Estimating the State/Local Fiscal Impact of the Plyler Decision

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November 21, 2024

Abstract

The Plyler decision was made by the United States Supreme Court in 1982. This decision permitted undocumented immigrant children to obtain a public K-12 education without any tuition payments or restrictions, i.e., as any other child. Approximately three million children benefited from this decision over the past four decades. This paper compares the costs of educating these children and the estimated cumulative tax revenue over their working lifetimes. This net fiscal impact exercise is performed for all fifty states as well as the District of Columbia. The analysis also specifically examines Chicago, IL, Los Angeles, CA, New York, NY, and Phoenix, AZ. We find that, overall, the states and the four cities examined have experienced positive net fiscal impacts as a result of the Plyler decision.

1 Introduction

In 1982, the United States Supreme Court ruled that states cannot deny children a free, public, K-12 education based on their immigration status. This case, known as Plyler v. Doe, has enabled millions of children to have access to public schooling over the past four decades. Some states claim that paying for the education of these children is a significant cost that is not recuperated. This analysis aims to calculate the state and local net fiscal impact of undocumented immigrants who had access to a public education through Plyler from 1982-2022. The intention of this work is to answer the question, "Do undocumented immigrants pay back the cost of their elementary and secondary educations over the course of their lifetimes?"

To answer this, we obtain estimates of aggregated lifetime tax revenue by state. We subtract from this the aggregated cost of education per person-year by state. We also examine federal transfers to states for public education purposes.

The data sources used to answer this question are discussed in Section 2. The methodology used to pool the estimates together is explained in Section 3.

2 Data

The starting point of this analysis is the IPUMS version of the 2022 American Community Survey (ACS). This dataset is supplemented with 2023 population weights and Plyler statuses as provided by FWD.us. The geographical characteristics of individuals' places of residency are also obtained via this IPUMS dataset.

The individuals we include in this dataset are those who benefited from the Plyler decision between 1982 and 2022. If an individual is still benefiting from the decision in 2023, they are not included in the analysis. Due to the point-in-time capturing of these data, people who died or left the United States prior to 2022 will not be included in the data or the calculations.

Since we only have incomes as of 2022 through the ACS, Francesc Ortega approximates annual incomes prior to, and after, 2022. In his "The Economic Effects of the Plyler Decision" paper, he details his methodology for computing these earnings estimates. Through his work, we obtain income estimates from 1982-2082 for individuals who benefited from Plyler before 2022. These estimates, in conjunction with the tax rates, give us an approximation for tax revenue by state over an individual's lifetime.

The tax rates used in this analysis come from the Institute on Taxation and Economic Policy (ITEP) report "Who Pays, 7th Edition" (Institute on Taxation and Economic Policy 2024). From Appendix A of this report, we get total state and local taxes as a share of family income by specific income percentile breakouts for each state. These shares, used as tax rates, encompass sales and excise taxes, property taxes, income taxes, and other taxes. The methodology behind the usage of these tax rates is detailed in Section 3.1.

The cost component of the analysis comes from the 2022 Census of Governments (COG): Finance - Survey of School System Finances (U.S. Census Bureau 2024). Table 11 of these data contain the costs to the state government of educating a student for each state. This table also contains the federal transfer dollars per student in each state. These transfers are discussed more in Section 3.3.

2.1 Summary Statistics

The weighted numbers of individuals examined for states and cities are contained in Table A1 and Table A2 respecitvely. Tables A3 and A4 contain the average number of years an individual in the sample spent being educated in the public school system for each state and city respectively.

3 Methodology

The net fiscal impact for each state is calculated by means of Equation 1 below. The net profit is denoted by π_s where s represents each state in the U.S. (including the District of Columbia). The state revenue component, R_s, is calculated by means of tax revenue. This is further detailed in Section 3.1 below. The state cost component, C_s, is calculated as

an aggregation of the cost of educating an individual per each state across their years of attendance. This is explained in Section 3.2 below.

$$\pi_s = R_s - C_s \tag{1}$$

The unit of measurement to be aggregated for these variables is person-year. This applies to both the costs and revenue components. The projected tax payment for each individual each year is aggregated for each state. Similarly, the cost for each individual's number of years attending public education is aggregated for each state.

3.1 Tax Revenue

To generate the revenue component of Equation 1, total state and local tax rates are applied to estimated incomes across individuals' lifetimes. Individuals' 2022 earnings in each state are ranked against their peers' earnings in each state, creating a place for each individual in their state's income distribution. If an individual does not have earnings in the 2022 ACS, their estimated 2022 income is used. Individuals are then placed into the following buckets based on their state income distribution percentile: 0-20, 21-40, 41-60, 61-80, 81-94, 95-99, and the top top 1 percent. Per ITEP's Appendix A, each state has a total tax share of family income for these buckets. It is these shares, or rates, that are applied to an individual based on which bucket their income percentile falls into and their state of residency. Note that we are using household tax rates for personal incomes in this analysis. This tax rate is then applied to all estimated incomes over a person's lifetime. That lifetime income tax revenue amount is then weighted via the 2023 population weights. Note, however, that a key assumption in this analysis is that the tax rates are constant over time.

Equation 2 below depicts how this revenue component is estimated for each state s. INC_{sit} is the estimated income for individual i at each time t where s is the individual's state of residency. TAX_{si} is the state tax rate applied to individual i based on their ranking in their state's income distribution. w_i is the 2023 population weight for individual i. The time frame examined is from 1982-2082, so $t \in [1, 100]$.

$$R_s = \sum_{i=1}^{N} \sum_{t=1}^{T} INC_{sit} TAX_{si} w_i \tag{2}$$

The time and individual components are aggregated out, leaving only the weighted total income tax revenue grouped by state.

3.2 Costs of Education

Each state in the United States has a different cost per pupil per year. These person-year costs come from the 2022 COG. They are then inflated to 2023 dollars by using the Consumer Price Index.

Each year that a person received public education is counted into the cost arithmetic. For example, if an individual had a seventh grade education prior to migration, only five years of education will have costs associated with them. A maximum of twelve years of education are possible, i.e., we are only examining grades one through twelve. Equation 3 below details how the aggregated cost is calculated for each state. $EDGAIN_{si}$ is the number of years an individual i in state s spent being educated by the state's public schooling system, i.e., the number of years of U.S. schooling. CPP_s is the cost per year to educate a pupil in state s. w_i is the population weight for 2023. Thus, C_s is the estimated state expenditure for each state to educate individuals from 1982-2022. An important assumption here is that the cost to educate for each state is constant over time, i.e., CPP_s is time invariant.

$$C_s = \sum_{i=1}^{N} EDGAIN_{si} CPP_s w_i \tag{3}$$

The individual component is aggregated out, leaving the total weighted cost to educate individuals from 1982-2022 grouped by state.

3.3 Federal Transfers

One additional component not included in the profit calculated by Equation 1 is the amount of federal transfers for each student for each year of education. This is broken out in the results tables, and can be considered an additional inflow of funds to the states for education purposes. Equation 4 below shows how this amount is calculated for each state. Again, $EDGAIN_{si}$ is the number of years an individual i in state s spent being educated by the state's public schooling system. FPP_s is the federal transfer amount per pupil in state s. w_i is the population weight for 2023. Thus, F_s is the estimated federal transfer inflow for each state for individuals educated from 1982-2022.

$$F_s = \sum_{i=1}^{N} EDGAIN_{si} FPP_s w_i \tag{4}$$

The individual component is again aggregated out, leaving the total weighted federal transfers to states for education purposes from 1982-2022 grouped by state.

References

Institute on Taxation and Economic Policy (2024). *Who Pays? 7th Edition*. URL: https://itep.org/whopays-7th-edition/.

U.S. Census Bureau (2024). *Census of Governments: 2022 Public Elementary-Secondary Education Finance Data*. URL: ttps://www.census.gov/data/tables/2022/econ/school-finances/secondary-education-finance.html.

A Appendix

Table A1: Number of Individuals Per State

State	Post-Weighted (Population)
Alabama	17,737
Alaska	2,272
Arizona	94,835
Arkansas	19,261
California	741,747
Colorado	52,582
Connecticut	21,070
Delaware	6,677
District of Columbia	2,385
Florida	180,414
Georgia	93,236
Hawaii	9,890
Idaho	11,797
Illinois	124,628
Indiana	29,033
Iowa	13,575
Kansas	22,585
Kentucky	13,795
Louisiana	13,314
Maine	2,521
Maryland	48,942
Massachusetts	33,355
Michigan	28,951
Minnesota	28,830
Mississippi	4,751
Missouri	18,426
Montana	988
Nebraska	14,893
Nevada	54,238
New Hampshire	3,599
New Jersey	90,807
New Mexico	19,355
New York	139,523
North Carolina	77,878
North Dakota	1,000
Ohio	23,327
Oklahoma	29,258
Oregon	39,928
Pennsylvania	41,762
Rhode Island	6,647
South Carolina	17,672
South Dakota	2,000
Tennessee	32,590
Texas	482,247
Utah	33,105
Vermont	830
Virginia	54,086
Washington	77,994
West Virginia	2,134
Wisconsin	19,868
Wyoming	1,482
Nationwide Total	2,903,819

Table A2: Number of Individuals Per City

City	Post-Weighted (Population)
Chicago, IL	36,184
Los Angeles, CA	97,438
New York, NY	85,492
Phoenix, AZ	38,184

Table A3: Average Number of Years of Education Obtained in the U.S. (EDGAIN) Per State

State	Avg. # of Years
Alabama	7.1
Alaska	8.2
Arizona	8.1
Arkansas	7.0
California	7.5
Colorado	8.3
Connecticut	8.9
Delaware	5.9
District of Columbia	10.6
Florida	6.4
Georgia	6.5
Hawaii	7.4
Idaho	8.9
Illinois	8.0
Indiana	7.7
Iowa	7.8
Kansas	7.6
Kentucky	8.3
Louisiana	6.4
Maine	8.5
Maryland	5.9
Massachusetts	8.8
Michigan	9.4
Minnesota	8.6
Mississippi	6.7
Missouri	7.4
Montana	10.8
Nebraska	6.1
Nevada	7.5
New Hampshire	9.1
New Jersey	6.8
New Mexico	7.9
New York	7.5
North Carolina	6.7
North Dakota	8.2
Ohio	8.3
Oklahoma	6.9
Oregon	8.0
Pennsylvania	8.3
Rhode Island	7.8
South Carolina	6.4
South Dakota	7.0
Tennessee	6.7
Texas	7.0
Utah	7.8
Vermont	10.4
Virginia	7.1
Washington	7.4
West Virginia	10.0
Wisconsin	8.3
Wyoming	7.7

Table A4: Average Number of Years of Education Obtained in the U.S. (EDGAIN) Per City

City	Avg. # of Years
Chicago, IL	8.4
Los Angeles, CA	6.9
New York, NY	7.5
Phoenix, AZ	8.2