

Attracting Immigrants to an Urban Area Literature Review and Findings

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ATTRACTING IMMIGRANTS TO AN URBAN AREA

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Attracting Immigrants to an Urban Area

Literature Review and Findings

EXECUTIVE SUMMARY

The C.E. & S. Foundation has engaged economists at the University of Louisville to learn what causes immigrants to choose certain locations over others in the United States, to understand why the Louisville area attracts so few immigrants, and to help find ways to reverse that trend.

This report summarizes the first phase of our research – a review of the large literature on immigration flows. In the second phase, we are using these research findings to specify an econometric model that quantifies the effects of the many forces determining immigrant location choice. This model will be customized to the Louisville experience, and be used to generate predictions to help local leaders improve the quantity and quality of immigrant flow to the Louisville area.

The scholarly literature on immigration dates back more than a century and spans many disciplines including demography, economics, political science, and sociology. While most published research addresses the question of international flows of immigrants, there is a strong vein of writings on intranational flows as well. We have synthesized the findings from over 50 publications dealing with the causes, as well as the costs and benefits of immigration flows to US cities.

The most important findings from our review of the literature are:

➤ The key factors that determine the number of immigrants in each metropolitan area are: the size of existing immigrant population, the city's total population, strength of the economy measured by wage and unemployment rates, level of welfare benefits and taxation, industry struc-

ture of the local economy, distance from the main “gateway cities” and source countries, and climate.

- The single most important immigrant pull factor for a particular location is the size of the already existing ethnic community in a Metropolitan Statistical Area (MSA), measured directly or in terms of percentage of all US foreign-born residents of a given ethnicity residing in a given location. Thus, having too few immigrants of a particular ethnicity in a city means the future inflow of immigrants of this ethnicity to this city will be relatively slow.
- However, having too many immigrants of one ethnicity in a given city makes settling there for the new immigrants too easy and leads to a decline in their important “quality” characteristics.¹ These include average education level, English proficiency, and skills. In addition, a larger size of immigrant communities correlates positively with higher welfare use/dependency and with such negative externalities as congestion.
- The balance of benefits and costs of immigration for a particular location (state, MSA) depends on the size and composition of the immigrant community. For all immigrants residing in the US (about 26 million), the economic benefits of their presence for natives are found to be fairly close to economic costs born by natives in the form of additional taxation.
- The benefits for natives generally outweigh the costs when immigrants are well educated, are in a productive age, and are fluent in English.

¹ Here and throughout the text immigrant quality is discussed only in the sense of an immigrant's economic potential, and should not be interpreted as an effort to evaluate individuals solely on the basis of their skills and education.

In terms of legal categories of immigrants, such “beneficial” persons tend to be found among employment-based as opposed to family-based immigrants.

- On average, immigrants coming to the US have significantly lower education levels than US natives. In recent years the largest groups of US immigrants were the low-skilled workers from Mexico and the Caribbean. Therefore, just increasing the existing immigrant population of Louisville without control of the structure of the inflow might not be a good idea. This could lead to a heavier burden of local taxation and possibly to sizeable wage losses for low-skilled natives, particularly among high school dropouts and blue collar workers, who will have to compete for jobs with the newcomers.
- We have not found any published studies that consider a state/city level program to attract immigrants. Most of the debates in the economics and general literature are concerned with the opposite problem: how to contain the existing level of migration or change its composition. The possible Louisville initiative might be a unique experiment.

Based on our findings so far, we plan to focus on two indicators in developing our recommendations for Louisville: the education level of new immigrants and the optimal size of ethnic communities in the city. The role of education-based immigration planning is particularly important for Louisville, as it would contribute also to improvement in its standing against other US cities in terms of average education level.

To attain the most beneficial results from immigration, Louisville may need to formulate a selective policy that will in effect counter the general immigration trends resulting from the “skills-blind” national immigration legislation. This “counter-policy” will have to be selective in nature and focus on attracting immigrants with high education and skill levels. More definitive answers can only be given after an extensive data examination is completed.

This report is organized into five sections. The first deals with the question of how and when immigrants choose to locate in the United States, and how their choices affect the host communities. The second section addresses “immigrant quality”, skill-level, age, language; it also considers the assimilation problems that immigrants and host communities face under various circumstances. In the third section, we examine the economic impacts of immigration. Does immigrant inflow raise or lower local prices and wages, raise human capital, create companies, help or hurt the local tax base? The fourth section summarizes the immigration experience of several prominent immigrant destination communities – New Jersey, New York, Miami, and San Francisco. Finally, in the fifth section we discuss and describe the models of immigrant inflow that are to be tested to measure the strength of various factors determining the scope and quality of potential immigrant inflow to Louisville.

The report also includes two appendices. The first surveys the available data on immigration flows and their characteristics, documenting data sources and the data limitations. The second appendix provides the latest statistical report from the Immigration and Naturalization Service, including tables on recent trends in legal immigration.

I. IMMIGRANTS' LOCATION CHOICES: BACKGROUND INFORMATION

1. Categories of immigrants

Every year between 700,000 and one million foreign-born individuals permanently settle in the US. At 30-40 immigrants per ten thousand US residents, the immigration inflow of the 1990s was higher than at any other time in this century other than during the 1905-15 period, when it stood at 111 immigrants per ten thousand residents. Between 1990 and 1998 the foreign-born population of the US grew by 6.5 million and accounted for 32% of the total US population growth in that period (Current Population Survey, 1998).

All foreign nationals who legally come to the US fall into one of the following three groups².

1. Immigrants, including such categories as: (i) family sponsored immigrants; (ii) employment-based immigrants; (iii) refugees and asylees; and (iv) diversity immigrants.
2. Long-term visitors, including: (i) non-immigrant professional visa holders; and (ii) students.
3. Short-term visitors, including (i) tourists; and (ii) business visitors.

For each category of legal immigrants the US Immigration and Naturalization Service (INS) establishes an annual “cap” which includes the principal immigrant and his/her immediate family members. At present, for family sponsored immigrants the cap is set at 480,000; for employment-based immigrants at 140,000³; for refugees and asylees at 77,000; for diversity immigrants at 55,000. The limit, however, is not

strict for the family-sponsored category as immediate relatives of US citizens are guaranteed the right of the permanent residency in the US, the so-called “green card.”

The overwhelming majority of immigrants come to the US as relatives of US citizens and permanent residents. In 1998 the total number of foreigners admitted to the US as permanent residents was 660,447 and another 110-140,000 filed papers necessary for admission in the future (US INS, 1999). Of all persons granted permanent residency in 1998, family sponsored immigrants comprised 72.0%, employment-based 11.7%, refugees and asylees 8.3 %, and diversity immigrants 6.9%. More detailed data are provided in Appendix B.

Long-term visitors such as professional visa holders and students are not considered immigrants. Their visas allow them to live in the US on a temporary basis. For professionals it is usually no more than six years. Students may stay for the duration of their studies, with no automatic right of employment in the US. The number of these longer-term visitors fluctuated in recent years; around 65-115,000 a year for professionals and 300-400,000 for students.⁴ For professional visa holders the INS establishes a strict annual limit. This limit was 65,000 in 1992-98, 115,000 in 1999 and 2000 (OECD, 1999).

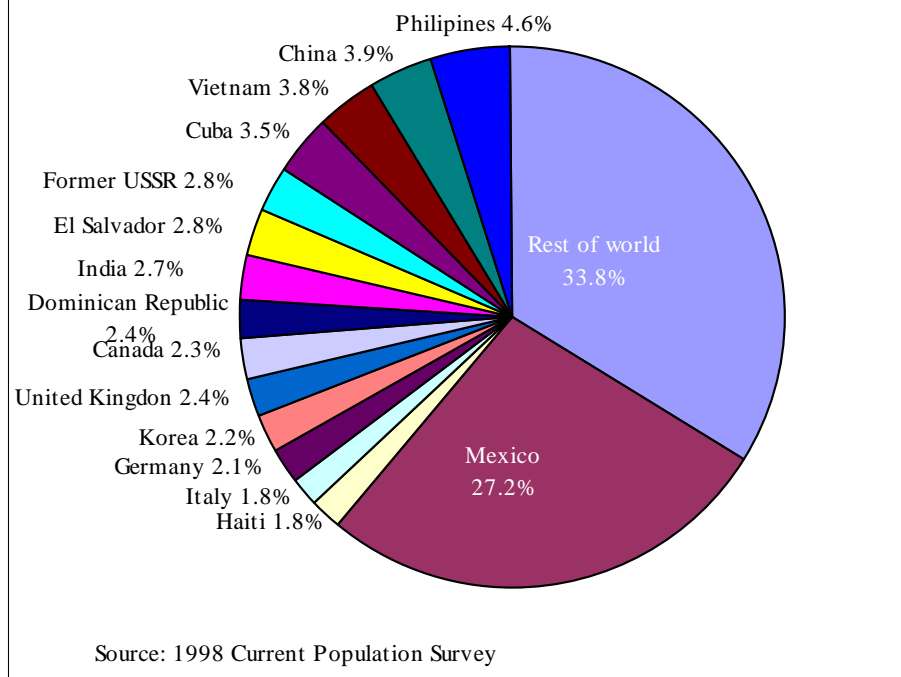
The rest of the foreign-born visitors are tourists and business visitors who usually stay in the US for less than a month. Numerically they are the largest category – about 25 million people in 1997, including 19 million tourists (*INS Statistical Yearbook*, 1997).

² Not included among these are illegal aliens, several hundred thousands of whom cross the US borders every year.

³ The vibrant US economy of the 1980s and 1990s has made the US government more willing to encourage the employment-based immigration. The 1990 Immigration Law increased the annual employment-based quota from 50,000 (set by the 1965 Immigration Act) to 140,000.

⁴ Immigration statistics overstate actual numbers of newly arriving students as some of the already enrolled students travel to and from the US during each year.

**Figure 1: Immigrants in 1998
Top 15 Countries of Origin**



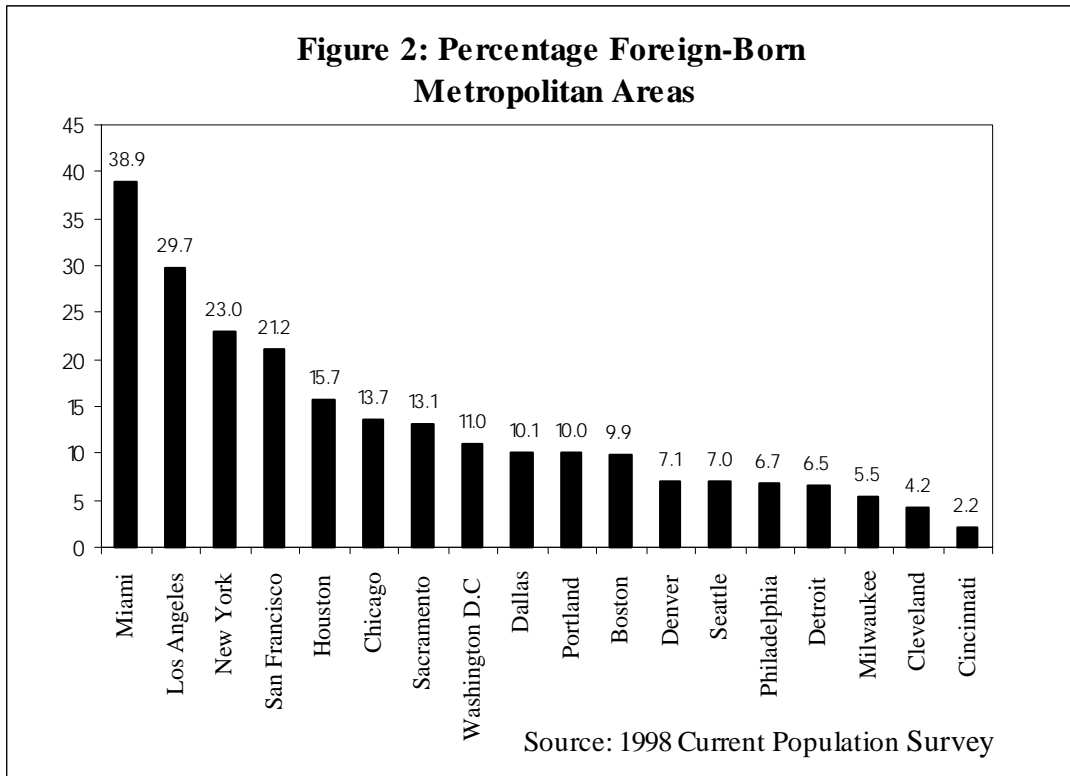
However, their economic impact on the US compared to that of immigrants is quite limited.

Most permanent immigrants come to the US via family channels. Thus, a few countries whose representatives settled here in large numbers in previous years dominate immigrant flow. In the last fifteen years the top five countries of immigrant origin were Mexico, Philippines, China, Dominican Republic, and India. In 1998, for example, out of 660,447 total of legal immigrants, 131,575 came from Mexico, 36,884 from China, 36,482 from India, 34,466 from Philippines, and 20,387 from Dominican Republic (see Figure 1). To compare, immigration that year from all of Europe was 90,793, immigration from all of Africa was 40,660, immigration from Russia was 11,529, and from Canada was 10,190. The immigration diversity program, launched by the US in 1995, is aimed to correct this imbalance. The program provides for

55,000 “green cards” to be distributed annually to the nationals of under-represented continents and countries via lottery. In 1999 for example, 42% of the selected individuals were from Europe and 38% from Africa (OECD, 1999).⁵

The *flows* of immigrants admitted to the US every year replenish and increase the *stock* of immigrants or foreign-born population. In 1998 the foreign-born population in the US was estimated at 26.3 million, or nearly 10% of the total US. The foreign-born comprise 12% of the US labor force, compared to 9.3% in 1990 and 5% in 1970. The composition of the foreign-born changed dramatically in the last decades. In 1970 immigrants of European origin were 60% of the total. By 1990 their share shrunk to less than that of Asians. Mexican and Central American immigrants account for the largest share of foreign-born (OECD, 1999).

⁵ This program generates wide interest around the world. In 1999 3.4 million people applied for the 55,000 permits offered in the lottery – 64 persons per permit (OECD, 1999).



2. Location choice patterns for US immigrants

In the US, most of the new immigrants tend to settle in just a few states and metropolitan areas. The top six destinations since 1970 were so-called “immigrant states”: California, New York, Florida, Texas, New Jersey, and Illinois. In 1996 two metropolitan areas in these states – New York City and Los Angeles- absorbed 143,000 immigrants or 21% of the total for that year.

As a result of highly focused immigration inflows, the foreign-born population pool in the US is geographically highly concentrated. As of 1998, of the 26.3 million total foreign-born, 71% reside in the six immigrant states, compared to 60% of all foreign-born in 1960. California alone has 31%, NY – 14%. On the metro-area level concentration is even higher. Over 50% of all foreign-born reside in just 5 metropolitan statistical areas (MSA), the so called gateway cities: Los Angeles, New York, Miami, San Francisco and Chicago (see Figure 2).

Location patterns for immigrants differ significantly depending upon their legal category; source country, and their education level. Thus, of four major legal categories of immigrants, the most geographically concentrated are family-based immigrants, the least concentrated are employment-based immigrants; refugees and asylees are in between. The non-immigrant long-term visitors (professionals and students) are also less concentrated than family-based immigrants. Illegal immigrants are highly concentrated.

3. Immigrant population of Kentucky and Louisville

Based on legal immigration statistics, Kentucky is generally not considered by immigrants as a top destination. In 1997 per ten thousand of population, Kentucky attracted only 5 immigrants (1,939 people), compared to 8 for Tennessee, 7 for Indiana and Ohio, and 29 for the US as a whole. By this indicator, Kentucky is close to the bottom of all 50 states. The top ten countries from which immigrants

came to Kentucky were Yugoslavia (mostly refugees from Bosnia), India, Vietnam, Canada, China, Mexico, Philippines, Britain, Korea, and Ukraine. Characteristically, Kentucky ranks at the very top in terms of attracting foreign capital. Location priorities of foreign capital and foreign labor can be expected to differ.

Kentucky has a much smaller share of immigrant population compared to other states, while Louisville has a smaller share of immigrants than most of its peer cities, and a much smaller share than is found in the largest 25 metro areas. The inflow of immigrants to Louisville in the 1980s and 1990s was dominated by refugees (in terms of legal categories of immigrants) and in terms of source countries by Vietnamese (in the 1980s) and Mexicans, Bosnians and Ukrainians (in the 1990s). In 1990-98, Jefferson County has attracted 5,200 immigrants, about a third of the state's total. The most rapidly growing segments of Kentucky's population are probably Mexicans and Asians. In 1990-98, the foreign-born Hispanic population of Kentucky increased from 22.1 to 32.5 thousand while the foreign-born Asian population increased from 18.2 and 27.1 thousand. In Jefferson County, the Hispanic foreign-born population increased in this period from 4.5 to 6.2 thousand and the Asian foreign-born population increased from 4.9 to 7.0 thousand.

4. Location choice factors for US immigrants

The multitude of factors that can potentially influence an immigrant's location decision can be broadly classified into two groups: the characteristics determining the attractiveness for an immigrant of a particular location, such as a city ("pull" factors) and personal characteristics of an immigrant ("push" factors).

Inside the pull group one can distinguish four broad categories of characteristics, namely: (i) demographic; (ii) economic; (iii) geographic; and (iv) cultural. Each of these categories, in turn, include a sub-set of factors. Thus, demographic characteristics include the size of an already existing immigrant community in a city, and the total population size of a city. The economic characteristics include

income levels, employment situation, structure of the local economy, taxation and welfare levels. Geographic factors include proximity of the city in question to the main immigrant entry points, distance from immigrants' countries of origin, and climate. Cultural factors include strength of educational and cultural facilities in a city, such as universities, schools, theaters, museums, etc.

Similarly in the push group of factors the most important are: (i) the education level of an immigrant; (ii) his or her legal category, such as family-based, employment-based, refugee or illegal immigrant; (iii) the country of origin and ethnicity; and (iv) age at the time of immigration. In each individual case of immigration the interaction of all of the above factors determines the size and duration of immigrant flows to particular cities and states.

Existing studies all agree that the single most important immigrant pull factor for a particular location is the size of an already existing ethnic community in a state/MSA. The size of a community can be measured directly or in terms of percentage of all US foreign-born residents of a given ethnicity residing in a given location (see, for example, Bartel, 1989; Dunlevy, 1991; Filer, 1992; Zavodny, 1998). However, the impact of this factor is weaker for employment-based immigrants and for better-educated immigrants in general. These categories of immigrants evidently base their settlement decisions on job opportunities, rather than on the promise of security of the ethnic community environment. Predictably, the strongest association between the immigrant inflows and existing immigrant population was found for family-based immigrants – clearly a result of so called "chain-migration". For refugees and asylees, whose location choices depend upon the will of the US government and voluntary agencies, the role of ethnic factors was found to be weaker (but still stronger than for employment-based immigrants).

Other factors that were found to at least sometimes exert a statistically significant impact on the number of new immigrants settling in a particular location are: the size of the overall population of a state/

MSA; strength of the local economy, measured by wage and unemployment rates; the level of welfare benefits; and taxation. The impact of these factors also differed by education, age, legal category of immigration, etc. Thus, predictably the inflows of refugees proved to be more dependent upon welfare benefits, while inflows of employment-based immigrants were found to be more dependent upon the strength of the local economy. Overall, however, the influence of economic factors was demonstrated to be much weaker than that of “ethnic pull” (Zavodny, 1998).

Location factors for immigrants classified by source country differ somewhat, with stronger “ethnic pull” factor influences demonstrated for Hispanics and weakest for European immigrants (Bartel, 1989). It is not clear how much of this dependence will remain after it is controlled for education.

The *secondary* migration of the foreign-born residents already in the US was found by researchers to be more active than that of natives. In 1975-80, 2.5 million or 15% of the total number of all foreign-born persons in the US moved from state to state, compared to 7% of natives (Bartel and Koch, 1991). However, this secondary migration of the foreign-born is primarily led by the same factors that shape primary immigration, in particular by the relative sizes of the already existing ethnic communities. Thus, secondary migration for the most part perpetuates the existing geographical distribution of immigrants. All but the most educated immigrants tend to move to the states/MSAs with the highest concentration of their compatriots (Bartel and Koch, 1991; Belanger and Rogers, 1990; Kritz and Nogle, 1994).

5. Benefits and costs of immigration

The economic impact of immigration on the US is a subject of major controversy due to the highly uneven level of education and skills of family-sponsored immigrants coming to the US from the poor countries of the world. There is little debate, however, that the skill-based component of immigrant flow (employment-based immigrants and professional visa holders) is a major contributor to US

economic progress. Some regions of the US are known to benefit from immigrant flow strongly (e.g., Silicon Valley in California; Saxenian, 1999).

Benefits

1. “General” economic benefits: Incoming immigrants help to produce goods and services which results in an increase in output and decrease in prices of goods and services that incoming immigrants help to produce. However, this impact measured at the US national level as a welfare gain for natives is by most accounts not very significant – on the order of \$10 billion a year or about 0.1% of the US Gross Domestic Product (GDP).
2. The “free human capital import” benefit: Most adult immigrants come to the US with acquired education paid for by the source country and can immediately join the US labor force. This is particularly important at present when the US unemployment level at its lowest in 30 years, and demand for labor surpassing supply in many occupational categories. The benefit of human capital import is, no doubt, real but hard to estimate. One estimate put it as high as \$1.43 trillion for all immigrants currently residing in the US (Moore, 1998).
3. New technology, goods, and services: Foreign-born entrepreneurs and engineers play an increasing role in the US high-tech sector. About one third of the Silicon Valley companies, for example, are led by foreign-born individuals. Foreign-born scholars play a growing role in the US scientific community and figure prominently among the US Nobel laureates. The labor shortage is most acute in information technology (IT) personnel. Some estimates put the excess demand for IT personnel (programmers, system analysts, project managers, etc.) at 200,000 nationally. These US companies are particularly eager to hire foreigners and bring them to the US (Kelly, 1998).
4. Offsetting the aging of the US population: The newly arriving immigrants are younger than na-

tives (their median age is 27; for natives it is 35) and therefore help to slow down the aging of the US population. This is important in the long term (e.g. the Social Security solvency problem), as the baby boom generation has created a “pig in the python” effect in the population pyramid for the United States.

5. Other possible positive externalities, such as cultural diversity: These benefits are much discussed in the popular literature but are hardest to quantify.

Costs

1. Labor market costs for natives: Most existing studies agree that the impact of immigrants on unemployment rates is negligible in regions/cities where most immigrants settle overall. The impact on wage rates is found to be very slight with the exception of two labor categories – the lowest-education natives and immigrants themselves. It is estimated for example that about 44% of a reduction in the wages of US high school dropouts in 1980-1994 is related to competition from immigrants (Borjas, 1999).

2. Fiscal costs – short and long-term: The short-term fiscal impact of immigration, defined as total taxes paid by immigrants minus total payments received by them from all levels of government, is generally believed to be close to zero. Yet this balance represents a significant net gain at the federal level and net loss at the state and local level where most payments to immigrant households originate. Per native household, this loss was estimated to be highest in California (at \$1,174 per year). Over the long term, for a given cohort of immigrants their fiscal burden tends to turn into surplus after 10 years (Smith and Edmonston, 1997).

3. Fiscal gain/loss: The level of fiscal gain/loss from immigration to natives also depends upon the legal category of immigrants with employment-based immigrants being net payers into the system, family-based close to neutral, illegals net recipients of government funds, and refugees being most costly.

4. Negative externalities: These include crime, congestion, and inter-ethnic conflicts. Estimates of these negative factors are scarce and controversial. Some studies, for example, found that crime in cities does not increase where the percentage of immigrants is higher. Yet, patterns of migration for white natives are negatively correlated with the inflow of immigrants. For example, in the 1980s migration to California from other US states significantly slowed-down after an increase of immigration from Mexico (Koch, 1991; Borjas, 1997; Filer, 1992).

The balance between benefits and costs of immigration is very hard to estimate. For a nation as a whole it is sometimes estimated by comparing the “quantifiable” components of benefits and costs, welfare gains for natives and net fiscal cost for natives. Such estimates yield the overall result, which is close to zero (Borjas, 1999).

II. IMMIGRANT QUALITY AND ASSIMILATION

At the heart of the immigration debate is the issue of “quality of the immigrants” and how it impacts their subsequent assimilation into the society. What constitutes quality of immigration? Though the variables can be many, immigration experts have mostly focused on such factors as: (i) years of education/skills; (ii) age; and (iii) English proficiency. Of all these variables, education is considered to be the best predictor of immigrant economic performance. Despite the incomparability of education between and among immigrants born abroad and the US natives, *years of schooling* is most easily measurable indicator of education.⁶ In various studies the word “education” has been interchangeably used with “skills.”

1. Trends in quality of immigration

Most US researchers agree that the educational attainment of immigrants to US in the 1970s and 1980s shows a downward trend. According to Borjas (1999), the average years of education of immigrants entering the US has declined relative to native-born Americans of the same age and sex. In the 1940s, immigrant men had 0.8 more years of schooling than native-born men and by 1980 they had 0.7 fewer years of schooling. Although in absolute terms the education of these immigrants increased from 9.5 years of schooling in 1940 to 12 years in 1980, education of native population increased even more rapidly.

The decline in educational attainment of immigrants may be attributed to three factors (Cohen, Zach, 1997). *First*, there was a shift in the major source countries for immigration from Europe and Canada in the 1950s to Latin American countries during the 1970s. *Second*, the 1965 Immigration Act intro-

duced a different rationing mechanism for immigration visas. It abolished the national origin quotas in favor of kinship preferences - as more educated immigrants became sponsors of their relatives, schooling levels tended to decline. *Third*, there have been changes in the incentives for self-selection of immigrants over time, which is related to returns to skill in the US relative to source countries. It has been argued that the schooling level of immigrants declined beginning in 1970s because the returns to skill in the US declined in this period relative to source countries and to other immigration destinations.⁷

However, by the end of the 1980s, this trend seems to have reversed as the schooling level of most cohorts has increased. Thus, comparison studies between the schooling of immigrants arriving in the 1970s and immigrants arriving during 1982-88 show that the schooling gap between the native born and the foreign-born shrunk from 1.3 years in the 1979 Current Population Survey (CPS) to 1.1 years in the 1988 CPS.

Immigrants coming from different regions have significantly different educational levels (see figure 3). According to Cohen and Zach (1997) Asian immigrants (14.2 yrs) have a schooling level greater than that of native-born (13.1 yrs), while European/Canadian immigrants (12.8 yrs) have a schooling level similar to the native born. Central and South American immigrants have a lower level of schooling (11.3 yrs), and immigrants from Mexico (6.7 yrs) have the lowest level. There seems to be an increasing inequality in education among the immigrants- a “thickening in both tails in the schooling distribution,” with an increasing share of highly

⁶ The quality and relevance of the education obtained by immigrants differs by their country of origin and whether the language of instruction was English (Schultz, 1997).

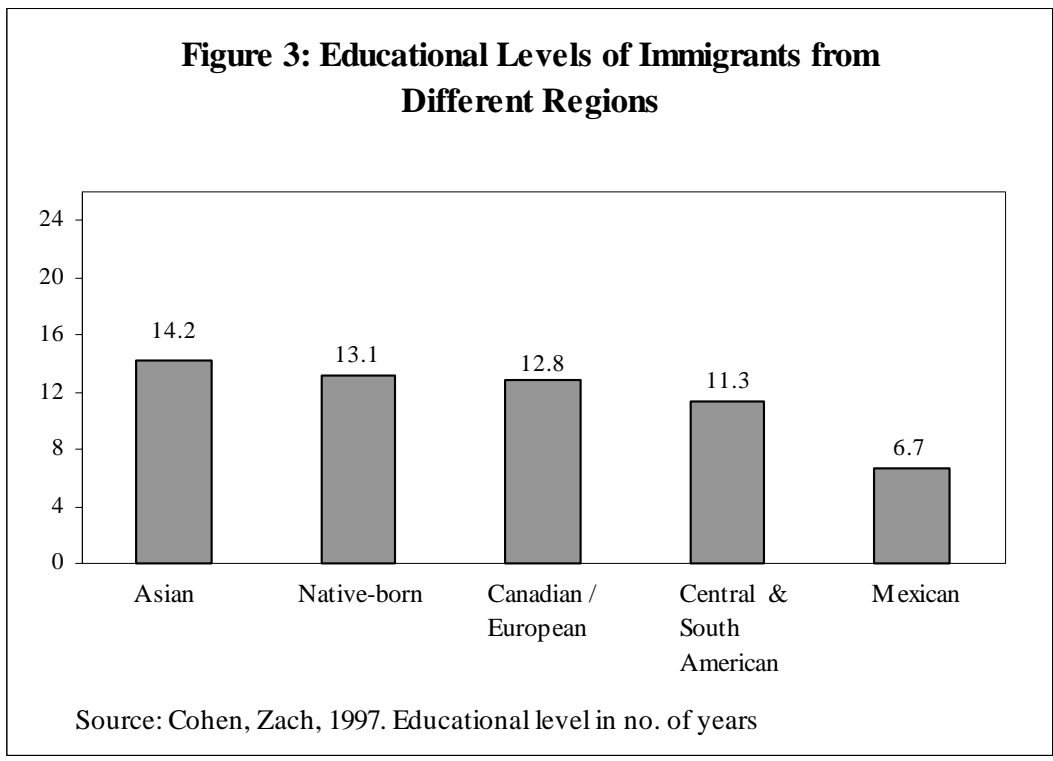
⁷ The return to skill is defined as a difference in average earnings for persons with different level of education. For example, in the US a person with a college degree on average earns 60% more than a high school graduate. In contrast, in most developing countries a person with a college degree generally earns several times more than the one without it. Therefore in relative terms incentives to move to the US from these countries are stronger for the less educated.

educated Asian immigrants and the increasing share of less educated Mexican immigrants (Cohen and Zach, 1997).

Some researchers have pointed out a number of problems with relying solely on decennial census or the CPS data to make claims about trends in the characteristics of recent immigrants. For example, a recent study (Passell, 1998) estimated that only 52% of those who immigrated between 1990 and 1995 were legal immigrants. The rest were either non-immigrants (10%) or illegal immigrants (38%). Since illegal immigrants are generally the lowest edu-

rise in the quality of legal immigrants during the last half of 1980s and throughout the 1990s (Jasso, Rosenzweig, Smith, 1998).

It is believed that three principal changes in the legal rules helped produce the post-1986 rise in labor market quality of legal immigrants. *First*, the Marriage Fraud Act which led to a decline (especially among residents of Mexico) in the numbers of people who become permanent residents by marrying US citizens. *Second*, the Immigration Reform and Control Act (IRCA) provided legalization programs for persons who have resided continuously in the



cated, merging them with the legal ones artificially depresses the latter's education characteristics. INS records of legal immigrants over the period 1972 through 1995 paint a somewhat different portrait of the labor market quality of legal immigrants, especially after eliminating the refugee and asylee population, as on average refugees are relatively low skilled and low income immigrants. A recent study using this data found that while the relative labor quality of legal male immigrants was falling during the 1970s and early 1980s, there has been a steady

US before 1982 in an illegal status and thus easing the route to legalization and apparently making the alternative path to US less attractive. *Finally*, the Immigration Act of 1990 almost tripled the ceilings for the relatively high skilled employment visas while at the same time reducing the numbers of low skill employment visas issued (Jasso, Rosenzweig, Smith, 1998).

2. The self-selection of immigrants

All immigrants coming to the US first have to make a comparison between the degree of success in their home country vis-à-vis the US. The question of who decides to migrate and why, called by economists a problem of self-selection, plays a very important role in determining the quality of immigrants. One of the standard propositions in the migration literature is that migrants tend to be favorably “self-selected” in labor market success. That is, economic migrants are described on average to be more able, ambitious, aggressive and entrepreneurial, or otherwise more favorably selected than other individuals who choose to remain in their place of origin. The favorable selectivity is less intense among those for whom other motives are important, such as tied movers (members of family of principal immigrant), refugees, and ideological migrants.

Studies indicate a tendency toward the favorable self-selection (supply) of migrants for success in labor-market on the basis of a higher level of ability (Chiswick, 1999). Migration involves costs such as forgone earnings in the country of origin and direct out-of-pocket costs. These involve not only a bus ticket or air fare and time in transit, but full costs of relocating and adjusting both consumption and labor market activities from the origin to destination. The larger are the out-of-pocket costs of migration, the lower the propensity to migrate, but also the lower is the return migration rate, and the greater the propensity for favorable selectivity in migration. This propensity for favorable selectivity is intensified if those who are more able in the source country labor market are also more efficient in the migration and adjustment process. Migration occurs if the rate of return on migration is greater than or equal to the interest costs of funds for investment in human capital.

The annual volume of migration flows and the skill selectivity of migrants who arrive are also based on the economic conditions in source countries and the US. The rate of migration per capita is negatively associated with lower prices of skill measured by wages and salaries in the source country, measured by wages and salaries (Borjas, 1994). That is,

other things equal, the lower the wage and salary rate is in a country, the more immigrants it will send to the US. In addition, the average skills of migrants decline as source country skills fall relative to those in the US. The trends in average labor market quality of immigrants are a negative function of the skill-price gap between potential source countries and the US. For example, the rising skill-price gap between source countries and the US since the mid 1980s contributed to the rising labor market quality of legal immigrants (Jasso, Rosenzweig, Smith, 1998).

3. Screening of immigration flow for skills

Barriers and screening in the host (destination) country play an important role in determining the quality of immigrants. For example, countries like Australia and Canada have immigration screening programs based upon a point system that tends to raise the mean skill level of immigrants. The major aim of the point system is to identify factors (in a potential immigrant) that will benefit the host country and assist with the settlement process. In Australia, the point test differs for the two categories of immigrants. For an immigrant in the “independent” category, points are awarded for age, skill (qualifications and experience in his/her occupation), and language proficiency. In the “skill” category, greater weight is placed on formal qualifications (50-60 points) than on experience (10 points). To pass the test, applicants must achieve 110 points.

However, the effectiveness of the points system in raising the mean skill level of immigrants depends on the demand for visas to enter Australia. A study of the worldwide market for skilled immigrants by Cobb-Clark and Connolly (1997) suggests that the skills of those wanting to enter Australia are influenced by a range of factors, some of which are internal to Australia (e.g., economic conditions), while others are external (e.g., immigration policies of other countries). These factors are likely to have more impact on immigrant quality than the point system.

Borjas (1999) also points out that, although the intention of the point system might be to increase

the skills of immigrants belonging to a particular ethnic group, this is not what actually happens. For example, the Canadian point system has little effect on the education or relative wages of specific national origin groups. Instead, the point system redistributes visas across source countries away from the developing countries and toward the more industrialized economies. He nevertheless favors the skill-based point system for screening the visa applicant as it generates a more skilled immigrant flow.

4. Age of immigrants

Age of the immigrants is also an indicator of potential for successful assimilation. A younger immigrant population translates into economic benefits because immigrants tend to stay longer in the workforce. The influx of younger immigrants helps to decrease the average age of both the foreign-born and general population. Recent statistics compiled by INS indicate that the foreign-born population is getting younger.

There has been a dramatic shift in the median age of the foreign-born population over the past 20 years. With the large influx of immigrants since 1970, the median age had decreased from 52 to 37 years old in 1990. Compared with the native-born population, a greater proportion of both male and female foreign born were between the ages of 20 and 64. One of every four foreign-born males was between the ages of 25 and 34. In 1990, about 13% of the foreign-born population was 65 years old and over, compared with about 12% of the native population

Among foreign-born groups, Mexicans, Salvadorans, and Vietnamese had the youngest populations with median ages of about 30. Italian immigrants had the highest median age at 59, Canadian and German immigrants had median ages of 53.

5. English proficiency⁸

English proficiency among immigrants is one of the most beneficial tools in assimilation. The common contention that today's immigrants are more resistant

to learning English than past generations is a misconception. At the turn of the century, an estimated 25% of the immigrant population could not speak English. By contrast, in 1990 only 8% of all immigrants over the age of five could not speak English at all.

Immigrants are much better prepared in English than is commonly believed. In 1990, a majority (58.2%) of immigrants who had arrived in previous five years reported that they already spoke English "well" or "very well." Within ten years of arrival, over three-quarters (76.3%) of immigrants spoke English with high proficiency. Only 1.7% of long-established immigrants reported speaking no English at all in 1990.

Second and third generation immigrants usually speak English proficiently. In most cases the native language of immigrants is completely lost after a few generations in the US. In 1990, 98.3% of Asian-American children reported speaking English "well," "very well," or exclusively. Despite the obvious benefits of cultivating bilingualism within America's diverse population, sociologists have designated the US as a "language graveyard" for in most cases, within a few generations the native language is completely lost or replaced by English.

However, English language proficiency among immigrants has been shown to be adversely affected by residence in a region with a relatively large number of individuals that speak the same origin-language as the immigrant (Borjas, 1999). In 1990, the typical Mexican immigrant lived in a metropolitan area where 11% of the population were Mexican-born, the typical Cuban lived in one where 15% of the population were Cuban-born. Geographic clustering of immigrants reduces the rate of economic assimilation because it reduces an immigrant's incentive to learn English language. Immigrants who live in ethnic enclaves have fewer incentives to make effort and devote resources required to learn English or to acquire skills that might be useful in the larger national market.

⁸ Parts of this section are derived from Rodriguez, 1999.

6. Assimilation

Skilled immigrants tend to assimilate quickly. They are more adept at learning the tools and “tricks of the trade” that can increase the chances of economic success in the US, such as language and culture of American workplace. Moreover, the structure of American economy has changed drastically in the 1980s and 1990s, and now favors workers who have valuable skills to offer.

Assimilation into life in the US does not mean obliteration of ethnic identity. Instead, it involves newcomers of differing backgrounds adopting basic concepts of American life—equality under the law, due process, and economic opportunity. Assimilation is not about immigrants rejecting their past, but people of different racial, religious, and cultural backgrounds coming to believe that they are a part of an overarching American community. Assimilation is not now, and has never been, an instant transformation in which an immigrant suddenly becomes a “full-fledged American.” Rather, it is a long-term, sometimes multigenerational process.

The measurable indicators of assimilation of immigrants to American society used in various immigration studies include:

- Acquiring US Citizenship
- Homeownership
- English Language Acquisition
- Intermarriage
- Earnings
- Educational level

In 1990, more than three-quarters (76.4%) of immigrants who had resided in the US for forty years were naturalized. *Citizenship* is the most symbolic sign of attachment to the US. Not surprisingly, studies have shown that naturalized citizens tend to have a positive outlook toward the US. Once naturalized, immigrants also take on a more active role in the civic life of the country.

Naturalization rates have always varied widely by group and by region of origin. Sociologists have

theorized that social class, education, and relative distance and political conditions of the country of origin are all critical factors in determining naturalization rates. In earlier years an overwhelming majority of Irish, German, and Jewish immigrants became citizens. But Italians and Eastern Europeans were less likely to naturalize. Today, changing political conditions in the US are also affecting a change in the attitudes toward naturalization. The anti-immigrant campaigns in California and in Congress in the last five years have been partly responsible for inspiring the greatest rush to naturalization in the history of US. In general, immigrant naturalization rates are rising, particularly among Mexicans, suggesting an even greater willingness among this large immigrant group to put down roots.

Homeownership is perhaps the most visible and durable sign that immigrants have set down roots in the US. Buying a house is the principal means of accumulating wealth. There is probably no greater symbol of stability, permanence, and faith in the future. Within 20 years of arrival in the US, well over half (60.9%) of immigrants lived in owner-occupied housing in 1990.

In fact, immigrants who have been in the US for at least 25 years actually achieve a higher homeownership rate than natives. Foreign-born persons who had arrived in the US before 1970 had a homeownership rate of 75.6% compared to native-born rate of 69.8%.

Of the fifteen most populous immigrant groups, Italians (87.1%), Indians (85.2%) and Filipinos (85%) made the greatest strides toward homeownership. Given their typically low socioeconomic status upon entering the US, Mexican immigrants attain homeownership at a remarkable rate over time. Only 17.5% of Mexicans who had arrived in the late 1980s lived in owner-occupied units in 1990, but homeownership was 39.2% among those who had arrived in late 1970s.

Intermarriage is a sign that a person has transcended the ethnic segregation— both coerced and self-

imposed— of the first years of immigration. It is also the most potent example of how Americans forge a common national experience out of a diverse cultural past. Clearly, intermarriage illustrates the extent to which ethnicity no longer serves to separate one American from another. In most cases, intermarriage is significantly more common among the children and grandchildren of immigrants than it is among the immigrant generation. Foreign-born Hispanics and Asians are significantly less likely to intermarry than are their US-born counterparts. But, the intermarriage rates for second- and third-generation Asians and Latinos are higher than US born whites and blacks.

Earnings by immigrants is another indicator of immigrant assimilation. The average immigrant earns about 50 cents per hour less than the average native worker, but many immigrant groups in the US earn higher wages than the native workers and many have higher education. Since the 1950s and 1960s the wage gap between natives and newly arrived immigrants has been widening by 0.2% to 0.6% annually. Because they start with a larger disadvantage, more recent immigrants may never earn more than natives. A decline in the average education of newly arrived immigrants accounts for 4 to 23% of the starting wage gap, and shifts in the source countries of new immigrants from Europe to Latin America and Asia account for 73 to 95% (Carliner, 1996). When immigrants first arrive in the US, they earn significantly less than natives. However, with each year of added residence in the US, this wage gap narrows by about 0.8%. As a result, the wage of a typical immigrant who arrived in the 1950s and the 1960s eventually surpassed the average native wage. Improvements in the English language skills contributed 6 to 18% of this narrowing (Carliner, 1996).

7. Tolerance to immigration

Immigrant assimilation, while desirable clearly demands patience on the part of natives. (Chavez, 1999). With the US admitting high numbers of immigrants, America's ability to accept newcomers will increasingly depend upon finding a pro-assimilation middle-ground between nativists who

say that today's immigrants cannot assimilate and multi-culturalists who say that they should not.

Both the location and size of the immigrant population are important in gauging the tolerance level of natives. The foreign-born population is not distributed equally throughout the country. Nearly one-third (30.3%) of all immigrants reside in California. Altogether, six states are home to 70.7% of the nation's immigrant population:

California	30.3 %
New York	13.8%
Florida:	8.8%
Texas	8.8%
New Jersey	4.5%
Illinois	4.5%

A large concentration of immigrants in a region seems to be causing conflict between immigrants and natives. For example, the opinions of Anglo Californians are considerably more anti-immigrant than in other states and favor more restrictive immigration policies (Hood and Morris, 1997). The anti-immigrant backlash produced California's proposition 187 to restrict health, education, and welfare benefits to illegal aliens, which won by nearly 20% of the vote.

Several scholars have suggested that the economic threat posed by immigrants has an impact on the preferences of the US citizens regarding further immigration (Hood and Morris, 1997; Lambert and Cummings, 1998, Borjas, 1999). The most obvious threat is the labor market competition. One of the most prominent results in the literature is that the economically disadvantaged, measured in terms of income, employment status, or occupational category, favor more restrictive immigration policies (Espenshade, 1997). Because jobs for unskilled and undereducated workers are marginal in nature, these workers tend to feel more threatened especially during times of heavy immigration.

Some, however, argue that the threat posed by immigrants is more perceived than real. Also, the

contemporary expressions of anti-immigrant sentiments appear rooted in more traditional forms of ethnic and racial prejudice, and the desire to convert and transform alien cultures of newly arriving groups (Lambert and Cummings, 1998). Age too plays a role in explaining individual attitudes toward migrant and individual opinions on immigration more generally. Hoskin and Mishler (1983) found that aversion to new migrants increases with age. Older individuals in California tend to view undocumented migrants more negatively than do younger individuals.

The reaction of natives to an increase of immigrant population is hard to measure directly. There is some evidence, however, that beyond a certain point natives react to immigration by resettling to other areas and/or reducing their own migration into the affected area. Thus, in California, the leading immigrant state in the US, the inflow of native-born Americans has been greatly reduced since 1970 (Borjas, Freeman Katz, 1997). Earlier studies for the US metropolitan areas done by Filer (1992) and Bartel and Koch (1991) also exposed a correlation between immigrant inflow into a city and natives flow out of the same city. Thus, according to Filer's study, a 1% increase in the number of immigrants, measured as a percentage of a city's labor force leads to a 1.25% decrease in the number of this city's native workers (Filer, 1992).

American attitudes toward immigration would be more accepting if people were better informed about immigration issues. The majority of US residents feel that that most recent immigrants are in the country illegally, but the data suggests otherwise. Illegals comprise roughly one-sixth of the US foreign-born population.

III. BENEFITS AND COSTS OF IMMIGRATION

Benefits of immigration

1. Extra output and lower prices of products

The US benefits from immigration in numerous ways. To begin with, immigrants increase the demand for goods and services produced by native workers. As a result, US firms see opportunities for higher profits and native workers see opportunities for additional jobs. Immigration also lowers the costs of many goods and services, benefiting American consumers. For example, immigrants increase the number of workers in the economy and due to this additional competition in the labor market, the wages of native workers fall (Borjas, 1999). Immigration also increases the productivity of some native workers. Less-skilled immigrants, for example, can conduct many of the service tasks in a modern industrialized economy, thereby freeing up time for native workers to devote to the activities where they are more productive. Finally, immigrant entrepreneurs open up firms, create jobs, and thereby make large contributions to economic growth.

Society as whole benefits from immigration because gains accruing to persons who use or consume immigrant services generally exceed the losses suffered by native workers. A study by National Research Council (Smith and Edmonston, 1997) found that immigrants raise the incomes of US-born workers by at least \$8-\$10 billion each year. In an \$8 trillion economy, such wealth transfer is quite small, but the important point is that the impact on natives was found to be positive. That is to say, without immigrants, native-born Americans would be poorer, not richer. The NRC authors concede that an estimate of \$8 billion is quite conservative and does not include the impact of immigrant-owned businesses or impact of highly skilled immigrants on overall productivity.

2. Mitigation of aging of the US population

Like many developed nations, the US is facing the problem of an aging population. A 1988 study by

the Organization for Economic Co-operation and Development (OECD, 1999) predicts that the share of the US population over the age of 65 will rise from 12.2% in 1990 to 16.2% in 2020. Conversely, in the same period the share of people in the working age (15-64) in the US will decline from 64.7% to 55%.

Census data indicate that the immigrants entering the US are relatively young. Only 3.3% of the immigrants are over the age of 65 when they enter the US, slightly more than one in four immigrants arrive when they are below the age of 18. Between 1970 and 1990 the median age of foreign-born declined from 52 to 37 years. These demographics help in reducing the average age of natives.

3. Human capital import

The most valuable and scarcest asset in the global economy today is human capital. According to Noble prize-winning economist Gary Becker of the University of Chicago:

“Human capital has become the most important form of wealth in America...Since wages and salaries account for over 75% of the national incomes of developed countries, it should be no surprise that human capital is estimated to be 3 to 4 times the value of stocks, bonds, housing and other assets.” (as quoted in Moore, 1998)

Immigrants essentially represent imported human capital that arrives at virtually no cost to native-born Americans as the immigrants who come to the US are raised and educated by the taxpayers of the countries of their origin. There are roughly 26 million immigrants in the US and 70%, or 17.5 million were educated elsewhere. Almost two-thirds (63.2%) of recent immigrants have at least a high-school degree and over 30% have a bachelor or higher degree according to Bureau of Census data.

The median level of education of newly arriving immigrants is approximately 10 years (roughly two years less than natives). Even accounting for immigrants' lower levels of average education and lower quality of education attained abroad for a given number of years of schooling, there is still a substantial net fiscal benefit to the US taxpayer in not having to pay for the education costs of most immigrants. The total discounted present value windfall to the US taxpayer is estimated at \$1.43 trillion over the lifetime of immigrants – a massive transfer of wealth from the rest of the world to the US (Moore, 1998).

Immigrants benefit the economy because they are different from the native-born population in several respects. Immigrants have unique cultural backgrounds, educational levels, skill profiles, language proficiencies, technical capabilities, and propensities for risk taking. Because immigrants have different skill levels and types of skills than natives, they often fill vital niches at the high and low skills ends of the labor market. As economist James P. Smith of the Rand Corporation testified to Congress:

“We gain from immigration because immigrants are different from native-born Americans. If immigrants were just like the rest of us in terms of skills and education, we would only be making our economy bigger, but native-born Americans would not benefit.” (as quoted in Moore, 1998).

Not all immigrants are equally skilled. Immigrants tend to be disproportionately represented at the high and low ends of the distribution of skills and education. And they are over-represented at the high and low ends of the occupational spectrum. Immigrants are somewhat more likely to be in professional, executive, and managerial positions (the highest occupational category), but also more likely to be in the bottom categories, including laborers and farm workers.

Since not all immigrants are highly skilled workers, they need to improve their informal skills as it has

a direct impact on the productivity of the native-born worker. For example, immigrants must learn to handle modern communications such as conducting work by telephone and computer, rather than in person and on paper. However, there is a linked positive effect. Immigrants cause new ideas to arise, even when higher-skilled persons are exposed to the routine traditional ways of doing a job.

One pool of potential human capital that is often overlooked is that of students engaged in undergraduate and post-graduate studies in the US. Foreign students who come to the US contribute new ideas and knowledge to their respective disciplines of study. Annually, more than 300,000 foreign students come to study in American universities, 60 % of them in technical fields. They account for between 52 and 68 % of the graduate students in the various engineering programs, and 40 % in computer science (Simon, 1989).

“Foreign students give the US as much as they get. They pay for their long years of study with the most precious and expensive commodity, the one US most needs today: more knowledge, new knowledge, provided by their labor. By working in American laboratories for three to seven years of post-graduate study, thousands of young experts are by themselves the most efficient “subsidy” to scientific progress and economic development” (Simon, 1989).

Foreign students are even more valuable after they receive their degrees as they possess particularly favorable characteristics as potential immigrants. By the time they have finished most courses of study, the graduates have mastered English, they are at the perfect age (ready to enter the labor force with their entire earning lives ahead of them), and they are usually well assimilated into the US society. They usually have found the markets for their skills, and therefore are likely to find employment relatively

Table 1
Major High-Tech Companies Started by Immigrants

Company/Consortium	No. of Employees in US	Annual Revenues
Intel	29,000	\$11.5 billion
Sun Microsystems	11,000	\$6.0 billion
Computer Associates	9,000	\$2.6 billion
Solectron	4,545	\$1.5 billion
Lam Research	3,600	\$811 million
LSI Logic	2,600	\$902 million
AST Computer	2,248	\$2.4 billion
Wang Laboratories	2,000	\$1.0 billion
Amtel	2,000	\$600 million
Cypress Semiconductor	1,500	\$600 million
Total	67,493	\$27,913 billion

*Note: At least one of the company founders was foreign born

Source: Stuart Anderson, "Employment-Based Immigration and High-Technology," (Washington: Empower America, 1996)

rapidly. And of course, on average they are a well-educated group. As a result, Simon (1989) recommends giving special preference to foreign students who have completed their courses of study in the US, and promoting the immigration of students from abroad who will pay the costs of their education.

4. New knowledge and goods

Immigration expands the size of the market, enabling many new interactions among workers and firms, so that both native workers and native-owned firms potentially learn valuable information without paying for it. American workers gain when their immigrant counterparts conduct a familiar task in a different but more efficient way. American firms also gain, because they can now use the social information networks that link immigrants and the source countries to better market their products in foreign markets. American consumers gain when immigrants introduce goods and services that the consumers never knew they wanted, but now cannot do without. While these intangibles are believed to be important by many, there is no empirical evidence because it is hard to quantify their impact (Borjas 1999).

The US has remained globally competitive in strategic high-tech industries in part because of the innovative thrust of immigrant-run companies. It is the diversity in ownership and employment that often gives US companies a global marketing edge.

Another aspect of immigrant human capital is its inventiveness. For example, researchers have begun to measure the impact of the foreign-born on the scientific discovery process that leads to new and more efficient ways of doing things. In a 1996 study, economist Philip Peters found that even though immigrants are 9% of the population, between 19 and 26% of all patents are created by immigrants alone or by immigrants collaborating with US-born co-inventors.

In Silicon Valley, more than 100,000 technically savvy immigrants have kept that area, and the nation, at the forefront of global technology. Some of the largest and most profitable businesses in America today were started by immigrants. Immigrants who entered the US as refugees, economic immigrants, or family sponsored immigrants are now at the helm of some of the nation's leading and rapidly growing technology

businesses: Hungarian-born Andrew Grove recently retired as chairman and CEO of Intel; Algerian-born Eric Benhamou heads 3Com Corporation, Ugandan-born Ajay Shah is the chief executive of Smart Modules Technologies.

Table 1 shows the income and employment generated by 10 highly successful immigrant-founded firms. These 10 firms alone generated \$28 billion in revenues and employed 67,000 American workers in 1997. The tax revenues paid directly by companies and by their employees in 1996 amounted to at least \$3 billion.

The 1980 and 1990 Censuses indicate that roughly 1 to 12 adult immigrants are self-employed or a business owner. A more recent study estimated that of all the immigrant workers in 1997, 11.3% were self-employed or business owners, compared to 11.8% for native-born Americans.⁹ The study found that the self-employed immigrants earn higher incomes than natives: \$20,710 vs. \$18,447 (Ibiden).

*Costs of immigration*¹⁰

5. Threat to natives' jobs and incomes

According to Borjas (1999), immigration has a two-fold effect on the labor market. Firstly, it increases the number of workers in the labor market, and secondly, it puts a downward pressure on the wages of native workers. Public opinion polls indicate that native workers (typically by a large margin) disapprove of immigration because they fear that immigrants take away jobs, and reduce wages.

The impact of immigrant workers on native workers is not uniform. The entry of the immigrants into the labor market lowers the wage of competing workers (workers who have the same types of skills as immigrants), but increases the wage of complementary workers (workers whose skills become more valuable because of immigration). For example, an influx of foreign-born laborers reduces the economic opportunities for laborers who already live in the locality—all laborers now face stiffer competition in the labor market. At the same time

highly skilled natives gain substantially. They pay less for services that the laborers provide, such as painting the house and mowing the lawn, and natives who hire these laborers can now specialize in producing the goods and services that better suit their skills.

In the long-run, native-owned firms realize that cities flooded by less-skilled immigrants tend to pay lower wages. Entrepreneurs thinking about starting up new firms find it more profitable to open them in immigrant areas. In other words, immigration increases the returns to capitalists in these areas. However, the job gains in the immigrant areas represent potential job losses for native laborers of similar skill level.

Native workers can respond to this change in the economic scenario by moving to other areas since immigration has reduced their potential wages. This migration of native workers within the US, in effect, accomplishes what the immigrant flow, with its tendency to cluster in a small number of gateway cities does not - a "spreading-out" of additional workers over the entire nation, rather than in just limited number of localities. This native response may be sufficiently large to diffuse much of the effect of immigration from affected regions to the entire economy.

Empirical studies that measure the impact of immigration on native economic opportunities across cities often report conflicting results. This inherent instability of the spatial correlation approach is reported in two recent studies. According to these studies the entry of one more immigrant for every ten native workers increased the wage of native men by 6% if the immigrants entered in 1960s, increased it by 1% if the immigrants entered in 1970s, and reduced it by 1% if the immigrants entered in the 1980s. A similar change in the numbers of immigrants reduced the wage of native men who are high-school graduates by 3% in the 1970s, but increased it by 2% in the 1980s (Borjas, Freeman and Katz, 1997).

⁹ "Immigrant Entrepreneurs Slip From the Top", *The Wall Street Journal*, January 12, 2000.

¹⁰ Parts of this section are from Borjas, 1999.

It is not too surprising that the adverse effect of immigration falls mainly on workers at the very bottom of the skill distribution. The US admitted about twenty-five million legal and illegal immigrants between 1965 and 1995. But this increase in the number of workers was not evenly balanced across education groups. While immigration increased the supply of high school graduates or college graduates only moderately, it led to a major increase in the number of high school dropouts. As a result, wages of the low-skilled Americans were significantly affected by immigrant inflow.

In 1980, workers with at least a high school education earned about 30% more than high school dropouts, and this gap widened to 41% by 1995. Between 1979 and 1995, immigration increased the supply of workers who were high school dropouts by 21%, but increased the supply of workers with at least a high school diploma by only 4%. Some recent studies attribute 44% of the widening wage gap between the high school dropouts and high school graduates in the US can be attributed to the large impact of immigration on relative number of high school dropouts (Borjas, 1999).

6. Impact on welfare programs

Almost all recent studies agree that foreign-born as a group make heavier use of welfare programs than natives, although their use of these assistance programs decline over time. The Bureau of the Census data underscore the latest trends in welfare use by immigrants. In 1996, 4.5 % of native-born households received federal means-tested cash benefits versus 5.8 % for all immigrants. Those figures do not include noncash benefits, including food stamps and Medicaid. When those assistance programs are included, the disparity between immigrant and native receipt of welfare widens (Moore, 1998). Jeffery Passel and Rebecca Clark (1998) of the Urban Institute recently estimated that in New York State 17% of immigrant households collected some form of welfare versus 11% for natives.

There is evidence that more recent immigrant cohorts are using welfare at higher rates than those

in the past. For example, the Census data show that in 1996 only 4.6% of pre-1970 immigrants collected welfare but 6.5% of post-1980 immigrants received such benefits. One program in particular that has seen dramatically expanding rolls has been the Supplemental Security Income (SSI). A recent Cato Institute report discovered a near tripling of immigrant-related SSI costs since 1982. In 1982 there were 128,000 immigrants collecting SSI at a cost (in 1996 dollars) of less than \$2 billion. In 1996 the number of immigrant recipients had risen to 989,000 at a cost of \$5.1 billion (Moore, 1998).

In fiscal year 1995, the cost of refugee resettlement programs neared \$400 million. Using 1990 Census data, Fix and Passel (1994) found that about 16% of refugees were on welfare, whereas less than 5% of all other legal immigrants collected benefits, compared to 4.2% for natives (see Figure 4 below). Generally, except for refugees and elderly, immigrants are less likely than natives to receive welfare. Among longer-term immigrants (at least ten years in the US) of working age, 3.2% were on welfare versus 3.7% for working-age natives. The reasons for refugees' high dependency upon welfare are evident. Refugees tend to use more benefits because they are generally fleeing their country to avoid war or persecution. They come to the US with limited assets and skills and thus collect much higher levels of public benefits than other immigrants.

Borjas (1999) has studied the welfare usage among various national origins groups using CPS data pooled from 1996-98 (Table 2). The analysis shows that there are large differences in welfare usage among immigrants along their national origin. Only 5.6% of households originating from India receive some type of assistance and this number does not change even after ten years of residence in the US. Less than 10% of Germans and British receive welfare assistance. On the other hand, a quarter of those originating in El Salvador or Nigeria, a third of those originating from Cuba or Mexico, and almost 60% of those originating from Dominican Republic or Laos receive some type of assistance. Generally, immigrants originating from refugee-

Table 2:
Differences in Welfare Use among National Origin Groups, 1998

Country of birth	% of households receiving some type of assistance	% of households receiving some type of assistance after ten years in the US
<i>Europe</i>		
Germany	7.8	7.8
Greece	10.4	10.2
Ireland	5.8	5.6
Italy	12.9	13.3
Poland	7.8	6.8
Portugal	16.8	18.0
USSR	37.1	20.7
US	9.7	9.5
<i>Asia</i>		
Cambodia	47.9	46.6
China	17.5	19.4
India	5.6	5.6
Japan	9.7	8.6
Korea	17.3	22.3
Laos	59.1	46.0
Philippines	13.4	13.2
Vietnam	28.7	22.8
<i>Americas</i>		
Canada	9.9	11.7
Cuba	30.7	28.6
Dominican Republic	54.9	58.0
El Salvador	25.2	25.9
Haiti	20.2	19.4
Jamaica	22.7	19.3
Mexico	34.1	33.6
<i>Africa</i>		
Egypt	16.2	20.5
Nigeria	25.7	32.8

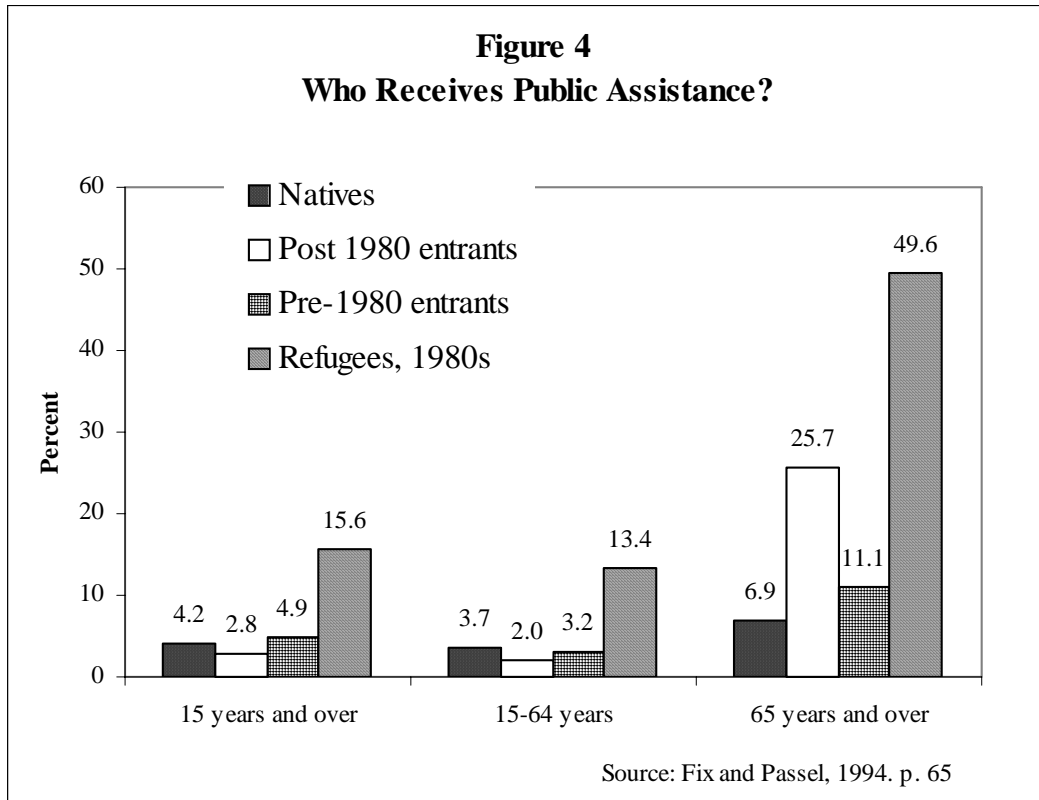
Source: Borjas (1999) p.110. Data refer to households where the head is at least 18 yr

sending countries exhibit much higher rates of welfare participation.

Welfare programs act as magnets for immigrants and generate three distinct types of effects. First, generous welfare programs attract a particular type of immigrant who otherwise would not have migrated to the US. Second, these programs discourage immigrants who fail in the US labor market from returning to their home countries by providing alternative income opportunities. Finally, the magnetic effects influence the geographic sorting

of the immigrant population in the US as there are huge differences in welfare benefits across states. California's AFDC benefits are the most generous in the nation: 20% larger than in New York, 136% larger than in Florida, and almost 280% larger than in Texas. These differences influence where immigrants and natives choose to live and place a substantial fiscal burden on relatively generous states. Thus, the overall use of welfare by foreign-born remains significantly higher than overall use by natives. About 21% of such households received

Figure 4
Who Receives Public Assistance?



some type of assistance in 1998 compared to 16% for native-born families. It can be reasonably expected, however, that immigrant rates of welfare will fall in the future as a result of recent congressional action (1996) that eliminates eligibility for many means-tested welfare programs—including SSI, food stamps, and Medicaid—for most new non-citizen immigrants.

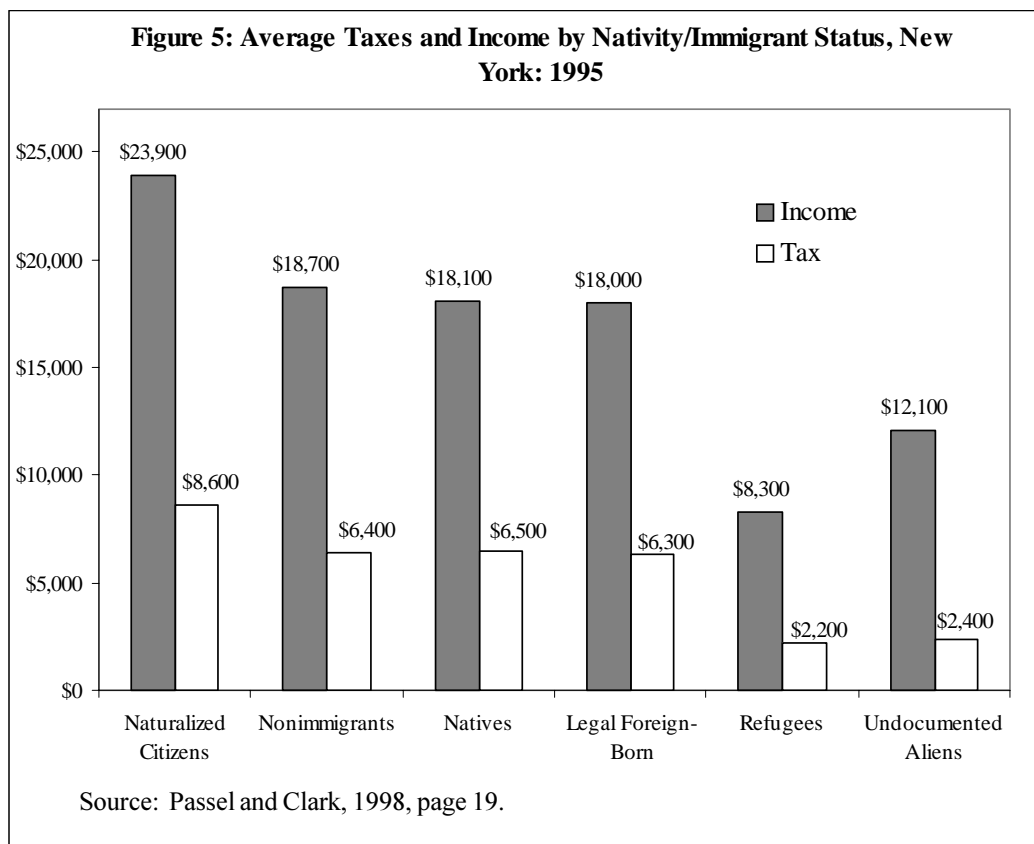
7. Impact on taxation

The latest US Census data reveal that total immigrant income in 1995 was \$330 billion. Updating that figure to 1997 (adjusting for increased total immigrant households in the US and the two-year growth in average incomes) gives a total immigrant income of \$390 billion. The Census data from 1995 suggest that median income for a typical immigrant household was about 20% below that of all US households. Stephen Moore of Cato Institute estimates the overall tax rate for immigrant households to be roughly 34%. This implies total tax payments by immigrants in 1997 of roughly \$132.6 billion: \$390 billion x 34% (Moore, 1998).

The taxes paid by immigrants are even more when one includes estimates of the total taxes generated from immigrant businesses. According to Moore (1998), this figure stands at \$23.9 billion.¹¹ When this figure is added to the taxes paid by immigrant workers, total tax payment by immigrants in 1997 was roughly \$162 billion.

The tax burden is not spread evenly among all immigrant households. An immigrant household's tax payments increase over time with earnings, labor force participation, and economic success. One factor that appears to be positively associated with taxes paid is whether immigrants become naturalized citizens. Drawing upon data from the US Census Bureau Current Population Survey, families with adult, foreign-born, naturalized citizen actually have higher adjusted gross incomes (averaging \$40,502) than families with US-born citizens (\$35,249). The immigrants' taxable incomes average \$32,585, compared with \$27,076 for families of all native-born members. The federal taxes paid by families with a naturalized citizen average \$6,500 per year, compared with \$5,070 for US-born-only families.

¹¹ For the purpose of the calculations Moore assumes that the average tax paid by immigrant owned businesses is as much as businesses owned by natives.



A recent Urban Institute study by Passel and Clark (1998) examined earnings and taxes of immigrants living in New York State (see Figure 5). The study found that immigrants account for \$57.5 billion of the \$330.3 billion aggregate personal income in New York State, equal to 17.4% of the personal income of the residents. Legally present non-citizen immigrants earned incomes similar to those of natives (\$18,000 versus \$18,100). Naturalized citizens have the highest per capita income (\$23,900), which surpasses that of natives (\$18,100). Refugees have the lowest average income (\$8,300). Immigrant incomes also go up as their time in the US increases.

The study also finds that immigrant status plays a large role in measurement of fiscal impact. On average present immigrants pay slightly less in total taxes than natives—\$6,300 per person versus \$6,500. Total tax payments of naturalized citizens (\$8,600) are higher than those of natives, while refugees pay \$2,200. The legal foreign-born pay substantially more in total taxes, on average, than undocumented aliens who pay \$2,400. Regardless of

the status, the average tax contributions for all immigrant groups go up as their time of residence in US increases.

Much of the concern about the fiscal impact of legal immigrants is the historical relationship between the federal government and the states in sharing the costs and benefits of citizens. About 70 cents of every dollar in taxes paid by immigrants go to the federal government (mostly in the form of income and social security taxes) and less than 15% is paid to local governments.¹² Hence, the bulk of tax contributions from immigrants go to federal government, while large costs, especially those associated with public primary and secondary education, fall on states and localities. Recent welfare laws have exacerbated this situation by shifting the burden of caring for new immigrants to the states. The impact varies by state. States and localities with large immigrant populations, such as Los Angeles, Houston, and San Diego, incur more costs than they receive in tax revenues from immigrants. The NRC study estimates that, overall, immigrants and their children cost state and local governments \$25,000

more per immigrant household than those government receive in taxes. Until this imbalance is rectified, there will be continuing debate over whether to offer and how to pay for services used by legal immigrants.

8. Negative externalities (congestion, crime)

Studies done on crimes committed by immigrants suggest that they do not have any greater propensity to commit crimes than do natives (Simon 1989). A study done by Kindleberger in 1967 reviewed the evidence on guestworker crime in Europe since World War II. He concluded that the scare stories in the newspapers were mainly the product of over-active imaginations, and he found that there was no statistical evidence to support these fears. The German data actually showed less crime caused by immigrants (reported in Simon, 1989).

Many decades ago there was a similar conclusion drawn by Steinberg, who studied the rates of crime among US immigrants up to the first quarter of the twentieth century for the Select Commission. He concluded that, by any measure, the rate of serious crime has been less among immigrants than among natives, though the rate of petty crime (vagrancy, disorderly conduct, breach of the peace, and drunkenness) has sometimes been greater among immigrants. When age and sex are controlled for, the rate of all crime has been less among immigrants than natives (as reported in Bhagwati, 1998).

However, some authors point to statistical evidence indicating that immigration can generate serious crime, including ethnically organized gangs or ‘mafias’. One such study point to the fact that in 1993 non-citizens accounted for 25% of all inmates of federal prisons, several times higher than their share in the total population (Brimelow, 1995).

The only recent study on the rates of crimes among *illegal* immigrants was done by Muller in 1984. Muller found that “In the city of Los Angeles, crime rates in the two police districts with the highest

Hispanic population were somewhat below the city average in 1982. Undocumented immigrants in particular are understandably reluctant to be involved in criminal activities that attract the attention of the authorities.” This suggests a relatively low rather than a relatively high rate of crime by illegals (as cited in Simon, 1989).

9. Net impact

The balance of benefits and costs of immigration for a particular location (state, MSA) is found to depend upon the size and composition of the immigrant community. For all of (about 26 million) immigrants residing in the US the *economic benefits* of their presence for natives are found to be fairly close to *economic costs* born by natives in the form of additional taxation.

However, the benefits for natives generally outweigh the costs when immigrants are well educated, in productive age, and fluent in English. In terms of legal categories of immigrants, such “beneficial” persons tend to be found among employment-based as opposed to family-based immigrants. The best example of how a high concentration of such immigrants can help to accelerate regional development is Silicon Valley, where more than a quarter of the high-tech companies are led by immigrants. This example indicates that economic benefits of immigration are obvious only when the immigration inflow is *selective*.

¹ For example, the New York study by Passel and Clark (1998) states that foreign-born individuals contribute more than \$19.3 billion in taxes. Of this, \$13.3 billion goes to the federal government in the form of income tax social security tax, and unemployment insurance. The remaining \$6 billion goes to state and local government (Moore, 1998).

IV. ATTRACTING IMMIGRANTS TO AN URBAN AREA EXPERIENCE OF US REGIONS AND CITIES

1. New Jersey experience¹³

Population

New Jersey ranks fifth among all major immigration states and ranks first in the nation in the diversity of its immigrant population. According to the 1990 Census, New Jersey had nearly 967,000 foreign-born individuals. The state's foreign-born population became more diverse between 1980 and 1990. The share of Europeans who constituted a majority of foreign-born in 1980 fell to 38% by 1990. In 1990, Italians were the largest foreign-born group in New Jersey, accounting for 7.3% of all non-natives, followed by Cubans (6.5%), Indians (5.4%), Germans (4.4%), and Colombians (4.2%).

Spatially, New Jersey's immigrant population has also become more diverse. Though still concentrated in northeastern part of the state bordering New York City, the foreign-born have spread west and south during the 1980s.

Overall differences between New Jersey and the US are due primarily to differences in the composition of the foreign-born by region of origin. For example, New Jersey has higher citizenship proportions among its immigrant population than the US does because of a relatively larger number of European immigrants who have been in the country for a longer period. New Jersey's immigrant population also has a higher level of educational attainment than immigrants nationwide. The educational advantage is maintained among every origin group (Asians, Latinos, and others) except for Europeans.

A report by Espenshade (1997) speculates that New Jersey's experience with immigrants may be exceptional and that the state might not be faced

with a declining relative quality of immigrants in the Borjas (1999) sense. According to this report, New Jersey's Asian and Latin populations may be positively selected and have higher ability or initiative than their counterparts who settle closer to their customary ports of entry.

Fiscal Impact

Espenshade (1997) examines the fiscal impacts of immigrant-headed households and compares them to the fiscal effects of households headed by native-born individuals. There are four findings. First, the typical New Jersey household, regardless of nativity, uses more services at both the state and local levels than it pays for with taxes. Corporate taxes and monies passed back to the state from the federal government makes up for the deficit. Second, households headed by immigrants are usually a larger fiscal burden (measured as a total sum of expenditures by the government of different levels) than households with a native-born head. Third, the relatively greater fiscal burden associated with immigrants is carried by the local governments, compared to that of the state and federal government. And fourth, there is greater diversity within the foreign population when this group is disaggregated by region of origin of the household head than there is overall gap between the native and foreign-born population.

However, once all other factors (age, education, marital status, English proficiency, place of residence, and number of children) are taken into account, there is no difference in fiscal burden between foreign and native-born households. Linguistic diversity of the state has placed an added burden on public schools. Although Spanish is the most common language used by immigrant school children in New Jersey, overall limited-English-proficiency (LEP) students speak more than 100 languages.

¹³ Parts of the section are from Espenshade (1997).

Immigrant Assimilation

Borjas' (1999) findings of a nationwide decline in the skill mix of immigrants relative to natives is not consistent with New Jersey's experience. Evidence suggests that the experience-earnings profiles of immigrants are converging to those of the native born. New Jersey's immigrants appear to be successfully assimilating into the local labor market. Most immigrant groups experienced steady within-cohort earnings growth over the decade. There is also some evidence of a slight improvement in the skill mix of recent immigrants relative to earlier cohorts.

Homeownership by foreign-born households is viewed as a sign of permanent attachment to the US and as an important aspect of assimilation. Roughly half of all immigrant households in New Jersey and in the US are homeowners, although the prevalence of homeownership among Latinos is consistently below Asian levels. The trend in New Jersey's immigrants homeownership is essentially similar to immigrant behaviors elsewhere in the nation.

In terms of residential segregation, non-English speakers, especially those with Spanish as their first language immigrants tend to concentrate in large, non-English neighborhoods in New Jersey. Linguistic segregation is among the highest for new arrivals from Puerto Rico. Espenshade (1997) suggests that many non-English speaking communities begin to erode as immigration recedes and migrants move away or shift to English. It also shows that neighborhoods with the largest proportion of recent immigrants whose native language is Spanish are the most socio-economically disadvantaged.

In general, New Jersey attitudes toward illegal immigration are more liberal than those nationwide. One reason for this is that the illegal immigrants in New Jersey are of less-obvious type; that is, people who came legally and then overstayed their visas as opposed to those who entered the country illegally in the first place. Just one-third of New Jersey

residents believe that most recent immigrants are in the US illegally, compared with two-thirds of respondents in national polls.

Judged in relation to other issues facing the state, immigration is not a pressing concern. It is roughly equivalent in importance to taxes, is less important than crime, but is more salient than jobs. Many of the individual-level determinants of respondent attitudes appear to have the same effects in New Jersey as they do in national samples. Better-educated, employed, minority (including African American), and foreign-born respondents are more likely to prefer the same or a higher number of immigrants.

Another reason for New Jersey's relatively more liberal attitudes on immigration could be that the East Coast has a longer immigration tradition than other parts of the country. Where immigration is less of a novelty, it may be considered a smaller disruption to the status quo. In addition, having immigrants who are better educated than their counterparts nationwide may lead people to perceive immigrants as less likely to be a problem and more likely to make a contribution. Finally, the diversity of New Jersey's immigrant population probably helps to create more tolerant attitudes. Diversity makes it difficult to stereotype immigrants.

2. New York experience

Throughout much of the country's history, New York State, especially New York City, has been the principal gateway for immigrants entering in the US. In recent years California has surpassed New York, but it still remains the second largest entryway to the country. An Urban Institute study done by Passel and Clark (1998) of immigrants in New York looks at the legal status, incomes and taxes of immigrants in detail.

Population

New York has a foreign-born population of 3.4 million, second only to California, which has 8 million. Immigrants in New York represent 17.7% of the state's population, again trailing only to California, where immigrants represent 25.1% of

Table 3
Average Taxes and Income for Individuals and Households
by Nativity/Immigrant status, Inside and Outside New York City: 1995

	Per Person		Per Household	
	Income	Taxes	Income	Taxes
<i>New York City</i>				
Native- Born	\$15,800	\$6,000	\$42,300	\$16,100
Legal Foreign-Born	\$15,800	\$5,500	\$33,400	\$11,400
LPR Aliens	\$13,000	\$4,500	\$29,600	\$10,000
Naturalized citizens	\$21,100	\$7,600	\$38,900	\$13,800
Refugees	\$8,600	\$2,200	\$21,000	\$5,100
Nonimmigrants	\$22,000	\$6,800	\$40,200	\$12,400
<i>Outside New York City</i>				
Native- Born	\$19,100	\$6,800	\$52,700	\$18,600
Legal Foreign-Born	\$23,900	\$8,400	\$54,300	\$18,900
LPR Aliens	\$20,400	\$7,000	\$54,900	\$18,900
Naturalized citizens	\$30,000	\$10,700	\$54,900	\$18,900
Refugees	\$7,500	\$2,200	\$33,900	\$9,700
Nonimmigrant	\$16,200	\$6,000	\$60,000	\$22,300

Source: Passel, and Clark, 1998, p.16

the state's population. New York has more than 1 million legal permanent resident aliens and more than 1 million naturalized citizens. Together, these two groups represent 77% of New York's immigrants and 15% of the state population.

The New York immigrant population is very diverse. Caribbeans account for 915,000 of New York's 3.4 million immigrants or 27%. Europeans have a 25% share and South and East Asia account for 20%. The largest single country of birth of immigrants is the Dominican Republic (12%), followed by China (7%) and Jamaica (6%).

New York has 200,000 refugees, or 5.9% versus 10.7% for the US as a whole. And unlike the rest of the country, where Southeast Asians dominate the refugee population, most refugees in New York are from the former Soviet Union.

New York's estimated undocumented population of 540,000 represents 16% of the state's immigrants—a lower percentage than in any of the other five large immigrant states except New Jersey. Thus, legally present immigrants make up a greater percentage of New York's immigrants than in

California, Florida, Texas, Illinois, and the US as a whole.

Fiscal Impact

Just like the rest of the US, incomes of immigrants in New York increase with their time of residence in the country and, consequently their tax payments increase. Among legal immigrants in New York, those who have been in the country for at least 15 years have higher average incomes than natives.

Immigrants account for \$57.5 billion of the \$330.2 billion aggregate personal income in New York State, equal to 17.4% of the personal income of the state residents. Legally present immigrants account for \$51.8 billion in aggregate personal income. Among the legally present immigrants in New York, incomes differ substantially by status. Naturalized citizens have the highest per capita income, \$23,000, which surpasses that of natives (\$18,100). Refugees have the lowest average income (\$8,300). Among New York State residents who live outside New York City, the legal foreign-born also have higher incomes than natives. For instance, per capita income for legal immigrants is \$23,900; for natives, it is \$19,100.

Income and taxes of all three groups of legal immigrants — naturalized citizens, legal permanent residents (LPR) aliens, and refugees are presented in Table 3.

At the individual level, the legal foreign-born seem to pay their fair share in taxes. They contribute more than \$19.3 billion in taxes. The legally present foreign-born pay \$18.2 billion in taxes, 15.5% of the state's total. Differences across groups are primarily attributable to income differences. Legally present immigrants pay slightly less than natives—\$6,300 versus \$6,500. Total tax payment of naturalized citizens (\$8,600) are higher than those of natives on average, while contributions of refugees (\$2,200) are substantially lower. Among adults, natives pay more, on average, in taxes than the legal foreign-born (\$9,200 versus \$7,000).

New York state faces new issues surrounding immigration as a result of passage in 1996 of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) and the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA).

These new laws make the attainment of citizenship, rather than being a legal immigrant, a principal criterion for eligibility for public benefits. The welfare law, PRWORA, also shifts to the states new decision-making and fiscal responsibility for providing public benefits to immigrants. The law requires states to maintain their own spending on welfare reform, and gives them powerful performance incentives to place more people on welfare in jobs. The law also states the capacity to create jobs by taking money now used for welfare checks and giving it to employers as subsidies, as incentives to hire people. This bill is meant to help people find work so that they stop drawing welfare checks and start drawing paychecks.

3. Miami experience¹⁴

Since 1959, Metropolitan Miami area has absorbed not just Cubans, but large numbers of immigrants from Haiti and Nicaragua as well. Immigrants now make up nearly half of the Dade county's popula-

tion and are found at every level of society. The rapid rise of immigrants did not occur smoothly, however. The stark changes in racial and ethnic makeup and accompanying shifts in political power have provoked confrontations that have at times threatened to shred the social fabric of the community.

Miami is sometimes described as a city where nobody speaks English anymore. Because the Miami-Dade County population is 45% foreign-born, serious concerns have been raised as to whether its predominantly Spanish-speaking immigrant community will become a permanent cultural and linguistic enclave rather than an integral part of the English-speaking host community.

To shed light on the community's linguistic future, a study team led by Princeton sociologist Alejandro Portes has been tracking 2,200 children of immigrants since 1992 to determine their proficiency in both English and the language of their parents.

Preliminary results indicate that by age 14, fully 99% of the youngsters in the study reported English fluency. Of that group, 92% said they also speak another language. Among those with foreign language proficiency, 85% spoke Spanish and 6% spoke Creole dialect of Haiti. By a 4-to-1 margin, and invariant over time, youngsters in the study said they preferred English to their parents' native language. Over 70% of the children said that they hoped to go to college and pursue post-graduate degrees. Like children of native-born Americans, immigrant children performed better academically if they came from two-parent families with higher socio-economic status. Portes says it is significant that children from immigrant families that have the resources to preserve fluency in their native tongue still prefer to speak English. He describes the trend as "a clear indicator of rapid assimilation" (*The New Americans*, 1998).

The multilingual workforce and multicultural environment of Miami attracts foreign businesses to Miami and is considered a major strength by Greater

¹⁴ Parts of this section are from *The New Americans*, 1998.

Miami Chamber of Commerce as it facilitates international commercial transactions. Local businesses sectors, which have increasingly international orientation and are in need of employees who speak Spanish, Portuguese, and other languages have found rich recruiting grounds in Miami.

Tourism has flourished in recent years due to extensive marketing of the uniqueness of Miami and its diversity. Miami attracts tourists from all over the world. It is estimated that 52% of the visitors come from other countries and 48% from elsewhere in the US.

4. San-Francisco-Silicon Valley experience¹⁵

California's Silicon Valley is famous the world over for its cutting edge technology innovations and experiments. Some of this success is due to the recent wave of highly skilled immigrants from Asia into the region who have contributed immensely in this economic success. Silicon Valley has become a haven for fostering creativity and entrepreneurial spirit.

Asian immigration to California started in the 18th Century, but its modern history can be dated to the *Immigration Act of 1965*, often referred to as Hart-Cellar act. Before 1965, the US immigration system limited foreign entry by mandating extremely small quotas according to nation of origin. Hart-Cellar by contrast, allowed immigration based on both the possession of scarce skills and on family ties to citizens or permanent residents. It also significantly increased the total number of immigrants allowed into the US. For example, Taiwan, like most other Asian countries, was historically limited to a maximum of 100 immigrant visas per year. As a result, only 47 scientists and engineers emigrated to the US from Taiwan in 1965. Two years later, the number had increased to 1,321 (Saxenian, 1999).

The 1965 Act thus created significant new opportunities for foreign-born engineers and other highly educated professionals whose skills were in short supply, as well for their families and relatives. The

great majority of these new immigrants were of Asian origin, and they settled disproportionately on the West Coast. By 1990, one-quarter of the engineers and scientists employed in California's technology industries were foreign-born—more than twice that of other highly industrialized states such as Massachusetts and Texas. *The Immigration and Nationality Act of 1990* further favored the immigration of engineers by almost tripling the number of visas granted on the basis of occupational skills from 54,000 to 40,000 annually. In doing so, it fueled the already burgeoning Asian immigration to California, particularly to urban centers such as Los Angeles and San Francisco.

Scholars have devoted considerable attention to California's immigrants but have focused their attention almost exclusively on the low-skilled population. However, the role of high-skilled immigrants is of growing importance to policymakers in California because foreign-born scientists and engineers account for a significant and growing proportion of the state's workforce. In 1990, immigrants accounted for 32% of the region's total scientific and engineering workforce.

National trends in graduate science and engineering education mirror these trends closely and provide insights into the changing composition of the Silicon Valley workforce. Between 1990 and 1996, the number of doctorates in science and engineering granted annually by US universities to immigrants from China more than tripled (from 477 to 1,680), and those to Indian immigrants doubled (to 692), whereas those to Taiwanese remained stable (at about 300). These three immigrant groups alone accounted for 81% of the doctorates granted to Asians and 62% granted of all foreign doctorates in science and engineering granted in the US between 1985 and 1996. Moreover, California's universities grant engineering degrees to Asian students at more than twice the rate of universities in the rest of the nation.

Not surprisingly, Silicon Valley's Indian and Chinese workforce is highly educated. In 1990, they earned graduate degrees at significantly greater rates than their white counterparts: 32% of the Indian

¹⁵ Parts of this section are from Saxenian, 1999.

Table 4:
Education of Indians, Chinese, and Whites
in Silicon Valley High-technology Industries, 1990

	Indian		Chinese		Whites	
	number	%	number	%	number	%
Masters, doctorage	4,043	55	7,612	40	34,468	18
Bachelor's degree	1,581	22	5,883	31	59,861	31
Some university	792	11	3,551	19	64,081	34
High school graduate	600	8	1,002	5	23,488	12
Less than high school	279	4	1,170	6	9,319	5

Source: Saxenian, 1999.

and 23% of the Chinese employed in Silicon Valley in 1990 had advanced degrees, compared to only 11% for the white population. Table 4 shows that the superior educational attainment of these groups is even more pronounced among workers in technology industries: 55% of Indian and 40% of Chinese technology workers held graduate degrees, compared to 18% of Whites.

The entrepreneurial contributions of these skilled immigrants are impressive. Ethnic Indian and Chinese immigrants run nearly 25% of the high-tech companies started in the valley since 1980. The 2,775 immigrant run companies had a total sales of \$16.8 billion and more than 58,000 employees last year. Those figures are probably understated because many companies they started are run by native-born Americans.

There is evidence that the traditional pattern is changing. Chinese and Indian immigrants run 29% of the companies founded between 1995 and 1998, a figure probably more accurately reflecting of their influence. Researchers and immigrants themselves say that immigrants frequently become entrepre-

neurs because they have already taken big risks by moving thousands of miles from home. Venture capital is also pouring in from overseas as immigrant entrepreneurs look outside the US. Currently, immigrant status may be an advantage in starting and funding companies.

The economic contributions of immigrants are not limited to their direct role as engineers and entrepreneurs. Although Silicon valley's new immigrant entrepreneurs are more highly skilled than their counterparts in traditional industries, like those counterparts they have created a rich fabric of professional and social activities that facilitate immigrant job search, information exchange, access to capital and managerial know-how, and the creation of shared ethnic identities. The region's most successful Chinese and Indian entrepreneurs rely heavily on such ethnic resources while simultaneously integrating into mainstream technology economy.

Table 5:
Sales and Employment of Silicon Valley High-technology Firms
Led by a Chinese or Indian CEO (1998)

	Number of		
	Firms	Sales (million)	Employment
Indian-led Firms	774	\$3,588	16,598
Chinese-led Firms	2,001	\$13,237	41,684
Total	2,775	\$16,825	58,282
Share of All Silicon Valley Firms	24%	17%	14%

Source: Saxenian, 1999

V. MODELS OF IMMIGRATION: IS THERE AN OPTIMAL SIZE FOR AN IMMIGRANT COMMUNITY?

1. General discussion

It is established that the single most important “immigrant pull” factor for a particular location is the size of an already existing ethnic community in a state/MSA, measured directly or in terms of percentage of all US foreign-born residents of a particular ethnicity residing in a given location. Thus, having *too few immigrants* of a particular ethnicity in a city means the future inflow of immigrants of this ethnicity to this city will be relatively slow.

The main rationale behind this finding is explained by the network theory of migration developed in the 1980s and early 1990s (see for example, Hugo, 1981; Taylor, 1986; Massey, 1990; Gurak and Caces, 1992). According to this theory, migrant networks are defined as “sets of interpersonal ties that connect migrants, former migrants, and non-migrants in origin and destination areas through ties of kinship, friendship, and shared community origin” (Massey et al, 1993, p. 448).

The sum of network connections generated by an ethnic community in a particular location constitutes valuable “social capital” that new or prospective immigrants from the same ethnicity can draw upon to facilitate employment, housing and other needs (Ibiden). Clearly the power of this social capital is a function of the size of an ethnic community concentrated in a particular location. “Once the number of migrants reaches a critical threshold, the expansion of networks reduces the costs and risks of movement, which causes the probability of migration to rise, which causes additional movement, which further expands the movement and so on” (Massey et al, 1993, p. 449).

By reducing costs and risks of immigration, the growth of migrant networks accelerate the inflow of immigrants, especially when the critical threshold is surpassed. However, this same process can have a significant downside for the host country, as growing ethnic “safety nets” make the inflow of

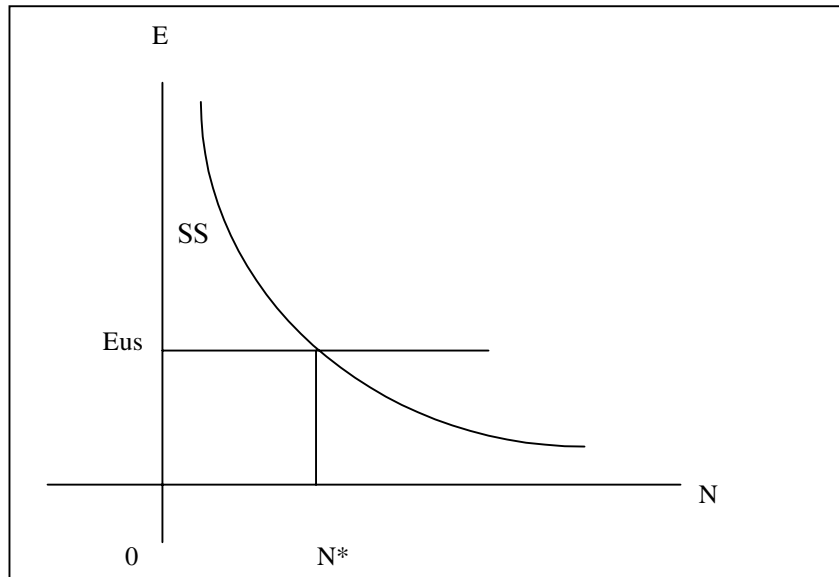
new immigrants into this country less and less selective. While first immigrants arriving at a particular location have to survive economically on their own, later immigrants can rely on increasing assistance from their compatriots. In a course of time, this leads to gradual lowering of selection criteria for the new immigrants. Ultimately the new immigrants start to be representative of the source country (Massey et al., 1993). This explains the logic behind such phenomena as New York’s Little Italy, Miami’s Little Havana, or San-Francisco’s Chinatown where residents can comfortably live for years without ever learning English or venturing out to the mainstream of the US economic life.

Existing studies confirm that concentration of *too many* immigrants of one ethnicity in a given city can lead to a decline in their important “quality” characteristics. These include average education level, English proficiency and skills. In addition, a larger size of immigrant communities correlates positively with higher welfare use/dependency and with such negative externalities as congestion and increased school drop-out rates among native-born persons of same ethnicity (Betts and Lofstrom, 1998; Reitz, 1998; Borjas, 1999).

From this observation it follows that for a city aiming to attract additional immigrants there possibly exists some *optimal size* of immigrant community for each ethnic group. For a city such as Louisville, which aims to increase its immigrant population, this optimal number should be between some *minimum* number of immigrants that is necessary to ensure faster growth of individual ethnic communities, and some *maximum* number after which education level of immigrants will start falling below the average education level of native citizens.

The role of education-based immigration planning is particularly important for Louisville, as it would contribute also to improvement in its standing

Figure 6: Education level of immigrants (ED) as a function of the size of ethnic community (N)



against other cities in terms of average education level. This is even more true for Kentucky, which is near the bottom of state rankings for educational attainment.

2. Maximizing “education surplus” from immigration

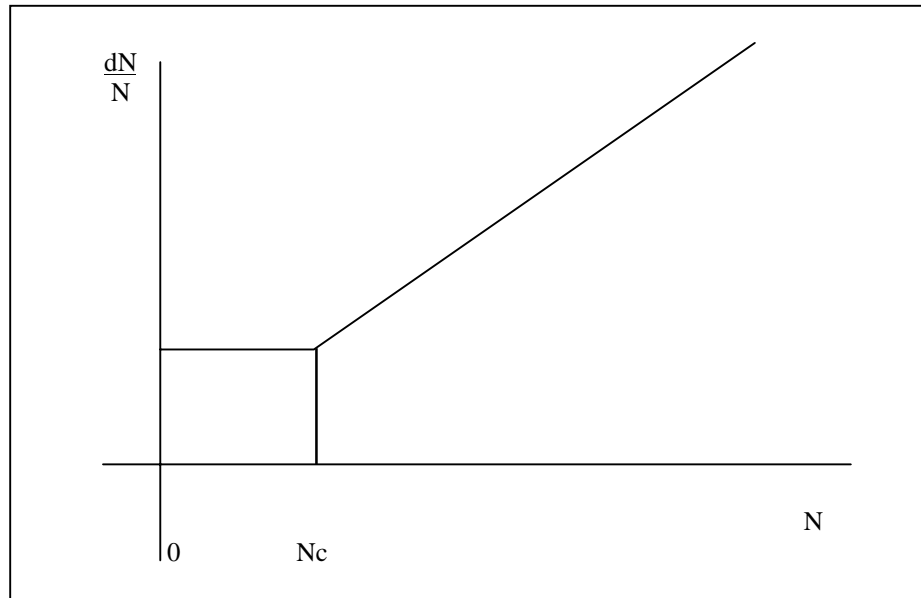
Hypothesis: With the growth of an ethnic community, the education level of members of a community decreases. At least for some ethnic communities there is a size at which education level starts at a higher level than for locals and then falls below it.

To test the above hypothesis empirically we briefly present a model that would be employed for econometric estimation. The educational attainment, generally measured in terms of number of years of schooling, is the most important predictor of economic and other contributions a prospective immigrant would make to the US in his/her lifetime.

As long as the educational level of an immigrant of a particular ethnicity exceeds the educational level of native born, the marginal benefit of immigration is positive. Based on this trade-off, the optimal size of immigrant population of a particular ethnic community in our model is determined by equating the average number of years of schooling of an additional immigrant to the number of years of schooling of a native born.

Let E represent the number of years of schooling of an immigrant population of a particular ethnicity. N is the number of immigrants of the same ethnicity. $E = f(N)$ is a decreasing function of N . In other words, as the number of immigrants of a particular ethnicity increases the number of years of schooling decreases. Let E_{US} represent the average years of schooling for native born persons. Then the optimal size of the immigrant population N^* for a given ethnicity is where $E_{US} = f(N)$. The reason N^* is optimal is that at N^* the social surplus from education given by the area SS in Figure 6 is maximized.

Figure 7: Rate of growth of an immigrant ethnic community (dN/N) as a function of its size (N)



In Phase II of the study, using sets of data described in the Appendix, we plan to estimate function $E = f(N)$ for eight different ethnic groups. From the estimated function N^* , the optimal size of ethnic groups will be determined for each group.

Goal: Estimate possible critical number N_c at which ethnic community starts to grow much faster than before (for the same 8 ethnic groups).

From the estimated function the estimates of elasticity η defined as the ratio of the % change in the number of years of schooling to the % change in immigrant population will be computed for 8 ethnic groups.

- The pull effect of the size of ethnic community – is there a critical number (N_c) after which the rate of growth of ethnic community changes?
- Tests for 1970-1980-1990 and 1998 data for metro areas of the US.

3. Determining the minimum critical size of an immigrant community

Hypothesis: Having too few immigrants in a city means that the ethnic community's support for the newcomers is not strong enough to accommodate large numbers of incoming compatriots, especially those with little education and English language skills. That in turn means that the immigrant inflow will be very slow.

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APPENDIX A. STATISTICS OF IMMIGRATION¹⁶

Published immigration statistics include information on several demographic concepts, such as immigration flow (i.e., the number of persons who come to reside in the United States each year or the number who transition from one legal status to another). Other immigration statistics indicate the size of the resident foreign-born population, net change in size, and emigration (i.e., the estimated number of foreign-born residents who leave the United States to live in another country). Statistics on the legal status of foreign-born residents have also been published.

Most federal statistical information on the foreign-born is provided by two agencies: the Immigration and Naturalization Service (INS) and the Bureau of the Census (BC). INS provides information relevant to flow of immigrants. The Census Bureau primarily collects information on the size of the resident foreign-born population and on annual change in size. The Census Bureau also provides an estimate of emigration.

1. Immigration statistics collected by the INS

Comprehensive information on immigration flow is reported in the annual INS Statistical Yearbooks. INS records that are maintained for administrative purposes are the basis for most federal statistics on flow of immigrants. These statistics describe the number of new legal permanent residents (persons with new “green-card” status), new refugees and asylees, and new naturalized citizens. As reported in the INS Yearbook, however, these statistics are limited by conceptual problems and confused reporting, undercounts, and information gaps. For example, data on annual trends in the number of new green cards authorized, although highlighted in the INS Yearbook, are significantly affected by INS administrative problems in processing green-card applicants and thus may not accurately reflect flow over time. The number of new asylees—persons granted asylum—and the number of persons

granted citizenship are undercounted in the Yearbook tallies because the data omit certain groups of persons, such as those granted asylum on appeal or minor children of new citizens. Adequate statistics for some demographic categories, such as the number of foreign-born students who take up residence in the United States each year, are not available.

Because almost all immigration laws involve specific legal statuses, it is crucial that information on each major demographic concept be reported separately for each of the major legal statuses (legal permanent residents, refugees and asylees, persons with a temporary visa, illegal immigrants, and naturalized citizens). All together, there are 33 relevant demographic categories. It is important to note the interrelationships of these categories to clarify (1) the differences between demographic concepts and (2) which statistics can—and which cannot—be validly compared.

The INS Yearbooks present a variety of data on immigration flow, including counts of new Legal Permanent Residents (LPRs), new refugees and asylees, and new U.S. citizens—all based on administrative records. But as presented, these data do not convey a clear and valid picture of immigration flow that is relevant to policy information needs. Rather, there are instances of conceptual problems and confused reporting, as well as undercounts and information gaps.

Conceptual problems and confused reporting are evident in the introductions to the INS 1995 and 1996 Yearbooks, which alternatively highlight a “decrease” (1995) and a “rise” (1996) in immigration to the United States. These annual trends mix data on two types of flow: (1) flow of new LPRs into the United States and (2) transitions by persons already living here into LPR status. These trends in “combined-flow” can reflect (1) a change

¹⁶ This section is an adaption of General Accounting Office (GAO) findings.

in the number of persons coming into the United States, (2) an administrative logjam (slowdown) or speed-up in INS' issuing of green cards to foreign-born persons already living here, or (3) some combination of the two.

Mixing two different forms of flow is not a trivial problem because, according to the Yearbook, the majority of potential green-card holders already reside in the US—often either illegally or on temporary visas—and because, in recent years, INS has experienced problems in processing green cards. (The agency is struggling to catch up with backed-up applications, which numbered approximately 775,000 as of April 1998.) Thus, the trends that INS highlights are very difficult to interpret, but readers of the Yearbook introduction are not alerted to this difficulty—unless they turn to the body of the report.

Another instance of a conceptual problem exacerbated by confused reporting occurs when the INS Yearbook presents information relevant to flow of legal immigration (i.e., the number of new green cards authorized in the past year), but not for illegal immigration. Instead, the Yearbook presents information on net change in the size of the illegal population. For a valid comparison of data on legal flow to data on illegals, comparable categories must be used; that is, legal flow should be compared to illegal flow—not to net change in the size of the illegal population. Because the INS Yearbook does not point out the difference between flow and net change, there is a potential for a reader to make an invalid comparison. For a given year, net change in the illegal population is likely to be considerably smaller than illegal flow because the net change statistic leaves out deaths, emigration, and legalizations for all illegal immigrants, regardless of how many years they have resided in the US. A likely consequence is that, for readers of the INS Yearbook, the flow of illegal immigrants is understated relative to the flow of legal immigrants.

The 1996 INS Yearbook also presents figures that undercount two other categories of flow:

- Persons granted asylum are undercounted by about a third or more, based on information that the US Government Accounting Office (GAO) obtained from computer systems maintained by INS, the Department of State, and the Department of Justice's Executive Office of Immigration Review (EOIR). Groups omitted from the Yearbook tally include (1) persons who were granted asylum on appeal and (2) trailing relatives of persons granted asylum. (These trailing relatives who "followed to join" a principal asylee were not included in that asylee's original application—often because they were not in the United States at the time).
- The number of new naturalizations is undercounted by an unknown amount. INS administrative records on naturalizations do not include most minor children who naturalize along with their parents.

There are also information gaps for certain categories of flow. For example, no statistic is reported for the number of new residents who entered the United States with temporary (e.g., student, worker) visas. This number cannot be tallied accurately because INS record-keeping systems are not designed to identify reentries. Thus, a foreign student residing here for 4 years who visits his home country twice a year would be tallied as eight separate 6-month visits by up to eight persons, rather than as a single individual's 4-year stay.

2. Immigration statistics collected by the Census Bureau

The Census Bureau provides ongoing coverage data on size and net change in size for the total foreign-born population and for naturalized citizens. The Bureau also estimates emigration in its comprehensive decennial censuses. Analysts have raised a

variety of questions about possible problems with Census data on the foreign-born. One of these problems is undercoverage of illegal immigrants who may deliberately avoid enumeration. The Census Bureau's estimate of emigration represents one instance where census undercoverage of the foreign-born clearly limits the utility of the data. The uncertainty of the emigration estimate is important because information on emigration is needed to balance information on flow—and also because estimates of emigration figure prominently in indirect estimates of population size for illegals and legal permanent residents. The Census Bureau attempts to fill this gap through a method of examining change in the size of various arrival groups across two points in time. For example, the 1970-79 arrival group (i.e., foreign-born residents who arrived here between 1970 and 1979) was counted in the 1980 and again in the 1990 decennial census. Emigration for that group is estimated according to the amount it dwindled between 1980 and 1990. But the data for certain pre-1980 arrival groups (e.g., Mexican and Salvadoran arrival groups) showed growth between 1980 and 1990 rather than dwindling—a logical impossibility since all had arrived before 1980. This pattern of apparent growth, which could be explained by differential census coverage (i.e., lower coverage of Mexican and Salvadoran residents in 1980 than in 1990), raises questions about the census counts that underlie the emigration calculation.

Data gaps occur for the number of residents in specific legal statuses—from LPRs to illegal immigrants—and for net change in the sizes of these resident population groups. Direct questions on legal status are very sensitive and, according to the Census Bureau, have not been asked in the census or in

any survey that it has conducted. To fill data gaps for the population sizes of certain legal statuses, the Census Bureau and INS have developed indirect estimates of the number of illegal immigrants and legal permanent residents. These estimates address key gaps and thus would seem to represent a step forward in providing information, but multiple sources of uncertainty remain - owing to the lack of direct empirical data and the need for major assumptions that, in some cases, are not fully supported.

3. Demographic and economic characteristics of immigrants

This outline summarizes the available published data on demographic characteristics of foreign-born persons with respect to the latest (1996) flow and “stock” data—that is, the size of the total foreign-born population. Major demographic characteristics include country of origin or birth, age or age group, sex, race and Hispanic origin, and marital status. Other variables of interest include area or state of US residence and economic characteristics such as occupation, employment status, homeownership, poverty status, benefit receipt, and so forth. Not all demographic and other characteristics identified above were available for all legal statuses of foreign-born persons

4. Foreign-born population: Flow estimates

Legal permanent residents

The 1996 *INS Statistical Yearbook* reports only one demographic characteristic separately for each legal category of new immigrants: the country of birth.¹⁷ Other demographic characteristics—age group, sex, marital status, and state of intended resi-

¹⁷ Aliens who transition to LPR status have often already been living in the United States for years; therefore, the demographic characteristics enumerated should be understood in that context, rather than interpreted as uniformly applying to the group of aliens newly arriving in the United States in 1996.

¹⁸ Employment-based principal immigrants are persons who qualify for green-card status based on their labor market skills. Employers wishing to sponsor an alien for permanent residence in order to fill a job must first apply for labor certification from the Department of Labor. Labor certification is awarded when there are insufficient numbers of US workers available to undertake the employment sought by an applicant and when the alien's employment will not have an adverse effect on the wages and working conditions of US workers similarly employed.

dence—are reported only for combined-flow LPRs, which totaled 915,900 in fiscal year 1996. For one group of new LPRs—employment-based immigrants—the 1996 INS Yearbook also reports occupation.¹⁸ Occupational detail is shown for just 261,000 of the remaining 864,000 LPRs; over 551,000 of these LPRs are students, children, homemakers, retirees, or unemployed workers.

More detailed tabulations for the LPRs can be achieved by analyzing public use files.¹⁹ Education and income are not included in these administrative records. When fully implemented, the new green-card survey (now in pilot stage) should provide a wealth of demographic information about new LPRs (Jasso et al., 1997). Such information will, no doubt, prove useful in policy-related analyses, such as assessing potential labor market impacts.

5. Refugees and asylees

The 1996 INS Yearbook reports the country of birth for 93,347 newly admitted refugees and approved asylees in fiscal year 1996. No other demographic data on refugees or asylees are reported in the 1996 INS Yearbook, other than for those who became LPRs that year (there is no requirement for a refugee or asylee to become an LPR). The Department of Health and Human Services annually reports country of citizenship and state of initial resettlement (in the United States) for newly admitted refugees.²⁰

Naturalized citizens

The 1996 INS Yearbook reports the sex, age group, marital status, state of residence, major occupational group, region, and country of former allegiance for 1,044,689 aliens who became naturalized citizens in fiscal year 1996. These persons were already living in the United States

6. Foreign-born population: “stock” estimates

Total foreign-born

Also in its publication Current Population Reports, the Census Bureau reports age group, sex, race, citizenship (naturalized citizen or not a citizen), period of entry to the United States, educational attainment, labor force status, income, receipt of means-tested cash benefits (Aid to Families With Dependent Children, Supplemental Security Income, and general welfare), poverty status, and homeownership for 24,557,000 foreign-born persons in 1996.²¹ It reports, for selected states, the percentage of state populations that were foreign-born.²² It also reports the number and percentage of foreign-born from selected regions of the world and countries of birth.²³

¹⁹ The public use files contain information on aliens granted legal permanent resident status. They are available on magnetic tapes or cartridges from the National Technical Information Service. These files contain information on demographic characteristics, which may be broken out separately for new entries and transitions by the computer-oriented analyst. More information about the public use files, which are currently available for fiscal years 1972-96, is listed on p.201 of the 1996 INS Yearbook.

²⁰ The 1996 report also contains certain overall 1996 demographic characteristics (such as employment rate, labor force participation rate, and unemployment rate, by sex, and English proficiency, hourly wages, and homeownership at time of arrival). However, these data refer to refugees age 16 and older in a “five-year sample population consisting of Amerasians, Entrants, and Refugees of all nationalities who arrived in the years 1991-1996.” Thus, demographic characteristics for 1996 refugees are not reported separately, but the capacity to report them separately may exist, depending upon the characteristics of the sampling frame and whether the sample of refugees would be sufficiently large to obtain reliable statistical results.

²¹ The Bureau of the Census has placed numerous publications, including those pertaining to the foreign-born population, on its Internet site at <<http://www.census.gov>>.

²² The states are those with the highest level of concentration of immigrants: California, New York, Hawaii, Florida, New Jersey, Nevada, Texas, Arizona, and Rhode Island.

²³ The regions are Central America, Caribbean, South America, Europe, and Asia. The countries are Mexico, Canada, El Salvador, Cuba, Dominican Republic, Jamaica, Germany, Great Britain, Philippines, China, India, Vietnam, and Korea.

Naturalized citizens

In the Bureau of the Census Current Population Reports, the characteristics reported for naturalized citizens include age group, sex, race, year of entry to the United States, educational attainment, labor force status, income, receipt of means-tested cash benefits (Aid to Families With Dependent Children, Supplemental Security Income, and general welfare), poverty status, and homeownership.

Legal permanent residents

On its Internet site, the INS reports the estimated state of residence for its estimated 10,525,000 legal permanent residents (plus or minus 350,000, and ranges for each state) as of April 1996.²⁴ No other demographic data are reported. The state-level distributions of LPRs are based on separate calculations for each state as follows: (1) adding post-1990 LPRs to the 1990 census count of non-citizens, (2) subtracting 1990 estimates of illegal aliens and nonimmigrants, (3) subtracting estimates of post-1990 illegal aliens and nonimmigrants, and (4) adjusting for emigration and mortality. The ranges are based on adjustments to the 1990 Census. The ranges in the estimates, INS stated, resulted from adjustments made to the number of noncitizens counted in the 1990 census.²⁵

Illegal aliens

The 1996 INS Yearbook reports two demographic characteristics—the top 20 countries of origin and the top 20 US states of residence—for 5 million illegal aliens as of October 1996.²⁶ No other demographic data are reported. A separate publication (Warren, 1997) provides estimates for all states (with upper and lower ranges) and point estimates for 97 countries.

The 1996 state-level distributions of illegals in the 1996 INS Yearbook were constructed by combining estimates of illegal aliens from two major groups. The first group consists of aliens who entered surreptitiously across land borders, usually between official ports of entry, who often are referred to as EWIs (entries without inspection). The second group is “nonimmigrant overstays”—aliens who were legally admitted to the United States temporarily and stayed beyond the specified period of admission. For EWIs who entered the United States from 1988 to 1996, the totals were distributed to states “using INS statistics for the early 1990s on the destination of the beneficiaries of aliens who legalized” under the Immigration Reform and Control Act (IRCA) of 1986. Estimates of overstays who arrived during 1988-96 were distributed to state of residence “based on annual estimates of overstays by state of destination for 1986 to 1989” (emphasis added). The state-level data for 1996, therefore, reflect the distributions of illegal immigration for earlier years and thus may not represent the actual current distributions.

²⁴ The Internet address is <<http://www.ins.usdoj.gov/hqopp/>>. Some details of the estimation procedures are not stated there, however.

²⁵ Specifically, “the census undercount of non-citizens was assumed to range between 5 and 7%, while the percentage of aliens who reported that they were citizens but who were actually non-citizens was assumed to range between 1 and 5%.”

²⁶ The countries are Mexico, El Salvador, Guatemala, Canada, Haiti, Philippines, Honduras, Dominican Republic, Nicaragua, Poland, Bahamas, Colombia, Ecuador, Trinidad and Tobago, Jamaica, Pakistan, India, Ireland, Korea, and Peru. The states are California, Texas, New York, Florida, Illinois, New Jersey, Arizona, Massachusetts, Virginia, Washington, Colorado, Maryland, Michigan, Pennsylvania, New Mexico, Oregon, Georgia, District of Columbia, Connecticut, and Nevada. The information in the 1996 INS Yearbook is also listed on the INS Internet site at <<http://www.ins.usdoj.gov/stats/illegalalien/index.html>>



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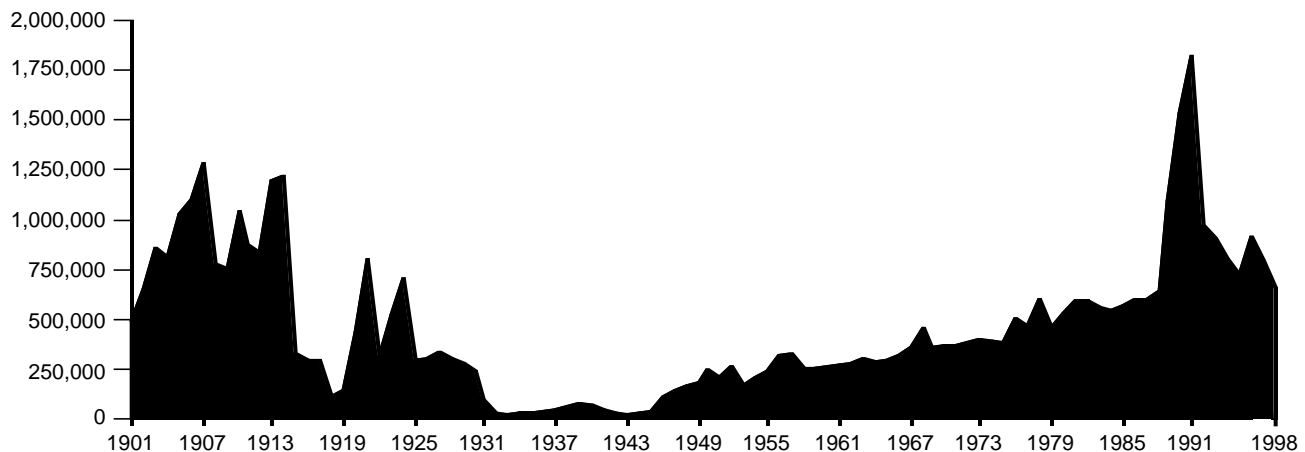
Legal Immigration, Fiscal Year 1998

This report provides a summary of INS statistics on immigrants admitted for legal permanent residence during fiscal year 1998 (October 1, 1997 - September 30, 1998). Included as legal immigrants are: 1) aliens who were previously living abroad; and 2) aliens who were already living in the United States, in some cases, for many years. The former obtain immigrant visas through the U.S. Department of State (DOS) allowing them to enter

pending a decision. As a result, this report does not describe trends in legal immigration or changes in the demographic composition of legal immigrants in any detail.

Data were obtained from the Computer Linked Applicant Information Management System (CLAIMS) of the INS. CLAIMS maintains information from the Immigrant Visa and Alien

Chart 1. Legal Immigration: Fiscal Years 1901-98



the United States. The latter adjust status through the Immigration and Naturalization Service (INS).

In recent years, including fiscal year 1998, legal immigration has been affected by an increasing number of adjustments of status applications

Registration (OF-155A) of the DOS for immigrant new arrivals and from applications to adjust status (I-485) of the INS. Further information about the data is included in the Appendix. An attached set of tables includes detailed statistical information for further reference.

HIGHLIGHTS

- ❖ Legal immigration in 1998 (660,477) was at its lowest level since 1988 (643,025). (See Chart 1). Fewer immigrants than expected have been admitted for legal permanent residence in recent years as the number of adjustment of status applications pending a decision has grown (See Chart 2).
- ❖ During the 1995-98 period, legal immigration would have been an estimated 450,000-550,000 higher than reported if the pending caseload had not increased.
- ❖ The demographic composition of legal immigrants, including category of admission, changed very little between 1996-97 and 1997-98. The impact of pending adjustment of status applications on the characteristics of immigrants is unknown.

Estimated Impact of Pending Adjustment of Status Applications

Between the end of fiscal years 1994 and 1998, the number of adjustment of status applications pending a decision increased 690,000 from 121,000 to 811,000. During this period, the number of applications approved failed to keep pace with receipts.¹

The impact of pending adjustment of status applications on legal immigration during fiscal years 1995-98 was estimated using the method for

¹ Adjustment of status applications were up during 1995-97 while the Section 245i provision of immigration law was in effect (October 1995-January 1998). Section 245i allowed illegal aliens who were already living in the United States but eligible for legal permanent residence to apply for adjustment of status at a local INS office. Previously, eligible aliens had to leave the country and apply for immigrant visas at DOS consular offices.

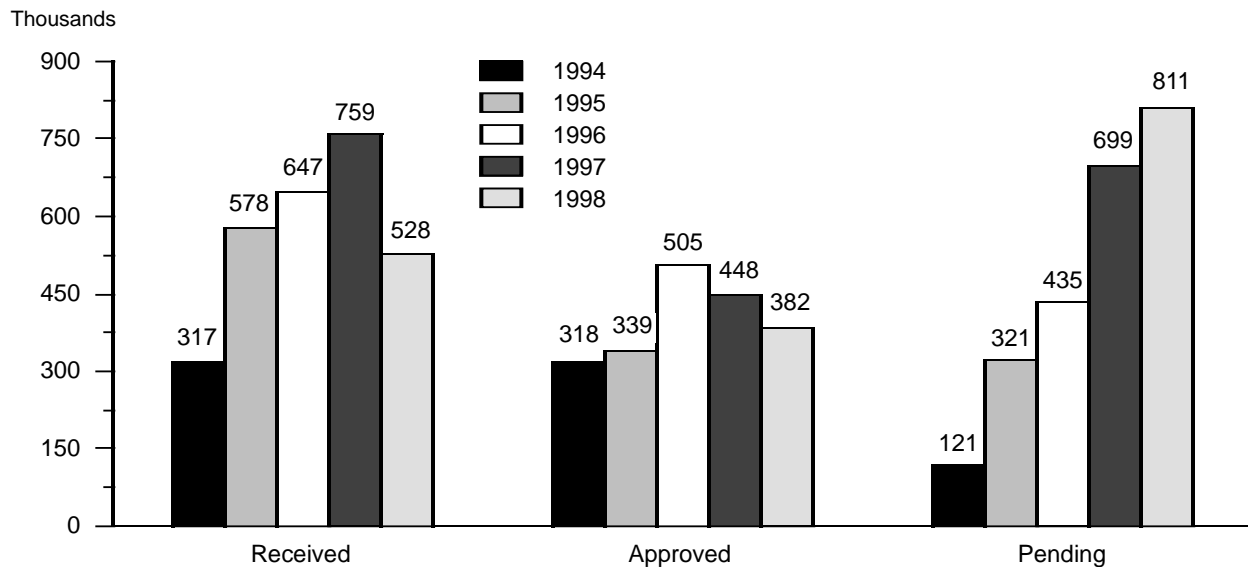
1995-97 presented in *Legal Immigration, Fiscal Year 1997*. For 1995-98, it is estimated that legal immigration would have been 450,000-550,000 higher had pending applications not increased 690,000. The upper bound estimate of 550,000 assumes that 7 percent of applications would have been denied (the historical denial rate) and that 14 percent were family preference applicants (the proportion of all adjustment of status legal immigrant during fiscal years 1995-98), none of whom contributed to the increase in pending caseload. The lower bound estimate of 450,000 takes into account the increase in the family preference limit in 1996 attributable to pending adjustment of status applications in fiscal year 1995.

Ordinarily, family preference adjustment of status applications pending a decision do not decrease legal immigration because of a waiting list of applicants. The DOS regulates immigration under the preference system by issuing visas to aliens on the waiting list whenever it appears that the annual limits may not be reached. (Unlike family preferences, there is little waiting for most employment preferences so an increase in pending caseload decreases legal immigration.) In fiscal year 1998, however, DOS was unable to issue all the family preference visas allowable under the annual limits because of delays in the application process caused by revisions in the affidavit of support.²

The calculations presented above suggest that legal immigration might have been 110,000-140,000 higher on average each year during 1995-98

² Effective December 1997, the affidavit of support, which must be filed for immediate relatives of U.S. citizens, family preferences, and certain other categories of immigrants, became an enforceable contract, and household income of sponsors had to exceed the federal poverty guidelines by at least 125 percent. Additional information required of applicants increased the time it took to complete the affidavit of support application correctly. The new rules also delayed the adjustment of status application process, but because of the pending caseload, did not affect adjustment of status approvals in 1998.

Chart 2. Immigrant Adjustment of Status Applications (I-485): Fiscal Years 1994-98



without any increase in the pending caseload. It should be noted, as in the 1997 report, that the average conceals some known annual variation. Pending adjustment of status applications increased more during fiscal years 1995 and 1997 than during fiscal year 1996 when the increase in the family preference limit offset much of the loss from pending applications. In 1998, the decline in the number of applications received may have prevented the pending caseload from growing more rapidly.

CLAIMS does not maintain data on the characteristics of applicants whose adjustment of status applications are pending a decision. It may be assumed that immigrant categories most affected in 1998 include those which traditionally have had the highest percentages of adjustments of status cases: employment preferences; refugees; and spouses of U.S. citizens.

APPENDIX

Notes on Data

Terms and definitions — Legal immigrants according to immigration law are persons lawfully admitted for permanent residence in the United States. Other terms used in INS reports to refer to legal immigrants include: aliens who were granted legal permanent residence; aliens admitted for legal permanent residence; immigrants admitted; and admissions.

There are two general administrative paths open to aliens wishing to become legal permanent residents depending on their residence at the time of application. Aliens living abroad apply for an immigrant visa at a consular office of the Department of State. Once issued a visa, they may enter the United States. They are granted legal permanent residence at the time they pass through the port of entry. Aliens already living in the United States, including certain undocumented

immigrants, temporary workers, foreign students, and refugees, become legal immigrants by filing an application with the INS for adjustment of status to legal permanent residence. Adjustment of status applicants are granted legal permanent residence at the time their applications are approved. New legal immigrants are automatically authorized to work. They should receive alien registration cards (“green cards”) within several weeks of becoming legal permanent residents, but in recent years this process has sometimes taken longer.

Fiscal year legal immigration — The INS tabulates data on legal immigrants each fiscal year. Before fiscal year 1998, each year’s total included a small number of aliens granted legal permanent residence in previous fiscal years for whom demographic information had not been entered into the automated systems used to generate the annual data.

Data quality — During fiscal years 1997 and 1998, the INS transitioned immigrant application processing from the Immigrant Card Facility (ICF) to the Computer Linked Applicant Information Management System (CLAIMS). Most immigrant records for fiscal year 1998 were selected using the date of approval for legal permanent residence. Alternative methods were required for selecting records for certain categories of immigrants, including refugees, asylees, and cancellation of removal. For these immigrant categories, an earlier or rollback date, rather than the actual approval date, is stored in the admission/adjustment date field for counting the time spent toward meeting the residency requirement for naturalization.

Refugees and cancellation of removal cases were selected using the most recent date of data entry as a proxy for the approval date. Asylee cases were selected by adding one year to the date appearing in the admission/adjustment date field since asylees are eligible for naturalization 4 years after they become legal permanent residents.

The refugee count (44,709) was consistent with the number of approvals (44,829) reported through the INS workload statistics (G-22.2 report), although less than what would have been expected (80,000 or more) based on recent trends in the refugee ceiling, the number of refugee arrivals, and the number of refugee adjustments of status.

Counts for cancellation of removal immigrants (428) and asylees (7,546) were considered too low. The annual limits, 4,000 and 10,000, respectively, were reached during fiscal year 1998 and substituted as estimates. Demographic characteristics for the 6,026 additional cases ((10,000-7,546) asylees + (4,000-428) cancellation of removal) were assumed unknown.

In addition, some of the variables traditionally included in the data extract for the annual legal immigrant reports were not included initially in CLAIMS. This omission has been corrected for fiscal year 1999. However, about 100,000 of the 1998 records are missing information for country of chargeability and nationality, marital status, occupation, and nonimmigrant class and year of entry.

Preference Limits

The Immigration Act of 1990 (P.L. 101-649) restructured the immigrant categories of admission and made other modifications to the Immigration and Nationality Act. The 1990 Act divided the preference classes into two general categories: family-sponsored and employment-based. Limits on the number of visas issued in these two categories are determined annually.

Family-sponsored limits — The worldwide level for family-sponsored preferences is calculated as:

480,000 minus the number of aliens who were issued visas or adjusted to legal permanent residence in the previous fiscal year as 1) immediate relatives of U.S. citizens, 2) children born subsequent to the

issuance of a visa to an accompanying parent, and 3) children born abroad to lawful permanent residents on temporary trips abroad, plus unused employment preferences in the previous fiscal year.

The 1990 Act specifies that the family-sponsored limit may not go below a minimum of 226,000 in any year. The number of legal permanent residents issued visas or who adjusted in fiscal year 1997 under categories 1-3 listed above was 336,384, and 40,710 employment-based visas were unused in 1997. The 1998 family-sponsored limit, therefore, was set to 226,000 ($480,000 - 336,784 + 40,710 = 184,326$ which is below 226,000). The limits for each of the family-sponsored preferences and their descriptions are shown below.

Employment-based limits — The 1990 Act specifies that the worldwide limit on employment-

based preference immigrants is equal to 140,000 plus unused family-preference visas in the previous year. The limit for fiscal year 1998 was set to 140,000 ($140,000 + \text{no unused family-preference visas in 1997} = 140,000$).

Per-country limits — The per-country limit on preference immigration for independent countries is set to 7 percent of the total family and employment limits ($226,000 + 140,000 = 366,000$), while dependent areas are limited to 2 percent of the total. The 1998 limit for independent foreign states was 25,620 (7 percent of 366,000) and the limit for dependencies was 7,320 (2 percent of 366,000).

Diversity limits — This classification became effective in fiscal year 1995. The annual limit is set at 55,000.

Categories of Immigrants Included in World-Wide Annual Limit Specified in Section 201 of the Immigration and Nationality Act: Unadjusted and Fiscal Year 1998 Limits

PREFERENCE	DESCRIPTION	UNADJUSTED LIMIT	LIMIT
Family-sponsored immigrants		480,000 ¹	480,000 ¹
Family-sponsored preferences		226,000	226,000
First	Unmarried sons and daughters of U.S. citizens and their children	23,400 ²	23,400 ²
Second	Spouses, children, and unmarried sons and daughters of permanent resident aliens	114,200 ³	114,200 ³
Third	Married sons and daughters of U.S. citizens	23,400 ³	23,400 ³
Fourth	Brothers and sisters of U.S. citizens (at least 21 years of age)	65,000 ³	65,000 ³
Immediate relatives of adult U.S. citizens (spouses, children, and parents) and children born abroad to alien residents		Not limited; assumed to be	254,000 ¹
		254,000 ¹	254,000 ¹
Employment-based preferences		140,000	140,000
First	Priority workers	40,040 ⁴	40,040 ⁴
Second	Professionals with advanced degrees or aliens of exceptional ability	40,040 ³	40,040 ³
Third	Skilled workers, professionals, needed unskilled workers, and Chinese Student Protection Act immigrants	40,040 ³	40,040 ³
Fourth	Special immigrants	9,940	9,940
Fifth	Employment creation ("Investors")	9,940	9,940
Diversity		55,000	55,000
TOTAL		675,000	675,000

Note: The annual limits are adjusted based on visa usage in the previous year.

¹ The number of immediate relatives of U.S. citizens included in these figures is assumed to be 254,000. Immediate relatives may enter without any limitation, however, the limit for family-sponsored preference immigrants in a fiscal year is equal to 480,000 minus the number of immediate relatives admitted in the preceding year. The limit of family-sponsored preference visas cannot go below a minimum of 226,000—the worldwide limit of 480,000 minus 254,000. ² Plus unused family 4th preference visas. ³ Visas not used in higher preferences may be used in these categories. ⁴ Plus unused employment 4th and 5th preference visas.

Table 1. Immigrants Admitted by Major Category of Admission: Fiscal Years 1995-98

Category of admission	1998		1997		1996		1995	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	660,477	100.0	798,378	100.0	915,900	100.0	720,461	100.0
New arrivals	357,037	54.1	380,718	47.7	421,405	46.0	380,291	52.8
Adjustments of status	303,440	45.9	417,660	52.3	494,495	54.0	340,170	47.2
Categories related to world-wide limits	598,787	90.7	675,816	84.6	772,737	84.4	593,234	82.3
Family-sponsored immigrants	475,750	72.0	535,771	67.1	596,264	65.1	460,376	63.9
Family-sponsored preferences	191,480	29.0	213,331	26.7	294,174	32.1	238,122	33.1
Unmarried sons/daughters of U.S. citizens	17,717	2.7	22,536	2.8	20,909	2.3	15,182	2.1
Spouses and children of alien residents	88,488	13.4	113,681	14.2	182,834	20.0	144,535	20.1
Married sons/daughters of U.S. citizens	22,257	3.4	21,943	2.7	25,452	2.8	20,876	2.9
Siblings of U.S. citizens	63,018	9.5	55,171	6.9	64,979	7.1	57,529	8.0
Immediate relatives of U.S. citizens ¹	284,270	43.0	322,440	40.4	302,090	33.0	222,254	30.8
Spouses	151,172	22.9	170,263	21.3	169,760	18.5	123,238	17.1
Parents	61,724	9.3	74,114	9.3	66,699	7.3	48,382	6.7
Children	70,472	10.7	76,631	9.6	63,971	7.0	48,740	6.8
Children born abroad to alien residents	902	.1	1,432	.2	1,660	.2	1,894	.3
Legalization dependents	21	Z	64	Z	184	Z	277	Z
Employment-based preferences ..	77,517	11.7	90,607	11.3	117,499	12.8	85,336	11.8
Priority workers	21,408	3.2	21,810	2.7	27,501	3.0	17,339	2.4
Professionals with advanced degree or of exceptional ability	14,384	2.2	17,059	2.1	18,462	2.0	10,475	1.5
<i>Skilled, professionals, unskilled</i> ..	<i>34,317</i>	<i>5.2</i>	<i>42,596</i>	<i>5.3</i>	<i>62,756</i>	<i>6.9</i>	<i>50,245</i>	<i>7.0</i>
Chinese Student Protection Act	41	Z	142	Z	401	Z	4,213	.6
Needed unskilled workers	6,255	.9	8,702	1.1	11,849	1.3	7,884	1.1
Other skilled, professionals ..	28,021	4.2	33,752	4.2	50,506	5.5	38,148	5.3
Special immigrants	6,584	1.0	7,781	1.0	7,844	.9	6,737	.9
Investors	824	.1	1,361	.2	936	.1	540	.1
Diversity programs	45,499	6.9	49,374	6.2	58,790	6.4	47,245	6.6
Permanent	45,499	6.9	49,360	6.2	58,245	6.4	40,301	5.6
Transition	X	X	14	Z	545	.1	6,944	1.0
Other categories	61,690	9.3	122,562	15.4	143,163	15.6	127,227	17.7
Amerasians	346	.1	738	.1	956	.1	939	.1
Parolees, Soviet and Indochinese	1,225	.2	1,844	.2	2,269	.2	3,086	.4
<i>Refugees and asylees</i>	<i>54,709</i>	<i>8.3</i>	<i>112,158</i>	<i>14.0</i>	<i>128,565</i>	<i>14.0</i>	<i>114,664</i>	<i>15.9</i>
Refugee adjustments	44,709	6.8	102,052	12.8	118,528	12.9	106,827	14.8
Asylee adjustments ²	10,000	1.5	10,106	1.3	10,037	1.1	7,837	1.1
Cancellation of removal ²	4,000	.6	4,628	.6	5,811	.6	3,168	.4
<i>Total, IRCA legalization</i>	<i>955</i>	<i>.1</i>	<i>2,548</i>	<i>.3</i>	<i>4,635</i>	<i>.5</i>	<i>4,267</i>	<i>.6</i>
Residents since 1982	954	.1	1,439	.2	3,286	.4	3,124	.4
Special Agricultural Workers ..	1	Z	1,109	.1	1,349	.1	1,143	.2
Other	455	.1	646	.1	927	.1	1,103	.2

¹ May enter without limitation; the number admitted may affect the limit on family-sponsored preference immigrants in the following year.

² Estimated. See Notes on Data in Appendix.

X Not applicable. Z Rounds to less than .05 percent.

Table 2. Immigrants Admitted by Region and Selected Country of Birth: Fiscal Years 1995-98

Region and country of birth	1998		1997		1996		1995	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All countries	660,477	100.0	798,378	100.0	915,900	100.0	720,461	100.0
Africa	40,660	6.2	47,790	6.0	52,889	5.8	42,456	5.9
Asia	219,696	33.3	265,786	33.3	307,807	33.6	267,931	37.2
Europe	90,793	13.7	119,898	15.0	147,581	16.1	128,185	17.8
North America	252,996	38.3	307,488	38.5	340,540	37.2	231,526	32.1
Caribbean	75,521	11.4	105,299	13.2	116,801	12.8	96,788	13.4
Central America	35,679	5.4	43,676	5.5	44,289	4.8	31,814	4.4
Other North America	141,796	21.5	158,513	19.9	179,450	19.6	102,924	14.3
Oceania	3,935	.6	4,342	.5	5,309	.6	4,695	.7
South America	45,394	6.9	52,877	6.6	61,769	6.7	45,666	6.3
Unknown	7,003	1.1	197	Z	5	Z	2	Z
1. Mexico	131,575	19.9	146,865	18.4	163,572	17.9	89,932	12.5
2. China, People's Republic	36,884	5.6	41,147	5.2	41,728	4.6	35,463	4.9
3. India	36,482	5.5	38,071	4.8	44,859	4.9	34,748	4.8
4. Philippines	34,466	5.2	49,117	6.2	55,876	6.1	50,984	7.1
5. Dominican Republic	20,387	3.1	27,053	3.4	39,604	4.3	38,512	5.3
6. Vietnam	17,649	2.7	38,519	4.8	42,067	4.6	41,752	5.8
7. Cuba	17,375	2.6	33,587	4.2	26,466	2.9	17,937	2.5
8. Jamaica	15,146	2.3	17,840	2.2	19,089	2.1	16,398	2.3
9. El Salvador	14,590	2.2	17,969	2.3	17,903	2.0	11,744	1.6
10. Korea	14,268	2.2	14,239	1.8	18,185	2.0	16,047	2.2
11. Haiti	13,449	2.0	15,057	1.9	18,386	2.0	14,021	1.9
12. Pakistan	13,094	2.0	12,967	1.6	12,519	1.4	9,774	1.4
13. Colombia	11,836	1.8	13,004	1.6	14,283	1.6	10,838	1.5
14. Russia	11,529	1.7	16,632	2.1	19,668	2.1	14,560	2.0
15. Canada	10,190	1.5	11,609	1.5	15,825	1.7	12,932	1.8
16. Peru	10,154	1.5	10,853	1.4	12,871	1.4	8,066	1.1
17. United Kingdom	9,011	1.4	10,651	1.3	13,624	1.5	12,427	1.7
18. Bangladesh	8,621	1.3	8,681	1.1	8,221	.9	6,072	.8
19. Poland	8,469	1.3	12,038	1.5	15,772	1.7	13,824	1.9
20. Iran	7,883	1.2	9,642	1.2	11,084	1.2	9,201	1.3
Subtotal	443,058	67.1	545,541	68.3	611,602	66.8	465,232	64.6
Other	217,419	32.9	252,837	31.7	304,298	33.2	255,229	35.4

Z Rounds to less than .05 percent.

**Table 3. Immigrants Admitted by Selected State and Metropolitan Area of Intended Residence:
Fiscal Years 1995-98**

State and metropolitan area	1998		1997		1996		1995	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All states	660,477	100.0	798,378	100.0	915,900	100.0	720,461	100.0
1. California	170,126	25.8	203,305	25.5	201,529	22.0	166,482	23.1
2. New York	96,559	14.6	123,716	15.5	154,095	16.8	128,406	17.8
3. Florida	59,965	9.1	82,318	10.3	79,461	8.7	62,023	8.6
4. Texas	44,428	6.7	57,897	7.3	83,385	9.1	49,963	6.9
5. New Jersey	35,091	5.3	41,184	5.2	63,303	6.9	39,729	5.5
6. Illinois	33,163	5.0	38,128	4.8	42,517	4.6	33,898	4.7
7. Washington	16,920	2.6	18,656	2.3	18,833	2.1	15,862	2.2
8. Massachusetts	15,869	2.4	17,317	2.2	23,085	2.5	20,523	2.8
9. Virginia	15,686	2.4	19,277	2.4	21,375	2.3	16,319	2.3
10. Maryland	15,561	2.4	19,090	2.4	20,732	2.3	15,055	2.1
11. Michigan	13,943	2.1	14,727	1.8	17,253	1.9	14,135	2.0
12. Pennsylvania	11,942	1.8	14,553	1.8	16,938	1.8	15,065	2.1
13. Georgia	10,445	1.6	12,623	1.6	12,608	1.4	12,381	1.7
14. Connecticut	7,780	1.2	9,528	1.2	10,874	1.2	9,240	1.3
15. Ohio	7,697	1.2	8,189	1.0	10,237	1.1	8,585	1.2
16. Minnesota	6,981	1.1	8,233	1.0	8,977	1.0	8,111	1.1
17. Colorado	6,513	1.0	7,506	.9	8,895	1.0	7,713	1.1
18. North Carolina	6,415	1.0	5,935	.7	7,011	.8	5,617	.8
19. Arizona	6,211	.9	8,632	1.1	8,900	1.0	7,700	1.1
20. Nevada	6,106	.9	6,541	.8	5,874	.6	4,306	.6
Other	73,076	11.1	81,023	10.1	100,018	10.9	79,348	11.0
All metropolitan areas	660,477	100.0	798,378	100.0	915,900	100.0	720,461	100.0
1. New York, NY	82,175	12.4	107,434	13.5	133,168	14.5	111,687	15.5
2. Los Angeles-Long Beach, CA ..	59,598	9.0	62,314	7.8	64,285	7.0	54,669	7.6
3. Chicago, IL	30,355	4.6	35,386	4.4	39,989	4.4	31,730	4.4
4. Miami, FL	28,853	4.4	45,707	5.7	41,527	4.5	30,935	4.3
5. Washington, DC-MD-VA	24,032	3.6	31,444	3.9	34,327	3.7	25,717	3.6
6. San Francisco, CA	14,540	2.2	16,892	2.1	18,171	2.0	15,773	2.2
7. Oakland, CA	13,437	2.0	15,723	2.0	15,759	1.7	12,011	1.7
8. Houston, TX	13,183	2.0	17,439	2.2	21,387	2.3	14,379	2.0
9. Boston-Lawrence, MA ¹	12,725	1.9	13,937	1.7	18,726	2.0	16,750	2.3
10. San Jose, CA	12,656	1.9	17,374	2.2	13,854	1.5	12,855	1.8
11. Orange County, CA	10,954	1.7	18,190	2.3	17,580	1.9	18,187	2.5
12. Fort Lauderdale, FL	9,951	1.5	10,646	1.3	10,290	1.1	8,373	1.2
13. Riverside-San Bernardino, CA .	9,967	1.5	9,518	1.2	10,314	1.1	7,568	1.1
14. San Diego, CA	9,840	1.5	14,758	1.8	18,226	2.0	12,077	1.7
15. Detroit, MI	9,811	1.5	10,019	1.3	11,929	1.3	9,899	1.4
16. Dallas, TX	9,602	1.5	11,061	1.4	15,915	1.7	9,843	1.4
17. Newark, NJ	9,553	1.4	10,801	1.4	17,939	2.0	11,162	1.5
18. Seattle-Bellevue-Everett, WA ..	9,385	1.4	10,692	1.3	10,429	1.1	9,652	1.3
19. Philadelphia, PA-NJ	9,129	1.4	10,858	1.4	13,034	1.4	11,440	1.6
20. Bergen-Passaic, NJ	8,597	1.3	9,788	1.2	15,682	1.7	9,385	1.3
Other	272,134	41.2	318,397	39.9	373,369	40.8	286,369	39.7

¹ Includes Lowell and Brockton.

Table 4. Immigrants Admitted by Gender and Age: Fiscal Years 1995-98

Gender and age	1998		1997		1996		1995	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	660,477	100.0	798,378	100.0	915,900	100.0	720,461	100.0
Gender								
Male	299,946	45.4	365,484	45.8	422,740	46.2	333,859	46.3
Female	353,426	53.5	432,699	54.2	493,142	53.8	386,582	53.7
Unknown	7,105	1.1	195	Z	18	Z	20	Z
Age								
Under 15 years	129,291	19.6	157,089	19.7	186,362	20.3	157,325	21.8
15-29 years	213,360	32.3	264,183	33.1	304,855	33.3	237,385	32.9
30-44 years	177,942	26.9	212,937	26.7	246,823	26.9	185,838	25.8
45-64 years	101,884	15.4	124,923	15.6	135,980	14.8	105,863	14.7
65 years and over	30,717	4.7	39,070	4.9	41,780	4.6	33,993	4.7
Unknown age	7,283	1.1	176	Z	100	Z	57	Z
Gender and age								
Male								
Under 15 years	64,515	9.8	79,006	9.9	94,105	10.3	79,494	11.0
15-29 years	99,146	15.0	120,842	15.1	141,874	15.5	109,270	15.2
30-44 years	79,566	12.0	95,565	12.0	110,421	12.1	84,524	11.7
45-64 years	42,782	6.5	52,685	6.6	58,373	6.4	46,028	6.4
65 years and over	13,353	2.0	17,301	2.2	17,912	2.0	14,513	2.0
Unknown age	584	.1	85	Z	55	Z	30	Z
Female								
Under 15 years	64,640	9.8	78,050	9.8	92,249	10.1	77,824	10.8
15-29 years	113,820	17.2	143,278	17.9	162,975	17.8	128,110	17.8
30-44 years	97,973	14.8	117,311	14.7	136,398	14.9	101,310	14.1
45-64 years	58,985	8.9	72,208	9.0	77,607	8.5	59,832	8.3
65 years and over	17,340	2.6	21,765	2.7	23,868	2.6	19,479	2.7
Unknown age	668	.1	87	Z	45	Z	27	Z
Median Age	29	X	28	X	28	X	28	X
Male	28	X	28	X	27	X	27	X
Female	29	X	29	X	29	X	29	X

Note: Male and female totals by age may not sum to total by age because of records with unknown gender.

X Not applicable. Z Rounds to less than .05 percent.

Table 5. Immigrants Aged 16 to 64 Admitted by Occupation: Fiscal Years 1995-98

Occupation	1998		1997		1996		1995	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Immigrants aged 16-64	479,849	100.0	586,830	100.0	669,814	100.0	514,993	100.0
Professional specialty and technical	44,297	9.2	61,733	10.5	74,220	11.1	58,214	11.3
Architects	1,229	.3	539	.1	565	.1	472	.1
Engineers, surveyors and mapping scientists	7,863	1.6	10,281	1.8	11,605	1.7	8,990	1.7
Mathematical and computer scientists	2,541	.5	2,606	.4	3,276	.5	2,127	.4
Natural scientists	2,490	.5	3,516	.6	3,729	.6	2,371	.5
Health diagnosing occupations	4,650	1.0	6,012	1.0	6,853	1.0	4,866	.9
Physicians	3,824	.8	5,237	.9	5,922	.9	4,072	.8
Other	826	.2	775	.1	931	.1	794	.2
Health assessment and treating ..	3,612	.8	9,023	1.5	12,482	1.9	11,654	2.3
Nurses	2,485	.5	6,161	1.0	8,243	1.2	8,118	1.6
Other	1,127	.2	2,862	.5	4,239	.6	3,536	.7
Teachers, postsecondary	2,553	.5	3,338	.6	4,664	.7	3,650	.7
Teachers, except postsecondary...	5,614	1.2	7,757	1.3	8,701	1.3	7,221	1.4
Counselors, educational and vocational	195	Z	259	Z	255	Z	186	Z
Librarians, archivists, and curators	96	Z	124	Z	223	Z	153	Z
Social scientists and urban planners	618	.1	710	.1	832	.1	577	.1
Social, recreation, and religious workers	2,983	.6	3,463	.6	3,665	.5	2,725	.5
Lawyers and judges	662	.1	827	.1	984	.1	810	.2
Writers, artists, entertainers and athletes	3,583	.7	5,161	.9	6,453	1.0	5,036	1.0
Health technologists and technicians	3,532	.7	1,471	.3	1,062	.2	737	.1
Technologists and technicians, except health	2,076	.4	6,646	1.1	8,871	1.3	6,639	1.3
Executive, administrative, managerial	18,002	3.8	25,651	4.4	31,115	4.6	24,306	4.7
Sales occupations	10,123	2.1	13,906	2.4	14,955	2.2	11,329	2.2
Administrative support occupations	12,514	2.6	18,172	3.1	21,526	3.2	18,177	3.5
Precision production, craft, and repair	11,905	2.5	20,131	3.4	23,421	3.5	18,068	3.5
Operators, fabricators, and laborers	32,354	6.7	70,433	12.0	75,551	11.3	50,755	9.9
Farming, forestry, and fishing	10,185	2.1	11,809	2.0	13,195	2.0	11,282	2.2
Service occupations	24,241	5.1	52,051	8.9	60,722	9.1	45,609	8.9
No occupation	171,620	35.8	277,749	47.3	317,349	47.4	239,704	46.5
Homemakers	79,412	16.5	113,868	19.4	125,714	18.8	88,890	17.3
Unemployed or retired	34,682	7.2	84,198	14.3	98,761	14.7	78,093	15.2
Students and/or children under age 16	57,526	12.0	79,683	13.6	92,874	13.9	72,721	14.1
Unknown or not reported	144,608	30.1	35,195	6.0	37,760	5.6	37,549	7.3

Z Rounds to less than .05 percent.