

Volume 39, Issue 4

The Effect of Immigration on Local Public Finances

Jeff Chan
Wilfrid Laurier University

Abstract

I investigate the relationship between immigration and local public finances, exploiting variation in immigration inflows across local labour markets and data on local government revenues and expenditures. I find that increases in immigration did not result in any change to local government revenues. This is not explained by offsetting decreases in revenues from local sources and increases from state-level intergovernmental transfers. Finally, I demonstrate that the lack of impact on revenues similarly implies that immigration does not have an effect on local public expenditures. The findings suggest that immigration does not act as a drain on local public finances.

I am grateful to Azim Essaji, Ryo Itoh, and Tung Le for their helpful comments. I also thank participants at the 2017 NARSC and 2018 WEAI Conferences for their feedback. All remaining errors are my own.

Citation: Jeff Chan, (2019) "The Effect of Immigration on Local Public Finances", *Economics Bulletin*, Volume 39, Issue 4, pages 2423-2428

Contact: Jeff Chan - jchan@wlu.ca.

Submitted: June 19, 2019. **Published:** October 20, 2019.

1 Introduction

Opponents to increased immigration often argue that immigrants are costly to non-migrants because they use a large amount of social services while contributing less to public revenues. Motivated by this, I utilize differences in immigrant inflows across regions to examine the effect of immigration on local government revenues and expenditures, both in aggregate and broken down by specific sources and spending categories. I find that increased exposure to immigration does not have a significant effect on either local government revenues or expenditures, suggesting that immigrants do not act as a drain on local public resources.

This paper adds to the literature on the impacts of immigration. The majority of this literature, like Card (2001) and Borjas (2003), have focused on the effect of immigration on labour market outcomes. A series of papers have also used similar methodologies to examine the effect of immigration on outcomes such as crime and education.¹ The above literature on the effects of immigration have utilized regional variation in immigrant inflows coupled with instrumental variable techniques that have often exploited previous-period regional ethnic composition.

In contrast, existing papers written in the area of immigration and public finances have largely focused on immigrants' use of public benefits versus their tax contributions at a national level or by immigrant characteristics. Borjas and Trejo (1991) estimate that the average immigrant family cost the U.S. welfare system over thirteen thousand dollars over their duration in the U.S., which was over five thousand more than a native family. Camarota (2004) also finds that immigrants could have a non-trivial financial cost to government finances, finding that the annual net cost to the federal government of immigrants was 12 billion in 2011 USD.² Finally, related work by Dustmann and Fratini (2014) finds, for the UK, that immigrant origin can affect immigrants' fiscal contribution, with recent immigrants and those from the European Economic Area contributing positively.

Understanding the fiscal impact of immigration is of first-order importance because of its effect on local public finances and therefore local public goods provision. My paper adds to our understanding of the fiscal impacts of immigration by using a local labour market approach to estimating the impact of immigrants to local public finances, which will take into account both the direct impacts of immigrants as well as other indirect, general equilibrium effects which are more challenging to incorporate in cost-benefit type exercises.

The rest of the paper proceeds as follows. Section 2 describes the data used in this paper, Section 3 lays out the methodology, Section 4 presents the results, and Section 5 concludes.

¹For examples of the former, see Bell et al. (2013) and Bianchi et al. (2012). For examples of the latter, see Chiswick (1989) and Hunt (2012).

²In a finding that echoes the theme of this paper, he also calculates that costs to local and state governments are significantly larger than the costs to the federal government.

2 Data Description

Measures for the stock of immigrants come from the 1990 and 2000 Censuses, as well as the 2007 American Community Survey (ACS). I aggregate the Census and ACS immigrant measures to the commuting zone level. I focus on the 722 commuting zones within the mainland United States.

Commuting zones (CZs) were explicitly constructed by grouping counties that were tightly linked by commuting patterns, thereby forming a more natural definition of a local labour market than MSAs, which are subject to a minimum population cutoff. Much recent research involving geographical variation across the U.S., including Autor et al. (2013) and Chetty et al. (2014), have therefore used commuting zones as their main unit of observation.

I obtain my main outcome measures from Feler and Senses (2017)³. Information concerning local government revenues and expenditures originate from State and Local Government Finances data from the Census Bureau, aggregated to the commuting zone level.

3 Methodology

In order to investigate the effects of changes in the level of immigrants on local public finances, I estimate the following equation:

$$\Delta \ln(Y_{it}) = \beta_1 \Delta \ln(I_{it}) + X'_{it} \beta_2 + \phi_{st} + \epsilon_{it} \quad (1)$$

$\Delta \ln(Y_{it})$ represents the change in logged outcome Y over time period t (either 1990-2000 or 2000-2007), for commuting zone i . The 2000-2007 time period is rescaled to capture 10-year equivalent changes.⁴ All regressions are weighted by each CZ's start-of-period population share in the mainland US. My main independent variable is $\Delta \ln(I_{it})$, the change in the logged stock of immigrants in commuting zone i in period t . I include as a vector of control variables X_{it} a series of start-of-period CZ characteristics: male population share, black population share, college-educated population share, high-school or lower population share, and the share of employment in routine occupations. I also control for the change in Chinese imports per worker during the period and the change in the logged working age population. I control for each major ethnic group's share in that CZ's total 1980 immigrant count as well as each CZ's share in the national count of immigrants in 1980 for each major ethnic group.⁵ Finally, I also include state-time period fixed effects to absorb any trends in outcome variables common across CZs within the same state in a given time period.

I use an instrumental variable in the spirit of the ethnic enclave IV in Card (2001). I follow the lead of Smith (2012) and first construct the measure:

$$\tilde{I}_{it} = \sum_{o \in O} \frac{I_{i,o,t-1}}{I_{i,t-1}} I_{o,t,-i} \quad (2)$$

³For a more comprehensive description of the data, see the data appendix in Feler and Senses (2017).

⁴This is consistent with the methodology of Autor et al. (2013).

⁵This accounts for the possibility that immigrants from certain origin groups may be more likely to be employed in particular industries, and these industries may have experienced shocks.

(2) takes, for each origin $o \in O$,⁶ the total national stock of immigrants of origin o in period t except for those residing in CZ i and allocate a proportion of that stock to CZ i , where the proportion allocated is equal to the share of all immigrants in i made up by those from origin o during the previous period, $t - 1$.

I then take the log of (2) and first difference, obtaining the following instrument for $\Delta \ln(I_{it})$:

$$\Delta \ln(\tilde{I}_{it}) = \ln \left(\sum_{o \in O} \frac{I_{i,o,t-1}}{I_{i,t-1}} I_{o,t,-i} \right) - \ln \left(\sum_{o \in O} \frac{I_{i,o,t-2}}{I_{i,t-2}} I_{o,t-1,-i} \right) \quad (3)$$

The exclusion restriction of the instrument is that a commuting zone's prior period ethnic composition only affects local revenues and expenditures through the way in which it allocates immigrant stocks in the rest of the country to that commuting zone.

The first-stage F-statistic of the excluded instrument is 22.08, suggesting that the IV is relevant.

4 Results

Standard errors are clustered by commuting zone. Results are estimated using 2SLS, using the instrument described in (3). Table 1 presents the results. In column 1, I find that increases in immigration do not affect total local government revenues per capita. The estimated coefficient is -0.0226, which is both economically small and statistically insignificant. The average increase in logged immigration is half a log point, which, combined with the coefficient, implies a 0.01 decrease in logged revenues per capita; for context, the average increase in logged revenues per capita is approximately 0.24. Nonetheless, revenues from local sources might have declined and that this may have been offset by state-level intergovernmental transfers.⁷ I therefore split total revenues into their two main sources in columns 2 and 3, respectively: state-level intergovernmental transfers and revenues from local sources. Both of the estimated coefficients are similarly small and insignificant, demonstrating that immigrants do not affect the amount of revenues accrued from either source. Finally, in column 4, I show that the lack of impact of immigrants on revenues also translates into a null effect on local government expenditures per capita. Taken together, I find that immigration does not affect local government revenues or expenditures, and therefore do not affect the provision of local public goods.

5 Conclusion

I examine at the effect of immigration on local public finances, pairing regional data on immigrants with information on local government revenues and expenditures. The results show that increased immigration does not affect local government revenues or expenditures, suggesting that immigrants do not place an undue burden on receiving communities. Given the range of benefits of

⁶I follow Smith (2012) and aggregate immigrant origin countries into 16 origin groups.

⁷At the local level, approximately 60% of revenues are from local sources, with most of the remainder coming from state-level intergovernmental transfers.

immigration found in other studies, the results in this paper show that regions should be encouraging immigration, given that there are no concerns that provision of public goods will be negatively impacted. The findings in this paper also suggest intriguing possibilities for future research, such as examining whether immigrant characteristics, such as skill level or origin, affect their impact on local public finances.

References

- Autor, D., D. Dorn, and G. Hanson**, “The China Syndrome: Local Labor Market Effects of Import Competition in the United States,” *American Economic Review*, 2013, 103 (6), 2121–2168.
- Bell, B., F. Fasani, and S. Machin**, “Crime and immigration: evidence from large immigrant waves,” *Review of Economics and Statistics*, 2013, 95 (4), 1278–1290.
- Bianchi, M., P. Buonanno, and P. Pinotti**, “Do immigrants cause crime?,” *Journal of the European Economic Association*, 2012, 10 (6), 1318–1347.
- Borjas, G.**, “The Labor Demand Curve is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market,” *Quarterly Journal of Economics*, 2003, 118, 1335–1374.
- **and S. Trejo**, “Immigrant participation in the welfare system,” *Industrial and Labor Relations Review*, 1991, 44 (2), 195–211.
- Camarota, S.**, “The High Cost of Cheap Labor: Illegal Immigration and the Federal Budget,” 2004. Washington: Center for Immigration Studies.
- Card, David**, “Immigrant inflows, native outflows, and the local labor market impacts of higher immigration,” *Journal of Labor Economics*, 2001, 19, 22–64.
- Chetty, R., N. Hendron, P. Kline, and E. Saez**, “Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States,” *Quarterly Journal of Economics*, 2014, 129 (4), 1553–1623.
- Chiswick, C.**, “The Impact of Immigration on the Human Capital of Natives,” *Journal of Labor Economics*, 1989, 7 (4), 464–486.
- Dustmann, C. and T. Fratini**, “The Effect of Immigration on Local Public Finances,” *Economic Journal*, 2014, 124 (580), F593–F643.
- Feler, L. and M. Senses**, “Trade Shocks and the Provision of Local Public Goods,” *American Economic Journal: Economic Policy*, 2017.
- Hunt, J.**, “The Impact of Immigration on the Educational Attainment of Natives,” 2012. NBER Working Paper 18047.
- Ruggles, S., K. Genadek, R. Goeken, J. Grover, and M. Sobek**, “Integrated Public Use Microdata Series: Version 6.0 [dataset],” 2015. Minneapolis: University of Minnesota.
- Smith, Christopher**, “The Impact of Low-Skilled Immigration on the Youth Labor Market,” *Journal of Labor Economics*, 2012, 30 (1), 55–89.

Table 1: Effect of immigration on local public finances

	(1)	(2)	(3)	(4)
Dep. Var.:	$\Delta \ln(\text{total rev. p.c.})$	$\Delta \ln(\text{total intergov. transfers p.c.})$	$\Delta \ln(\text{local rev. p.c.})$	$\Delta \ln(\text{total exp. p.c.})$
$\Delta \ln(I_{it})$	-0.0226 (0.0799)	-0.0723 (0.0952)	-0.0574 (0.112)	-0.0357 (0.0867)
Observations	1,444	1,444	1,444	1,444
R-squared	0.591	0.703	0.630	0.428

Notes: *** denotes 1% significance, ** denotes 5% significance, * denotes 10% significance. Standard errors reported are clustered at the CZ level. All specifications estimated using 2SLS.