Estimates of Seattle's Population At-Risk of Changes to Public Charge

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Summary

Demographers at University of Washington's Center for Studies in Demography and Ecology estimate that proposed changes to public charge guidelines will directly affect 51,186 immigrants in the City of Seattle. The proposed changes will also indirectly reach another 33,185 city residents who live in households with someone who is directly impacted, including 10,143 U.S.-born children.

Demographic Overview of Directly-Impacted Population

The population in the City of Seattle directly susceptible to public charge redefinition is estimated to be 51,186 (Table 1). Immigrants from China (17%), Mexico (12%), and India (9%) form the largest shares of this population. The population is heavily concentrated among working-age adults (89%), although there are a non-trivial 3,327 (6%) number of directly impacted children. The bulk of this population lives in households with incomes placing them outside of the federal poverty threshold (100% FPL), but a sizable portion (27%) are in poverty or near poverty (23%).[2]

Table 1: Estimates of impacted population

	Estimate	95% Margin of Error
Impacted population	51,186	±3,252
Top-5 Nationalities		
China	8,718	±1,237
Mexico	6,316	±1,285
India	4,722	±1,073
Canada	3,047	±567
Philippines	2,814	±1,180
Age		
Children (0-17)	3,327	±802
Working ages (18-64)	45,389	±2,836
Older ages (65+)	2,470	±623
Poverty status		
In poverty (<100% FPL)	14,303	±1,733
In near poverty (100-250% FPL)	11,588	±1,521
Not in poverty (>250% FPL)	25,295	±2,366

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[2] This high poverty rate is partly a function of the large number of international students in this population. Excluding students and their dependents produces an estimate of the poverty rate of 15%, which is much closer to the poverty rate of US-born Seattleites of 14%.

The estimates also indicate that 33,185 individuals who are not directly impacted by the public charge redefinitions live in households with an impacted member (Table 2). This includes over 10,000 U.S.-born citizen children with parents who are directly impacted by these changes.

Table 2: Estimates of non-impacted population in impacted households

	Estimate	95% Margin of Error
Total others in impacted households	33,185	±2,966
U.S.-born children in impacted households	10,143	±1,430

Note: values refer to non-impacted individuals living in households with an impacted household member

Geographic Distribution of Impacted Population

The impacted population is concentrated in the northeastern region of Seattle, home to the University of Washington and a large population of foreign-born students who have potential visa pathways to legal permanent residence (Figure 1).

Figure 1: Distribution of Impacted Population across Seattle's PUMAs
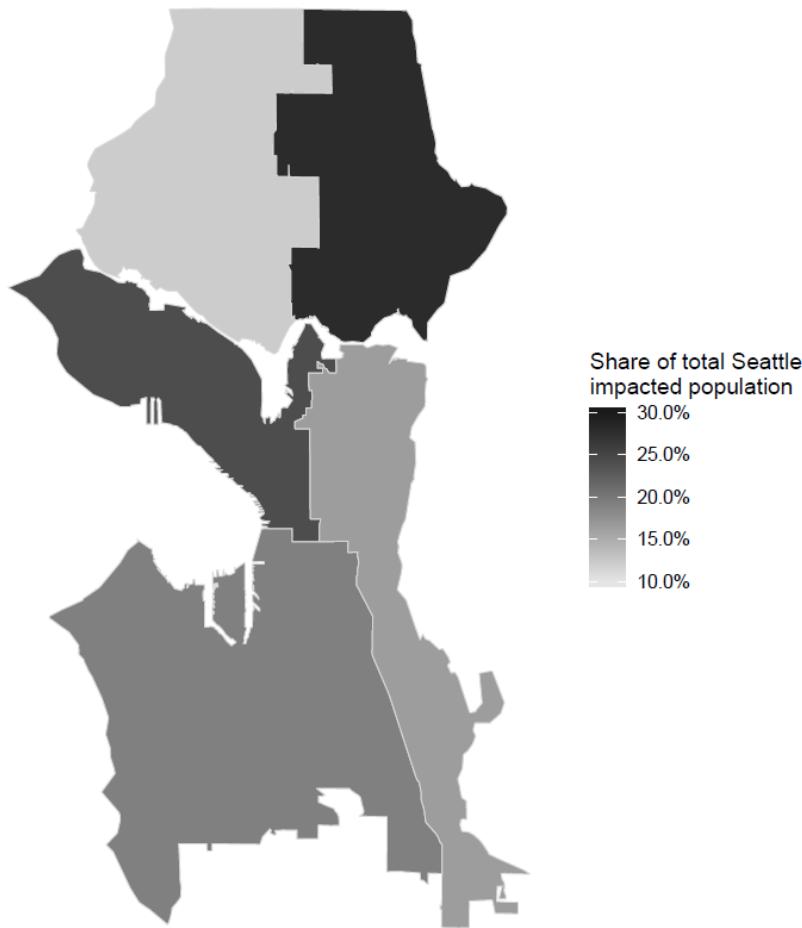
Note: Public-use microdata areas (PUMAs) are sampling units defined by the Census Bureau

Another sizeable portion of the impacted population resides in Downtown, South Lake Union, and Magnolia neighborhoods, where high-tech and medical industries have a large presence. This area may be home to a disproportionate share of the region's H-1B and other visa holders who work in these industries. South and West Seattle have lower shares of the city's impacted population. This may be surprising because the immigrant share of population is higher in many South Seattle neighborhoods than in other areas of the city. The share of the city's impacted population in South Seattle could be lower than elsewhere because a high fraction of foreign-born residents there have legal permanent residence or hold refugee status. Additionally, the population of foreign-born students and temporary workers most at risk from this change live in greater numbers in other parts of the city. Northwest Seattle has the lowest share of the impacted population in the city.

Methodology
In order to estimate the size and to describe features of the impacted population, micro-level Census records from the 2012-2016 multiyear American Community Survey (ACS) were used as the main source of data.[3] The ACS is an ongoing annual survey that provides representative estimates of the US population, at various levels of geography. Our estimates are based on an aggregation of the five public-use microdata areas (PUMAs) in Seattle.

The ACS includes several critical measures necessary for determining the impacted population, including country of birth, year of entry, and citizenship status. The data do not, however, include the kind of detailed immigration statuses necessary in order to classify the non-citizen population into lawful permanent residents (LPRs), who are not vulnerable to the changes in public charge, and other noncitizen populations, who are susceptible to the proposed changes. Our approach for determining the latter population is based on a logical imputation derived from administrative sources and allocated counts.[4]

Our estimate starts with the estimated 62,314 noncitizens residing in Seattle in 2012-2016. In order to determine the portion of this count that is impacted by these changes, we remove noncitizens who are likely to hold a Green Card (LPR) through family or employment, as well as migrants who arrived as refugees. We characterize likely-family-sponsored LPRs as noncitizens with a spouse or parent who is a US citizen by birth or naturalization. Administrative reports from the Department of Homeland Security indicate that this allocation captures 70% of those who obtained family-based LPR status in 2016.[5]

Employment-based (EB) pathways form a comparatively small portion of LPRs, representing just 12% of LPR recipients in 2016. The priorities for obtaining EB LPR are, however, highly selective; granting LPR status to highly-educated workers in professional fields. In our allocations, we classify likely-employment-based LPRs as noncitizens who have completed a college education, are employed full time, have a personal income of $75,000 or more, and to prevent intersection with highly-skilled temporary workers, have resided in the U.S. for at least 10 years. We make an exception to the residency rule for the small group of noncitizen with investor (EB-5) LPRs, by classifying those with business incomes exceeding $200,000 as LPRs. Any noncitizen spouse or children of these likely-EB LPRs are also assigned to LPR status.

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[3] The data were downloaded from the IPUMS-USA site: https://usa.ipums.org/usa/ . For more imformation on the IPUMS project see Ruggles, S., Genadek, K., Goeken, R., Grover, J., & Sobek, M. (2015). Integrated public use microdata series: Version 6.0 [Machine-readable database]. Minneapolis: University of Minnesota.
[4] Similar approaches are used by demographers to estimate the size and characteristics of the unauthorized population (Passell and Cohn 2016; Hall, Greenman, and Farkas 2010).
[5] https://www.dhs.gov/immigration-statistics/yearbook/2016/table6

Refugee status is determined using a modified version of the method developed by Capps et al. (2015)[6] and Evans and Fitzgerald (2017)[7]. Specifically, we calculate a refugee intensity index based on historical flows of refugee sending countries between 1990 and 2016 and refugee adjustments between 1946 and 1989. We relate these refugee flows to estimates of immigrant arrival cohorts, by country, based on national estimates of the resident immigrant population in the 2012-2016 ACS. We link these country- and year-specific indices to individual noncitizens in our Seattle-based PUMS sample, and following Capps et al. (2015), set a threshold of 0.4 for allocating noncitizens as likely-refugees.[8] Given their unique position in US immigration policy, we also classify all Cuban noncitizens as refugees, as well as Nicaraguans, Guatemalans, and Salvadorans arriving before 1990.[9]

The residual noncitizen group provides the analytic sample for our estimate of the non-LPR noncitizen population. This group captures the resident nonimmigrant population, including international students, temporary workers, and their dependents, as well as undocumented migrants and those on provisional statuses (TPS, DACA). The figure also contains a small number of noncitizens who are not vulnerable to changes in public charge guidelines: those who entered via the Diversity Immigrant Visa program, who are survivors of domestic violence or trafficking (U/T visa holders), Special Immigrant Juveniles, and some parolees. It also is likely to include small numbers of family-based LPRs who are sponsored by non-immediate relatives, as well as small numbers of employment-based LPRs without a college education.

To generate the estimate, we apply person weights provided by the Census Bureau and use the replicate weights for standard error estimation. Based on extensive research detailing the modest undercounts of the foreign-born population in the ACS, we apply an inflation factor of 8% to our estimate.[10] The final estimate is 51,186 with a 95% margin of error of ±3,252.

We have taken several steps to validate this estimate. Our approach estimates that 11,526 of this population is composed of students who are enrolled full-time at a university/college. We have obtained complete counts of enrolled international students in Seattle university/colleges, including University of Washington, Seattle Pacific University, Seattle University, City University, and Seattle Colleges (Central, North, South, SVI). In Fall 2017, these schools reported a total of 11,294 international students. Similarly, our allocation approach indicates that there are 20,833 workers in King County who are plausible H-1B holders (i.e., workers with a college-degree and incomes of at least $75,000 [the median for H-1B workers]). Reports from the Department of Homeland Security estimate that Washington State was home to 40,000 temporary workers (including H-1B and H-2A visa holders) and their dependents in 2016.[11] Given the distribution of workers across the state, where one-third of workers live in King County, this strikes us a reasonable estimate.

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[6] Capps, Randy, Kathleen Newland, Susan Fratzke, Susanna Groves, Gregory Auclair, Michael Fix, & Margie McHugh. 2015. *The Integration Outcomes of U.S. Refugees*. Washington, DC: Migration Policy Institute.

[7] Evans, William and Daniel Fitzgerald. 2017. The Economic and Social Outcomes of Refugees in the United States: Evidence from the ACS. Working Paper 23498, National Bureau of Economic Research.

[8] There are 320 country/year pairs with intensity factors meeting this threshold.

[9] This approach generates an estimate of the Seattle refugee population of 4,073. A media report from KUOW provides an estimate of refugees arriving to Seattle from 2010-2016 of 5,665 (see http://archive.kuow.org/post/where-seattles-refugees-come-and-other-things-you-should-know)

[10] See Passel, Jeffrey S and D'Vera Cohn. 2016. Overall Number of U.S. Unuahtorized Immigrants Holds Steady Since 2009. Washington, D.C.: Pew Research Center

[11] https://www.dhs.gov/sites/default/files/publications/Nonimmigrant_Population%20Estimates_2016_0.pdf