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Report to the Chairman, Committee on the Judiciary, House of Representatives

June 2004

ILLEGAL ALIEN SCHOOLCHILDREN

Issues in Estimating State-by-State Costs

GAO-04-733

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GAO Accountability • Integrity • Reliability

Highlights

Highlights of GAO-04-733, a report to the Chairman of the Committee on the Judiciary, House of Representatives

Why GAO Did This Study

In 1982 the Supreme Court ruled that states and school districts cannot deny education to illegal alien children residing here. Issues in estimating the costs of providing education to them are of interest because (1) policy discussions concerning illegal immigration often focus on cost impacts; (2) potential costs are borne mostly at the state and local levels; and (3) the Congress could authorize federal reimbursement for benefits provided to illegal aliens, based on estimated state costs or numbers of illegal aliens.

The foreign-born population is growing and is concentrated in certain states; the illegal immigrant component is thought to be substantial. Concerns about education costs may reflect "squeezed" state and local budgets, rising school enrollments, and overcrowded schools.

To address the potential for estimating the costs of educating illegal alien schoolchildren, this report (1) identifies major government sources of relevant data, (2) describes a Census Bureau plan for developing new information, and (3) outlines cost-estimation approaches.

GAO provided a draft of this report to the National Center for Education Statistics, the Department of Homeland Security, and the Census Bureau. The agencies informed GAO they had no formal comments.

www.gao.gov/cgi-bin/getrpt?GAO-04-733.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Nancy Kingsbury at (202) 512-2700 or kingsburyn@gao.gov.

What GAO Found

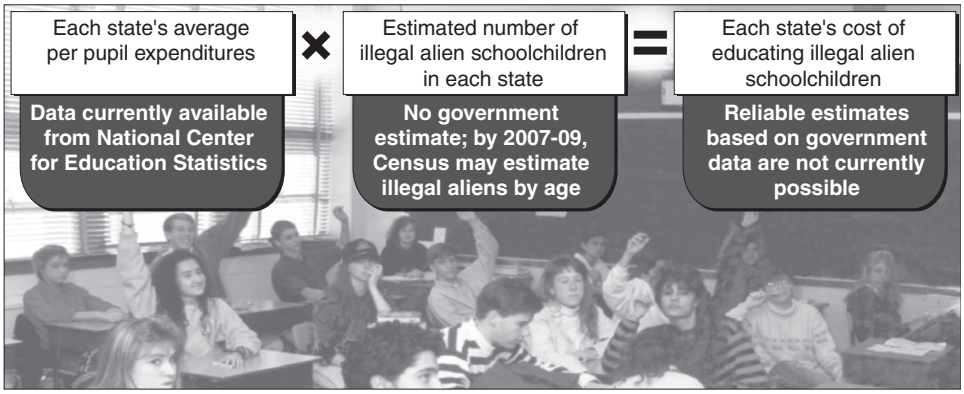
Current government information is not sufficient to directly estimate the state-by-state costs of educating illegal alien schoolchildren. Although a variety of data are available, no government source estimates the numbers of illegal alien schoolchildren for most or all states. Specifically:

- States and local areas record data on school enrollment and costs but not on immigration status. In response to GAO's survey, a few states estimated costs of educating illegal alien children, based partly on assumptions.
- The National Center for Education Statistics (NCES) maintains enrollment and cost data—but has no information on immigration status.
- The Department of Homeland Security (DHS) developed state-by-state estimates of the illegal alien population, but the estimates do not break out age groups and are subject to methodological limitations.

The Census Bureau is developing a plan to estimate the size of the resident illegal alien population, indirectly by age group and state. This new information might help in developing state-by-state estimates of the number of school-age illegal alien children. However, the plan does not specify the age groups to be estimated, faces technical challenges, and depends upon future funding. Overall, it is too early to evaluate the Census Bureau's plan.

The simplest approach to estimating the costs of educating illegal alien children is to multiply average current per pupil expenditures by the estimated number of illegal alien schoolchildren separately for each state (see fig.). At present, government information is insufficient for developing reliable estimates based on this approach. If the Census Bureau's plan proves successful, relevant data would be available by 2007–09. Taking account of cost determinants such as variation in local area expenditures, student needs, and school capacity requires additional data.

Simplest Approach to State-by-State Cost Estimation



Sources: GAO (analysis), NCES (per pupil expenditure data), Census Bureau (estimation plans), U.S. Department of Education (photo).

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Abbreviations

ACS	American Community Survey
CPS	Current Population Survey
DHS	Department of Homeland Security
ELL	English language learner
INS	Immigration and Naturalization Service
NCES	National Center for Education Statistics
TPS	temporary protected status

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G A O
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

June 21, 2004

The Honorable F. James Sensenbrenner, Jr.
Chairman
Committee on the Judiciary
House of Representatives

Dear Mr. Chairman:

Reliable data are needed to support policy decisions in the area of illegal immigration, but such data have often been lacking or inadequate.[1] In this report, we respond to your request that we examine the potential for estimating state-by-state costs of public schooling for illegal alien children, based on government information.[2]

As you know, the U.S. Supreme Court has ruled that states and school districts cannot deny K-12 education to resident children who are illegal aliens. Government estimates of the state-by-state costs of educating them would, however, be policy relevant for a number of reasons, such as the potential for federal reimbursement to states.

Because government estimates are not available at present, in this report we (1) identify currently available government information, (2) describe the Census Bureau's plan for developing new information, and (3) outline possible approaches to estimating costs and, for each approach, briefly assess whether needed information is currently available or planned.

GAO collected relevant information through a survey of 20 states, did outreach through associations of governors and mayors, conducted

[1]See U.S. Commission on Immigration Reform, *Becoming an American: Immigration and Immigrant Policy* (Washington, D.C.: Government Printing Office, 1997), pp. 194-98. We pointed to this issue in U.S. General Accounting Office, *Immigration Statistics: Information Gaps, Quality Issues Limit Utility of Federal Data to Policymakers*, GAO/GGD-98-164 (Washington, D.C., July 31, 1998), pp. 12–13 and 22–24.

[2]According to data from the National Center for Education Statistics (NCES), the proportion of students in private elementary and secondary schools has changed little over the past 10 years, remaining around 11 percent; we do not include or discuss expenditures by private schools in this report.

interviews at federal agencies, performed a literature review, and consulted with experts.

Results in Brief

Overall, our review indicates that at present, government information is not sufficient for directly estimating the state-by-state costs of providing public schooling to illegal alien children. Specifically:

- Government data include a variety of information on school expenditures and on the foreign-born population. However, estimates of the numbers of illegal alien schoolchildren, by state, are lacking.

- The Census Bureau has outlined a preliminary plan to develop indirect state-by-state estimates of the resident illegal alien population by age. Such estimates could help determine the number of schoolchildren in that population. But even if age-group estimates are successfully developed, they would not be available before 2007–09.

- Approaches to state-by-state cost estimation differ in the extent to which they attempt to account for various factors that can affect costs, but all approaches require data on or estimates of the number of illegal alien schoolchildren in each state.

State governments and school districts routinely record school enrollments and dollar expenditures. Although a few states responded to our survey with estimates of the costs of educating illegal alien children, none actually collect data on children's immigration status.

At the federal level, the National Center for Education Statistics (NCES) centrally maintains data on school enrollment and expenditures, as well as certain other information. (For example, NCES has collected data on school overcrowding for a sample of areas.) But like the states and school districts, NCES has no data on the immigration status of schoolchildren.

The Census Bureau collects citizenship data on foreign-born U.S. residents, including children, but does not ask further questions about immigration status.

The Department of Homeland Security (DHS) has developed indirect state-by-state estimates of the size of the resident illegal population, but these

estimates do not break out age groups; the DHS estimates are subject to methodological limitations as well.[3]

The Census Bureau has outlined a plan for research to develop age-group estimates for the resident illegal immigrant population, by geographic divisions (states and selected counties), with trends across time. It is too early to judge the quality of this plan, but if it is successfully implemented, it could help quantify the school-age portion of the resident illegal alien population. The Census Bureau also suggested that other government agencies might expand on its planned population estimates—for example, by developing further estimates on the extent to which illegal alien children attend public schools or require special programs.

The simplest approach to estimating state-by-state costs multiplies current average per pupil expenditures for each state by an estimate of the number of illegal alien children attending school in that state. Other approaches take account of potentially key cost factors, including cost variations across local areas within a state and higher costs for students needing special programs, such as English Language Learner (ELL) programs.[4] Yet another approach assesses the role of enrollment growth, school capacity, and "incremental costs."[5] All these approaches require estimates of numbers of illegal alien schoolchildren by state.

We provided a draft of this report to the Census Bureau, DHS, and NCES. The agencies informed us that they had no formal comments, but we received informal comments from the Census Bureau and NCES on minor technical points and made changes in the report as appropriate.

Background

In 1982, the U.S. Supreme Court ruled that it would be unconstitutional for any state or school district to deny K-12 education to a child residing in that state or school district on the basis of the child's being an illegal

[3]DHS estimates use decennial census data on the foreign-born population and administrative data on legal immigrants, among other sources. These estimates are termed "indirect" because information on the illegal immigrant population is not directly collected; instead, a variety of other estimates (some marked by uncertainty) are combined to project state-by-state figures for this population.

[4]The term English language learner is defined in the Background section of this report (see p. 10).

[5]Theoretically, in schools or classes with excess capacity, enrollment growth might not cause overcrowding, and incremental per pupil costs might be lower than average per pupil costs. Otherwise, the opposite would hold true.

alien.[6] Nevertheless, issues in estimating the state-by-state costs of educating illegal alien children are policy relevant because

1. concern about cost impacts is often among the issues raised in debates and discussions about immigration policy,[7]

2. illegal alien schoolchildren represent a potential cost component that is particularly relevant to states and local areas because they bear most of the costs of educating illegal alien schoolchildren,[8] and

3. the Congress could authorize federal reimbursement of the costs of providing K-12 education to illegal alien children, based on the state-by-state costs of educating them or on the estimated numbers residing in each state.[9]

The following sections provide background on (1) issues that have heightened concern about the costs of educating illegal alien schoolchildren; (2) variation in education expenditures—and immigration levels—across states and local areas; and (3) other factors that may contribute to cost variation.

Concern about Costs May Be Heightened

Concern about the costs of illegal alien schoolchildren may be heightened because education costs are high and the illegal immigrant population is thought to be large.

According to NCES, for the 1999–2000 school year, current expenditures by primary and secondary public schools—not including capital outlays—

[6]See *Plyler v. Doe*, 457 U.S. 202 (1982).

[7]U.S. Commission on Immigration Reform, *U.S. Immigration Policy: Restoring Credibility*. (Washington, D.C.: Government Printing Office, 1994), pp. 109–43.

[8]U.S. Commission on Immigration Reform, *U.S. Immigration Policy: Restoring Credibility*, pp. 143–52.

[9]Such reimbursement was recently enacted for emergency health benefits. The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Public Law 108-173 (Dec. 8, 2003), §1011, Federal Reimbursement of Emergency Health Services Furnished to Undocumented Aliens, specifies that annually, from 2005 through 2008, $167 million will be distributed among the states, based on the estimated percentage of undocumented aliens residing in each state. Also see U.S. General Accounting Office, *Undocumented Aliens: Questions Persist about Their Impact on Hospitals' Uncompensated Care Costs*. GAO-04-472 (Washington, D.C.: May 21, 2004).

totaled about $324 billion. Capital outlays in that school year—for facilities acquisition and construction—were an additional $35 billion.[10] These costs were borne primarily at state and local levels; federal dollars represented about 7 percent of school revenue.[11]

The Immigration and Naturalization Service (INS) estimated that the illegal immigrant population increased to 7 million as of January 2000.[12] However, there is no government estimate of the percentage of the illegal alien population that is of school age or that is now attending public school in grades K-12.

Some possibly related reasons for concern about costs include the following:

- Many state and local budgets are squeezed, and education costs represent their largest expenditure item.[13]

[10]An additional $22 billion was spent on other categories and programs, some not part of K-12 education. "Current expenditures," as used in the NCES finance surveys, means current expenditures for public elementary and secondary education—not including capital outlays. Current expenditures include instruction expenditures and expenditures for other functions that support public elementary and secondary education, such as school support (guidance counselors, nurses), instructional support (libraries, teacher training), administration, student transportation, and food services. School districts also spend money on functions that fall outside of public elementary and secondary education, such as adult education, community services, and support for private education. NCES collects and tracks these expenditures separately.

[11]Local dollars represented 43 percent of total school revenues and state dollars 50 percent. National Center for Education Statistics, *Statistics in Brief* (Washington, D.C.: May 2002), p. 1. More recently, the No Child Left Behind Act of 2001 (Public Law 107-110, Jan. 8, 2002) may have increased the federal share slightly, at least in some states. Notably, title III specifies a formula grant program, based on estimated state-by-state distributions of children who have limited English proficiency and are recent immigrants.

[12]U.S. Immigration and Naturalization Service, Office of Policy and Planning, "Estimates of the Unauthorized Immigrant Population Residing in the United States: 1990-2000," Washington, D.C., January 2003. (On March 1, 2003, INS was transferred from the Department of Justice to DHS.) We discuss the 7 million estimate in a later section of this report; for a fuller discussion, see U.S. General Accounting Office, *Overstay Tracking: A Key Component of Homeland Security and a Layered Defense*, GAO-04-82 (Washington, D.C.: May 21, 2004), app. III.

[13]See Elizabeth McNichol and Makeda Harris ("Many States Cut Budgets as Fiscal Squeeze Continues," Center on Budget and Policy Priorities, Washington, D.C., 2004), who state that "the amount of state education spending included in proposed fiscal year 2005 budgets in a number of states—including California . . . [and] New York . . . falls short of the amount needed to maintain current-law funding levels or restore cuts made over the last few years."

- School enrollments are rising. From 1990 to 2000, school enrollments rose about 15 percent—with steeper rises in states like Nevada (with an increase close to 70 percent), Arizona and Florida (each with an increase greater than 30 percent), and California, Colorado, and Georgia (each with an increase of about 25 percent).

- Despite a 1990s boom in school construction, one in five schools were overcrowded in 1999, rising to one in three for schools in western states.[14]

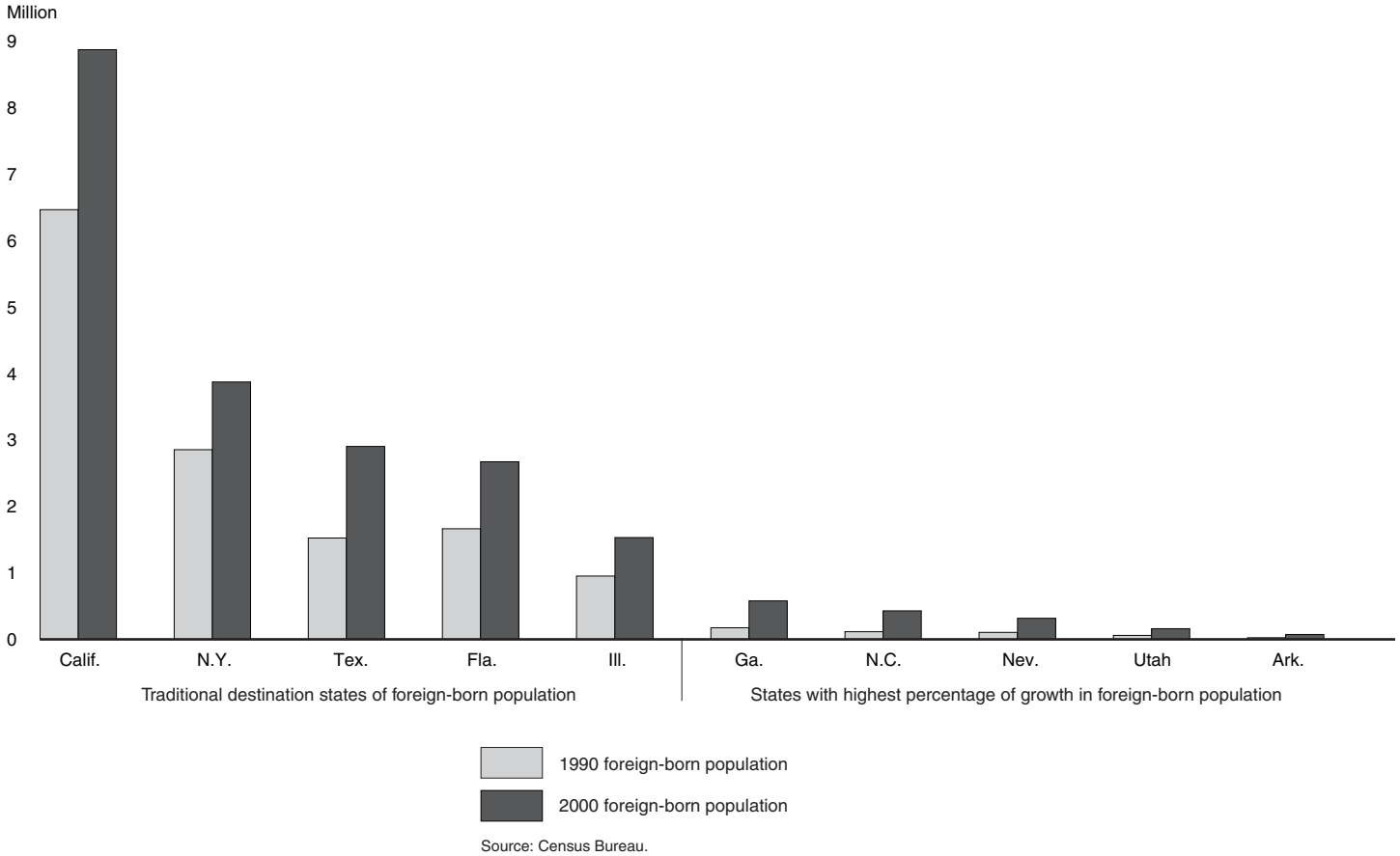
Immigration Levels and Education Costs Vary across Areas

It is likely that the costs of educating illegal alien children vary across states and local areas because (1) immigration (including foreign-born persons residing here legally and illegally) is heavily concentrated in certain areas and (2) per pupil school expenditures vary by state and school district.

As shown in figure 1, between 1990 and 2000 foreign-born populations increased in the top 5 traditional destination states—California, Florida, Illinois, New York, and Texas. As of 2000, the foreign-born represented 12 to 26 percent of these states' populations. (Illegal immigration may follow similar patterns; for example, INS estimated that as of January 2000, 2 million illegal immigrants resided in California, 1 million in Texas, and nearly ½ million in New York.) Also, as illustrated in figure 1, certain smaller states (with somewhat lower concentrations of immigrants—for example, Georgia, Nevada, and North Carolina have 5 to 16 percent foreign born) have recently experienced growth in their foreign-born populations.

[14]U.S. General Accounting Office, *School Facilities: Construction Expenditures Have Grown Significantly in Recent Years*, GAO/HEHS-00-41 (Washington, D.C.: Mar. 3, 2000), p. 7, and National Center for Education Statistics, *The Condition of Education 2001: Indicator 45, Overcrowding in Schools*, NCES-2001-072 (Washington, D.C.: U.S. Government Printing Office, 2001), p. 72. NCES defined overcrowding as enrollment more than 5 percent above the facility's initial capacity. About half of all schools were operating at less than capacity.

Figure 1: Total Foreign-Born Population (Legal and Illegal) in Key States, 1990 and 2000



Source: Census Bureau.

Note: Data or estimates for illegal aliens are not available from the Census Bureau. Other state-by-state estimates of illegal aliens are not included because of data reliability concerns.

States with at least 10 percent foreign born as of 2000 that are not shown in figure 1 include Arizona, Hawaii, New Jersey, and Rhode Island. In contrast, states such as Mississippi, Montana, North Dakota, South Dakota, and West Virginia had 2 percent or less foreign born.

Per pupil school expenditures also vary by state. To illustrate this for selected states, in the 1999–2000 school year, current per pupil expenditures (exclusive of capital outlays) averaged about

- $10,000 in New York and New Jersey
- $8,000 in Michigan and Wisconsin

- $7,000 in Illinois, Indiana, and Virginia
- $6,000 in California, Florida, Georgia, Nevada, and North Carolina
- $5,000 in Arizona and Arkansas
- $4,000 in Utah[15]

Local areas can also vary in terms of both immigration concentration and per pupil expenditures, despite equalization rules and programs in some states.[16]

Two California areas serve as illustration.[17] Current per pupil expenditures in Pasadena Unified School District (near Los Angeles) averaged about $7,000 for the 1999–2000 school year; about 24 percent of the population in Pasadena City is foreign born. In contrast, current per pupil expenditures in Fairfield-Suisun School District averaged about $5,000; this school district is the largest in Solano County (located between San Francisco and Sacramento), in which about 17 percent of residents are foreign-born. A variety of factors affect local-area costs. For example, among other determinants, teacher salaries may vary according to the cost of living in different areas of a state.

Other Factors Are Related to Costs

Other factors that add to the complexity of fully accounting for variation in education costs include variation in student needs and school capacity. Even within a single school district, costs can vary among individual students. That is, expenditures are higher for students who live in poverty

[15]Table 167, Total and Current Expenditures Per Pupil in Fall Enrollment in Public and Secondary Public Education, by Function and State: 1999-2000. *NCES Digest of Education Statistics*, List of Tables and Figures for 2002, ch. 2, Elementary and Secondary Education, Revenues and Expenditures. http://www.nces.ed.gov/programs/digest/ (May 16, 2004). Note: Excludes capital expenditures. We report costs for the 1999–2000 school year for consistency with decennial census data. The most recent cost data available from NCES indicate that by 2001–02, per pupil expenditures had increased by an average of $765 for these states as a group.

[16]In 1971, the California Supreme Court ruled in *Serrano v. Priest*, 487 P.2d 1241 (Cal. 1971), that equalization of revenue should be required across school districts. Various other states also have equalization programs. For a summary of "persistent challenges" to fiscal equity or adequacy, and a list of relevant studies, see Margaret Hadderman, "Equity and Adequacy in Educational Finance." *ERIC Digest.* http://www.ericdigests.org/2002-1/equity.html (May 19, 2004).

[17]Table 91, Revenues and Expenditures of Public School Districts Enrolling More Than 15,000 Pupils, by State: 1999-2000. *NCES Digest of Education Statistics*, List of Tables and Figures for 2002, ch. 2, Elementary and Secondary Education, Schools and School Districts. http://www.nces.ed.gov/programs/digest/ (May 17, 2004).

or who have limited English proficiency, if schools attempt to meet these needs (for example, with English Language Learner or ELL programs).

According to the Education Alliance at Brown University, ELL indicates

> a person who is in the process of acquiring English and has a first language other than English. Other terms commonly found in the literature include language minority students, limited English proficiency (LEP), English as a second language (ESL) and culturally and linguistically diverse (CLD).[18]

In 2000–2001, some school districts enrolled high percentages of students in various ELL programs. More than 40 percent of Los Angeles students and about 33 percent of Dallas students are enrolled in ELL programs; of course, not all students enrolled in these programs are foreign-born.[19]

The costs of meeting the needs of such students have been variously estimated. Bringing ELL-enrolled children up to the grade level of same-age non-ELL-enrolled children has been estimated to potentially increase costs by an additional 10 to 100 percent over usual per pupil costs; for students living in poverty (independent of ELL programs), the corresponding range of estimates is 20 to 100 percent.[20] Bringing students

[18]See the Education Alliance at Brown University, http://www.lab.brown.edu/tdl/ell.shtml (May 20, 2004). NCES describes ELL students as "born outside of the United States with a native language other than English; or . . . from environments where the language is predominantly non-English; or . . . American Indians and Alaska Natives whose level of English proficiency may have been affected by a non-English environment resulting in difficulty speaking, reading, writing, or understanding the English language." NCES notes that ELL students were "formerly known as Limited-English-Proficient (LEP)." See National Center for Education Statistics, *Instructions for Completing the Nonfiscal Surveys of the Common Core of Data: School Universe Survey, Agency Use Survey, State Nonfiscal Survey, 2003-2004* (Washington, D.C.: U.S. Department of Education, OMB No. 1850–0067, expires Nov. 30, 2004), p. 94.

[19]See Beth Antunez, *English Language Learners in the Great City Schools: Survey Results on Students, Languages, and Programs* (Washington, D.C.: Council of Great City Schools, March 2003).

[20]See U.S. General Accounting Office, *School Finance: Per-Pupil Spending Differences between Selected Inner City and Suburban Schools Varied by Metropolitan Area*, GAO-03-234 (Washington, D.C.: Dec. 9, 2002), pp. 5-6; William Duncombe, Anna Lukemeyer, and John Yinger, "Financing an Adequate Education: A Case Study of New York," in William J. Fowler, ed., *Developments in School Finance: 2001-02* (Washington, D.C.: National Center for Education Statistics, 2003); and U.S. General Accounting Office, *Bureau of Indian Affairs Schools: Expenditures in Selected Schools Are Comparable to Similar Public Schools, but Data Are Insufficient to Judge Adequacy of Funding and Formulas*, GAO-03-955 (Washington, D.C.: Sept. 4, 2003), p. 39.

characterized by both poverty and limited English proficiency up to average levels of achievement could potentially increase average costs by a larger amount—perhaps 30 to 200 percent over average per pupil costs.

School capacity to absorb new students is an issue because some schools are overcrowded while others are operating below capacity. This suggests variation across schools in the added costs associated with enrolling additional children, such as illegal alien children.

Finally, we note that a broad array of costs additional to dollar costs may potentially be relevant. For example, overcrowded facilities may be related to growth in enrollments and, thus, to immigration. If sufficient temporary space is not added, class-size—and, potentially, the quality of education—may be affected.[21]

Objectives, Scope, and Methodology

Our objectives were to address three questions regarding the potential for estimating the costs of educating illegal alien schoolchildren K-12, by state, using government information:

1. What information is currently available from state and local governments or federal agencies on either the specific costs of educating illegal alien schoolchildren or related topics, such as overall education costs or the illegal alien population?

2. What is the Census Bureau's plan for developing new information on the illegal alien population in the future?

3. What are possible approaches to estimating the costs of educating illegal alien schoolchildren, and are government data available to support such approaches?

The main methods we used to address these questions included:

- A mail survey sent to 22 states, which we selected to include (1) the major immigration-destination states, identified in terms of numbers of

[21]See Ricardo R. Fernandez and P. Michael Timpane, "Bursting at the Seams: Report of the Citizens' Commission on Planning for Enrollment Growth," Office of the Chancellor, Board of Education, New York City, 1995, and Francisco Rivera-Batiz and Lillian Marti, "A School System at Risk: A Study of the Consequences of Overcrowding in New York City Public Schools," Institute for Urban and Minority Education, Teachers College, Columbia University, New York, New York, 1995.

foreign-born residents; (2) the main new-growth states, which we identified on the basis of large percentage increases in numbers of foreign-born residents; and (3) some other states with lower percentages of foreign-born residents (questions 1 and 3).[22]

- Telephone or e-mail inquiries to six local government or school district officials (question 1).[23]

- Outreach to states and local areas through the National Governors Association and the U.S. Conference of Mayors (question 1).

- Discussions with officials and staff at NCES, DHS (which incorporates the former INS), and the Census Bureau, plus a collection of relevant documents from these agencies (questions 1 and 2).[24]

- Analysis, including a review of literature and of the results from our state survey, local area checks, and discussions with federal agencies—as well as consultation with experts in economics and school funding (question 3).[25]

In discussions with your staff, we agreed to limit the scope of this report to (1) government estimates and government sources of information, (2) children of illegal aliens born outside the United States, and (3) issues concerning the estimation of gross costs, rather than attempting to

[22]We asked for specific information on enrollments of illegal alien schoolchildren, the costs of educating these children, and opinions on the factors that should be considered in estimating these costs. The 20 states that responded were Arizona, Arkansas, California, Colorado, Illinois, Indiana, Iowa, Kentucky, Michigan, Nebraska, Nevada, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, Texas, Utah, Virginia, and Wisconsin. The 2 that did not respond were Florida and Georgia. We supplemented our mailing to the 22 states with e-mails, faxes, and telephone calls.

[23]We contacted local officials in (1) two traditional destinations for immigrants (Los Angeles County, California, and New York City), (2) the fastest growing urban area in the United States (Las Vegas, Nevada), (3) two suburban counties (Arlington, Virginia, and Fairfax, Virginia), and (4) one city on the Mexico-United States border (Nogales, Arizona).

[24]Other than NCES, DHS, and the Census Bureau, we could not identify any federal agency as a primary source of information on illegal alien schoolchildren, whether numbers or costs.

[25]These include F. Howard Nelson of the American Federation of Teachers Educational Foundation; Frank H. Johnson, an NCES statistician; and GAO's Chief Economist as well as GAO's Center for Economics staff.

quantify net impacts.[26] Additionally, we did not consider preschool, postsecondary, or after-school programs.

With respect to data reliability, we discussed NCES data quality procedures with an NCES statistician specializing in NCES surveys of school expenditures and enrollments, and we reviewed NCES's survey documentation. We determined that the NCES data were sufficiently reliable for use in estimating school costs.[27] As we discuss in the body of the report, other federal information concerning estimates of illegal aliens is not as reliable.

We conducted our work in accordance with generally accepted government auditing standards from January 2003 to May 2004.

Currently Available Government Information

Looking across local, state, and federal levels of government, we found that a wealth of data are available on school enrollments and dollar expenditures, but with few exceptions, specific information on illegal alien schoolchildren has not been developed.

State and Local Data Sources

Of the 22 state governments we surveyed, only 3 provided information on the costs of schooling illegal alien children. Seventeen states said that they did not have such information, and 2 states (Florida and Georgia) did not respond.

Texas, Pennsylvania and North Carolina multiplied their states' average current per pupil expenditures for the 1999–2000 school year by estimates of the number of illegal alien schoolchildren. Specifically:

[26]We excluded from consideration the costs of educating children born in the United States (and, therefore, U.S. citizens) to parents who were illegal immigrants. Net costs of providing benefits to a specific population would consider the full range of benefits received by that population as well as taxes paid and other potential contributions. Because we are not examining net costs, we do not address the issue of life-cycle analysis. Barry Edmonston and Ronald Lee, eds., discuss life-cycle analysis briefly in *Local Fiscal Effects of Illegal Immigration: Report of a Workshop* (Washington, D.C.: National Academy Press, 1996), p. 25.

[27]NCES data do not break out certain costs that are needed for some approaches to cost estimation.

- Texas state government staff told us that they first obtained an estimate of the number of school-aged illegal alien children younger than 18 living in Texas, from a nongovernment organization.[28] The Texas staff then multiplied this figure by the upper and lower bounds of a range based on alternative assumptions about the percentages of such children attending public schools—66.8 to 74.8 percent.[29]

- Pennsylvania's state government staff told us told us that they estimated the number of illegal immigrant schoolchildren in terms of a range by (1) accepting DHS's estimate for the resident illegal immigrant population in their state and (2) assuming that schoolchildren represent 10 to 18 percent of this population.[30] The staff then multiplied the upper and lower bounds of the range by average per pupil expenditures—and also specified an estimate of additional expenditures for supplemental services such as ELL programs.

- North Carolina did not provide documentation of its specific methods of estimation.

We did not evaluate the estimation procedures these states used. The annual cost estimates that they provided to us ranged from $50 million to $87.5 million in Pennsylvania to $932 million to $1.04 billion in Texas.[31]

Of the 17 states that said they did not have information on the costs of schooling illegal alien children, 6 indicated that it would be illegal to ask about children's immigration status. Three of these 6 mentioned the 1982 U.S. Supreme Court decision we cited earlier; these states' interpretation

[28]At the request of the Texas state demographer, an immigration expert at The Urban Institute, Washington, D.C., estimated this figure indirectly, using census and other data. We did not evaluate that estimate.

[29]Texas based this range on data, indicating that, overall, 74.8 percent of Texas children under age 18 attend school and 66.8 percent attend public school.

[30]They told us that 18 percent of households in Pennsylvania have school-age children and that they expected this figure to be lower for the resident illegal alien population because it is likely that some families of illegal aliens remain in their native land.

[31]Pennsylvania state government staff estimated a range of $38.1 million to $66.3 million for current average per pupil expenditures ($7,772) and possible additions to these costs of $12.2 million to $21.2 million for ELL and other special programs. These two ranges total $50 million to $87.5 million.

of this U.S. Supreme Court decision may be overly cautious.[32] (Of course, regardless of legal issues, a state or school district might determine that asking about immigration status would be inadvisable or inappropriate.)

The six local governments or school districts that we contacted did not provide estimates of either the costs of educating or the numbers of illegal alien schoolchildren, suggesting a lack of widespread local government ability or effort to make such estimates. However, one school district, on the southwest border, identified the problem of schoolchildren who resided in Mexico and crossed the border daily or weekly to attend U.S. schools in border areas.[33]

Outreach through the U.S. Conference of Mayors yielded one local area estimate. San Jose, California, estimated the presence of approximately 20,000 illegal alien school children—noting, however, that no study had been done. In other responding areas, various city officials said that, given the 1982 U.S. Supreme Court decision that we mentioned above, they did not ask about children's immigration status.[34] Of course, only a complete census of school districts could assess the number of local areas that actually have or have not developed data or specific methodological procedures for making estimates.

Federal Data and Estimates

Federal data sources are also limited. NCES and the Census Bureau routinely collect a variety of education data, including school enrollments and dollar expenditures, with annual figures for

[32]The Supreme Court's decision in *Plyler v. Doe*, 457 U.S. 202 (1982), said only that children may not be denied education on the basis of their immigration status. Subsequently, a 1997 district court case (*League of United Latin American Citizens v. Wilson*, 997 F.Supp. 1244 (C.D. Cal. 1997)) declared unconstitutional a provision in California's Proposition 187 that required schools to verify the status of schoolchildren because the Court found that the intent of the requirement was to deny the students access to a public education. Presumably, a state or local government could inquire about legal status for another, constitutional reason (such as to seek federal reimbursement).

[33]The Superintendent of Nogales Unified School District #1 informally estimated, from anecdotal information, including observations of children in Nogales school uniforms crossing the border, that in his school district such children might number 400 to 600. He said that based on Arizona's average annual per pupil expenditures of $5,000, he estimates the annual cost of such children at about $2 million to $4 million.

[34]These cities include Anchorage, Alaska; Boston, Massachusetts; Dayton, Ohio; Lincoln, Nebraska; Oklahoma City, Oklahoma; St. Petersburg, Florida; San Leandro, California; and West Palm Beach, Florida.

- numbers of pupils, pupil-teacher ratios, ELL program use, and a measure of overcrowding and

- current per pupil expenditures and capital expenditures for items such as facilities acquisition, construction, and computer purchases.

NCES maintains these data and makes them available by state and by school district or local education agency. NCES told us that staff check the validity of these data by (1) comparing data from the school district-level survey to data from the state-level surveys and (2) examining trends for possible anomalies.

NCES tallies education expenditures by set categories. Thus, expenditures cannot be broken down for specific types of programs—notably, the costs of ELL programs are not reported separately. Also, NCES collects no data on the number of foreign-born children enrolled in school or their immigration status.

The Census Bureau also does not collect data on the legal status of foreign-born persons residing in the United States. As we stated in a previous report,

> Neither [the decennial] census nor CPS [the Current Population Survey conducted by the Census Bureau] asks about the legal status of noncitizens—or whether they are, in fact, here illegally. There are good reasons for this: such questions fall under the heading of 'threatening' survey questions . . . many respondents might not answer these questions truthfully; and others might avoid participating altogether if they hear that such questions will be asked. In addition, . . . Census is concerned about privacy invasion issues.[35]

DHS has provided indirect, national and state-by-state estimates of the size of the resident illegal alien population.[36] DHS estimated this population nationally at 7 million as of January 2000 and has published additional

[35] GAO/GGD-98-164, p. 39.

[36] Immigration and Naturalization Service, "Estimates of the Unauthorized Immigrant Population Residing in the United States: 1990-2000." (Washington, D.C.: Jan. 2003). http://uscis.gov/graphics/shared/aboutus/statistics/index.htm (May 21, 2004).

estimates for 42 states and the District of Columbia.[37] As defined by DHS, the illegal population excludes approximately 577,000 aliens, who constitute several groups, including unauthorized immigrants with pending applications for legal permanent resident status.[38]

As we have explained elsewhere,

- DHS based its 7 million estimate on two component estimates. The first component is an estimate of 5.5 million illegal residents who entered the United States between 1990 and 2000. The estimate was developed by using the generally accepted residual method.[39] The second component is an estimate of 1.5 million illegal residents who entered before 1990 and were still here, illegally, in 2000. With respect to this estimate of 1.5 million, DHS has not published an explanation of the base figure or starting point of its calculations—3.5 million illegal immigrants here as of 1990. DHS did specify the subsequent steps that it used to determine how many of the 3.5 million were still here and still illegal as of 2000. (We note that the 3.5 million base figure is consistent with other available estimates for 1990.)[40]

[37]In addition to estimates for 42 states published in Immigration and Naturalization Service, "Estimates of the Unauthorized Immigrant Population Residing in the United States: 1990-2000," DHS provided us with unpublished estimates for 4 more states (New Hampshire, South Dakota, West Virginia, and Wyoming), rounded to the nearest thousand. DHS told us estimates for the 4 remaining states (Maine, Montana, North Dakota, and Vermont) rounded to zero.

[38]There are about (1) 200,000 unauthorized immigrants who have submitted applications for lawful permanent resident alien status that are pending and likely to be approved and (2) 377,000 aliens in various groups. The latter include aliens, mostly from Central America, who otherwise would be unauthorized residents but are allowed to remain and work in the United States under various legislative provisions or court rulings, such as people with Temporary Protected Status (TPS), asylees, and parolees. TPS derives from the U.S. Attorney General's designating foreign nationals eligible for temporary refuge. "Asylee" refers to an alien granted asylum, "parolee" to an alien otherwise inadmissible but allowed to enter temporarily for urgent humanitarian reasons or significant public benefit.

[39]The residual method consists of (1) deriving estimates of *legal* immigrants, based primarily on DHS's own administrative data, and (2) subtracting these estimates of legal immigrants from the census figure for the *total* number of aliens residing here. DHS's calculations were completed separately for different years of arrival in the United States; that is, census data include a report of the year in which each foreign-born individual came to the United States to live, and DHS administrative data indicate the year in which each legal immigrant entered.

[40]See U.S. General Accounting Office, *Overstay Tracking: A Key Component of Homeland Security and a Layered Defense.* GAO-04-82. (Washington, D.C., May 21, 2004), app. III.

- By definition, DHS's estimates of the resident illegal immigrant population do not include short-term illegal aliens—for example, persons here for weeks or months and not likely to be included in the decennial census (or corrections for undercounts).[41]

- DHS has stated that its national estimates are marked by uncertainty—noting, for example, "actual trends might be somewhat higher or lower than those shown"—but has not developed ranges to characterize this uncertainty.[42]

DHS's published state-by-state estimates of illegal immigrant residents cover 42 states and the District of Columbia. These estimates are based, in part, on comparing legal immigrants' statements about their intended destinations, as reflected in INS administrative records when they were admitted to the United States, to decennial census geographic distributions for the total population of foreign-born residents.[43] However, these state-level estimates are uncertain to the extent that legal immigrants moved to different states from the states of their intended destinations, at any time before the 2000 census—and some did move to a different state.[44]

Information not provided by DHS is also problematic. First, the DHS paper presenting these indirect estimates does not include ranges so that other analysts can gauge the degree of uncertainty—and hence their suitability for specific purposes. For example, DHS does not indicate whether some state estimates may be highly uncertain. Second, DHS has not published

[41]Similarly, DHS's estimates do not, by definition, include children who reside in Mexico and cross the border daily or weekly to attend U.S. schools in border areas.

[42]DHS's paper, "Estimates of the Unauthorized Immigrant Population Residing in the United States: 1990-2000," discusses limitations of its data, including the complexity of estimating numbers of persons residing here with legal temporary visas (such as temporary workers and students), and so forth. The paper does not, however, attempt to validate assumptions about emigration (how many legal and illegal immigrants leave the United States).

[43]DHS calculates state estimates of illegal immigrants by, essentially, subtracting state-level estimates of legal immigrants—based on these immigrants' statements about their *intended state of residence*, on their applications—from the total number of foreign-born persons residing in each state, based on the 2000 census.

[44]See, for example, Marc J. Perry and Jason P. Schachter, *Migration of Natives and the Foreign Born: 1995 to 2000*, CENSR-11 Census 2000 Special Reports (Washington, D.C.: U.S. Census Bureau, August 2003).

any description of analyses conducted to validate its national or state estimates. Third, DHS's estimates of illegal immigrants do not break out age groups. This is important because it is not known whether the age distribution—and thus percentage of school-age children—for the illegal population is or is not different from that for other groups.[45]

The Census Bureau's Plans for Estimating Illegal Immigrants Are Preliminary

The Census Bureau is developing a research plan aimed at eventually developing new information on the population of illegal immigrants residing in the United States.[46] Census Bureau staff told us that the objective of the plan is to produce annual estimates of international migrants according to four statuses: (1) legal immigrants, (2) temporary migrants, (3) quasi-legal migrants, and (4) unauthorized migrants, "in order to better inform . . . population estimates." The plan will be based on an indirect approach that does not involve asking census or survey questions about immigration status.

Importantly, the Census Bureau anticipates that the new information will include indirect estimates of illegal aliens in various age groups—perhaps coming close to identifying the number of resident illegal alien children who are of school age.[47] The Census Bureau staff said that it is not yet known how many age groups can be reliably broken out. For example, it might be possible to use 5-year age groups or perhaps five main age groups (0–17, 18–29, 30–49, 50–64, and 65 and older), but Census Bureau staff told us that if this is not possible, perhaps only three age groups would be estimated (0–17, 18–64, and 65 and older).

[45]A possible additional issue regarding information not provided concerns the fact that illegal alien schoolchildren may include some nonresidents—that is, Mexican children who cross the border each school day to attend U.S. schools. DHS's estimates of the resident illegal alien population would, by definition, not include schoolchildren who reside outside the United States.

[46]Charles L. Kincannon, Director of the Census Bureau, letter to F. James Sensenbrenner Jr., Chairman of the Committee on the Judiciary, U.S. House of Representatives, U.S. Congress, Washington, D.C., Aug. 20, 2003. The preliminary work necessary to carry out this plan was mentioned in a presentation to a Census Bureau advisory group (see Kevin Deardorff, "Immigration Research Update," presentation to Census Information Conference Steering Committee, Feb. 26, 2004).

[47]By definition, such an estimate would not include schoolchildren who reside in Mexico and cross the border daily or weekly to attend U.S. schools in border areas.

While an exact methodology has not yet been specified, the Census Bureau previously experimented with models for imputing temporary legal status (for example, possessing a valid temporary work or student visa) to groups of foreign-born survey respondents.[48] This effort used administrative and other data to suggest the potential numbers of foreign-born residents with temporary legal status—by age group, as well as by race and country of birth. The age groups were defined as 0–17, 18–29, 30–49, 50–64, and 65 and older.

Census Bureau analysts reason that a similar process could be developed for group imputation of lawful permanent resident status (that is, green card status).[49] If this approach were expanded to cover virtually every legal immigration status, then the numbers and characteristics of illegal alien residents could also be estimated, based on a modified residual or subtraction approach.

The Census Bureau intends to use its new indirect procedures on data from the new American Community Survey (ACS), scheduled for full implementation later this year. A variety of other information sources may be tapped. The Census Bureau further anticipates that

- the new information on age groups nationally will be available in 2007, with estimates for states—and perhaps key counties—potentially available by 2009 (pending budget approvals needed for the geographic estimates);

- key estimates will be made annually, and other estimates (such as estimates for smaller groups) will be made with 3-year or 5-year averages;[50]

[48]Rachel Cassidy and Lucinda Pearson, "Evaluating Components of International Migration: Legal Temporary Migrants," Working Paper 60, Population Division, Census Bureau, January 2002. (Census Bureau working papers report the results of research undertaken by Census Bureau staff and undergo a more limited review than official Census Bureau publications.)

[49]Characteristics of persons with green cards might also be based on survey data on green-card holders developed by using one legal-status card from the "three-card method." See U.S. General Accounting Office, *Survey Methodology: An Innovative Technique for Estimating Sensitive Survey Items*, GAO/GGD-00-30 (Washington, D.C., Nov. 1999), pp. 1 and 5.

[50]Thus, the size of the group for which an estimate is derived, as well as the specific estimation methodology, will determine the time period for initial estimates and trends. For example, trends based on comparing 3-year averages for two points in time with no overlap would not be available until 2011.

- the new estimates will include ranges to indicate a margin of uncertainty; and

- an assessment of the quality of the new estimates will be conducted, perhaps using an expert panel.

Census Bureau staff told us that its plan does not include estimating the number of illegal alien children who attend public school or estimating the children's English proficiency. However, Census Bureau staff suggested to us that, potentially, other agencies might develop such estimates by combining the Census Bureau's state-by-state age group estimates of illegal aliens with other information, assumptions, or models or a combination of them.

The ACS asks about English proficiency and school attendance. Although administrative data on legal immigrants do not include this information, the New Immigrant Survey (NIS)—sponsored by DHS and the National Institute of Child Health and Human Development, in partnership with other federal agencies—asks a sample of new green-card holders about their English proficiency and their school attendance.[51]

We believe that Census Bureau analysts face a number of technical challenges in developing reasonably valid and reliable information. Challenges include (1) assessing coverage of the illegal alien population in the ACS by age group, as well as coverage of legal foreign-born residents; (2) developing adequate sources of information to calibrate and validate a model for estimating immigration status; and (3) assessing and reporting the levels of uncertainty associated with the estimates.

Additionally, developing this new information resource will depend on continued funding approvals. Specifically, the Census Bureau's budget request for 2005 indicates that increased funding (more than requested for

[51]The NIS asks for the name of the school currently attended rather than whether the school is public or private. (The NIS is described briefly at www.pop.upen.edu/nis (May 22, 2004).) Information on a broader spectrum of foreign-born children legally residing in the United States (for example, information on their school attendance or their English language proficiency) might also be developed by using data gathered in a survey using one or more legal status cards from the three-card method (GAO/GGD-00-30).

2005) will be needed for work during fiscal years 2006 to 2008 to begin developing migration estimates at the state and local levels.[52]

Because the Census Bureau's plan is in an early stage of development (detailed documents are not yet publicly available), it is not yet possible to judge its quality. However, when more details become available, the Census Bureau's plan might be compared to DHS's methodology to determine whether the Census Bureau's approach will be likely to avoid the weaknesses associated with DHS's.[53]

Approaches to Cost Estimation

We identified four approaches to estimating the dollar costs of illegal alien schoolchildren by state. These four approaches to estimating dollar costs are not necessarily mutually exclusive; that is, some are refinements of, or may be used together with, one or more of the others.[54]

The four approaches are as follows:

1. state-by-state multiplication;
2. local-area refinement of state-by-state multiplication;
3. student-needs refinement of state-by-state multiplication; and
4. capacity-based estimation of incremental costs, also a refinement of state-by-state multiplication.

State-by-State Multiplication Approach

The first approach consists of multiplying current average per pupil expenditures in each state by an indirect estimate of the number of illegal alien schoolchildren in that state, as illustrated in fig. 2. This approach has

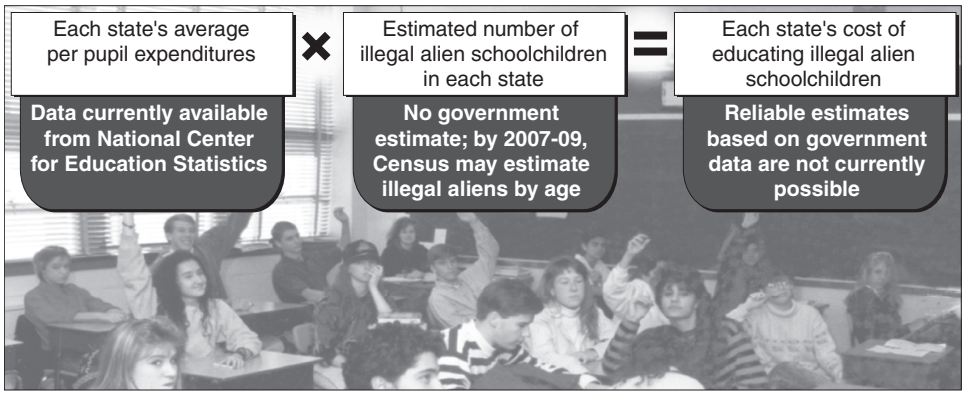
[52]Census Bureau staff told us these plans are documented in Exhibit 13 of the President's Fiscal Year 2005 Budget. (Exhibit 13 is about the "Measuring Migration Across U.S. Borders" program of the Intercensal Demographic Estimates Sub-activity.)

[53]We note, however, that the Census Bureau's plan to estimate the resident illegal alien population would (like DHS's estimates) exclude short-term illegal aliens who are not likely to be included in the decennial census, or corrections for undercounts. Also, the Census Bureau's estimates would not include illegal alien schoolchildren residing in Mexico who cross the border to attend school.

[54]Estimation of a broad array of potential costs, including overcrowding and possible reductions in education quality, represents an alternative direction in assessing cost impacts.

been used in the past to estimate the costs in some states of educating illegal alien schoolchildren.[55]

Figure 2: Simplest State-by-State Estimation Approach



Sources: GAO (analysis), NCES (per pupil expenditure data), Census Bureau (estimation plans), U.S. Department of Education (photo).

A variant of this approach might take account of capital expenditures (for example, add per pupil capital outlays to per pupil current expenditures).[56]

- The main advantage of state-by-state multiplication is its simplicity: If input data are available, cost figures are easily calculated. Additionally, this approach seems logical and is easily understood.

[55]For detailed examples of using current average per pupil expenditures (and the effects of various assumptions about how to define such expenditures) to estimate states' costs of educating illegal aliens, see Rebecca L. Clark, and others, "Costs of Providing Public Primary and Secondary Education to Undocumented Aliens in Seven States," in *Fiscal Impacts of Undocumented Aliens: Selected Estimates for Seven States* (Washington, D.C.: The Urban Institute, September 1994), pp. 61-89, and descriptions of estimates reviewed in U.S. General Accounting Office, *Illegal Aliens: Assessing Estimates of Financial Burden on California*, GAO/HEHS-95-22 (Washington, D.C.: Nov. 28, 1994), and *Illegal Aliens: National Net Cost Estimates Vary Widely*, GAO/HEHS-95-133 (Washington, D.C.: July 25, 1995).

[56]A National Academy of Sciences' (NAS) workshop discussed in Edmonston and Lee, *Local Fiscal Effects of Immigration*, raised the issue of including capital costs. Although NCES cautions that annual figures may vary considerably from year to year, one solution may be to use a summary figure, such as a 5-year average. The NAS workshop, however, noted "the applicability of average cost or marginal cost may be time sensitive," depending on whether a school system has "significant excess student capacity" or becomes overcrowded (p. 16).

- Its limitations are that it does not account for the many complexities of costs in this area—which, as we outlined in the background section, include local-area cost differentials, variation in individual student needs, differences in school capacity, and potentially other factors.[57]

Considering its advantages and disadvantages, we believe that state-by-state multiplication is a logical approach that could yield a rough approximation of state-by-state costs. As we outlined above, government data or estimates needed for using this approach are not currently available. Although NCES provides data on per pupil expenditures by state, DHS's state-by-state estimates of the illegal immigrant population do not break out age groups. Moreover, DHS's state-by-state estimates have methodological limitations that make them uncertain, yet DHS has not estimated ranges or otherwise characterized the degree of uncertainty associated with specific estimates.

In the future, the Census Bureau may provide age-group estimates of illegal immigrants by state.

Although there are a number of challenges, if state-level estimates of illegal alien children are successfully developed and validated then reasonably reliable (if somewhat rough) approximations of state-by-state costs could be calculated, using the state-by-state multiplication approach. This would be especially the case if others are able to refine this information by estimating illegal alien children's school attendance.

Local-Area Refinement of the State-by-State Multiplication Approach

The local-area refinement approach is a logical extension of state-by-state multiplication and attempts to generate greater precision by taking account of local variations in school costs.[58] Multiplications would be conducted separately for different areas—for example, cities, counties, or groups of counties—and then summed across all areas of the state. Thus,

[57]For example, the diversity (versus homogeneity) of languages and backgrounds of illegal immigrant children enrolled in a particular school district may affect costs.

[58]In responding to our survey, New York (State Department of the Budget, Education Unit) pointed to geographic cost differences within states, noting that "If the unauthorized foreign-born students are clustered in the regions of the state where education is more expensive, as is most likely the case in large states like New York and California, using the average cost in the state as a whole will underestimate the true cost of educating these students." NAS noted cost variations across geographic areas within states (Edmonston and Lee, *Local Fiscal Effects of Illegal Immigration*, p. 14).

if large numbers of illegal alien schoolchildren attend schools with higher or lower costs than the state average, this would be reflected in the cost estimates. This approach is appropriate for states with significant immigrant populations that exhibit local-area variation in both school costs and numbers of illegal alien schoolchildren.

- The local-area refinement approach has the same advantages as state-by-state multiplication, and it uses more specific local-area data.
- Its limitations are suggested by a review of other methods (discussed below) that account for differences in student needs or school capacity, each of which can affect costs.

NCES collects and maintains current per pupil expenditure and capital outlay data, which are available at the school district level, but government information on illegal alien schoolchildren is not available. In the future, the Census Bureau's plan may, if successfully implemented, help quantify the population of school-age illegal alien children in key counties.

Student-Needs Refinement of the State-by-State Multiplication Approach

The student-needs refinement of the state-by-state multiplication approach can build on either of the two approaches we described above, by accounting for specific individual student needs that may affect education costs. As we indicated in the background section, costs may be higher for children in poverty or with limited English proficiency than for other children—and both poverty and limited English proficiency may characterize many illegal alien children. Moreover, of the 20 states responding to our survey, 5 indicated that because of special needs (such as for ELL programs), efforts to estimate the costs of educating illegal alien children should consider these additional cost factors.[59] Using a cost-function approach to statistical analysis allows estimation of cost factors associated with meeting the needs of students with specific characteristics.[60]

[59]The NAS workshop also pointed to program-specific variations in costs, for example, ELL (Edmonston and Lee, *Local Fiscal Effects of Illegal Immigration*, p. 15).

[60]See, for example, William Duncombe, "Estimating the Cost of an Adequate Education in New York," CPR Working Paper 44, Center for Policy Research, Maxwell School, Syracuse University, Syracuse, New York, February 2002. http://www-cpr.maxwell.syr.edu/faculty/duncombe/special%20report/specialreport.htm (May 22, 2004).

- The main advantage of this approach is that by focusing on individual students, it takes account of more determinants of cost than the other approaches outlined above.

- The main disadvantage is the complexity involved in estimating cost factors, as well as requirements for data that may not be available. Additionally, this approach does not account for varying school capacity (see below).

There are two key issues in implementing the student-needs-refinement approach:

1. It requires data based on separate cost accounting for programs designed to meet special student needs. NCES state-by-state and school-district data do not include separate information on the cost of either ELL programs or programs designed to compensate for poverty (and associated learning disadvantages). However, information on revenues from federal and state sources for related programs (for example, bilingual education) are collected in the Annual Survey of Local Government Finances–School Systems, conducted by the Census Bureau.

2. It also requires estimates of the English proficiency and the poverty status of illegal alien school children. The Census Bureau's plan does not envision such estimates, but Census Bureau staff told us that other government agencies or researchers could expand on the information the Census Bureau provides by, for example, using additional assumptions and models to achieve indirect estimates of illegal alien children with limited English proficiency.[61]

School-Capacity Approach

The incremental cost of adding a student to a classroom, school, or school district may be much higher or lower than the average per pupil expenditure, depending on the capacity of the classroom, school, or district in question. To illustrate, adding one student to a classroom and school that has the capacity to easily accommodate the student would not

[61]Refer back to the earlier section entitled The Census Bureau's Plans for Estimating Illegal Immigrants Are Preliminary.

require additional capital outlays, such as building a new facility.[62] In contrast, if that school were at or above capacity, the reverse might be true.[63]

Various experts have suggested that—at least in some circumstances—a capacity-based approach to cost estimation may produce more meaningful results than the other approaches. For example, an NAS workshop on the fiscal effects of immigration indicated that "Over time, [education] costs are a function of the capacity utilization level, not simply the number of additional children."[64]

In general, three cost categories can be distinguished, as shown in table 1. Category 1 costs do not vary with enrollment increases or decreases. Category 2 costs tend to change in a predominantly linear fashion when students are added. Category 3 costs, which may be related to growth in enrollment, tend to increase or decrease in step jumps rather than in a linear fashion; these may be more difficult to predict.

[62]Consistent with this is the notion that when enrollments increase, average per pupil expenditures may initially decline. Of course, if more students are added, a point may come at which—even for a school with initial excess capacity—one or more teachers must be added, overcrowding will occur, and additional classroom space must be acquired or new school must be built.

[63]An example is given in Brad R. Humphreys, "A Report on Incremental Costs and Benefits Associated with Increasing Enrollment at UMBC," Department of Economics, University of Maryland Baltimore County, Baltimore, Maryland, May 17, 2003. In preparing this report, we conducted a preliminary analysis of education costs in new-growth immigration states (including the 5 states on the right in fig. 1, and 5 other states). We found that per pupil expenditures in these 10 new-growth states increased by a larger amount than in other states, taken as a group. However, we could not conclude that there was a connection between immigration and the change in per pupil expenditures, because there was considerable *overall* growth in these states' total populations. And even after high percentage growth in the foreign-born populations in these states, foreign-born persons remained a relatively small percentage of these states' total populations.

[64]Edmonston and Lee, *Local Fiscal Effects of Immigration*, p. 16.

Table 1: Cost Categories Relevant to the School-Capacity Approach

Cost category	Cost example
1. Fixed costs	• maintaining a school board • salary of the superintendent of schools
2. Variable costs that correspond directly to the number of students	• new textbooks • other materials purchased for each student
3. Costs incurred when capacity is expanded	• adding teachers • adding on to an existing school or building a new school

Source: GAO analysis.

For a classroom with excess capacity, the only costs associated with adding a single student would be category 2 costs.[65] Where capacity is limited or already stretched, both category 2 and category 3 are relevant. Calculating category 3 costs is difficult. However, studies to explore the incremental costs of illegal alien children might be approached by developing matched pairs of school districts—that is, school districts that appear to have many relevant characteristics in common but that differ with respect to enrollment of illegal alien schoolchildren over time.

- The advantage of the school-capacity approach is that it reflects important classroom and school factors for which the other approaches do not account.

- The main disadvantages are its complexity and requirements for extensive, specific data that may not be available.

Separate data for each cost category in table 1 are not necessarily easily accessed. Although some expenditures within a category (such as paper supplies, books, and periodicals in category 2) can be broken out in NCES data, the costs of adding teachers because of expanding enrollments could probably be estimated only by undertaking a special study, such as that suggested above. In the future, the Census Bureau may be able to supply the data needed to (1) help identify candidate counties or districts for such studies and (2) track trends in the estimated numbers of illegal alien schoolchildren in these areas over time. NCES school-expenditure data could then be compared over time—ideally, before and after a period of

[65]In fact, the slightly larger class size would, all other things being equal, tend to result in a decline in *average* per pupil expenditures.

substantial growth in the illegal alien enrollments for one of the two school districts.

Observations

Considering our findings, we believe that the government information that is available is not sufficient to reliably quantify the costs of educating illegal alien schoolchildren. All approaches to estimating these costs require data or estimates of the number of illegal alien schoolchildren. Neither state nor local governments collect this information, and federal agencies do not provide estimates.

Although DHS estimates the resident illegal immigrant population, its estimates are subject to unspecified levels of uncertainty; further, DHS estimates do not break out age groups. The Census Bureau plans to develop age-group estimates, but it is too early to evaluate its plans. If successfully implemented, the plan calls for national estimates to be made available by 2007 with state and perhaps local estimates by 2009.

If more data on the numbers and characteristics of illegal alien schoolchildren were to become available, then it would be appropriate to conduct an in-depth analysis of the methodological alternatives that could be supported by those data. If feasible, analyses aimed at producing comparative estimates, based on more than one approach, could shed considerable light on the issue of education costs. They could do so by indicating not only the expenditure levels based on the numbers of illegal alien pupils and the average per pupil expenditures by state or local area. They could also do so by providing information on whether estimated expenditures are appreciably different when adjusted to reflect these students' needs or the capacity of the schools they attend or both.

Agency Comments

We provided a draft of this report to the Census Bureau, DHS, and NCES. The agencies informed us that they had no formal comments, but we received informal comments from the Census Bureau and NCES on minor technical points and made changes in the report as appropriate.

As agreed with your office, we will be sending copies of this report to the Secretary of the Department of Homeland Security, the Director of the National Center for Education Statistics, the Director of the Census Bureau, and various congressional committees. We will also make copies available to others on request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff would like to discuss any of the issues we present here, please call me at (202) 512-2700 or Judith A. Droitcour, who served as project director on this study, at (202) 512-9145. Other major contributors to this report include Eric M. Larson, Mona H. Sehgal, Seyda Wentworth, and Timothy Carr.

Sincerely yours,

Nancy R. Kingsbury,
Managing Director
Applied Research and Methods

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