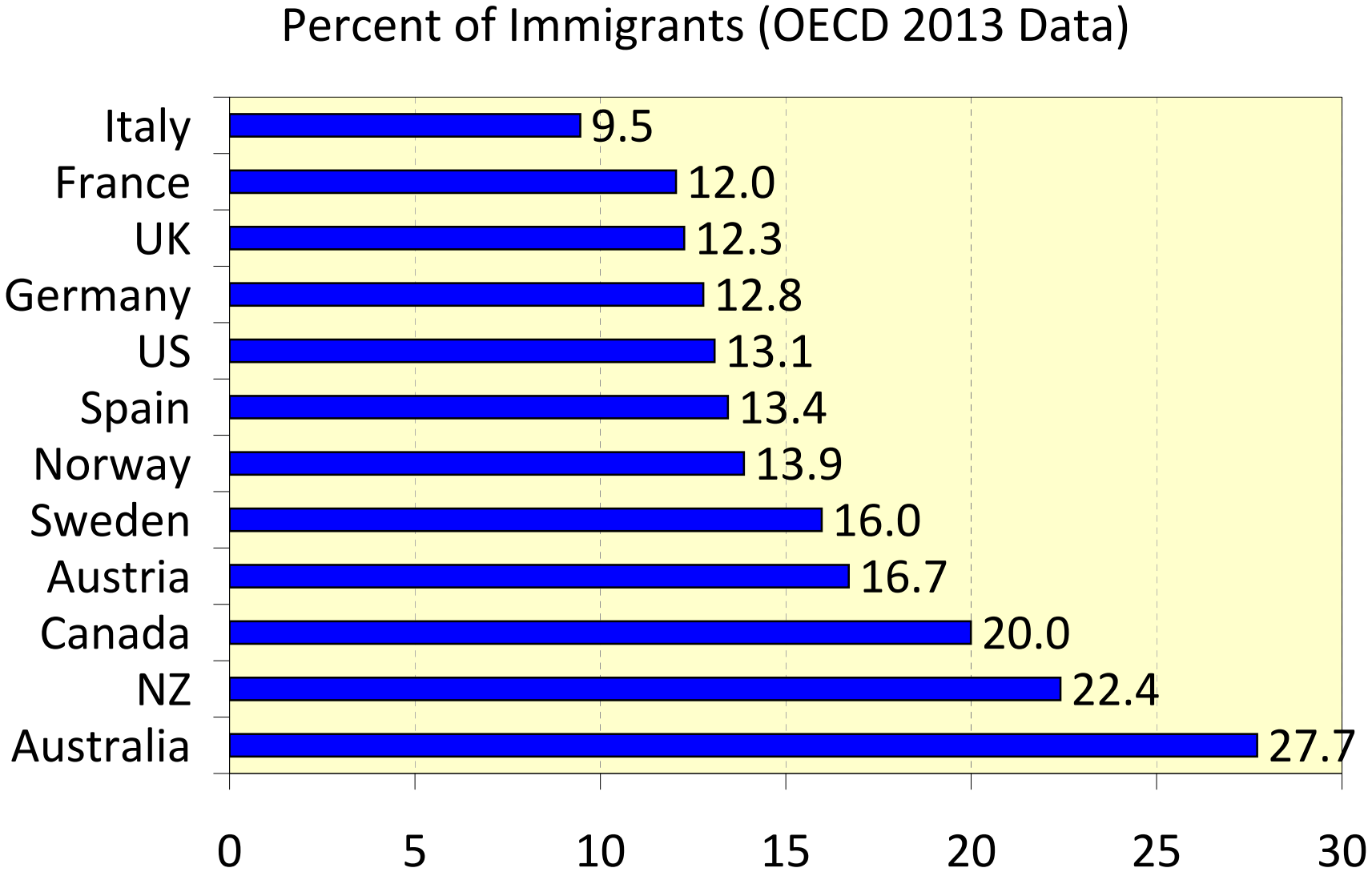
Immigration and Eugenics (?)

- some economic discussions of immigration sound like eugenics
- eugenics ≡ benefits of "improving" the composition of the population

  ≡ *spillover effects* from differential fertility or immigration
- eugenics arguments were central to 1924 US law that closed the door for most groups
  - National Origins Act, Asian Exclusion Act

Where we are going

1. background facts/trends
2. how do economists think about the ***labor market spillover effects*** of immigration
3. different kinds of evidence
4. other spillover domains
5. which domains are important for public views about immigration policy?


Percent of Immigrants (OECD 2013 Data)
Italy
France
UK
Germany
US
Spain
Norway
Sweden
Austria
Canada
NZ
Australia
9.5
12.0
12.3
12.8
13.1
13.4
13.9
16.0
16.7
20.0
22.4
27.7
0
5
10
15
20
25
30

A closer look at the US situation

	2000	2015
Total US Population (millions)	282	320
Number Immigrants (millions)	31	42
Number Unauthorized (millions)	8	11
Immigrant Share of Population (%)	11	14
Fraction unauthorized (%)	27	25

Top Source Countries for New Immigrants (mid-2000s)	Percent of Imms	
	US	Canada
E. Asia (China, Korea, Japan)	9	20
S. Asia (India, Pakistan..)	9	20
S.E. Asia (Vietnam, Thailand…)	5	7
South/Central Am (inc. Mexico)	49	7
Africa	6	13
Carribbean	5	3
Eastern Europe	6	10
Addendum: Pct with BA+	35	60

source: Bonikowska et al (2011)

Importance of Education Differences

	Natives	All Imms	Hispanic	S.E. Asians
Dropouts	11	32	51	17
HS Graduate	30	22	27	16
Some College	31	19	13	18
BA or More	29	28	10	49
including...				
Adv. Degree	11	12	3	21

Other differences

- immigrants are geographically clustered
  LA/Miami/Tx-border: 50%+ immigrant
  rural areas/small towns: 2-5%
- similar in: Sydney/Toronto/London: 50% +

- immigrants also clustered in sectors/jobs:
  agriculture, food processing: 50%+ in US
- health care: 30% in US

Aside: Why do countries get different imms?

- Imm. flows reflect supply, demand, and legal/institutional policies

- E.g., US:

  - strong demand for high-skill *and* low-skill (adaptive labor mkt, few regs at bottom)

  - vast supplies of both groups

  - restrictive policies for high skilled imms; little/no control of low-skilled flows till ~2001

⇒ immigrant doctors and janitors

First degree spillover effects: +1 person

- many people intuitively think:
  "more people ⇒ lower wages"

- this was the idea proposed by Malthus in his famous 1826 essay

BUT: larger countries do not have lower income
larger cities have *higher* pay
many countries try to promote population growth!

First degree spillover effects: +1 person

- Malthus: *medieval world* with fixed land (Black death ⇒ higher wages)

-in the late 1800s the "neoclassicals" pointed out that as long as capital can expand with population, we avoid the Malthusian trap

-rise in labor force leads to increase in investment, wages unaffected if K/L stays on trend

A deeper dive:

y=F(K,L), with constant returns to scale (HD1)

MPL = $\partial y/\partial L$ depends on ratio of L/K (HD0)

MPK = $\partial y/\partial K$ depends on ratio of K/L

So, if increase in L causes L/K to rise, MPK rises and firms will invest more. If interest rate (r) is constant

MPK = r $\Leftrightarrow$ K/L = some constant

exercise: try it with $y=A\,L^{\alpha}\,K^{1-\alpha}$

First degree spillover effects: +1 person

-in fact: many economic models suggest that "size matters": larger economy is more productive

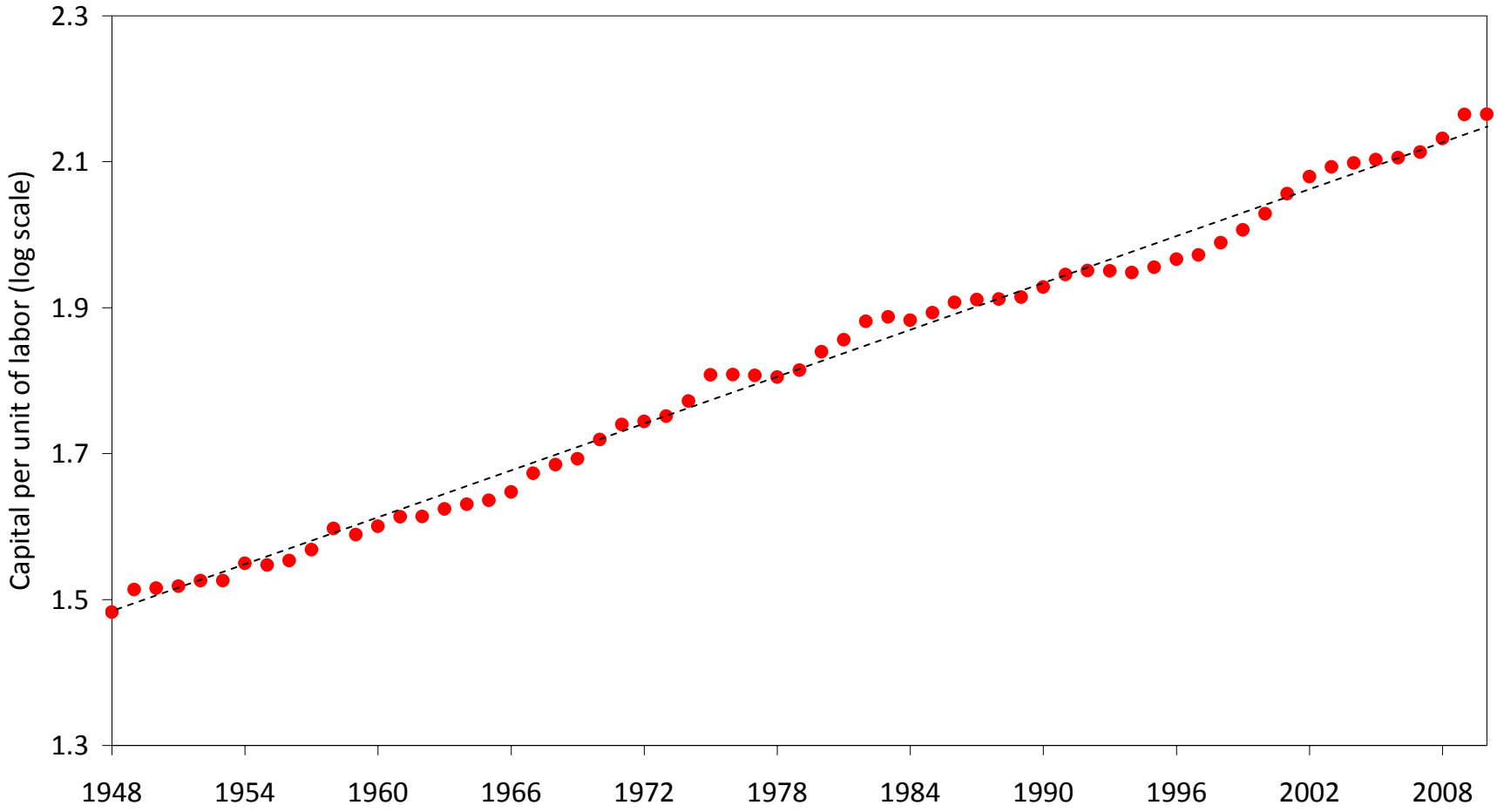
- at country level: is New Zealand too small?
- at city level: + "external effect" of size (?)

- what is the historical record on K/L?

US trend

Case study: Isreal after Soviet emmigration

The Long Run Trend in Capital per Unit of Labor



Source: BLS Multifactor Productivity Tables (http://www.bls.gov/mfp)

Data souce: Penn World Tables and World Development Indicators.
*Combination of OECD countries matched on investment/GDP 1980-89, GDP/cap in 1989, openness, and real interest rate. Largest weights are: Ireland(39%), US(39%), Chile(21%).

back

2^0 spillover effects: different skill groups

-US imm. flows are unbalanced: excess shares of high/low skill groups (relative to middle)

-refugee flows: typically low skill, especially accounting for language, outdated training...

Does this matter? Maybe....

- production function $f(L_1, L_2, \ldots L_J, K)$
- additive $f(L,K)$, $L = a_1L_1+a_2L_2+\ldots a_JL_J$
- really only "1 type" of labor (so no Malthus)

2^0 spillover effects: different skill groups

- models originating with Freeman (*Over-Educated American*) Katz/Murphy have 2 major skill groups based on education

- $f(L_1, L_2, K)$, L_1=higher ed. L_2= lower ed.

$\Rightarrow$ $w_1/w_2 \propto L_1/L_2$ (*) "new malthusianism"

- some economists believe such models successfully explain rising wage inequality due to technological progress

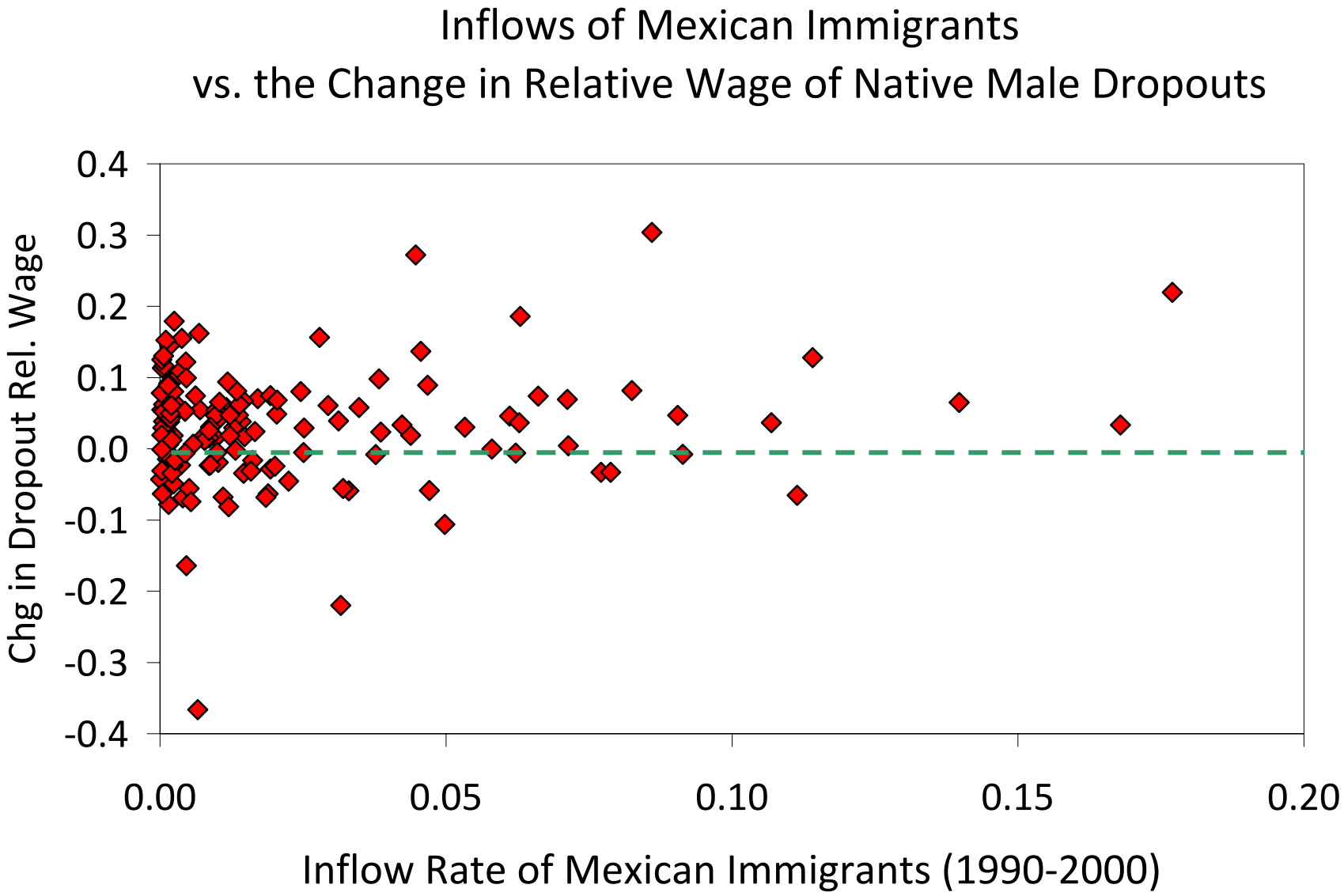
- neg. spillovers of imms on competing natives

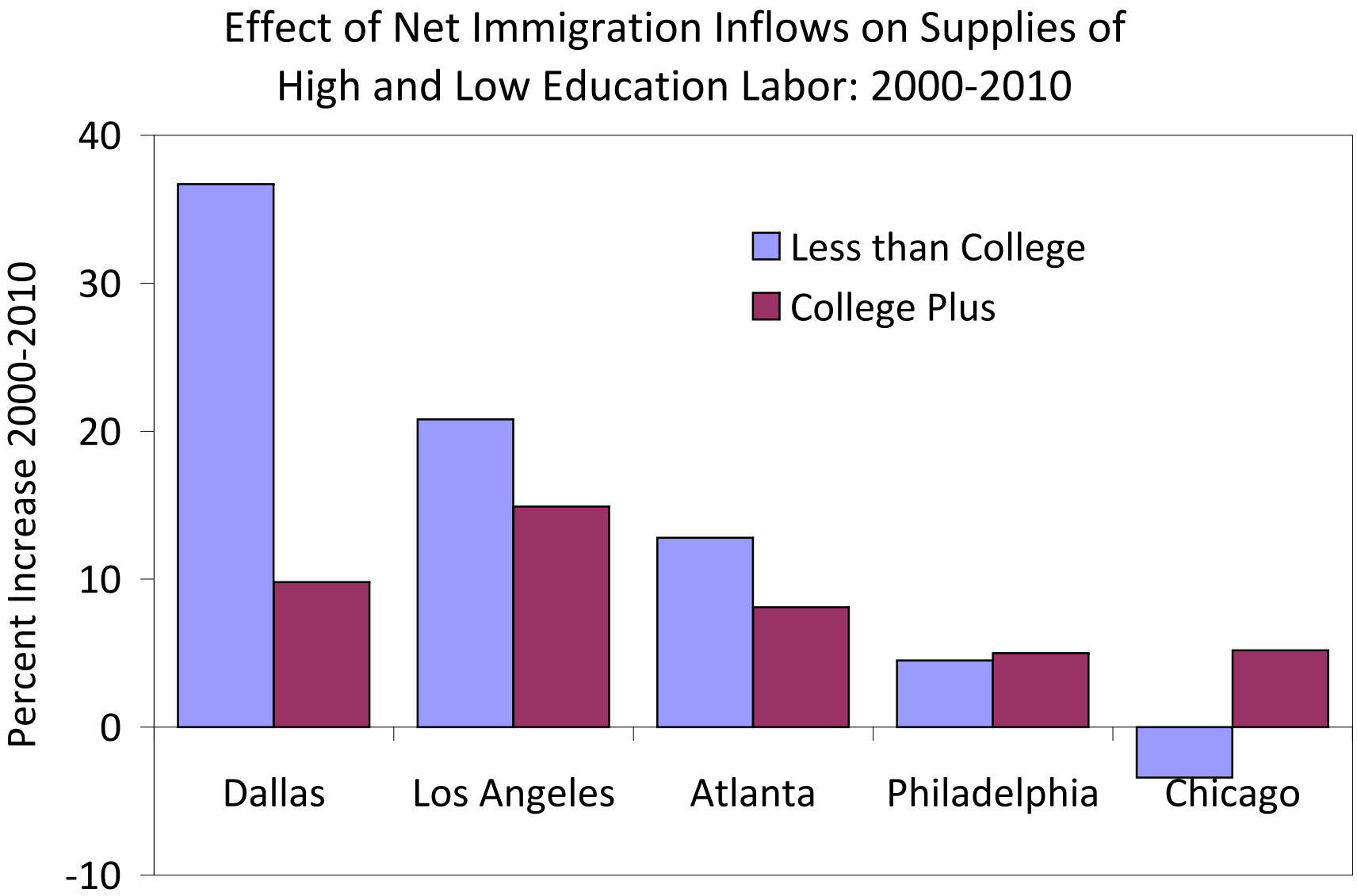
Different types of evidence

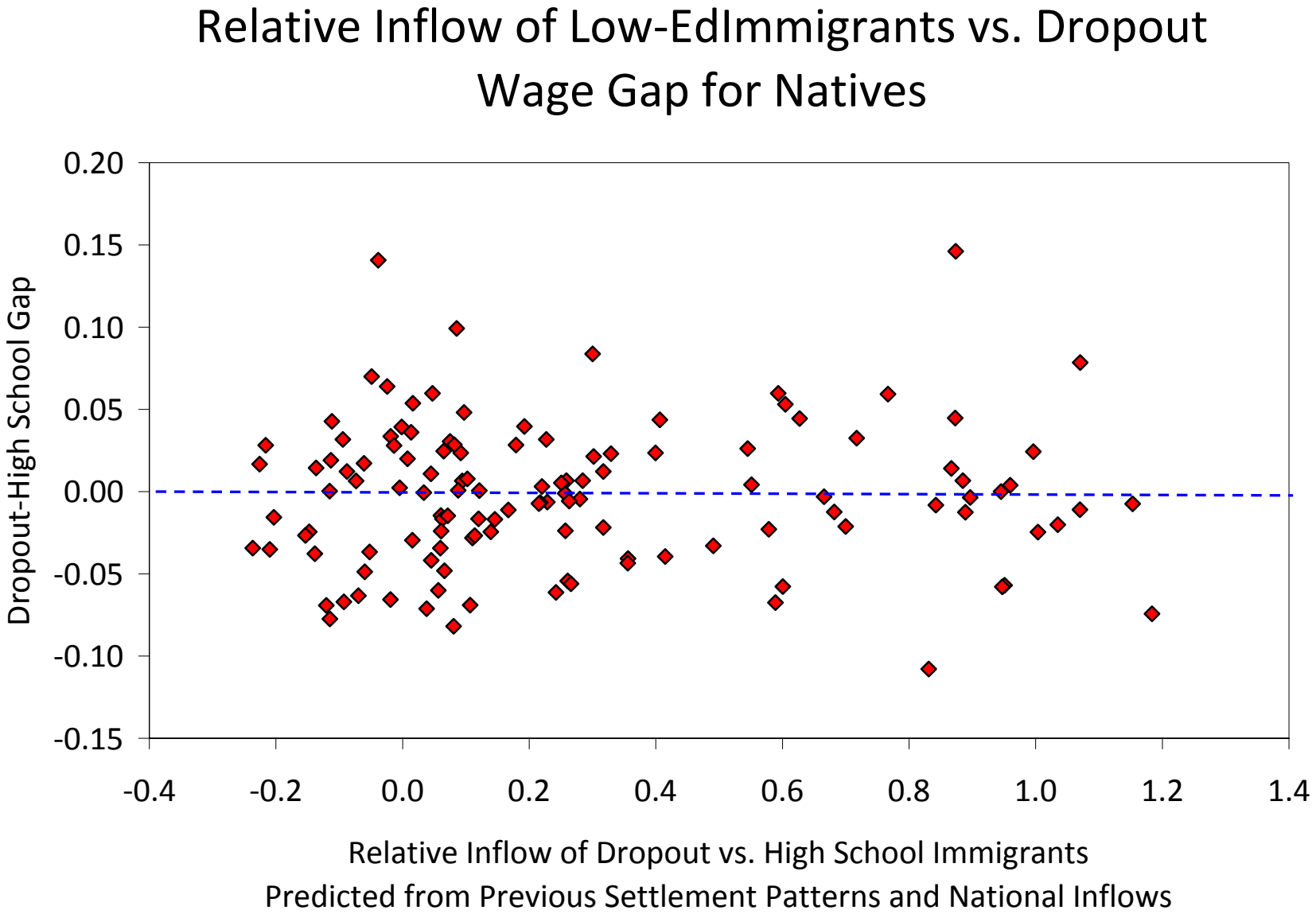
a) Cross-city comparisons. Immigrants are clustered in selected cities:

On average: more immigrants → more low education workers in city. But relative wages of lowest-education natives are very stable across cities

Comparison enhanced by isolating 'supply push' component of immigrant inflow to different cities


Inflows of Mexican Immigrants
vs. the Change in Relative Wage of Native Male Dropouts
Chg in Dropout Rel. Wage
0.4
0.3
0.2
0.1
0.0
-0.1
-0.2
-0.3
-0.4
0.00
0.05
0.10
0.15
0.20
Inflow Rate of Mexican Immigrants (1990-2000)


Effect of Net Immigration Inflows on Supplies of High and Low Education Labor: 2000-2010
Percent Increase 2000-2010
40
30
20
10
0
-10
Less than College
College Plus
Dallas
Los Angeles
Atlanta
Philadelphia
Chicago


Relative Inflow of Low-EdImmigrants vs. Dropout Wage Gap for Natives
Dropout-High School Gap
0.20
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
Relative Inflow of Dropout vs. High School Immigrants
Predicted from Previous Settlement Patterns and National Inflows

Different types of evidence (2)

b) Big shocks.

Mariel Boatlift (1980)

Similar studies:

Portugal (end of Angola colonial war)

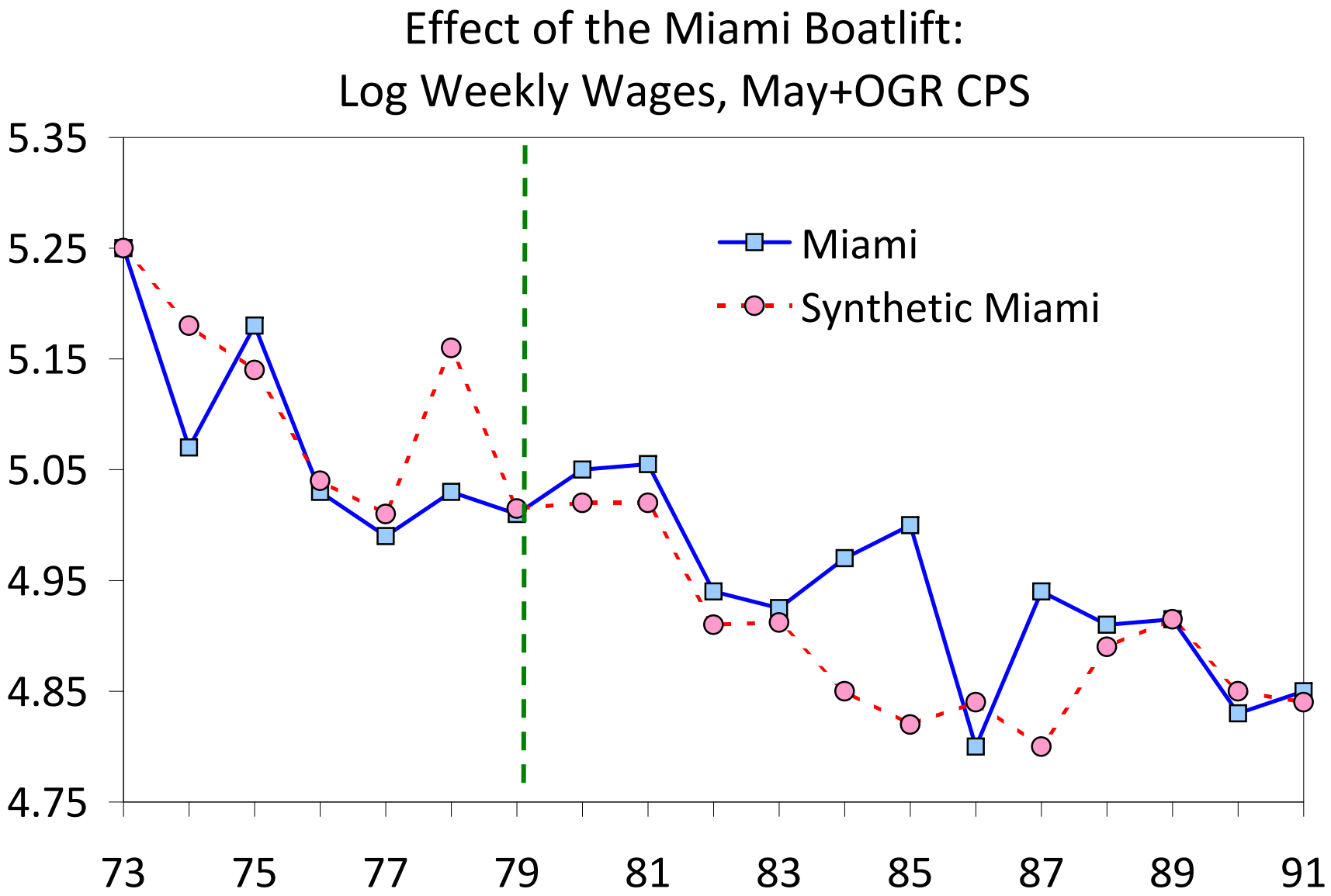
France (end of Algerian war)

Israel (lifting of Russian emigration restrictions)

"reverse" – end of Bracero program in US
(Clemens, Lewis, Postel, 2017)

The Mariel Boatlift - update

- Mariel Boatlift has been re-analyzed by Borjas (2017) and Peri and Yasenov (2017)
- PY use synthetic control method to select a comparison group of cities – also test sensitivity to March CPS (small samples) vs merged outgoing rotation groups (MORG, larger)
- It is possible to find small selective samples that trend differently in Miami and comparisons, but for broader samples from MORG: trends are very similar


Effect of the Miami Boatlift:
Log Weekly Wages, May+OGR CPS
5.35
5.25
5.15
5.05
4.95
4.85
4.75
73
75
77
79
81
83
85
87
89
91
Miami
Synthetic Miami

Different types of evidence (3)

c) model-based analysis of national trends

Leading exponent: George Borjas (Harvard U)

Disagreement in literature: what assumptions in the model re:

- dropouts vs HS grads
- immigrants and natives with same education

Simulated Wage Impacts of U.S. Immigration 1990-2010 on Native Subgroups

	Education Subgroup:					All Natives
	Dropouts	HS Grads	Some College	BA/BS	Post Graduate	
1. Baseline Table 5.4, row 4	-3.1	0.4	0.9	-0.1	-0.9	0.0
2. Perfect Subst. Dropouts v. HS Grads (σ_{HS}=0)	-0.2	-0.2	0.9	-0.1	-0.9	0.0
3. Imperfect Subst. Imms v. Natives (σ_{NM}=20)	-1.7	0.9	1.2	0.5	-0.1	0.6
4. Combine row 2 and 3 (σ_{HS}=0, σ_{NM}=20)	1.1	0.2	1.2	0.5	-0.1	0.5

Model-based national trends

- Even under Borjas "preferred" specification treating dropouts as separate education group BUT assuming natives and immigrants are perfectly substitutable within age/ed cells:
  - -- immigration lowered dropout wages 3.1% 1990-2010
  - -- even smaller effects (+/- 1%) on other groups

- My "preferred" specification (dropouts and HS grads perfect substitutes, some imperfect substitution between natives and imms) – effects are negligible

Other Spillover Domains

1. prices – some evidence that immigrant inflows affect prices for low-skill services (daycare/homecare)
2. firm profits/rents – US farmers lobby very hard for low skilled immigration (temp. ag workers). Expect these visas to expand in next years ("saudi model" replaces undocumented flows)
3. techological adaptation. Lewis (mfg tech); Bracero expulsion (sugarbeets, cotton)

Other Spillover Domains

Gov't budget

- UK study (Dustmann et al) tries to carefully measure effects on taxes, transfers, other gov't spending. Conclusion: imms are net +
- no comparable evidence for most other countries
- major issue: static vs dynamic accounting and impact of children

Per Capita Transfers and Taxes -- Mid-2000's (CPS)

	All	Immigrants	Natives (incl. 2nd Gen)	Second Generation
Percent Age 16-65	66.5	83.0	64.2	43.5
Percent Working	52.8	63.1	51.4	33.6
Mean Annual Earns	20,390	22,486	20,101	13,161
Value of:				
Total Transfers	1,820	1,295	1,892	2,014
Total Taxes	6,117	6,047	6,127	4,145
In Kind Benefits:				
Medicare (%)	13.6	10.9	14.0	16.7
Medicaid (%)	11.3	10.3	11.5	16.0
Enrolled in K-12 (%)	17.7	8.0	19.0	27.9

Other Spillover Domains

Neighborhoods/schools

- strong clustering of imms in destination cities
- these cities become ethnically/racially diverse
- how does this affect natives?
    - housing prices (NZ, Aus, Canada, London)
    - "white flight" from nbhds?
      (similarity with S-N migration of AAms)
    - impacts on schools/other services

- key "summary": outmigration flows

Outmigration Responses

-"voting with feet"=metric for assessing spillovers

- outmigration flows also diffuse spillovers

- heated subliterature: do imm inflows cause native outflows? And if so does this invalidate studies at city level?

- answers: pretty modest outflows at city level

AND: properly designed city studies not affected

- Total labor = native+imm
- Outcomes depend on Total labor – IV!!

Longitudinal Spatial Correlations Between Immigration and Native Migration Flows

	Between City Flows			Between State Flows		
Specification/ Dependent Var.	Net Migration	In-Migration	Out Migration	Net Migration	In-Migration	Out Migration
Borjas' specification:	-0.66	-0.39	0.28	-0.32	-0.16	0.16
(current imm share p_{it})	(0.22)	(0.20)	(0.07)	(0.10)	(0.08)	(0.05)
Unbiased specification:	-0.10	-0.05	0.05	-0.07	0.01	0.08
(imm inflow as % of	(0.04)	(0.03)	(0.01)	(0.04)	(0.04)	(0.02)

Which domains drive public attitudes?

-Most studies show wage/employment effects of immigration on natives are small

-many firms and households use immigrant services, both at the "high end" (doctors, nurses, professors) and the "low end" (day care, home health and elderly care, agriculture and construction…)

-BUT: many natives are opposed to (or deeply ambivalent about) immigration

public attitudes

-people care about the spillover effects of immigration on their wages and taxes, and on the "compositional spillovers" on their neighbors, co-workers, schoolmates..

-composition concerns are the major driver in choices over where to live, what school to choose,….

-how do people respond when asked about increasing immigration?

ESS study

Indicator questions for wage/tax spillovers:

1. *Do you agree/disagree that immigrants* **lower wages***?*
2. *Do you agree/disagree that immigrants* **harm the poor***?*
3. *Do you agree/disagree that immigrants* **fill job shortages***?*
4. *Do you think that immigrants* **take away jobs** *from natives or* **create new jobs***?*
5. *Do you think that immigrants* **take out more** *(in social benefits)* **than they put in** *(in taxes)?*

ESS study (2)

Indicator questions for compositional spillovers

1. *Do you agree/disagree it's better if everyone* **shares the same customs and traditions**?
2. *Do you agree/disagree it's better if everyone* **shares the same religion**?
3. *Do you agree/disagree it's better if everyone* **shares the same language**?
4. *Do you think that immigrants* **undermine or enrich the culture** *of the country*?
5. *Do you think a country should* **stop immigration to reduce social tensions**?

Findings:

European views on immigration depend on both economic (20%) and composition (80%) spillover effects.

Views about immigration policy (restrict or increase immigrant flows) are mainly driven by concerns about compositional spillovers

Older, rural, and non-college grads are more concerned about compositional issues, and these concerns drive their more negative policy views

Some conclusions

1. most econ. work focuses on labor mkt spillover effects of immigration
2. malthusian (pure pop^n) effect is arguably 0 or even postive
3. “new malthusian” (substitution) effect appears to be very small
4. evidence on other domains (product mkts, firms, gov’t costs, nbhds) is limited. But native out-migration responses are small
5. views about immigration are largely driven by “compositional” domains