The Labor Market Effects of U.S. Immigration: What is the Latest Evidence?

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"By keeping labor supply down, immigration policy tends to keep wages high. Let us underline this basic principle: Limitation of the supply of any grade of labor relative to all other productive factors can be expected to raise its wage rate; an increase in supply will, other things being equal, tend to depress wage rates."

(Paul Samuelson, 1964)
Jacques Chirac: “If there were fewer immigrants, there would be less unemployment, fewer tensions in certain towns and neighborhoods, and lower social cost.”

Liberation: “That has never been formally proven”

Politician: “It is easy to imagine, nevertheless”

(1984)
“Any sizable increase in the number of immigrants will inevitably lower wages for some American workers”

(George Borjas, 2004)
“While immigration may have raised overall income slightly, many of the worst-off native-born Americans are hurt by immigration -- especially immigration from Mexico. Because Mexican immigrants have much less education than the average U.S. worker, they increase the supply of less-skilled labor, driving down the wages of the worst-paid Americans.”

(Paul Krugman, 2007)
Traditional approach for testing elementary textbook model:

Spatial Correlation Method; a type of “Difference-in-differences” analysis

Example
Assume World is one country with two regions, A and B. Workers in A are perfect substitutes for workers in B. Labor supply is perfectly inelastic A experiences an exogenous inflow of immigrants, who are perfect substitutes for workers in A; B receives no immigrants (“counterfactual”). Recession hits country at the time immigrants arrive
Hypothesis:

Ceteris paribus, the percentage drop in the wage for A exceeds the drop for B (is there a statistically significant “difference in wage differences”?)
Two approaches to spatial correlation analysis:

1. *Cross-section*: sample contains many areas

Typical empirical specification:
\[ \ln(Y_{jt}) = a + \beta(\ln M_{jt}) + \alpha(\ln X_{jt}) + \varepsilon_{jt} \]

\( Y_{jt} \) is a labor market outcome experienced by natives in area \( j \) during \( t \)
\( M_{jt} \) is the fraction of immigrants in \( j \) during \( t \)
\( X_{jt} \) is a vector of controls
Most prominent recent example of cross-section approach:

- Approximately 2,750,000 observations comprising native- and foreign-born men and women
2. Unexpected Extraordinary Supply Shock Method

- Researcher exploits famous natural experiment
- Similar to two-region example
- Many time periods before and after shock are observed
- Do native-born labor market outcomes in treatment region after the shock change relative to outcomes in counterfactual?

Prominent examples: Card (1990) and Friedberg (2001)
Using either of these strategies, most evidence doesn’t indicate that immigration harms natives!

- Friedberg and Hunt (1995); “Despite the popular belief that immigrants have a large adverse impact on the wages and employment opportunities of the native-born population, the literature on this question does not provide much support for this conclusion.”

- Longhi et al (2005); meta-analysis of over 350 estimates of elasticity of native wage with respect to relative supply of immigrant labor (“factor price elasticity”): average about -0.1%
Recall the textbook model:

- Perfect substitution
- Fixed capital
- Perfectly inelastic labor supply
- Product demand and supply fixed
- Technology fixed
- Exogenous immigration shock
The diagram illustrates the relationship between wage and employment. The supply curves are labeled as $S_N$ and $S_{N+M}$, and the demand curves are $D_1$ and $D_2$. The intersections with the horizontal axis indicate the equilibrium points for different scenarios.
Immigration may trigger *secondary* adjustment processes:

**Labor Demand Responses**
- Capital inflows
- Growth of immigrant-employing industries
- Substitution of immigrant-intensive technologies
- Effects on product price

**Labor Supply Responses**
- Out-migration
- “Network effects”
If markets are flexible:

• native-born wages should eventually return to their pre-migration levels (Leamer-Levensohn (1995) “hypothesis of factor price insensitivity”)
Other complications:

• Immigration could be endogenous
• Natives and immigrants could be complements
Recent Improvements in empirical methodology

Spatial correlation method has been replaced by “Skill-Cell” method (Borjas (2003))

• Instead of defining the labor market as a local spatial unit, define it as a national skill category,
• Method emphasizes the importance of the production function in influencing distributional effects
• Relies partly on simulations
Evidence from skill cell studies?

- Borjas (2003): factor price elasticity averages - 0.35%; high-school dropouts most adversely affected by immigration;

- Ottaviano and Peri (2005, 2006): average native wage increased 1.8% in response to immigration; workers with at least a high school degree gained;

- Borjas and Katz (2007): Studied Mexican migration to USA; factor price elasticity averages -0.64; native high school dropouts most adversely affected.
The very latest evidence shows mildly adverse short effects, positive long run effects:

Ottaviano and Peri (2008):

• In short run, small negative effects on natives without a high school degree (elasticity is -0.7%) and on the average native (-0.4%);

• In long run, small positive effects on natives without a high school degree (0.3%) and on the average native wage (0.6%).
2. Latest research on secondary adjustment processes

Internal migration responses (Borjas (2006))
Capital adjustments (Ottaviano and Peri (2005, 2006, 2008))
Product supply responses (Cortes (2005))
Endogenous technology and industry structure responses (Lewis (2003, 2004, 2005), Card and Lewis (2005))
Are there internal migration responses?

• Evidence generally mixed, although strong recent evidence by Borjas (2006): For 1960-2000 census data, native migration response softens the measured impact of immigration on wages by 40 to 60 percent;

• Freeman (2006): analysts still “…have reached no consensus about the extent to which internal migration explains the absence of any relation between immigration and wages”
What about the other adjustment processes?

- Immigration does not increase immigrant-intensive industries, but only increases employment shares of immigrants across all industries;
- Some evidence that immigration triggers the choice of immigrant-intensive technologies
- Unskilled immigration appears to lower prices of unskilled-intensive non-tradeable goods in U.S. cities
Strongest secondary adjustment appears to be a consumer demand response:

Does Say’s Law apply to immigrant labor supply?
Two studies of consumer demand response:

• Bodvarsson et al. (2008): Reexamination of Mariel Boatlift;
• Bodvarsson and Van den Berg (2006): study of Hispanic migration to meatpacking industry in Nebraska
Model for Mariel Boatlift Reexamination:

- Non-tradeable good produced using imperfectly native- and foreign-born labor and capital (fixed)
- Product demand = \( f(\text{consumer income, price}) \)
- Consumer Income = \( g(\text{native wage, immigrant wage, sizes of native and immigrant pools, remittances}) \)
- Upward sloping labor supply curves
Central comparative static result:

- Immigration shock triggers an “input substitution effect” (-) and a consumer demand effect (+, - or 0)
- The “full” marginal effect of the shock on native wage is the sum of the two effects
Empirical findings:

• Test of retailing sector in Miami before and after Boatlift; counterfactual group of cities identical to Card (1990)

• The relative sizes of the “input substitution” and “consumer demand” effects are estimated

• The consumer demand effect was positive and more than offset the input substitution effect.
Dawson County: natural experiment in demand-pull immigration

• Migrants made up approximately 25% of county’s population in 2000, compared to 3% in 1990

• Migrants absorbed by export-driven meatpacking; clean separation between the markets where migrants work and spend
Demand-Pull Immigration to meatpacking

Wage

W_1

W_2

D_1

D_2

S

L_1

L_2

Labor
stimulated consumer demand in non-tradeables
What happened in the county after the first big immigration wave?

• Net increase of 92 businesses
• Real food manufacturing wage and employment rose during the 1990s
• Retail employment rose and sales stabilized from a continual decline during the 1980s
• Housing prices rose
Data Set

• Pooled study; annual observations on 9 different counties, 1980-99
• Counterfactual group of 8 counties in NE, KS, IA and SD;
Estimated consumer demand effects?

Ceteris paribus, a new immigrant is predicted to raise a county’s:

- annual retail wage by $0.17
- median housing price by $2.
Directions for future research:

• Need a general equilibrium theory that accounts for primary and secondary adjustments.

• Theory should include fiscal effects, remittances, policy responses, and feedback “network effects”.

• Empirical specifications must be derived directly from theory and carefully account for all forms of simultaneity.

• Conventional panel data may not do.