THE LATINO POPULATION IN ARIZONA — GROWTH, CHARACTERISTICS, AND OUTLOOK — WITH A FOCUS ON LATINO EDUCATION

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SUMMARY

In 2001, the issue of Latino educational achievement and attainment was raised in the Morrison Institute report *Five Shoes Waiting to Drop on Arizona's Future*. Though the educational performance and attainment of Hispanics was substantially less than that of non-Hispanic whites and Asians, it was in line with other minority groups. The special focus on Hispanics was due to the large and rapidly growing size of the Hispanic population in Arizona.

In terms of educational attainment and achievement, the situation has not changed much in the last decade. Hispanics continue to make only slow gains relative to non-Hispanic whites and Asians. Among Hispanics, the relative percentage of high school graduates has increased, but the relative college graduation rate has not improved.

Demographically, however, significant changes have occurred since 2001. The growth rate of the Hispanic population has slowed — reducing the magnitude of the Latino education issue — as a result of two factors. First, the number of undocumented immigrants living in Arizona has dropped, primarily as a result of the state's anti-immigration legislation. The long and deep recession followed by a very slow economic recovery also has caused some undocumented immigrants to leave the state and has reduced the number of undocumented immigrants crossing the border. Second, the fertility rate of Hispanics has fallen considerably — by more than that of any other racial/ethnic group.

Going forward, the magnitude of the Latino education issue in Arizona will depend largely on the size of the Hispanic population relative to the state's entire population. The expansion or restriction of educational programs tailored to students learning English as a second language or to Hispanic/minority/low-income students generally also would have an impact.

The fertility rate of Hispanics will play an important role in determining the number of Hispanics living in Arizona, particularly in the number going to school. However, the single largest factor that will influence Latino educational achievement and attainment in Arizona in coming years is the number and characteristics of Latino immigrants who will live in the state. Since few changes have occurred over the last 20 years in the characteristics of Hispanic immigrants and Arizona's Hispanic population as a whole, the significance of the Latino education issue in coming years will largely be determined by the number of immigrants, particularly undocumented immigrants.

Immigration to Arizona in the future is dependent largely on policy decisions made in Arizona, most notably in the enforcement of the state's employer sanctions law. Certain changes in federal immigration law also would have an effect. Economic and demographic conditions, typically the most important factors influencing immigration — particularly undocumented immigration — may also play a role, but the presence of Arizona's employer sanctions law likely will relegate them to secondary importance.

Changes in the age distribution in both the United States and Mexico almost certainly will result in less undocumented immigration in coming decades. Economic conditions in countries from which the United States receives immigrants (mostly Mexico), in the United States, and specifically in Arizona could have an effect on the number of immigrants settling in Arizona.

INTRODUCTION

The primary purpose of this paper is to examine the educational achievement and attainment of Latinos living in Arizona. (The terms Latino and Hispanic are used interchangeably in this report.) In short, the educational performance and attainment of Hispanics lags considerably behind that of the state's non-Hispanic white residents. Moreover, the growth in the number of Hispanics, especially children, has far outpaced that of the non-Hispanic white population, raising the importance of this educational gap. This issue was highlighted in the 2001 Morrison Institute report *Five Shoes Waiting to Drop on Arizona's Future*.

The specific goal of this report is to assess the future of Hispanic educational performance and attainment in Arizona, but this outlook is dependent to a very sizable extent on the characteristics of the Hispanics living in Arizona. In particular, the educational achievement and attainment of Hispanic immigrants has been substantially less than that of Hispanics born in the United States. Forecasting Hispanic immigration specifically and the characteristics of the Hispanic population generally is extremely difficult for two reasons: severe data limitations, and recent legal and policy changes related to immigration.

To make forecasts using any standard modeling technique requires a long time series of consistent data on a range of related indicators. However, demographic and socioeconomic data for Hispanics are largely limited to a data point every 10 years from the decennial census. Solid data on undocumented immigrants is virtually nonexistent, yet it appears that this component of the Hispanic population became substantially more significant during the 1990s.

Even if more and higher quality data existed, the recent legal and policy changes in Arizona related to immigration, and the potential for additional action and for legal challenges to affect legislation that has been passed, would render the historical data to be of limited use. Rather than economic and demographic conditions in the United States and in the countries supplying the immigrants (mostly Mexico) being the most important factors to consider in making projections of the number of Hispanic immigrants to Arizona, future immigration is more likely to be affected by immigrant-related laws passed by the Arizona Legislature since 2007.

The key legislation is the "employer sanctions law" passed in July 2007 and implemented at the beginning of 2008. The number of undocumented immigrants living in Arizona appears to have dropped in 2007 and 2008 in direct response to this legislation. The other significant piece of legislation is "Senate Bill 1070" that was passed in 2010. Court challenges have blocked significant parts of this legislation from being implemented, but a number of cases remain open in the court system.

Data Limitations

The population count from the decennial census is the only source of accurate figures on the number of residents at any geographic level, including the nation and states. Annual estimates of the total population in years between the decennial censuses are produced by the U.S. Census Bureau and by other organizations, including the Arizona Department of Administration's Office of Employment and Population Statistics. (This unit formerly was within the Department of Economic Security and, most recently, the Department of Commerce.) The accuracy of these estimates varies widely over time and by geographic area. Generally, estimates are most accurate

for large population centers and least accurate for lightly populated areas. The Census Bureau's 2010 population estimate for Arizona was much higher than the decennial census count, with the overestimate being the largest in the nation on a percentage basis. Estimates from other sources also were substantially too high.

While the Census Bureau will revise its annual intercensal estimates from 2000 to 2010 to match the 2000 and 2010 census results, those revisions are not yet available. Further, since the Census Bureau does this for every state and county in the nation, it must use a simplistic approach that will not consider, for example, the effects of the implementation of the state's employer sanctions law in 2007 and 2008 on the number of Hispanics living in Arizona.

Beyond the overall population, counts are available from the 2010 decennial census by gender, race/ethnicity (including Hispanic), age, and household relationship. The annual population estimates produced by the Census Bureau are subdivided by gender, age, and race/ethnicity, but these figures are highly derived. For example, in addition to the overestimate of the total population, the Hispanic share of the Arizona population was overestimated compared to the 2010 decennial census results.

Other demographic and socioeconomic information (such as educational attainment) was available from decennial censuses prior to 2010. These measures were derived from responses to the long form of the decennial census questionnaire that was sent to only about one-in-six households. Thus, sampling error was a significant issue when looking at small geographic areas or at small subsets of the population in more populous geographic areas (such as the number of Hispanic immigrants in Arizona).

The Current Population Survey (CPS) has for decades provided annual estimates of most of the demographic indicators reported by the decennial census, but the CPS was designed to be accurate only for the nation and four broad regions of the country. Another survey, the American Community Survey (ACS), was launched nationwide in 2005 to provide demographic and socioeconomic data for states and smaller geographic areas. In order to fund the ACS, the long-form questionnaire of the decennial census was abandoned — such data are not available from the 2010 census.

American Community Survey

The ACS has the advantage of providing ongoing data updates (annually), rather than an update every 10 years. However, survey error in the ACS is very large. Except for very populous areas, only the broadest indicators can be considered reliable using the annual data. As discussed below, a comparison of the results of the 2009 ACS and the 2010 census suggests that even the estimates/counts of the broadest indicators — such as gender — are noticeably different for Arizona.

Three-year and five-year averages, which have less sampling error, also are produced from the ACS. However, even for the five-year average, sampling error is larger than the error from the long form of the earlier decennial censuses. Moreover, multiyear averages from the ACS are more difficult to interpret than the point-in-time estimates from the decennial censuses. For example, the first two years of the latest five-year average for 2005 through 2009 were part of

the real estate/economic boom while the last two years were marked by the deepest and longest recession since the 1930s.

Most of the survey results from the ACS and from earlier decennial censuses are expressed in two ways: number of people and percentage of the total. In the decennial censuses prior to 2010, the number of people in a given category (such as the number of people speaking Spanish at home) was calculated from the percentage of those surveyed and the overall population count. The ACS has no population count to use. Instead, the Census Bureau's annual population estimates are used as the control for the ACS. However, since the Census Bureau's population estimates for Arizona in recent years were substantially too high, the population estimates by category published in the ACS have significant error beyond that of the survey error. Thus, only percentages from the ACS should be used.

Beyond using the margin of error published by the Census Bureau for every ACS estimate, a sense of the reasonableness of the ACS results can be obtained by comparing the 2009 (single year) ACS figures to the 2010 census results for those few indicators that are available from the 2010 census. (ACS results for 2010 are not yet available.) The 2009 ACS data were collected throughout the calendar year and thus on average represent a period nine months earlier than the decennial census data that are expressed as of April 1, 2010. It is unlikely that during these nine months significant demographic changes would have occurred in Arizona's population. Thus, it is assumed that most of the differential in results between the 2009 ACS and the 2010 census are due to sampling error in the ACS.

The comparison reveals that non-Hispanic men (relative to non-Hispanic women) are marginally underrepresented in the 2009 ACS, but Hispanic men are overreported. By age, the ACS underportrays non-Hispanics between the ages of 55 and 74 (relative to other ages) and slightly overstates the percentage in most other age brackets. Among Hispanics, the ACS underdepicts the percentages in the 45-to-74 and 15-to-19 age groups. Those 25-to-34 years old and children less than 5 years old are overrepresented.

By race, the ACS results are close to those of the census among non-Hispanics. Among Hispanics, however, the ACS greatly overreports whites, offset by a much lower proportion in the "other" race category. This is inconsistent not only with the 2010 census, but with earlier censuses.

The ACS overstates the proportion of households headed by someone between the ages of 25 and 44, especially for Hispanics. Very young and old householders are underdepicted in the ACS. The sampled households in the ACS had more children and more other relatives (such as parent or sibling of the householder) than did the count of households in the decennial census. Average household size was very substantially overstated in the ACS. Because of these significant differences between the 2009 ACS and 2010 census results, considerable caution should be exercised in interpreting the results from the 2005-09 ACS that are included later in this report.

Effects of Legal and Policy Changes

The passage of immigration-related legislation by the Arizona Legislature may have permanently changed the pattern of growth in the Hispanic population in Arizona beginning in late 2007. Several factors contribute to the uncertainty of this statement. While the employer sanctions law has passed legal muster, if it is not vigorously enforced some employers may hire undocumented workers, allowing illegal immigration to the state to occur. Other uncertainties involve pending court decisions, subsequent legislation, and actions taken by other states and/or by the U.S. Congress.

It is difficult to quantify the effects of the legislation passed so far. The only "symptomatic" indicators that are available by race/ethnicity are births and school enrollment, but the latter series underwent a methodological change in the key year when the employer sanctions law was implemented and otherwise appears to include inaccuracies. The birth and enrollment data are analyzed in a later section of this report.

A further complication to understanding the effects of the Arizona legislation is that the Arizona and national economies fell into a deep recession at the same time that the employer sanctions law went into effect. When Senate Bill 1070 went into effect, the Arizona economy had barely begun to recover. Conceptually, it is possible to disentangle the effects of the legislation from the economic recession on the number of Hispanics living in Arizona, but the quality of the data needed to perform such an analysis is limited. Such a study, performed by the Public Policy Institute of California, is reviewed in this report.

GROWTH OF THE HISPANIC POPULATION IN ARIZONA

The growth of the Arizona population over the last three decades is shown in Table 1 by ethnicity. Numeric population growth was less between 2000 and 2010 than in the preceding decade, almost entirely due to a slowing of non-Hispanic growth. The Hispanic share of the population did not rise as much between 2000 and 2010 as during the 1990s.

Population change consists of net natural increase — the number of births less the number of deaths — plus net migration. Total net migration consists of net domestic migration (migration to and from elsewhere in the United States) plus net international migration (immigration less emigration).

While an accurate count of the number of births and deaths is available by race/ethnicity, counts of the other components of population growth do not exist. Total net migration between two decennial censuses can be calculated by subtracting net natural increase from the change in the population, but it is not possible to derive the number of domestic versus international migrants.

Net migration from state to state within the United States is available annually from the Internal Revenue Service (IRS), but no demographic detail, such as race/ethnicity or age, is available. Further, these IRS figures are not complete counts and are not available promptly.

The number of legal immigrants is reported annually by state by the U.S. Department of Homeland Security's Office of Immigration Statistics, but in many cases the immigrants entered the country earlier than the year in which they are reported (for example, by first entering on a temporary visa). Estimates from various sources of the number of undocumented immigrants by state are available, but these figures are derived from surveys with a relatively small sample size. Further, the estimated numbers by state are not subdivided by ethnicity.

Based on their estimated numbers, undocumented immigrants accounted for around 70 percent of Arizona's total immigrants during the 1990s. The undocumented share was smaller from 2000 through 2007, but still exceeded 50 percent. Since then, Arizona probably has experienced a net outflow of undocumented immigrants.

TABLE 1
NUMBER OF ARIZONA RESIDENTS BY ETHNICITY

	Total	Non-Hispanic	Hispanic	Hispanic Share
1980	2,718,215	2,277,514	440,701	16.2%
1990	3,665,228	2,976,890	688,338	18.8
2000	5,130,632	3,835,015	1,295,617	25.3
2010	6,392,017	4,496,868	1,895,149	29.6
Change:				
1980-90	947,013	699,376	247,637	2.6
1990-2000	1,465,404	858,125	607,279	6.5
2000-10	1,261,385	661,853	599,532	4.3

Source: U.S. Department of Commerce, Census Bureau, decennial censuses.

Symptomatic Indicators

Because of the unavailability of most components of population growth, in order to make intercensal estimates of the population, a variety of "symptomatic" indicators are used. These include building permits, school enrollment, driver licenses, and Medicare and Social Security enrollments. Births and deaths are sometimes used as indicators of broader population change. Of these indicators, the only ones that provide information by state by race/ethnicity are births and deaths and school enrollment.

School Enrollment

Operationally, school enrollment figures are primarily used to estimate the size of the school-age population. However, changes in enrollment from a given grade in one year to the next grade in the following year provide insight into net migration, not only of children, but of their parents.

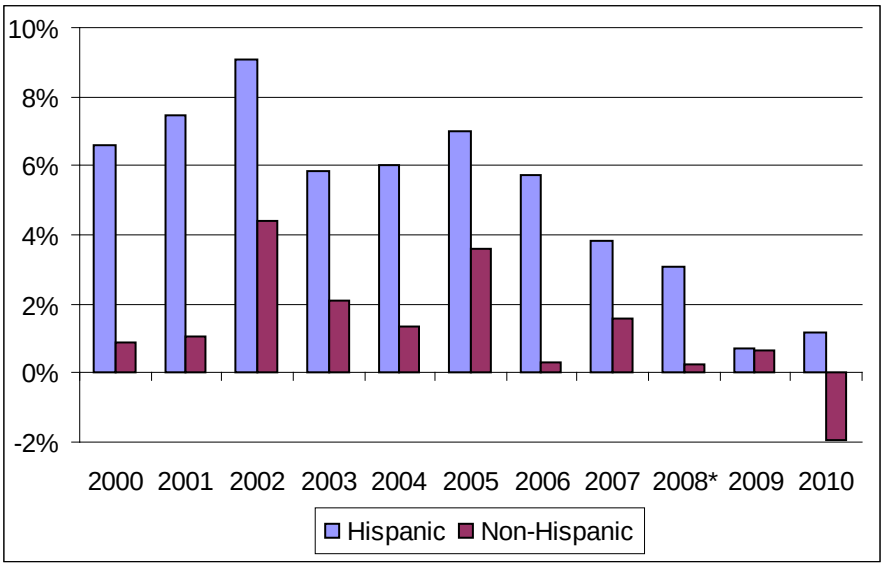
Public school enrollment figures, as of October 1, are reported annually by the Arizona Department of Education (ADE). Prior to 2008, a student enrolled in more than one school — primarily high school students taking classes at their regular high school and at a vocational school — was counted more than once. Since then, a student is counted only once. Since the ADE has not published the counts for 2008 under both methodologies, a discontinuity in the time series exists in a key year — when the employer sanctions law went into effect.

In addition to this methodological change, questions regarding the accuracy of the enrollment figures have been present for years. An examination of annual enrollment counts by county and by grade reveals numerous instances of unexpected changes. There are a number of cases of an unusually large increase in enrollment in one year followed by an unusually small increase, or a decrease, in the following year, which suggests that enrollment was overstated in the first year. The opposite also occurs, suggesting that the enrollment figure in a given year was understated. In other cases, it is impossible to evaluate the likelihood of an unexpected change of being accurate.

Another limitation of using the school enrollment figures as an indicator of population change is that the counts are limited to public schools. If the popularity of private schools and home schooling changes over time, then the public enrollment figures are less indicative of the change in the school-age population. Taken together, the change in methodology, the questions regarding accuracy, and the limitation to public schools greatly reduce the usefulness of this school enrollment dataset as an indicator of the change in the Hispanic population.

From 2000 through 2006, the increase in Hispanic enrollment ranged from 3.4-to-6.4 percentage points per year higher than that of non-Hispanics (see Chart 1). In the four years since then, the difference has ranged from 0.0-to-3.1 percentage points. (The 2008 figures are based on an estimate of 2008 enrollment under the old methodology.) The slowdown in Hispanic growth relative to other groups begins in 2007 and precedes the implementation of the employer sanctions law on January 1, 2008. However, the law was passed in July 2007. Anecdotal evidence suggests that some undocumented Hispanic immigrants left the state before the law took effect — before the school year started — rather than make their children change schools during the school year.

CHART 1
PUBLIC SCHOOL ENROLLMENT IN ARIZONA, ANNUAL PERCENT CHANGE



* Estimated
Source: Arizona Department of Education, Research and Evaluation Section.

Without being able to precisely state how the enrollment of Hispanics changed once legislation targeting undocumented immigrants began to be passed, the enrollment data strongly suggest that the growth in number of school-age Hispanics has slowed substantially.

Births
The final count of births reported by the Arizona Department of Health Services is believed to be highly accurate. Annual data are available for several decades. The numbers are reported by the race/ethnicity and age of the mother.

Not only do births represent a component of population change, changes in the number of births can be used to estimate changes in the size of the broader population. Even if a long-term trend is present, fertility rates — the number of births relative to the number of women of child-bearing age — typically do not change very much from year to year. Generally, short-term fluctuations are related to the economic cycle, since some people postpone family additions during periods of economic weakness. Thus, an increase or decrease in the number of births that cannot be explained by economic conditions may signal a change in the population size.

In order to calculate fertility rates, data must be available on the number of females of child-bearing age. Since the overall fertility rate is affected by the age distribution of women — fertility rates vary widely by age of the mother — it is more useful to examine fertility rates by age of the mother. Thus, at a state or local level, accurate fertility rates can only be calculated based on decennial census counts.

More commonly reported than the fertility rate is the crude birth rate, which divides the number of births by an estimate of the entire population size. Crude birth rates are very high for

Hispanics in Arizona, but in large part this is due to such a high percentage of the Hispanic population being of child-bearing age.

The fertility rates displayed in Table 2 use the census counts in 2010 of the number of women of child-bearing age and the number of births in 2009 (births by age and race/ethnicity have not yet been published for 2010), The rates are expressed as the number of births per 1,000 women in each age group.

The Hispanic fertility rate is higher than the overall rate of all races/ethnicities for women under the age of 30 and approximately equal to the overall rate among women 30 or older. In each age group under the age of 30, the Hispanic fertility rate is higher than that of non-Hispanic whites and non-Hispanic Asians, but is lower than that of non-Hispanic Native Americans.

Fertility rates fell between 2000 and 2010 among women under the age of 30. Fertility rates fell particularly among Hispanics — in every age group they had the largest decline or smallest increase in fertility rate among the race/ethnic groups.

TABLE 2
FERTILITY RATES IN ARIZONA BY AGE AND RACE/ETHNICITY OF MOTHER
(Number of Births Per 1,000 Women)

Age of Mother	Total	Hispanic	Non-Hispanic			
			White	Black	Am Indian	Asian**
2009/2010*						
Total	54.6	65.4	45.9	63.5	77.7	57.3
10-14	0.6	0.9	0.2	0.7	1.5	0.4
15-17	26.6	41.6	11.3	30.9	54.0	5.7
18-19	79.2	113.4	47.6	99.3	147.6	29.5
20-24	112.1	143.2	86.3	152.7	173.8	61.9
25-29	123.3	138.9	113.4	133.2	151.5	123.3
30-34	96.5	95.9	96.5	93.5	101.7	129.4
35-39	45.9	47.6	43.0	49.0	54.2	62.9
40-44	10.0	11.0	8.7	9.8	13.7	15.6
45-49	0.8	0.7	0.7	1.2	0.6	1.1
Change Between 2000 and 2009/10						
Total	-4.5	-19.9	0.6	8.5	10.6	8.3
10-14	-0.6	-1.4	-0.2	-0.9	0.2	0.1
15-17	-14.5	-34.8	-6.8	-16.1	3.7	-5.3
18-19	-26.5	-48.7	-18.5	-32.0	10.2	-5.3
20-24	-27.0	-48.8	-15.3	0.9	2.7	6.3
25-29	-5.8	-17.6	1.9	30.6	15.0	16.7
30-34	4.1	-1.1	8.1	27.4	9.3	28.2
35-39	5.4	4.6	5.5	15.8	6.1	10.7
40-44	1.6	0.5	1.6	2.0	2.6	3.2
45-49	0.3	0.1	0.3	0.8	0.2	0.4

* Births are from calendar year 2009; the number of women is as of April 1, 2010
** Including Pacific Islanders

Sources: U.S. Department of Commerce, Census Bureau, decennial censuses (number of women) and Arizona Department of Health Services, Bureau of Public Health Statistics (number of births).

Though accurate fertility rates cannot be calculated annually, the annual time series of the number of births provides insight into when during the decade the decrease in fertility rates occurred. The annual percentage change in the number of births by racial/ethnic group is shown in the top half of Table 3. The fluctuations in the overall percentage change primarily are related to the economic cycle. The number of births in 2001 into 2002 rose little due to the 2001 recession. The deep recession that began in late 2007 and ran through 2009 is largely responsible for decreases in the number of births across racial/ethnic groups from 2008 through 2010.

From 2003 through 2008, the number of births to Hispanics was greater than the number to non-Hispanic whites. Hispanics accounted for approximately 44 percent of the total during this period. In most years, even before 2008, the percentage increase in the number of births to blacks and Asians was greater than that of Hispanics. However, these racial groups are relatively small in Arizona. In 2010, Blacks accounted for only 5 percent, and Asians less than 4 percent, of the total population.

In the bottom half of Table 3, the percentages by race/ethnicity are expressed relative to the overall percent change. The number of births to Hispanic mothers rose roughly equal to or faster

TABLE 3
NUMBER OF BIRTHS IN ARIZONA BY RACE/ETHNICITY, PERCENT CHANGE

			Non-Hispanic			
	Total	Hispanic	White	Black	Native American	Asian
			Percentage Change			
2000	5.6%	7.5%	3.5%	2.3%	5.8%	8.9%
2001	0.3	3.6	-2.3	-0.9	-4.7	3.1
2002	2.5	2.8	-0.3	0.6	3.8	8.4
2003	3.9	8.3	0.1	9.8	6.1	10.7
2004	2.9	4.4	1.1	6.4	4.1	3.6
2005	2.6	3.3	1.0	7.3	2.8	7.3
2006	6.5	6.4	8.5	12.0	1.1	11.8
2007	0.6	1.9	-1.9	7.8	0.7	8.8
2008	-3.4	-6.8	-0.7	3.3	-0.7	0.4
2009	-6.7	-10.0	-5.1	1.8	-3.0	-0.8
2010	-6.0	-10.5	-2.5	-1.1	-5.7	-3.0
			Relative to the Total			
2000		1.9	-2.1	-3.3	0.2	3.3
2001		3.3	-2.6	-1.2	-5.0	2.8
2002		0.3	-2.8	-1.9	1.3	5.9
2003		4.4	-3.8	5.9	2.2	6.8
2004		1.5	-1.8	3.5	1.2	0.7
2005		0.7	-1.6	4.7	0.2	4.7
2006		-0.1	2.0	5.5	-5.4	5.3
2007		1.3	-2.5	7.2	0.1	8.2
2008		-3.4	2.7	6.7	2.7	3.8
2009		-3.3	1.6	8.5	3.7	5.9
2010		-4.5	3.5	4.9	0.3	3.0

Source: Arizona Department of Health Services, Bureau of Public Health Statistics.

than the overall figure in each year from 2000 through 2007, with the faster growth especially apparent in 2001 and 2003. Beginning in 2008, however, the percent change in the number of Hispanic births was significantly less than the overall figure. Part of this differentially large decrease almost certainly results from a reduction in the number of Hispanic women of child-bearing age due to the passage of the employer sanctions law.

The large decreases in the number of births to Hispanic women after 2007 also are due to declines in fertility rates. It appears that the disproportionate decline in the fertility rate of Hispanics between 2000 and 2010 did not begin until 2007. Annual data from the ACS were examined to provide insight into the decrease in fertility rates, but the results are subject to considerable sampling error. The analysis compared Hispanics to non-Hispanics, with a distinction made by the ability to speak English. Between 2006 and 2009, the fertility rate of non-Hispanics was unchanged at 2.0. The fertility rate of Hispanics who speak English well decreased slightly from 2.2 to 2.1. In contrast, the fertility rate of Hispanics who do not speak English well dropped substantially, from 3.8 to 3.1. This suggests that a decrease in fertility occurred among undocumented immigrants who chose to remain in the state after the employer sanctions law went into effect.

Deaths

As with births, deaths are reported by race/ethnicity and age and are believed to be highly accurate. Annual data are available for several decades. Mortality rates change only gradually over time and are largely unaffected by economic conditions. Since mortality rates are extremely related to age, an increase or decrease in the number of deaths largely reflects a change in the size of the elderly population, which may be independent from the change in the younger population.

Mortality rates of Hispanics are only a little higher than those of non-Hispanic whites and are lower than those of Blacks and Native Americans in most age groups. Since relatively few Hispanics in Arizona are elderly, Hispanics accounted for only 11-to-12 percent of the total number of deaths over the last decade — compared to 39-to-44 percent of the births.

Annual percentage increases in the number of Hispanic deaths were lower in the second half of the last decade than in earlier years. This slowing also occurred among non-Hispanic whites and suggests lesser increases in the number of very elderly living in Arizona.

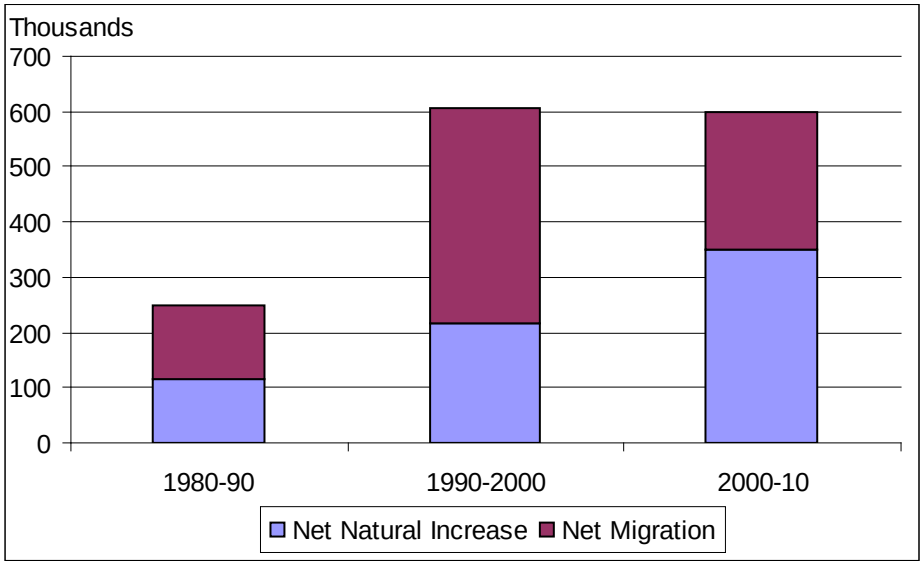
Components of Hispanic Population Change

Net Natural Increase and Total Net Migration

Between the 1980 and 1990 censuses, the number of Hispanics living in Arizona rose by about 248,000 (see Chart 2). With approximately 114,000 more births than deaths (net natural increase), net migration (domestic migration plus legal immigration plus undocumented immigration) was around 134,000. Net migration was 54 percent of the total population change.

The numeric growth of Hispanics in Arizona soared to about 607,000 between 1990 and 2000. Net natural increase was up to 215,000 (89 percent higher than in the preceding decade) and net

CHART 2
POPULATION CHANGE OF HISPANICS IN ARIZONA
(In Thousands)



Source: U.S. Department of Commerce, Census Bureau, decennial censuses (total change) and Arizona Department of Health Services, Bureau of Public Health Statistics (net natural increase).

migration soared 193 percent to 392,000. Net migration accounted for 65 percent of the total population change.

The population change of Hispanics in Arizona between 2000 and 2010 barely slipped to around 600,000. Net natural increase continued to rise to about 349,000, but net migration fell 36 percent to approximately 251,000 — only 42 percent of the total population change.

The net migration of Hispanics to Arizona between 2000 and 2010 consisted largely of children and young adults: 58 percent of all migrants were between 10 and 29 years old in 2010. On average, at the time the migration occurred, this group was between 5 and 24 years of age. Among non-Hispanics, only 28 percent of the migrants were in this age group.

Domestic Migration

The decennial census through 2000 and now the ACS is the only source of information regarding the migration of Hispanics within the United States. The decennial census asked for place of residence five years earlier. Since the ACS version of the question asks for residence one year earlier, the census and ACS results are not directly comparable.

In 1990, only 9 percent of Hispanics had moved to Arizona from another U.S. state in the preceding five years, a proportion less than half that of non-Hispanics (21 percent). In 2000, the Hispanic proportion moving from another state rose to 10 percent while the non-Hispanic share dropped to 19 percent. The same general relationship is seen in the 2005-09 ACS data, with 2.7 percent of Hispanics and 4.9 percent of non-Hispanics moving to Arizona from another U.S. state in the prior 12 months.

Hispanics were divided into three citizenship categories in the analyses made from the decennial census and ACS data: born in the United States, naturalized citizens, and noncitizens. Those Hispanics born in the United States had a slightly higher rate of migration from another state than all Hispanics. Noncitizens had a slightly lower rate.

Immigration

Immigration, particularly undocumented, has been a significant factor in the growth of the Hispanic population in Arizona (and in the nation). Information on those legally admitted to the United States is available from the U.S. Department of Homeland Security's Office of Immigration Statistics (OIS). However, only an estimate of the number of undocumented immigrants is available from the OIS; other groups also produce estimates, as seen in Table 4. None of these estimates of undocumented immigration distinguish between Hispanics and non-Hispanics. However, immigrants from Mexico are estimated to make up around 60 percent of the undocumented immigrants to the United States (compared to about 15 percent of legal immigrants). Since the combined share of undocumented immigrants from Mexico and other Latin American countries is estimated to be greater than 75 percent, it can be assumed that a similar share of undocumented immigrants are Hispanic.

The numbers of immigrants in Table 4 are expressed as an annual or annual average change. The number of legal immigrants includes both new arrivals and those already in the country who received an adjustment from a visa to permanent residency. These adjustments account for about

TABLE 4
ESTIMATED NUMBER OF IMMIGRANTS TO ARIZONA AND THE UNITED STATES
(In Thousands)

		Undocumented		
	Legal (OIS)	OIS	Pew	PPIC
ARIZONA				
Average, 1992-2000	9	29	21	21
Average, 2000-05	17	30	30	22
Average, 2006-07	20	25	25	15
2008	21	30	-25	1
2009	21	-100	-100	
2010		10	25	
UNITED STATES				
Average, 1992-2000	777	574	490	510
Average, 2000-05	980	406	540	470
Average, 2006-07	1,159	645	450	180
2008	1,107	-180	-400	-58
2009	1,130	-850	-500	
2010		40	100	

Sources: OIS: U.S. Department of Homeland Security, Office of Immigration Statistics, *Yearbook of Immigration Statistics* (various years).
Pew: Pew Hispanic Center (various reports).
PPIC: Public Policy Institute of California, *Unauthorized Immigrants in California: Estimates for Counties* (Technical Appendix).

60 percent of the total, so the year represents the year that individuals received permanent residency instead of the year in which they first entered the United States. Nearly two-thirds of the legal immigrants are either immediate relatives of U.S. citizens or are sponsored by family members.

The numbers of undocumented immigrants in Table 4 are derived from the estimates of the total number of undocumented immigrants living in a state by year. In 2010, undocumented immigrants were estimated to account for 3.5 percent of the national population. The share was twice as high in Arizona, California, and Texas, and even higher in Nevada. The change over time in the number of undocumented includes those moving from one U.S. state to another as well as those moving to or from the United States. Notable differences are seen in the estimates across the three sources.

The mobility question that was used in the decennial census and the comparable question in the ACS does not distinguish between immigrants and U.S. citizens who returned to the United States after living in another country. Without differentiating between legal and illegal immigrants, it is possible to estimate the amount of immigration that occurred during the period by cross-tabulating the mobility results by citizenship. In 1990, around 30,000 Hispanic noncitizens had moved to Arizona from another country in the preceding five years. This figure more than tripled to nearly 100,000 in 2000. These figures are understated since some individuals entered and left the state during the five years. The ACS results are not comparable.

IMMIGRATION

This section focuses on immigration for several reasons:

- the unusual importance of immigration in explaining Arizona's overall population growth and the growth of the Hispanic population in particular
- the actions taken and discussions still taking place to limit undocumented immigration, both in Arizona and nationally
- the potential volatility of immigration of Hispanics to Arizona relative to the other components of population change

Several topics are addressed, including the factors that cause individuals to immigrate, immigration law, the estimated effect of Arizona's employer sanctions law, and an outlook for immigration apart from considering changes to immigration law. Immigration from Mexico is emphasized due to the large proportion of Arizona's immigrants who moved from Mexico.

Federal Immigration Law

Federal immigration policies have changed many times over the last century; only a few of those changes are mentioned here. Between 1924 and 1965, a quota system was used, with specific limits on the number of immigrants by country. This was replaced by a preference system in which the skills of potential immigrants and their relationship to family living in the United States took precedence. This resulted in a shift in the origins of immigrants from Europe to Asia, Central America, and South America.

In response to the growing number of undocumented workers living in the United States, the U.S. Congress passed the Immigration Reform and Control Act (IRCA) in 1986. The main provisions of this act

- required employers to attest to their employees' immigration status
- made it illegal to knowingly hire or recruit unauthorized immigrants
- granted amnesty to certain seasonal agricultural workers
- granted amnesty to illegal immigrants who had resided in the United States continuously since before January 1, 1982
- increased enforcement at the border

According to the Department of Homeland Security, around 2.7 million people took advantage of the amnesty provisions of IRCA and became legal residents of the United States, with nearly all of these individuals gaining this status between 1989 and 1992.

Since 1990, the United States has limited the number of legal immigrants to 675,000 per year. (If the number admitted is less than that in one year, the limit is increased for the following year.) Immediate relatives of U.S. citizens, the largest category of admission, are not subject to this limit. Thus, the total number of people granted permanent residence in each year greatly exceeds 675,000; it was 1.1 million in 2009.

While the policy of the nation is to consider immigrant skills and employment in the United States, the limit on the number of legal immigrants is not modified in response to workforce needs in the United States. From the early 1990s through mid-2000s, the combination of strong economic growth and relatively few U.S.-born youths entering the workforce resulted in worker shortages. Without any change in the limit on the number of legal immigrants, the worker

shortages were solved by a large increase in the number of undocumented immigrants. Had the legal immigration limit been adjusted to reflect workforce needs, many of those who entered illegally could have entered legally.

Efforts to Limit Undocumented Immigration in Arizona

Of the various immigrant-related laws that have been passed by the Arizona Legislature, two in particular have had an impact on the number of undocumented immigrants living in Arizona. By far, the greatest impact came from the Legal Arizona Workers Act (House Bill 2779 passed in the first regular session of 2007), also known as the "employer sanctions law." Passed in July 2007, this legislation went into effect at the beginning of 2008. The constitutionality of this law was affirmed by the U.S. Supreme Court in 2011. This legislation has significantly reduced the number of undocumented immigrants living in Arizona (discussed in the next subsection) and likely will result in significantly less undocumented immigration to the state in the future than in the past.

The other notable legislation is the "Support Our Law Enforcement and Safe Neighborhoods Act" (Senate Bill 1070) passed in April 2010. Its goal was "attrition through enforcement." While it likely contributed to some additional undocumented immigrants leaving the state, its effect was limited by a preliminary injunction by a federal judge that has kept some parts of the legislation from being implemented. A number of legal challenges are pending.

Though additional bills to restrict the number of undocumented immigrants living in the state introduced in the 2011 regular session were not passed, the possibility remains that additional legislation will be passed by the Arizona Legislature in coming years.

An Estimate of the Effect of Arizona's Employer Sanctions Law

The Public Policy Institute of California (PPIC) released a report in March 2011, *Lessons From the 2007 Legal Arizona Workers Act*. The PPIC did a sophisticated analysis of conditions in Arizona and in other states in an effort to estimate the number of Arizonans who left the state after the passage of the Act. The methodology was designed to differentiate between the effects of the recession and the effects of the Act.

While the methodology was sophisticated, the quality of the available data (primarily from the American Community Survey and the Current Population Survey) leaves much to be desired. Thus, the results of the study can provide only an estimate of the likely effect of the employer sanctions law. The PPIC estimated that 92,000 undocumented immigrants left the state in 2008 and 2009 due to the employer sanctions law. This represents between 16 and 18 percent of the estimated number of undocumented immigrants living in Arizona. The total number leaving was greater than 100,000, with the balance of those leaving doing so because of the disproportionately severe recession in Arizona.

Factors in Immigration Decisions

Most of the decisions made by people to migrate — across international boundaries or within the same country — are based on "push" and "pull" factors. Among people of working age, a lack of economic opportunity in the community in which an individual lives — for example, the loss of major employers that has resulted in a chronically high unemployment rate — is a primary factor

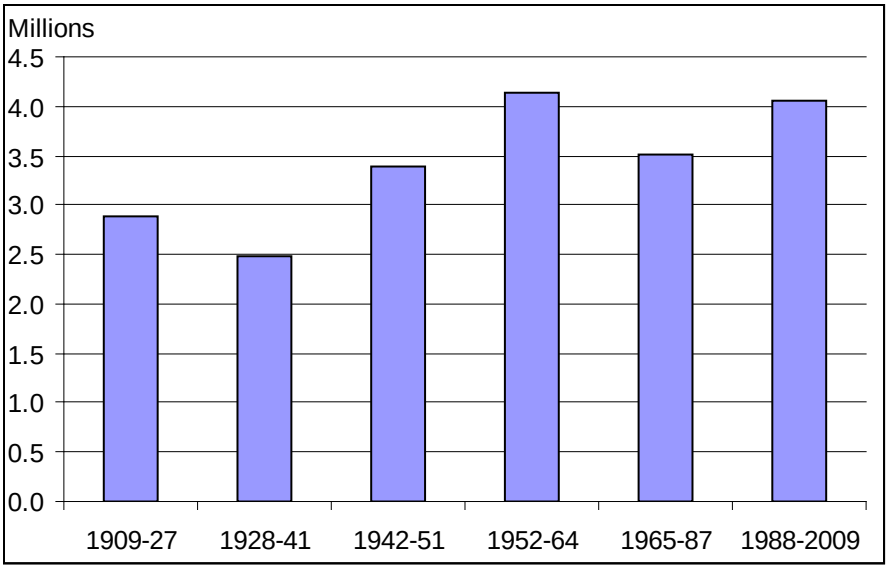
that pushes an individual to consider a move. Any number of other factors — for example, an undesirable climate — also can push an individual (regardless of workforce status) to consider a long-distance move.

Job opportunity is a primary pull factor, one that has been particularly significant in Arizona, which typically is among the job creation leaders in the nation. Noneconomic pull factors include climate, environmental conditions, political atmosphere, presence of family and friends, etc.

Most of the immigration of Hispanics to the United States consists of young adults (and their children), with most immigrants coming from Mexico. Economic factors, both push and pull, have been the predominant causes of immigration to Arizona. Family reunification also is an important factor.

In any country, whenever the size of a generation is substantially different from that of previous generations, the supply and demand relationship for jobs is affected. For example, the baby-boom generation (those born from 1946 through 1964) in the United States was substantially more numerous than previous generations (see Chart 3). From 1952 through 1964, annual average births were 66 percent higher than those from 1928 through 1941 (the Great Depression occurred during this period). As baby boomers began to reach employment age in large numbers around 1970, they greatly outnumbered those retiring and those moving up from entry-level jobs. Thus, far more young people sought jobs than the number available. As a result, the unemployment rate rose and the average wage stagnated. During this period (from about 1970 into the early 1980s), the economic pull factor of the United States to potential immigrants was muted.

CHART 3
ANNUAL AVERAGE NUMBER OF BIRTHS IN THE UNITED STATES



Source: Centers for Disease Control and Prevention, National Center for Health Statistics.

In contrast, the "baby-bust" generation (those born from 1965 into the 1980s) was less numerous than the baby-boom generation. The average number of births from 1965 through 1987 was 12 percent (475,000 per year) less than during the 1946-to-1964 baby boom and the average from 1972 through 1978 was 22 percent less than from 1952 through 1964. As the number of American-born youths aging into workforce age began to decline significantly in the early 1990s, a labor shortage developed in certain occupations, particularly entry-level positions and jobs not deemed attractive (such as working in a poultry-processing facility). At the same time as the demographic situation was changing, the U.S. economy embarked on the longest and strongest economic expansion in history, creating many new jobs. Due to the worker shortages, the economic pull factor of the United States was particularly strong from the early 1990s through the mid-2000s.

Immigration of Mexicans

Of all Hispanics living in Arizona, 90 percent reported Mexican origin in the 2005-09 ACS. The percentage is higher among noncitizens at more than 93. Mexicans do not account for a very large share of legal immigrants, but appear to make up 60 percent of the undocumented immigrants. Presumably, a sizable portion of the immigration from Mexico has always been undocumented.

During the 20th century, only one generation in the United States was substantially larger than its predecessors, but in Mexico each generation was significantly more numerous than the prior generations. The increasingly larger generations were a result both of high fertility rates and a large number of women of child-bearing age.

Under these conditions, it was difficult for the Mexican economy to create an adequate number of jobs for young people entering the workforce and the competition for the jobs held wages in check. Thus, the economic push factors from Mexico were significant throughout the 20th century, though the imbalance in generation sizes peaked from the 1970s into the 1990s. In the short term, peso devaluations and economic downturns temporarily caused even larger numbers of Mexicans to seek work in other countries.

The first sizable influx of Mexican immigrants appears to have begun in the 1970s. A major driver was the worsening conditions in Mexico related to young people finding work. In 1960, the ratio of the number of Mexicans between 15 and 19 years old (a proxy for the number entering the workforce) to the number between 60 and 64 years old (a proxy for the number retiring from the workforce) was 4.75. It rose to 5.5 in 1970 and peaked at 6.9 in 1980. Many of the Mexicans who illegally immigrated to the United States during this period became permanent residents through IRCA.

Between the passage of IRCA and the early 1990s, the Arizona economy was in a long slump, limiting opportunities for immigrants. Beginning in 1993 and lasting through 2006, the Arizona economy created many jobs, though a lull occurred during the 2001 recession and the slow recovery that followed. The pool of U.S.-born young adults from which Arizona draws much of its workforce declined in size during this period of strong job growth, corresponding to the lower number of births during the baby bust. The lure of jobs in Arizona not being filled by Americans

(a pull factor) caused a surge in undocumented immigration to the state. A peso devaluation in 1994 (a push factor) added to the flow of unauthorized immigrants from Mexico.

This increase in the number of immigrants during the 1990s created opportunities for immigrant entrepreneurs to create businesses that catered largely to the immigrant population. This provided the opportunity for an even larger number of immigrants to come to the United States than might be expected from the worker shortages. The annual increase in the number of undocumented immigrants living in Arizona doubled between the early 1990s and 2000.

The ratio of the number of Mexicans between 15 and 19 years old to the number between 60 and 64 years old still was very high in 1990 at 6.0, but dropped back to 4.6 in 2000, reducing the push factors from Mexico. The number of undocumented immigrants entering Arizona slipped after 2000, but remained high through 2006.

The period of strong job growth ended in 2007, as the Arizona economy entered a long and deep recession late in the year. The number of legal immigrants to the state was about the same in 2008 and 2009 as in 2004 through 2006. However, the number of undocumented immigrants living in Arizona quickly shifted from increases in every year to sizable decreases in 2008 and 2009. This abrupt shift was in part due to the weak economy, but the passage of the employer sanctions law had a greater effect.

Also contributing to the decrease in the number of undocumented immigrants is the greater number of Americans entering the workforce and competing for jobs that had been filled by immigrants, due to an increase in U.S. births during the 1980s. The generational imbalance in Mexico also continues to shrink. Thus, even without considering Arizona's anti-immigrant legislation, a slowdown in undocumented immigration would have occurred during the past few years.

U.S. Immigration Outlook

The Census Bureau is the source of population projections for the United States. While the Census Bureau also produces projections for Mexico, the Mexico projections cited in this section were made by CONAPO — Consejo Nacional de Poblacion, Mexico's National Population Council. Relative to CONAPO, the Census Bureau assumes higher birth rates, lower death rates, and lesser net out-migration from Mexico.

Since the late 1980s, the number of births in the United States has not fluctuated much and has averaged just more than 4 million per year, nearly as many as in the peak years of the baby boom. Thus, the number of young adults entering the workforce will be roughly equal to the number of baby boomers over the next 15 years. (The ratio of the number 15-to-19 years old to the number of baby boomers in the peak five-year age group is expected to reach 1 in the next several years, compared to 0.8 in 1990 and 0.9 in 2000.) With the number of births in the United States projected to rise, the ratio of the number 15-to-19 years old to the number 60-to-64 years old will rise from about 1.1 in the next several years to 1.3 in coming decades.

Under these conditions, opportunities for immigrants (the economic pull of the United States) will be considerably less than from the mid-1990s through mid-2000s. Jobs likely will be

available for relatively uneducated immigrants in certain occupations in which American-born youths show limited interest, such as hotel maids, but otherwise job opportunities for undocumented immigrants will be tight.

In Mexico, the age demographics are rapidly changing. Fertility rates have fallen considerably, from 6.7 in 1970 and 2.7 in 2000 to less than 2.1 in 2010, resulting in 500,000 fewer births in 2010 than in 2000. The fertility rate in Mexico now is identical to that in the United States. The number of births in Mexico is expected to continue to drop, with the fertility rate dropping below 1.9. A stable population size (not considering immigration) is associated with a fertility rate of 2.1.

The decrease in the number of births in Mexico leads to a situation within the next several years in which the number aging into the workforce will begin to drop. After figures as high as 6 as recently as 1990, the ratio of those 15-to-19 years old to those 60-to-64 years old will drop to 2 in 2020 and about 1 in 2040. The age distribution will resemble that of the United States by 2030. Thus, the economic push from Mexico should lessen, with supply and demand for jobs in Mexico falling into balance, followed by increases in wage rates. (The primary risk for Mexico is that the drug cartels and the government's efforts to limit the cartels will so destabilize the country that the Mexican economy is adversely affected.)

Therefore, even if Arizona had not passed anti-immigrant laws, push and pull factors should combine to keep undocumented immigration lower than it was from the mid-1990s through mid-2000s. If the status quo remains unchanged — federal immigration policy is unchanged or modified only slightly, Arizona's anti-immigrant legislation remains in place, and a significant number of other states do not adopt similar measures — then it is likely that Arizona will see a greatly reduced flow of undocumented immigrants compared to any historical period prior to 2008.

DEMOGRAPHIC PROFILE OF HISPANICS IN ARIZONA

This profile is based on the results of the 2010 census compared to the 1990 and 2000 censuses whenever possible. Since the 2010 census was limited to only a few questions, the 2005-09 ACS is used for the most up-to-date data for several indicators. Only percentages of the total population are presented.

Hispanics are compared to non-Hispanics in this section. The Hispanic population was subdivided into three citizenship categories: those born in the United States, those who have become naturalized citizens, and those who are not citizens. Since citizenship was not included in the 2010 census, the latest data for Hispanics by citizenship come from the ACS.

All people born in the United States or to U.S. citizens are citizens. Those born in another country to parents who are not citizens are classified either as naturalized citizens or noncitizens. No distinction can be made between those who are legally living in the United States and those who are undocumented, but a sizable share of the Hispanics who are not citizens likely are undocumented immigrants.

The figures reported in this section were derived from the Public Use Microdata Sample (PUMS) for the 1990 and 2000 censuses and for the 2005-09 ACS. (A PUMS file is not available for 2010.) Accessing the PUMS is the only way to obtain a variety of detailed census data. Standard Census Bureau tabulations do not provide many cross-tabulations of two or more indicators (such as educational attainment by age), do not provide any data on Hispanics by citizenship status, and in some cases do not even provide data for Hispanics as a whole. The primary concern with using the PUMS is that the sample size is small, causing sampling error to be a significant concern.

Race/Ethnicity and Origin

Hispanics are considered to be an ethnic group. Individual Hispanics can be of any race. Data on race and ethnicity are available from the 2010 census.

Prior to the 2000 census, respondents had to select a single race. Since then, respondents have the option to report two or more races. The race data since 2000 are tallied in two ways: (1) “alone” — those of more than one race are reported in a separate category and the sum of the categories equals the population count; and (2) “combined” — each race of a person of more than one race is included in the race category’s total; the sum of the races sums to more than the number of people counted. Regardless of how the data are tallied, the 2000 census and subsequent race data are not directly comparable to the earlier data.

In 2010 in Arizona, 82 percent of non-Hispanics identified their race as white; somewhat less than in 2000 (85 percent) and 1990 (88 percent). Very few non-Hispanics indicated a race other than those specified (white, black, American Indian, Asian, and Pacific Islander). In contrast, about half of the Hispanics in 2010 identified their race as white and nearly as many as “other.” These percentages have not changed much over time. Based on the 1990 and 2000 censuses, the racial percentages do not vary much across the three Hispanic citizenship categories. (The 2005-09 ACS results for Hispanic races are inconsistent with those of the 2010 and earlier censuses.)

The origin of Hispanics (the birthplace of an individual not born in the United States or for those born in the United States the birthplace of their ancestors) is not available from the 2010 census. Hispanics living in Arizona are overwhelmingly of Mexican origin, accounting for 90 percent of the total in 2005-09, barely less than in 1990.

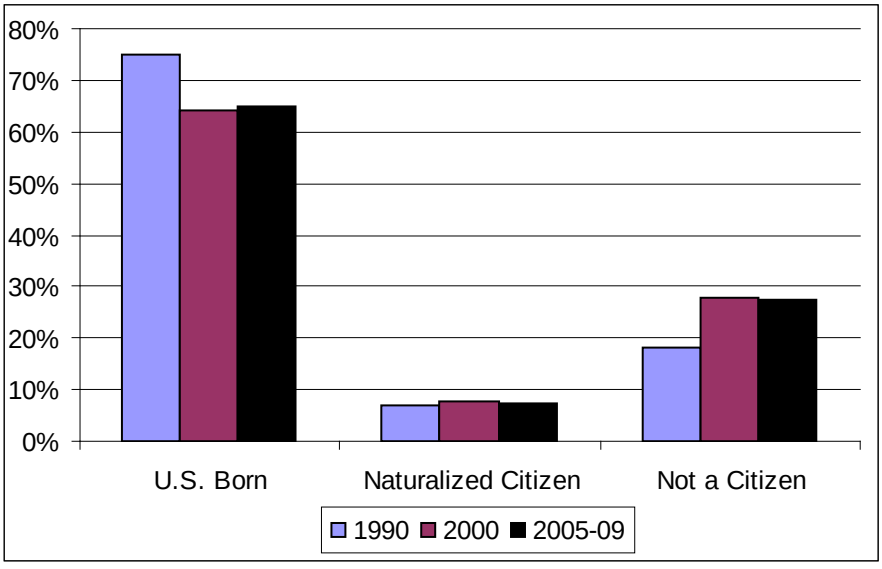
Place of Birth and Citizenship

Place of birth and citizenship are not available from the 2010 census. The place of birth of an individual has been classified into one of four categories: Arizona, elsewhere in the United States, Mexico, or other foreign country. Among non-Hispanics, only 32 percent were born in Arizona, according to the 2005-09 ACS. A little more than 60 percent were born elsewhere in the United States and 7 percent were born in another country. A gradual shift has occurred since 1990, with the shares of non-Hispanics born in Arizona and in other countries increasing.

In contrast, a higher proportion of Hispanics were born in Arizona (47 percent) and relatively few (17 percent) were born elsewhere in the United States. The proportion born in another country was much higher at 36 percent. The foreign-born proportion has increased over time while the Arizona-born share has decreased. More than 90 percent of the Hispanics who were born in another country came from Mexico. Among Hispanics who were naturalized citizens, 86 percent were born in Mexico. The percentage was higher at 94 percent among Hispanic noncitizens.

A surge in immigration during the 1990s lowered the percentage of the Hispanics living in Arizona who were born in the United States from 74 in 1990 to 64 in 2000. The Hispanic noncitizen proportion rose from 18-to-28 percent during this decade. The change in the percentages reversed marginally after 2000, based on the 2005-09 ACS (see Chart 4).

CHART 4
HISPANICS IN ARIZONA BY CITIZENSHIP, SHARE OF TOTAL



Source: U.S. Department of Commerce, Census Bureau, decennial censuses (1990 and 2000) and American Community Survey (2005-09).

Citizenship of Hispanic Children

Nearly all of Arizona's Hispanics under the age of 5 in 2005-09 were born in the United States, as were more than 80 percent of those of school age (5 to 17). The U.S.-born percentage dropped during the 1990s with the surge in immigration, but returned to the 1990 level in 2005-09 (see Table 5).

A more in-depth look at the citizenship of Hispanic children relative to their parents was made through a special analysis of PUMS data that was limited to Hispanic children under the age of 21 who were identified as a child of the householder. This "own-child" designation includes adopted children and step-children. The children were divided into four categories:

- all children in the family were born in the United States
- all children in the family were naturalized citizens
- all children in the family were not citizens
- the citizenship of the children in a family was mixed

For families with just one parent present, the parent was placed into one of the three citizenship categories. For families in which two parents are present, the citizenship of the parents was placed into one of nine categories, as specified in Table 6.

As can be seen at the top of Table 6, this analysis verifies that a high percentage of Hispanic children were born in the United States, and that all of their siblings also were born in the United States. Less than 10 percent of the children in 2005-09 lived in families in which all of the children were not citizens, and less than 4 percent of the children lived in families in which the children had differing citizenship statuses.

The cross-tabulation of the citizenship of children and citizenship of parents largely yields predictable results. In 90 percent of the families in which all of the children are not citizens, either the sole parent or both parents were not citizens. In families in which the children were of mixed citizenship, 75 percent of the children lived with a single parent or both parents who were not citizens. In families in which all of the children were U.S. born, 47 percent of the children lived with a single parent or with both parents who were born in the United States. However, 27 percent lived with a single parent or both parents who were not citizens.

TABLE 5
HISPANICS LESS THAN 21 YEARS OF AGE IN ARIZONA
BY CITIZENSHIP, SHARE OF TOTAL

	U.S. Born			Naturalized Citizen			Not a Citizen		
	1990	2000	2005-09	1990	2000	2005-09	1990	2000	2005-09
Age									
<5	94.6%	93.2%	97.1%	0.6%	0.4%	0.1%	4.9%	6.4%	2.8%
5-13	88.6	83.4	88.1	1.4	1.2	0.6	10.0	15.3	11.3
14-17	81.5	71.9	80.4	3.1	2.8	1.7	15.4	25.3	15.7
18-20	74.6	62.6	69.1	4.6	3.2	2.9	20.9	34.3	28.0
Total	87.1	81.2	87.1	1.9	1.5	0.9	11.0	17.3	12.0

Source: U.S. Department of Commerce, Census Bureau, decennial censuses (1990 and 2000) and American Community Survey (2005-09).

TABLE 6
HISPANIC PARENTS AND CHILDREN IN ARIZONA BY CITIZENSHIP, SHARE OF TOTAL

	1990	2000	2005-09
Citizenship of Children:			
All U.S. Born	87.7%	82.5%	86.8%
All Naturalized Citizens	1.4	1.1	0.7
All Not Citizens	7.7	11.7	9.0
Mixed	3.1	4.7	3.5
Citizenship of Parents:			
One Parent, U.S. Born	18.6	17.0	18.8
One Parent, Naturalized Citizen	2.9	2.9	3.3
One Parent, Not a Citizen	5.7	8.8	11.9
Both Parents U.S. Born	38.2	26.4	22.0
Father U.S. Born, Mother Naturalized	3.1	2.3	2.5
Father U.S. Born, Mother Not a Citizen	3.8	3.4	4.8
Father Naturalized, Mother U.S. Born	3.3	2.5	1.7
Both Parents Naturalized Citizens	2.8	4.3	3.4
Father Naturalized, Mother Not a Citizen	2.8	4.9	4.5
Father Not a Citizen, Mother U.S. Born	4.3	3.1	2.8
Father Not a Citizen, Mother Naturalized	1.8	2.6	1.7
Both Parents Not a Citizen	12.7	21.8	22.7

Source: U.S. Department of Commerce, Census Bureau, decennial censuses (1990 and 2000) and American Community Survey (2005-09).

In the second part of Table 6, it can be seen that three-fourths of the children in 2005-09 lived in four of the 12 categories of parental citizenship: one parent U.S. born, both parents U.S. born, one parent not a citizen, and both parents not a citizen. A significant change in the percentages occurred between 1990 and 2000, with further change between 2000 and 2005-09 in three categories: the percentage of children living in families in which each parent was U.S. born has dropped, while the percentage living in families in which both parents or the only parent is not a citizen increased.

Putting it all together, while a high share of Hispanic children are U.S. citizens by birth, an increasing proportion of these children have been born to parents who are not citizens. Because of the increase in immigration in the 1990s, a higher proportion of Hispanics are noncitizens than in 1990. It appears that the fertility rate of Hispanic noncitizens is higher than that of Hispanics born in the United States.

Language

Information on the language spoken is not available from the 2010 census. Earlier censuses and the ACS report the language spoken at home both for households and for persons. About 90 percent of non-Hispanics spoke English at home in 2005-09, with about 2 percent speaking Spanish. These percentages have not changed over time. In contrast, more than 70 percent of Hispanic households spoke Spanish at home. This percentage ranges from 56 percent among U.S.-born Hispanics to 97 percent of Hispanic noncitizens. The proportion of U.S.-born Hispanics speaking Spanish at home has decreased over time.

If a language other than English is spoken, then the ability of the person to speak English is classified by the ACS and earlier decennial censuses into one of four categories: very well, well, not well, or not at all. Among non-Hispanics speaking a language other than English at home, more than 70 percent spoke English very well and nearly 90 percent spoke English at least well in 2005-09. These percentages have increased over time.

Similarly, more than 80 percent of U.S.-born Hispanics who speak another language at home spoke English very well and more than 90 percent spoke English at least well in 2005-09. In contrast, only 20 percent of Hispanic noncitizens spoke English very well. The percentage of Hispanic noncitizens not speaking English at all has increased since 1990 to 29 percent (see Table 7); another 32 percent did not speak English well in 2005-09.

If none of the individuals older than 14 living in a household can speak English very well, then the household is considered to be linguistically isolated. Less than 2 percent of non-Hispanic households were linguistically isolated and only 5 percent of households headed by a Hispanic born in the United States were isolated. In contrast, more than half of the Hispanic noncitizen households were linguistically isolated in 2005-09, a percentage that has increased since 1990 (see Table 8).

TABLE 7
ABILITY TO SPEAK ENGLISH OF ARIZONANS NOT SPEAKING ENGLISH AT HOME BY ETHNICITY AND CITIZENSHIP, SHARE OF TOTAL

		Hispanic			
	Not Hispanic	Total	U.S. Born	Naturalized Citizen	Not a Citizen
Very Well:					
1990	63.1%	59.2%	75.3%	44.9%	26.6%
2000	67.6	51.0	75.1	41.9	23.1
2005-09	71.9	52.0	81.5	45.8	20.3
Not at All:					
1990	3.0	7.4	0.9	8.5	22.2
2000	2.0	12.0	1.4	7.4	26.7
2005-09	2.4	13.8	1.3	9.1	29.1

TABLE 8
LINGUISTIC ISOLATION OF ARIZONA HOUSEHOLDS BY ETHNICITY AND CITIZENSHIP, SHARE OF TOTAL

		Hispanic			
	Not Hispanic	Total	U.S. Born	Naturalized Citizen	Not a Citizen
1990	1.9%	18.2%	7.7%	27.9%	44.2%
2000	1.8	24.0	7.0	27.9	50.2
2005-09	1.5	24.8	5.0	25.5	54.7

Source (Tables 7 and 8): U.S. Department of Commerce, Census Bureau, decennial censuses (1990 and 2000) and American Community Survey (2005-09).

Gender and Age

According to the 2010 census, males make up slightly less than half of the non-Hispanic population but slightly more than half of the Hispanics living in Arizona. The differential largely is due to the larger share of older people in the non-Hispanic population and the earlier age at which men die. Using the 2005-09 ACS, males accounted for less than half of the Hispanic naturalized citizens, who are disproportionately older than the rest of the Hispanic population. In contrast, slightly more than half of the U.S.-born Hispanics were males. Among Hispanic noncitizens, nearly 56 percent were men, a percentage that has increased over time (see Table 9).

Though the age distribution is somewhat different for males and females, the differences are primarily among the elderly; the following discussion of age is based on males and females combined. The age distribution in 2010, in five-year age groups, is compared for Hispanics and non-Hispanics in Chart 5. The distribution is sharply different, with Hispanics much younger than non-Hispanics. The higher percentages of the baby-boom generation (those from 46 to 64 years old in 2010) than other age groups are easily seen among non-Hispanics.

The aging of the baby-boom generation dominates the changes in the age distribution of non-Hispanics between 1990 and 2000 and from 2000 to 2010. In contrast, large changes in the age distribution of Hispanics did not occur between 1990 and 2000. Between 2000 and 2010, the share of Hispanics between the ages of 45 and 64 increased, offset by a decline in the share of young adults (especially those 20-to-29 years old) and children less than 10 years of age.

In 1990, the age distribution of Hispanics in Arizona was much younger than non-Hispanics, but was not as young as that of Mexico. This relationship began to change during the 1990s due to fertility rates in Mexico falling more than among Hispanics in Arizona and because of the increase in the immigration of young adults from Mexico to the United States. In 2010, the age distribution of Arizona's Hispanics was *younger* than that of Mexico. A higher proportion of

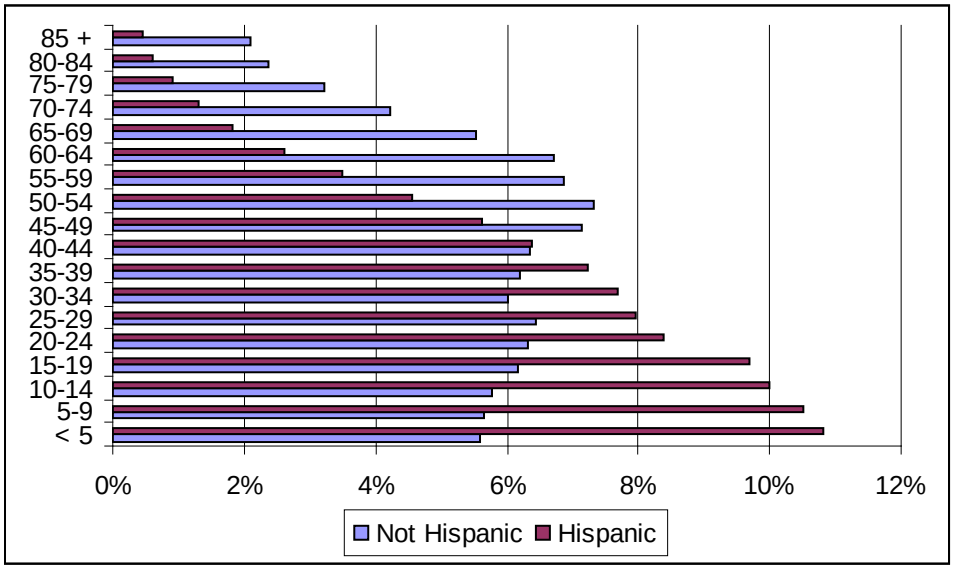
TABLE 9
GENDER OF ARIZONA RESIDENTS BY ETHNICITY AND CITIZENSHIP, MALES AS A SHARE OF THE TOTAL

		Hispanic			
	Not Hispanic	Total	U.S. Born	Naturalized Citizen	Not a Citizen
1990	49.1%	50.5%	50.1%	51.5%	51.9%
2000	49.2	51.5	50.4	48.9	54.6
2005-09	49.3	52.0	50.8	48.2	55.9
2010	49.5	50.2	na	na	na
Change:					
1990 to 2000	0.1	1.0	0.3	-2.6	2.8
2000 to 2005-09	0.1	0.5	0.4	-0.7	1.3
2000 to 2010	0.3	-1.3	na	na	na

na: not available

Source: U.S. Department of Commerce, Census Bureau, decennial censuses and American Community Survey (2005-09).

CHART 5
AGE DISTRIBUTION OF ARIZONA RESIDENTS IN 2010 BY ETHNICITY



Source: U.S. Department of Commerce, Census Bureau, 2010 census.

Arizona's Hispanics were less than 10 years old and a lesser proportion were at least 60 years old. (The data for Mexico come from their decennial census, which is conducted within several weeks of the U.S. decennial census.)

In order to examine the age distribution of the three Hispanic citizenship categories, the 2005-09 ACS must be used. The age distribution differs notably across the three categories (see Table 10). Relative to the other categories, the U.S.-born group is disproportionately less than 20 years old, with relatively few 30 or older. Hispanic naturalized citizens are much older, with relatively many 35 or older and few less than 25. Hispanic noncitizens are especially numerous between the ages of 20 and 39, with few 55 or older.

Several factors should be considered in interpreting the changes in age distribution over the last 20 years across the three Hispanic categories:

- Because IRCA legalized long-time Hispanic residents between 1989 and 1992 and since some went on to become naturalized citizens in the years following, the naturalized population became older than it had previously been.
- Children born in the United States to noncitizens are included in the U.S.-born category rather than the noncitizen category.
- A large increase in immigration occurred during the 1990s, shifting the age distribution of the noncitizen category.

Changes over time in the age distribution also have varied considerably across the three Hispanic categories. The U.S.-born category has experienced a large rise in the share of children despite a decreasing share in the 25-to-44 age group (largely due to births in the United States to noncitizens). The noncitizen category has experienced a significant increase in share between the

TABLE 10
AGE DISTRIBUTION OF ARIZONA RESIDENTS BY AGE, ETHNICITY AND CITIZENSHIP, SHARE OF TOTAL

		Hispanic			
	Not Hispanic	Total	U.S. Born	Naturalized Citizen	Not a Citizen
Age 0-19:					
1990	26.8%	42.7%	50.0%	10.2%	24.6%
2000	25.2	42.0	53.8	7.8	24.3
2005-09	24.1	40.9	55.4	4.5	16.5
2010	23.3	41.0	na	na	na
Age 20-39:					
1990	32.3	34.2	29.9	45.4	48.0
2000	27.3	35.2	26.8	37.9	53.7
2005-09	25.8	33.6	24.8	33.2	54.8
2010	25.0	31.3	na	na	na
Age 40-59:					
1990	21.4	15.7	13.6	28.4	19.5
2000	26.8	16.7	13.5	37.9	18.3
2005-09	27.9	18.7	13.9	42.4	23.6
2010	27.7	20.0	na	na	na
Age 60 and Older:					
1990	19.5	7.4	6.5	16.0	7.9
2000	20.7	6.1	5.9	16.4	3.7
2005-09	22.3	6.7	5.9	19.9	5.1
2010	24.2	7.7	na	na	na

na: not available

Source: U.S. Department of Commerce, Census Bureau, decennial censuses and American Community Survey (2005-09).

ages of 25 and 59, with large decreases in share among those less than 25. The share of naturalized citizens between the ages of 40 and 74 has climbed, offset by a large decrease in share among those less than 35, particularly among those 20 to 34 years old.

Household Type and Relationship

Approximately 98 percent of Arizonans live in households, a percentage that varies little between non-Hispanics and Hispanics or between the three Hispanic categories. The remainder of the population lives in group quarters, such as a prison or a nursing home.

In households, one person is identified as the householder; the number of householders equals the number of occupied housing units. The relationship of others living in a household is expressed relative to the householder; broad categories include spouse, child, other relative, and not related. If more than one related person is living in a household, then the household is considered to be a family. The number of people living in households is divided by the number of households to get the average household size.

Data on household type and relationship are available from the 2010 census for Hispanics and non-Hispanics. Household type is expressed as the number of households. Family households include married couples and single-parent families. Nonfamily households include people living alone and households of more than one person in which none are related. The percentage of households headed by a married couple has been shrinking, dropping below half of all households between 2000 and 2010. Married couples account for a slightly greater share of Hispanic than non-Hispanic households. Married-couple households are more common among Hispanic immigrants than among Hispanics born in the United States. A higher percentage of non-Hispanic than Hispanic households are nonfamilies, but this results in part from disproportionately more elderly non-Hispanics than Hispanics; those living alone are not classified as a family. Single-parent families are more common among Hispanics.

Household relationship refers to people. In part because of the higher proportion of Hispanic households with a young-to-middle-age adult householder and in part due to higher fertility rates among Hispanics, a higher proportion of Hispanics than non-Hispanics are children. A greater proportion of Hispanics are related to the householder in a way other than spouse or child; the percentage is particularly high among Hispanic noncitizens. A slightly higher percentage of Hispanics are not related to the householder among Hispanic noncitizens.

Economic Well-Being

In order to get a sense of the economic well-being of the Hispanic population, median household income and the poverty rate were analyzed. The latest figures come from the 2005-09 ACS; these topics were not included in the 2010 census. The poverty rate of Hispanics has been more than twice that of non-Hispanics over the last two decades (see Table 11). Among Hispanics, noncitizens have a much higher poverty rate than citizens. Hispanics born in the United States have not experienced any narrowing of the gap with non-Hispanics over the last 20 years. However, the gap has narrowed among immigrants — both naturalized citizens and noncitizens.

Household income is highly correlated to the age of the householder. It is lowest among those with a household head less than 25 years old or 75 or older, and highest among householders between the ages of 45 and 54. In every age group, the median household income of Hispanics in 2005-09 was less than that of non-Hispanics. Of the three Hispanic citizenship categories, U.S.-born Hispanics have the highest incomes, and noncitizens the lowest figures, in every age group.

TABLE 11
POVERTY RATE IN ARIZONA BY ETHNICITY AND CITIZENSHIP

		Hispanic			
	Not Hispanic	Total	U.S. Born	Naturalized Citizen	Not a Citizen
1990 Census	12.8%	28.4%	25.0%	28.1%	42.7%
2000 Census	10.3	24.1	20.9	19.1	32.9
2005-09 ACS	11.1	23.6	22.1	17.1	28.9

Source: U.S. Department of Commerce, Census Bureau, decennial censuses (1990 and 2000) and American Community Survey (2005-09).

The differential in median household income between non-Hispanics and Hispanics is least among households with young householders (see Chart 6). The differential between U.S.-born Hispanics and non-Hispanics is 10 percent among householders less than 25 but approximately 20 percent among householders between the ages of 35 and 74.

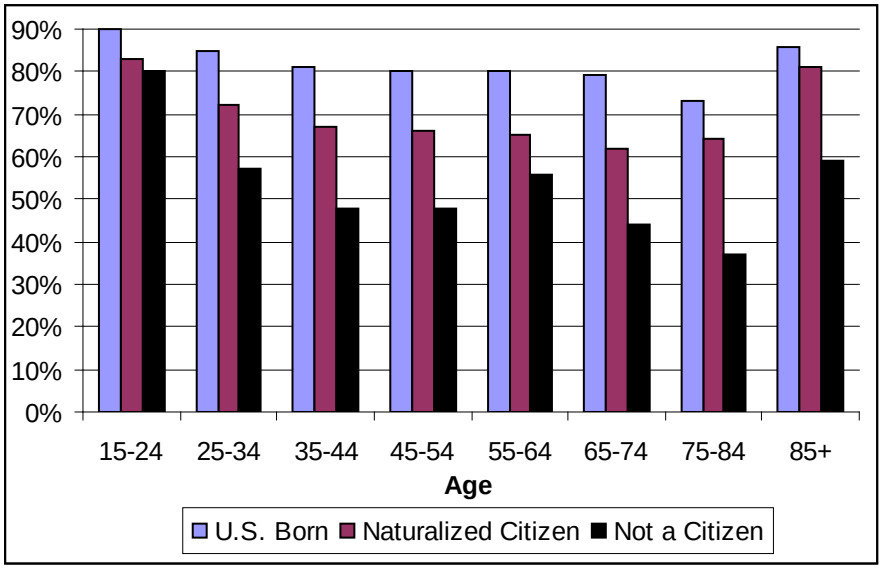
During the 1990s, median income rose considerably after adjusting for inflation, with Hispanics experiencing gains much larger than non-Hispanics; among Hispanics, the increase was greater for immigrants than for those born in the United States. In contrast, between 2000 and 2005-09, median household income dropped slightly after adjustment for inflation, with declines similar among Hispanics and non-Hispanics, and among U.S.-born Hispanics and immigrants.

Workforce Indicators

The latest data reported in this subsection come from the 2005-09 ACS. The percentage of Hispanics 16 or older who are employed was greater than that of non-Hispanics, but this is a result of the differences in the age distribution — a higher share of non-Hispanics is of retirement age. Among Hispanics, there is little difference across the three citizenship categories. The percentage unemployed was higher among Hispanics than non-Hispanics, with little difference in the unemployment rate between U.S.-born Hispanics and noncitizens.

Variations in the age distribution also explain some of the differences in the number of workers in family households. Relative to non-Hispanics, a higher share in all three Hispanic citizenship categories have at least one person in the family in the workforce.

CHART 6
MEDIAN HOUSEHOLD INCOME OF HISPANICS AS A PERCENTAGE OF NON-HISPANICS IN ARIZONA, 2005-09, BY AGE OF HOUSEHOLDER AND CITIZENSHIP



Source: U.S. Department of Commerce, Census Bureau, American Community Survey.

Hispanics and non-Hispanics vary considerably in the occupations in which they work. A higher share of U.S.-born Hispanics than non-Hispanics work in the blue-collar occupations of agriculture, mining, construction, and production. The shares in these occupations among Hispanic immigrants, especially noncitizens, are much higher than those of U.S.-born Hispanics.

Relative to non-Hispanics, a considerably lower proportion of U.S.-born Hispanics work in professional occupations. Very few Hispanic noncitizens work in professional occupations. The differential between Hispanics and non-Hispanics has increased over time. In service occupations, the proportion of U.S.-born Hispanics was not much different from non-Hispanics in 1990, but since then, the non-Hispanic share has fallen while the U.S.-born Hispanic share has increased a little. After being lower in 1990, the proportion of Hispanic noncitizen immigrants working in service occupations has become equal to that of non-Hispanics.

Compared to non-Hispanics, the share of U.S.-born Hispanics who are self employed is only half as much, offset by somewhat higher proportions working as wage and salary employees in both the private and public sectors. Very few Hispanic noncitizens work in the public sector; the proportion self employed is between that of non-Hispanics and U.S.-born Hispanics.

In the past, working Hispanic noncitizens averaged fewer hours worked per year than other Hispanics and non-Hispanics. According to the ACS, however, this differential has disappeared, with Hispanic noncitizens working more hours per year than others (see Table 12).

Educational Attainment

Educational attainment is not available from the 2010 census. A question on past decennial censuses and on the ACS asks for the "highest degree or level of school completed" of each

TABLE 12
SELECTED CHARACTERISTICS OF ARIZONA WORKERS, 2005-09, BY ETHNICITY AND CITIZENSHIP

		Hispanic			
	Not Hispanic	Total	U.S. Born	Naturalized Citizen	Not a Citizen
Occupation:					
Professional	36.9%	15.5%	21.5%	19.2%	5.8%
Services	45.2	49.8	53.4	47.5	45.1
Blue Collar	9.2	23.5	14.0	22.0	37.7
Other	8.7	11.2	11.1	11.3	11.4
Class of Worker:					
Public Employee	15.9	12.0	17.5	14.5	3.4
Private Employee	72.2	79.2	75.7	75.0	85.4
Self Employed	11.1	7.5	5.4	9.8	9.8
Hours Worked:					
2,000 or More	58.6	60.1	57.8	66.1	61.6
1,000 to 1,999	22.2	22.0	21.9	20.9	22.4
Less Than 1,000	19.2	17.9	20.3	13.0	16.0

Source: U.S. Department of Commerce, Census Bureau, American Community Survey.

person. The responses from the 2005-09 ACS have been summarized in Table 13. The standard tabulation produced by the Census Bureau includes all persons 25 or older; age 25 is used since a high proportion of the younger population still is attending school. However, because of a very strong relationship between educational attainment and age, and because of the differing age distributions between non-Hispanics and the various Hispanic citizenship categories, it is necessary to look at educational attainment by age group.

Looking first at those between 25 and 34 years old — the youngest age group in which a sizable proportion of the individuals have completed their formal education — a very large difference in educational attainment is seen between non-Hispanics and Hispanics. A far higher percentage of Hispanics have not graduated from high school and a much lesser percentage have earned at least a bachelor's degree.

Wide differentials in educational attainment are seen across the three Hispanic categories, with educational attainment much higher among the U.S.-born population than among those who are not citizens. However, even U.S.-born Hispanics have a much lesser attainment than non-Hispanics — more than twice the share have not graduated from high school and less than half the percentage have earned at least a bachelor's degree.

The relationships are similar among the older age groups, with the differential between non-Hispanics and Hispanics even larger than in the 25-to-34 age group. In contrast, the differentials are smaller among those 15-to-24 years old. However, since many individuals in this age group are still attending school, the observed differentials are likely to increase.

The changes in educational attainment between 2000 and 2005-09 are shown in Table 14. The educational attainment of Hispanics living in Arizona has improved over time, with the percentage without a high school diploma falling and the percentage with at least some college increasing. However, the gap between Hispanics and non-Hispanics has not changed significantly: while the improvement in the percentage of high school graduates was greater

TABLE 13
EDUCATIONAL ATTAINMENT IN ARIZONA, 2005-09

		Hispanic			
Age Group	**Not Hispanic**	**Total**	**U.S. Born**	**Naturalized Citizen**	**Not a Citizen**
Less Than High School Graduate:					
15-24	40.5%	53.3%	51.3%	35.1%	59.8%
25-34	7.5	35.6	17.5	28.0	54.5
35-44	7.5	37.0	17.3	34.9	56.5
45-54	6.9	39.0	20.3	41.5	66.5
Bachelor's Degree or Higher:					
15-24	5.9	2.1	2.2	3.6	1.4
25-34	32.4	9.2	13.4	12.8	4.5
35-44	33.7	10.3	15.1	12.2	5.2
45-54	30.8	10.6	12.7	11.7	6.7

Source: U.S. Department of Commerce, Census Bureau, American Community Survey.

TABLE 14
PERCENTAGE POINT CHANGES IN EDUCATIONAL ATTAINMENT IN ARIZONA BETWEEN 2000 AND 2005-09

		Hispanic			
Age Group	Not Hispanic	Total	U.S. Born	Naturalized Citizen	Not a Citizen
Less Than High School Graduate:					
15-24	-2.7	-8.9	-5.0	-23.3	-12.7
25-34	-2.4	-8.2	-6.5	-17.6	-9.8
35-44	-2.1	-7.1	-6.6	-11.2	-14.1
45-54	-0.8	-7.3	-6.5	-8.3	-11.6
Bachelor's Degree or Higher:					
15-24	0.7	0.7	0.6	2.1	0.5
25-34	2.4	0.7	0.7	5.9	0.1
35-44	5.5	1.3	3.5	2.1	0.1
45-54	-1.3	1.2	0.5	1.6	2.5

Source: U.S. Department of Commerce, Census Bureau, decennial census (2000) and American Community Survey (2005-09).

among Hispanics than non-Hispanics, Hispanics did not gain relative to non-Hispanics in terms of the percentage who have earned at least a bachelor's degree.

The improvement in the percentage graduating from high school has been greater for Hispanic immigrants than for U.S.-born Hispanics, but the gap in this measure still is significant. Not much difference between Hispanic immigrants and U.S.-born Hispanics is present in the improvement in the percentage earning at least a bachelor's degree.

In each age group, the educational attainment of Arizona's Hispanics on average is greater than that of residents of Mexico. However, the percentage of Hispanics in Arizona who have earned a bachelor's degree or more is *less* than the percentage in Mexico. Further, the educational attainment gap is being narrowed as educational attainment in Mexico rises faster than among Hispanics in Arizona. The differences between Arizona Hispanics and Mexicans are smallest in the youngest (15-to-24) age group. Mexico still has a disproportionate share of its 15-to-24 year-old residents not going beyond a junior high education, but otherwise its deficiencies in attainment relative to Arizona Hispanics are minor. (Educational attainment in Mexico comes from Mexico's decennial census. It is part of the questionnaire sent to all households and thus sampling error is not present. However, since Mexico's educational system differs from that of the United States, the educational attainment results for Mexico are not fully consistent with those of the United States and are not presented in this report.)

Comparing Arizona's noncitizen Hispanics to residents of Mexico, differences in educational attainment at the low end are not significant, as the percentage graduating from high school is slightly higher among Arizonans. However, the percentage earning a bachelor's degree or more is *far less* among Arizona's noncitizen Hispanics.

EDUCATIONAL INDICATORS

In the 2001 Morrison Institute report *Five Shoes Waiting to Drop on Arizona's Future*, the "Latino Education Dilemma" was discussed. The rationale for focusing on Latinos was based on a combination of factors: the large size of the Latino school-age population, the fast growth in this population, and the below-average educational achievement and attainment of this group. Educational achievement, or performance, is based on measures such as test scores and eligibility rates for admission to Arizona universities.

In the remainder of this section, all references to racial groups imply the non-Hispanic portion of each group. Public school enrollment in 2010 was nearly as high among Hispanics as whites, with each group accounting for between 42 and 43 percent of the total enrolled. While the rate of increase in Latino enrollment over the last 10 years was substantial at 50 percent, it was nearly as high among blacks (45 percent) and was much higher among Asians (80 percent). (In contrast, the number of white students decreased slightly and enrollment of Native Americans fell more.) The educational achievement of Hispanics on a variety of measures is considerably below that of whites and Asians. However, Hispanics perform as well as blacks and somewhat better than Native Americans.

Thus, the challenges the state faces regarding Latino education — underachievement and fast growth in the number of students — is typical of that of other minority groups. What differs is the large size of the Hispanic population. Looking forward, the percentage growth in the number of Hispanic children may drop below blacks and Asians, based on reduced undocumented immigration due to the state's anti-immigration laws and the sharp drop in the Hispanic fertility rate that already has occurred.

Factors Affecting Educational Achievement and Attainment

Two reports written by Paul Barton and Richard Coley for the Educational Testing Service provide good summaries of the factors affecting educational achievement and attainment. These factors apply to all racial/ethnic groups.

In *The Family: America's Smallest School* (2007), Barton and Coley discuss several factors:

- Parent-Pupil Ratio. In particular, children in single-parent households do not perform as well academically.
- Family Finances. Low incomes/high poverty, food insecurity, and unemployment of parents all negatively affect educational achievement.
- Literacy Development. Before starting kindergarten, differences in academic abilities are measured in children. Those with lesser abilities had not been read to by their parents as much as others and more generally, did not hear as many words spoken.
- Quality of Child Care.
- The Home as an Educational Resource. The availability of books, magazines, newspapers and the Internet, as well as a desk or table at which to work, all affect academic development. The amount of time watching television is negatively associated with educational achievement.
- Parent-School Relationship (parental participation).

Four factors — single parent household, parents reading to children, hours watching television, and the frequency of school absences — were found to explain 68 percent of the differences

across states in eighth grade reading scores on the National Assessment of Educational Progress (NAEP) test.

A synthesis of research studies done by Barton and Coley, *Parsing the Achievement Gap II* (2009) indicated that 16 factors related to life experiences and conditions are correlated with cognitive development and academic achievement. Differences in these factors across racial/ethnic groups and across income groups mirror the gaps seen in educational achievement across these groups:

- Curriculum Vigor. This includes participation in Advanced Placement classes, which is lower among minorities and low-income students.
- Teacher Preparation. In particular, minorities and low-income children are more likely to be taught math by teachers who did not major or minor in math.
- Teacher Experience. Minorities and low-income children are taught by individuals with less average teaching experience.
- Teacher Absence and Turnover. These are higher in minority/low-income schools.
- Class Size. Minority schools have larger average sizes.
- Availability of instructional technology. Minorities and low-income children have less access.
- Safety at School. Minorities are negatively affected by street gangs and fighting in schools.
- Parent Participation. This is lower in minority groups.
- Frequent Changing of Schools. Minorities change schools more often.
- Low Birth Weight. Blacks have lower average birth weights.
- Environmental damage. Minorities and low-income children have more exposure to lead and mercury.
- Hunger and Nutrition. These are larger issues among minorities and low-income children.
- Talking/Reading to Babies and Young Children. This is lower among minorities and low-income children.
- Excessive Television. This is more common among minorities and low-income children.
- Parent-Pupil Ratio. This is lower in minority and low-income households.
- Summer Achievement. Academic progress over the summer is less among minorities and low-income children.

Two studies published by the Pew Hispanic Center provide particular insight into Hispanic educational issues. In *How Far Behind in Math and Reading Are English Language Learners?* (2007), Rick Fry indicates that English language learners (ELL) score far below the rest of the population on both math and reading on the NAEP tests. Hispanic ELL scores are lower than those of other Hispanics.

In *Latinos and Education: Exploring the Attainment Gap*, Mark Lopez in 2009 reported the results of a national survey of Hispanics. While nearly 90 percent of young Latinos (16-to-25 years old) — a higher percentage than non-Hispanics — understand that a college education is important to success in life, less than half plan to get a college degree (a lower percentage than non-Hispanics). The primary reason for the discrepancy in the percentages is the need to support a family. Poor English skills also were frequently cited as a reason. As high a proportion of U.S.-

born Hispanics planned to get a college degree as non-Hispanics, but the figure for Hispanic immigrants was less than half as high. Financial pressures for immigrants not only include supporting a spouse and children, but also sending remittances to other family members in their home country.

Another survey question asked why Hispanics do not do as well in school as others. The most frequently cited reason was that Hispanic parents do not play an active role in helping their children succeed academically. Poor English skills and a different cultural background from their teachers also were commonly cited.

Thus, in addition to the factors affecting educational achievement and attainment that are common to all children, Hispanic immigrants, particularly those entering the country illegally, face additional educational challenges. Undocumented immigrants tend to come from countries with a culture of generally low educational attainment and usually experienced low socioeconomic status in their home country as well as in the United States. In addition, immigrant children must learn English as a second language and need to make cultural adjustments.

Achievement

The *2009 Minority Student Progress Report* released by AMEPAC (Arizona Minority Education Policy Analysis Center), part of the Arizona Commission for Postsecondary Education, provides a number of measures of educational achievement by race/ethnicity. Results are consistent across such measures as the AIMS test, enrollment and test scores in Advanced Placement classes, and eligibility for admission to Arizona universities. Hispanics, blacks, and Native Americans lag substantially behind whites and Asians on each of these measures. Each of the minority groups is slowly narrowing the educational achievement gap with whites and Asians.

The differentials in achievement are not as great when looking only at those individuals in each racial/ethnic group who are interested in pursuing a postsecondary education. Still, Hispanics, blacks and Native Americans score lower on the SAT and ACT university admissions tests. Postsecondary enrollment is relatively low among Hispanics and the attainment of college degrees is low among Hispanics and Native Americans.

Attainment

The achievement measures presented by AMEPAC reflect those students attending K-12 schools in Arizona. The decennial census/ACS educational attainment measure discussed in the previous section is broader, including those who moved to the state after completing their education elsewhere. Since employment-driven immigration begins among those in their mid-teens, even the educational attainment of 18-year-old Hispanic Arizonans is affected by the low attainment of many of the immigrants from Mexico and other Latin American countries. Generally, however, the educational attainment figures are consistent with the achievement measures presented in the AMEPAC report. Hispanics, blacks and Native Americans have both lower educational achievement and lesser educational attainment than whites and Asians.

In order to provide more information on the educational attainment of young U.S.-born Hispanics versus Hispanic immigrants, a special analysis was conducted using the 2005-09 ACS

PUMS file. Sampling error is a major concern when subsetting the population as much as was done in this analysis. The analysis focused on Hispanics from 16-to-24 years old, with results produced by single year of age. In addition to educational attainment, school enrollment was examined. These measures were analyzed by place of birth and (for immigrants) the length of time in the United States.

Among Hispanics 16-to-24 years old, school enrollment is much higher among those who were born in the United States than among those born in another country, particularly Mexico. No difference is apparent between those born in Arizona and those born elsewhere in the United States. Among those who had immigrated to the United States, school enrollment was positively correlated with the number of years of residence in the United States. Educational attainment — whether measured as the percentage with a high school diploma (or GED), the percentage attending college, or the percentage with a bachelor's degree — also was greater among those born in the United States.

For those Hispanics 16-to-24 years old who were living with a parent, enrollment and attainment also were examined based on the birthplace of the parent. Among those 16-to-21 years old born in the United States, enrollment was higher among those with a U.S.-born parent than with an immigrant. Among those 22-to-24 years old, the results were reversed. The results by age of child are inconsistent for the educational attainment indicator. Sampling error may account for the inconsistency in results by age; the data do not support any conclusion being reached as to whether the birthplace of the parents has any influence on the American-born child.

One can conclude that school enrollment and educational attainment are lower among Hispanics aged 16 to 24 who were born in another country. Thus, Hispanics who moved to the United States as children are the largest challenge in reducing the Latino educational gap. Otherwise, the Latino gap appears to be no different from that of other minority groups, or more generally, of those with low socioeconomic status.

OUTLOOK FOR LATINO EDUCATION

The magnitude of the Latino education issue in Arizona in coming decades will depend largely on the size of the Hispanic population relative to the state's entire population. The expansion or restriction of educational programs tailored to students learning English as a second language or to Hispanic/minority/low-income students generally also would have an impact.

The fertility rate of Hispanics will play an important role in determining the number of Hispanics living in Arizona, particularly in the number going to school. However, the single largest factor that will influence Latino educational achievement and attainment in Arizona in coming years is the number and characteristics of Latino immigrants who will live in the state. Since few changes have occurred over the last 20 years in the characteristics of Hispanic immigrants and Arizona's Hispanic population as a whole, the significance of the Latino education issue in coming years will largely be determined by the number of immigrants, particularly undocumented immigrants.

Immigration

Immigration to Arizona in the future is dependent largely on policy decisions made in Arizona, though certain changes in federal immigration law would have an effect. Economic and demographic conditions, typically the most important factors influencing immigration — particularly undocumented immigration — may also play a role, but the presence of Arizona's employer sanctions law likely will relegate them to secondary importance.

Court decisions regarding the legality of portions of Senate Bill 1070 could have an impact on the number of undocumented immigrants living in the state. If the currently blocked portions of the law are allowed to take effect, some current residents of the state could leave and another barrier would be put in place to discourage future undocumented immigrants. However, these effects likely would be much smaller than those of the state's employer sanctions law.

Policy Scenarios

Arizona. Currently, Arizona has the most restrictive immigration laws among the states, making it unlikely that many new undocumented immigrants will move to the state. Assuming that employers obey the employer sanctions law, other than day labor or another source of income in the underground economy, the only way that an undocumented immigrant could earn money in Arizona is by obtaining a job through ID theft.

Additional legislation relating to undocumented immigrants could be passed in Arizona and existing laws could be strengthened or weakened in the future. Probably the most significant effect on undocumented immigration to Arizona, however, will be the degree of enforcement of the employer sanctions law.

Given the weak economic conditions that have been in place ever since the employer sanctions law took effect, its full impact has not yet been tested. As the economy recovers and employers add jobs, manpower shortages in certain occupations and industries likely will develop that will not be resolved by individuals moving to Arizona from elsewhere in the United States to fill the jobs. Some employers then would have a motivation to ignore the employer sanctions law. If the law is not strongly enforced, some employers may hire undocumented workers, increasing undocumented immigration to Arizona and worsening the Latino education issue.

If the law is vigorously enforced, the penalties seem likely to keep most employers in compliance. The most likely scenario is that the employer sanctions law will be adequately enforced, motivating employers to follow the law and discouraging undocumented immigrants from moving to Arizona.

Federal. The likelihood of substantive changes being made to existing federal immigration law anytime soon seems low, based on the unwillingness of Congress to address the issue over the last decade and the remaining dichotomy between those desiring to restrict immigration further and those wanting a policy that is more in tune with the workforce needs of the American economy.

Current federal restrictions on undocumented immigration could be strengthened by the federal government by enforcing the existing provision that it is illegal to knowingly hire or recruit unauthorized immigrants. This could be accomplished by requiring all employers nationally to use E-Verify. Though Arizona's employer sanctions law would no longer be unique, passage of such a national law would not likely have much effect on the number of undocumented immigrants living in the state.

Another means of restricting undocumented immigration is to tighten border security even further. The effectiveness and practicality of this strategy is in doubt, since it would take enormous resources to truly control the border. Further, since many undocumented immigrants entered the United States legally on a student or tourist visa, this initiative would need to include a way to find and deport those who overstay their visa (and/or to greatly limit the number of such visas). With state laws already discouraging undocumented immigrants from permanently locating in Arizona, this federal strategy likely would have limited effect on the number of immigrants living in Arizona.

A very different direction for immigration reform would be to adjust the overall legal immigration quota over time to match changes in workforce conditions in the United States. This could be done by using easily predicted long-term changes in the age distribution and making short-term projections of the strength of the national economy. In this scenario, Arizona likely would receive a larger number of legal immigrants, but the characteristics of these immigrants probably would not be different from those of the state's existing undocumented immigrants. This would aggravate the Latino education gap.

Rather than adjust the number of legal immigrants permanently admitted, guest worker programs could be expanded. Currently, the H-1B visa program allows aliens to work in the United States for a limited number of years. This program requires an employer-employee relationship and is designed for workers in specialty occupations, particularly those requiring substantial educational attainment in fields such as mathematics and science.

A similar program could be created for the labor shortages that likely will redevelop in some of the lowest-paid occupations or in physically demanding and difficult jobs. Undocumented immigrants, largely from Mexico and Latin America, have filled these openings in the past. Whether such a guest worker program is feasible is doubtful. Many of the nation's undocumented residents originally entered the country legally. Moreover, since most of the labor

shortages of this nature are likely to persist for many years, temporary workers are not a good fit. A guest worker program likely would result in an increase in the number of Hispanics living in Arizona, adding to the Latino education challenge.

Other States. If the federal government does not enact significant changes to existing immigration law, then more states may pass laws similar to those enacted in Arizona. If many states, especially populous and proximate states, pass state legislation similar to that in Arizona, the state no longer would stand in isolation. However, with Arizona's employer sanctions law in place, actions taken in other states would be unlikely to cause a significant change in the number of undocumented immigrants living in Arizona.

Economic Scenarios

If immigration laws in the United States were not an issue and if Arizona had not passed its anti-immigration legislation, then economic and demographic conditions in the United States and in the countries from which immigrants are moving would be the most important factors affecting immigration to Arizona in the future. As discussed earlier, changes in the age distribution in both the United States and Mexico almost certainly will result in less undocumented immigration in coming decades. With the age distribution of the working-age population essentially fixed for the next 20 years, forecast scenarios will not vary much based on demographics.

Other economic factors in the United States and Mexico (and other Latin American countries) could cause variations in the amount of immigration. Though unlikely, the possibility of substantial social and economic instability exists in Mexico, due to the power of the drug cartels and the government's efforts to fight the cartels. If instability were to occur, emigration from Mexico almost certainly would increase.

The rate and nature of economic growth in the United States also will affect future undocumented immigration. Very fast growth — especially in occupations that are not attractive to American-born workers — would lead to larger labor shortages and more opportunities for undocumented immigrants.

The relevance of the following discussion of economic growth in Arizona and the number of immigrants moving to the state is questionable. The existence of the employer sanctions law likely will prevent much of a response from undocumented immigrants to labor shortages in the state.

The course of the Arizona economy hardly is certain, particularly as one looks ahead for decades. In the near term, it is highly likely that the Arizona economy will gradually recover and that job growth will accelerate. Within a few years, the unemployment rate is likely to lower substantially, creating a need for individuals to migrate to the state, as in the past, to fill the jobs created. Whether economic growth will be as fast as in prior economic expansions is unclear. Similarly, the nature of the growth is uncertain. Of particular interest are those industries that historically have been heavily dependent on immigrants for labor, including agriculture, construction and tourism. In a baseline scenario, the rate and nature of economic growth during the next expansion is expected to be similar to that experienced in Arizona in recent decades.

Uncertainty increases the further into the future one looks. At some point, economic growth will slow in Arizona. The norm for any area is to experience rapid growth for a period of time, followed by a longer period of much slower growth. The primary reason for this life cycle is that as major urban areas become more populous, the negative effects of growth become increasingly apparent while the advantages of growth dissipate.

The Phoenix area already has a population of more than 4 million and is one of the most populous metropolitan areas in the nation. Like any other large and growing urban area, the Phoenix area already faces a variety of issues, including air quality, traffic congestion, and housing being built many miles from job centers in order to improve housing affordability. If the Phoenix area resumes fast growth, these issues will increase in significance.

The actions of the Arizona Legislature over the last two decades to sharply reduce state government revenues, which caused major budget reductions in the last few years, could affect both the quantity and quality of the state's future economic growth. Even before the recent budget cuts, the state's K-12 educational outcomes already were among the lowest in the nation, with per pupil spending nearly the lowest in the nation. Significant reductions in investments for higher education also have occurred in recent years. At some point, employers offering high-quality jobs likely will refuse to relocate to, or expand in, Arizona due to concerns regarding the quality of education and the quality of the workforce.

Future investments in other types of infrastructure also are a concern. An environment in which taxes continue to be reduced does not bode well for the ability of the state to provide the public infrastructure and other public services required by quality employers. For example, an inadequate transportation system is more than an inconvenience to commuters — it is a cost to employers.

A slowing of economic growth in Arizona would result in reduced immigration and domestic migration to the state. Fewer opportunities would exist for immigrants, and some U.S.-born Hispanics might choose to leave the state. Whether this would be accompanied by a change in the Hispanic educational gap is unclear. A lack of higher-paying jobs would be a disincentive to some youths, regardless of race/ethnicity, to concentrate on their education.

Fertility

Hispanic fertility rates in Arizona fell considerably between 2000 and 2010, by much more than the decrease in other racial/ethnic groups. Though still substantially higher than the rates of non-Hispanic whites and Asians, Hispanic fertility rates are comparable to those of blacks and less than those of American Indians. Further, the fertility rate of U.S.-born Hispanics is not much higher than that of non-Hispanic whites.

There are three possibilities regarding Hispanic fertility rates in Arizona in the future:

- Hispanic fertility rates will continue to fall more than those of other racial/ethnic groups, akin to the large declines in fertility rates in Mexico. This would reduce the significance of the Latino education issue.

- The disproportionately large decrease in the Hispanic fertility rate in the last decade was a one-time phenomenon. If so, Hispanic fertility rates likely will change in the future at the same pace as those of other racial/ethnic groups.
- The large decrease in fertility rate in the last decade was an aberration due to the economic recession combined with the uncertainty caused by Arizona's anti-immigrant legislation. In this scenario, Hispanic fertility rates could increase more than those of other racial/ethnic groups once the economy improves and the justice system determines the fate of S.B. 1070. This would elevate the significance of the Latino education issue.

The probabilities of each of these three scenarios depend on many factors. Regardless of the scenario, the number of Hispanic immigrants moving to Arizona in the future likely will be a significant factor.

Hispanic Education

In the most likely scenario, the educational achievement and attainment of Hispanics will continue to rise at a slightly greater rate than that of non-Hispanic whites. However, given the magnitude of the existing gap, it will be many years before Hispanics begin to approach non-Hispanic whites in educational achievement and attainment. To date, most of the improvement in attainment has occurred at the low end of the scale — relatively more Hispanics are graduating from high school. Little change has occurred relative to non-Hispanics in the percentage of college graduates.

The slow improvement in educational achievement and attainment likely is associated with the slight progress in economic well-being that has occurred for Hispanics relative to non-Hispanics. In addition, the educational gains that have taken place in Mexico have helped to raise the achievement and attainment of immigrants.

In an optimistic scenario, widespread adoption of programs to improve the educational outcomes of Latinos, such as the Center for the Future of Arizona's "Beat the Odds" program, would close the gap more quickly. In contrast, if existing efforts are scaled back, such as funding for students learning English as a second language, the gap could widen in a pessimistic scenario. The probabilities of each scenario will depend in part on the number of immigrants entering the state.