DEMOGRAPHIC AND SOCIOECONOMIC PROFILE OF THE UNITED STATES AND MÉXICO, WITH A FOCUS ON THE BORDER AREA

VOLUME II IN THE UNITED STATES-MÉXICO SERIES OF BACKGROUND REPORTS

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INTRODUCTION

As part of Arizona State University's United States-México Initiative, the L. William Seidman Research Institute, in conjunction with ASU's McCain Institute for International Leadership Policy Analysis, has undertaken a project to analyze potential bi-national, national and regional policies in order to facilitate decision making. A web-based decision-making tool — the United States–México Policy Analysis Tool (USMexPAT) — is under development to quantify the impacts of potential policies. This tool also will be designed to operate at Arizona State University's Decision Theaters in Tempe, Arizona and Washington, D.C. For more information on this project, see the website USMexPAT.com.

A five-volume series of reports provides background information on the demography and economy of the United States and México, with a focus on the border area — the portion of each country near their international border. A summary of the five volumes also is available.

Background Reports

While numbered sequentially, the reports need not be read in order. However, most users will want to refer to the first part of Volume I in order to understand the geography of the border area. In order to fully understand Volume V, Volumes II through IV may need to be consulted.

A short description of each of the five volumes follows:

Volume I: The Geography and History of the United States and México, With a Focus on the Border Area

This introductory report presents two definitions of the U.S.-México border area — border states and border region — and also identifies urban areas along the international border. A brief history of the two nations and the border area is included.

Volume II: Demographic and Socioeconomic Profile of the United States and México, With a Focus on the Border Area

Most of this report presents the demographic and socioeconomic data collected from the 2010 decennial census of each country and from the American Community Survey. The historical and projected population of the two nations and of the geographies of the border area also are examined in this report.

Volume III: Economic Profile of the United States and México, Including an Economic Base Study of the Border Area

Economic data from a variety of sources other than the 2010 decennial census of each country and the American Community Survey are presented in this report. Economic base studies for the border states and the border region counties and municipios are reviewed in this report.

Volume IV: Trade Between the United States and México, With a Focus on the Border Area

U.S. international trade, trade between the United States and México, and the traffic crossing the international border between the two countries are examined in this report. Information is presented for various geographies: national, state, metropolitan area, customs district, and port.

Volume V: A Description of Each State, County and Municipio in the United States-México Border Area

Information from each of the prior volumes is incorporated in this report, which is organized by geographic area rather than by topic as in the other volumes. A summary of the geography, history, population, trade, and economy of each state, county and municipio in the border area is presented.

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TOTAL POPULATION

In this section, the size of the population is examined, based primarily on decennial census counts, by nation, border state, border region, and urban area within the border region. Annual estimates and projections also are considered.

Data Sources

Decennial Census

The U.S. Department of Commerce's Census Bureau is responsible for the decennial censuses in the United States. The first U.S. census was taken in 1790, with a census taken in each year ending in '0' since then. The first census conducted within the border states was in 1850, with separate counts for Arizona and New Mexico first produced in 1860. While county data are available for the border states back to 1850 or 1860, numerous changes in county boundaries were made into the early 1920s. Thus, the analysis of county data in this paper begins in 1930.

The Instituto Nacional de Estadística y Geografía (INEGI) is responsible for the decennial censuses in México. The first Mexican census was taken in 1895. Beginning in 1900, a decennial census was taken in each year ending in '0' except that the 1920 census was delayed until 1921. The border states were included in 1895, though the first count for what became the state of Baja California was in 1900. As in the United States, boundary changes were common for municipios. The analysis of municipio data in this paper begins in 1930, though several boundary changes were made after 1930.

In the United States, the decennial census date varied historically but has consistently been April 1 since 1930. In México, the date has varied from late January through mid-June; the official date of the 2010 census was June 12.

Estimates

In the United States, annual estimates of the population are produced by the Census Bureau for the nation, states, and counties. The state estimates begin in 1929, while the time series by county begins in 1969. The estimates are expressed as of July 1. The estimates are linked to the decennial census counts, but the estimates for census years are higher than the census count to reflect the growth that occurred between the census date of April 1 and July 1.

In México, annual estimates of the population for the nation and states are available for 1990 through 2010 from the Consejo Nacional de Población (CONAPO), expressed as of July 1. The estimates from CONAPO reflect higher figures for the decennial census years than the census counts, even after considering the adjustment needed for the difference between the census date and July 1. CONAPO assumes that the censuses reflect a net undercount; they adjust the decennial counts based on vital statistics and sociodemographic surveys. The U.S. Census Bureau also produces an annual time series of the population in México (only for the nation), back to 1950. Like CONAPO, the Census Bureau adjusts the decennial census figures for an undercount.

Projections

In the United States, the Census Bureau produces population projections only for the nation, with annual figures available through 2060. State and county projections are produced by state agencies in each state. While all of the projections are expressed as of July 1 and are based on decennial census counts, the methodology and assumptions vary widely by the organization producing the projections, such that considerable inconsistencies may exist across the states and nation. Projections are available by state as follows:

- Arizona through 2050 from the Arizona Department of Administration, Office of Employment and Population Statistics.
- California through 2060 from the California Department of Finance, Demographic Research Unit.
- New Mexico through 2040 from the University of New Mexico, Geospatial and Population Studies.
- Texas through 2050 from the Texas State Data Center.

The Consejo Nacional de Población produces annual population projections for México, also expressed as of July 1. Projections are available from 2010 through 2050 for the nation and through 2030 by state and municipio.¹ The U.S. Census Bureau also projects the population of México annually through 2050.

Total Population and Population Change by Decade

The analysis in this subsection uses decennial census counts and the projections for years ending in '0.' The focus is numeric population change, since the percentage change over long time periods is difficult to interpret, especially in fast-growing areas, because of the inverse relationship between percentage change and the size of the population. Percentage changes are useful when comparing the growth in areas of dissimilar size.

Nations

The ratio of the number of people living in the United States to the number living in México peaked at 7.4 in 1930. By 2010, the U.S. population was only 2.7 times more numerous than the Mexican population. México's share of the combined population of the two nations fell from 15.2 percent in 1900 to 11.8 percent in 1930, then rose to 26.7 percent in 2010. In each of the eight decades after 1930, the percentage change in population was greater in México than in the United States. Through much of the 20th century, the percentage change in México was more than double that of the United States, but the differential in growth rates began to narrow in the 1990s.

The numeric change in population in each decade has been substantially greater in the United States than in México. Numeric gains in each country have fluctuated by decade since 1930, but

¹ Two sets of population figures are used for 2010; the decennial census count is used to calculate the 2000-to-2010 change while the 2010 mid-year estimate/projection is used to calculate the 2010-to-2020 change.

have not shown any trend since the 1970s in México and since the 1950s in the United States (see Chart 1).²

Based on the population projections issued in 2013 by the Census Bureau for the United States and by CONAPO for México, the numeric gain is expected to lower over time in each country. However, the decline is projected to be larger in México. Numeric gains in México are projected to slow from 14.9 million during the 2000s to 5.4 million during the 2040s, while the population change in the United States is forecast to drop from 27.3 million to 19.8 million. The disproportionate projected reduction in the numeric population change in México results in even the percentage growth in México falling to approximately the same rate as in the United States by the 2030s and to a lesser rate in the 2040s.

The U.S. Census Bureau projects the 2050 population in México to be nearly the same as that of CONAPO. However, the Census Bureau projects faster growth in the 2010s and 2020s, with lesser gains after that, relative to the figures from CONAPO.



CHART 1 HISTORICAL AND PROJECTED POPULATION CHANGE BY DECADE IN THE UNITED STATES AND MÉXICO

Sources: Instituto Nacional de Estadística y Geografía (México, decennial censuses), Consejo Nacional de Población (México, projections), and U.S. Department of Commerce, Census Bureau (United States, decennial censuses and projections).

² In the charts, various shades of blue represent the United States and various shades of green represent México. These colors are based on the national flag colors; the two nations share red and white and differ between blue and green.

Historical Overview of Border Area

In 1850, the combined population of the U.S. border states was about 366,700. Population growth slowed during the Civil War, but beginning in the 1870s, the population of the border states rose by more than 1 million per decade. The population was close to 4.9 million in 1900. Population growth accelerated further after World War II, with gains of more than 5 million per decade. The peak gain occurred between 1980 and 1990 at 10 million; the increase between 2000 and 2010 was 9.2 million. In 2010, the border states had 70.9 million residents. Chart 2 shows the decennial census counts.

Approximately 4 percent of the residents of the U.S. border states lived in the border region in 1850; the border region had only about 15,000 residents. Between 1850 and 1900, only 5 percent of the population gain in the border states occurred in the border region. This share rose during the 20th century to 15 percent during the 1970s, but was down to 11 percent in the 1990s and 2000s. As a share of the total border state population, the border region's figure climbed to 10.6 percent in 2010, but this share has hardly increased since 1980 (see Chart 3). As in the border states, numeric population gains in the border region accelerated after World War II, peaking at 1.2 million in the 1980s. The gain between 2000 and 2010 was 1 million, pushing the population of the border region to nearly 7.5 million in 2010.

The combined population of the six Mexican border states was about 1.22 million in 1895. Population growth slowed during the Mexican Revolution (1910s), but accelerated after that, with the population of the border states rising by more than 1 million per decade beginning in the 1940s, peaking in the 1990s at 3.4 million; the increase between 2000 and 2010 was 3.25 million. In 2010, the border states had 19.9 million residents (see Chart 4). Just less than 10 percent of the nation's residents lived in the border states in 1895; this share increased to 17.7 percent in 2010.

Residents of the border region of México accounted for 22.3 percent of the population of the border states in 1930. This share gradually increased to 38.7 percent in 2010 (see Chart 5). The border region's share of the change in the population of the border states was greatest in the 1990s at 55 percent; it was 42 percent in the 2000s. The 10-year population change in the border region has exceeded 700,000 in each decade since the 1950s, peaking at 1.87 million in the 1990s. The gain between 2000 and 2010 was 1.36 million, pushing the population of the border region to 7.70 million in 2010.

Border States

The population of the four U.S. border states (70.9 million in 2010) was much greater than the number of residents of the six Mexican border states (19.9 million in 2010). Each of the six Mexican states had a population of between 2.7 and 4.7 million in 2010. The number of residents in California and Texas each exceeded the total of the six Mexican states.

By decade, the numeric population gain in the four U.S. border states peaked at 10 million during the 1980s, but still was 9.2 million during the 2000s — higher than in any decade prior to the 1980s. Using the combined population of the projections issued by the four states, the numeric increase will be a little lower during the 2010s, due to the weak economy early in the



CHART 2 NUMBER OF RESIDENTS OF THE U.S. BORDER STATES

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





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



CHART 4 NUMBER OF RESIDENTS OF THE MEXICAN BORDER STATES

Note: The border region population is not available prior to 1930.

Source: Instituto Nacional de Estadística y Geografía, decennial census.





Source: Instituto Nacional de Estadística y Geografía, decennial census.

decade, but will return to the level of the 2000s in the 2020s and 2030s. Thus, population growth is expected to slow less in the border states than in the balance of the country.

The fastest population growth in the United States between 1990 and 2010 occurred in the Rocky Mountain states (including Arizona), in Texas, and along the South Atlantic coast. New Mexico also experienced above-average growth, while the rate in California was roughly equal to the national average. The projected growth rate between 2010 and 2030 is higher than the national projection in each of the four border states, ranging from slightly above average in California to far above average in Arizona. Relative to the 1990-to-2010 period, population growth between 2010 and 2030 is projected to slow in Arizona, California, and Texas; New Mexico is projected to have about the same population change in each 20-year period.

The population increase in the six Mexican border states was highest during the 1990s at 3.4 million, but was only slightly lower during the 2000s. However, the numeric population gain is projected by CONAPO to lower over the next two decades to the lowest level in the 2020s since the 1960s. The slowing of the population increase in the border states is expected to be nearly as great as in the rest of the country. All six border states are expected to experience a reduction in numeric gains. Baja California, Nuevo León, and Sonora are expected to grow the fastest of the border states and Chihuahua the least, though the differentials are expected to be small across the states. The projected greater slowing of population growth in the border states of México versus the United States is addressed in the section on population change by component (see pages 25 and 26).

Between 1990 and 2010, the fastest population growth in México occurred in the Baja California and Yucatan peninsulas. The remainder of the states bordering the United States had growth rates above the national average. Between 2010 and 2030, part of the Yucatan peninsula and Baja California Sur are again expected to lead the nation's growth, along with the west coast states of Nayarit and Colima. The border states as a whole are projected to grow more rapidly than the balance of the country, with only Chihuahua below the national average.

Border Region

While the population of the four U.S. border states is much greater than the number of residents of the six Mexican border states, slightly more of the 15.2 million living in the border region in 2010 were in México (7.7 million) than in the United States (7.5 million). The border region's population has increased rapidly and at a similar pace in the two countries since 1930, as seen in Chart 6.

The numeric increase in population by decade in the border region is displayed in the top graph of Chart 7. The border region population gain was much larger in México than in the United States during the 1990s and also was higher during the 1960s and 2000s. The increases in the United States were fairly consistent from the 1970s through the 2000s, while the population change shot up in México in the 1990s and still was large in the 2000s. On a percentage basis, the growth rate peaked some decades ago, in the 1950s in the United States and in the 1940s in México (see the bottom graph of Chart 7). The projections indicate that the border region growth, on both a numeric and percentage basis, will be comparable in the two countries. Numeric population gains are expected to lower throughout the border region and balance of the



Sources: Instituto Nacional de Estadística y Geografía (México, decennial censuses), Consejo Nacional de Población (México, projections), U.S. Department of Commerce, Census Bureau (United States, decennial censuses), and individual U.S. states (projections).

border states except in the following areas: the nonborder region of New Mexico and the border regions of Texas and Nuevo León.

The border region's population share of the state total varied widely by state in 2010, as seen in Chart 8. The share exceeded 25 percent in four of the Mexican states, while it was less than 25 in each of the U.S. border states, including only 9-to-10 percent in highly populous California and Texas. The border region's share was least in Nuevo León at only 2 percent.

The border region's share of the population of the six Mexican border states increased from 23.0 percent in 1940 to 38.1 percent in 2000, but rose only modestly in the 2000s and is projected to rise hardly any further. The share climbed significantly between 1940 and 2000 in Chihuahua, and between 1930 and 1960 and again from 1980 to 2010 in Tamaulipas. In contrast, the border region share has dropped considerably in Nuevo León. Between 2010 and 2030, the share is projected to rise only in Sonora and Tamaulipas.

The border region's share of the population of the four U.S. border states rose from 7.5 percent in 1940 to 10.3 percent in 1990, but has increased only slightly since then, with only slight further gains projected. The share has been falling in Arizona since 1960, is no longer rising in California or New Mexico, and is climbing only a little in Texas.

CHART 7 BORDER REGION POPULATION CHANGE BY DECADE IN THE UNITED STATES AND MÉXICO



NUMERIC CHANGE

PERCENT CHANGE



Sources: Instituto Nacional de Estadística y Geografía (México, decennial censuses), Consejo Nacional de Población (México, projections), U.S. Department of Commerce, Census Bureau (United States, decennial censuses), and individual U.S. states (projections).



Note: the share in Baja California is 100 percent.

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 census) and U.S. Department of Commerce, Census Bureau (United States, 2010 census).

Urban Areas

Each of 11 urban areas located along the international border had a combined U.S.-México population of at least 185,000 in 2010. Combined, they accounted for 90 percent of the border region population.

The percentage growth in the 11 urban areas taken as a whole was highest in the 1940s and 1950s, in each country. The percentage increases were considerably higher in México than in the United States from the 1930s through 1960s, but the differential has been much less since then. Between 2010 and 2030, the percentage change in the urban areas is expected to be nearly identical on the two sides of the border.

In contrast to the percentage growth, the numeric change in population in the 11 urban areas combined was greatest during the 1990s, with the next highest gains in the 2000s and 1980s. Projections for the 2010s and 2020s indicate a lesser increase in each decade than in any of the last three decades. The pattern of numeric gains has been different on the two sides of the border. Increases in the United States were relatively equal in each of the last four decades, while México experienced a sharp peak in the 1990s, with the gain during the 2000s still considerably higher than in prior decades. The gain on the Mexican side was much greater than on the U.S. side during the 1990s. Otherwise, the gain was larger in México only in the 2000s and 1960s.

The San Diego-Tijuana area in 2010 was by far the most populous of the 11 urban areas, with more than 4.8 million residents, accounting for 32 percent of the entire border region's population. The El Paso-Juárez area was the next largest, with 2.3 million residents. These two areas have been the two largest along the border for decades. The McAllen-Reynosa area has become the third-most populous, with 1.6 million residents, followed by Tucson-Nogales at 1.2 million, and Calexico-Mexicali with 1.1 million. The 2010 population by country in each of the urban areas is displayed in Chart 9.

Population growth has been rapid in each of these 11 urban areas. On a percentage basis, gains during the 2000s were much less than at the peak during the 1940s and/or 1950s. In each area, percentage growth is expected to slow further in the 2010s and 2020s. In eight of the 11 areas, the largest numeric increase occurred during the 1990s. The exceptions were San Diego-Tijuana (the peak was in the 1980s), Calexico-Mexicali (the gain in the 2000s was slightly higher than in the 1990s), and McAllen-Reynosa (the gain was the greatest in the 2000s). The numeric population changes in each of the last five decades are shown in Chart 10 for the largest urban areas. In the 2010s and 2020s, the numeric increases are expected to lower from the level of the 2000s in most of the urban areas; the numeric gains are expected to be nearly constant in the Yuma-San Luis Río Colorado and El Paso-Juárez areas.

The Mexican share of the combined urban area population was 47 percent in 2010, up substantially from 19 percent in 1930. Most of the increase in share occurred between 1930 and 1970 and in the 1990s. The share is expected to rise only marginally through 2030.



CHART 9 POPULATION IN 2010 BY URBAN AREA

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 decennial census) and U.S. Department of Commerce, Census Bureau (United States, 2010 decennial census).

Considerable variation existed across the 11 urban areas in the share of the population that lived in México in 2010. The Mexican share was highest in Calexico-Mexicali at 84 percent, followed by 77 percent in Eagle Pass-Piedras Negras and 74 percent in Del Río-Acuña — the latter two urban areas are two of the three least populous. The Mexican share was lowest in Tucson-Nogales at 18 percent, though the population in Nogales, Sonora (220,292 in the municipio) greatly exceeded that in Nogales, Arizona (47,420 in Santa Cruz County). The other eight areas were relatively balanced in the population living in each country, with the Mexican share ranging from 36 percent to 61 percent.

In five of the urban areas — Calexico-Mexicali, Yuma-San Luis Río Colorado, Laredo-Nuevo Laredo, McAllen-Reynosa, and Brownsville-Matamoros — the Mexican share of the urban area population rose sharply between 1930 and 1970 to more than 50 percent, but the share has held steady or dropped since then, with further declines expected by 2030. In El Paso-Juárez, the share rose through 2000 but has since slipped. In San Diego-Tijuana and Del Rio-Acuña, the share continued to rise through 2010. The share dropped slightly between 1930 and 2010 in Tucson-Nogales and Eagle Pass-Piedras Negras.

The pattern of growth often has differed between the U.S. and Mexican sides of an urban area. For example, the growth rate in Tijuana slowed considerably during the 1970s while the rate in San Diego accelerated a little. The rate fell sharply in San Diego in the 1990s without dropping off in Tijuana.



CHART 10 NUMERIC POPULATION CHANGE BY DECADE IN THE LARGEST URBAN AREAS OF THE BORDER REGION, COMBINED UNITED STATES AND MÉXICO POPULATION

Sources: Instituto Nacional de Estadística y Geografía (México, decennial censuses) and U.S. Department of Commerce, Census Bureau (United States, decennial censuses).

Annual Estimates of the Population

CONAPO's estimate of the number of people living in México in 1990 is considerably greater than the estimate made by the U.S. Census Bureau, which assumes a smaller net undercount of the 1990 census. The differential between the two sets of estimates shrinks considerably by 2010. In each year between 1990 and 2010, the Census Bureau's estimates reflect greater growth in México than the estimates from CONAPO. The estimates from CONAPO are used in this subsection.

Annual numeric population gains in the border states and border region of the United States have fluctuated since 1990 but have not shown any trend, as seen in the top graph of Chart 11. In contrast, numeric gains in the balance of the United States have become progressively smaller. In México, annual numeric increases in the border states between 1990 and 2010 were largely steady. In the balance of México, annual gains lowered during the 1990s then held steady before rising in the late 2000s. Return migration of Mexicans who had moved to the United States, prompted in part by the weak economy in the United States, accounts for this increase in the balance of the 2000s.

As seen in the bottom graph of Chart 11, the rate of population growth as expressed as a percentage has trended down since 1990 in the United States and México. The growth rate throughout México slowed during the 1990s, in part due to falling fertility rates and in part due to an increase in the number of Mexicans immigrating to the United States. In the 2000s, the growth rate in the border states of México continued to slow, while the growth rate in the balance of the country rose in the late 2000s. Population growth has slowed particularly in Baja California. In the early 1990s, its growth rate was much more rapid than in the other Mexican border states, but by 2010 the percentage growth in Baja California had slowed to about the same rate as in Nuevo León and Sonora.

The growth rates throughout the United States have slowed over time, but display ups and downs related to the economic cycle to a greater extent than in México. Since the population change from one year to the next year fluctuates with the economic cycle, the remainder of this subsection focuses on annual average population growth from one cycle to another, dated from peak to peak.

In México, numeric population growth between the 2000 economic peak and the 2008 economic peak was slightly less than between the 1992 and 2000 peaks. Growth slowed in the border states, especially in Baja California, and in the balance of the country. However, gains were a little stronger in Nuevo León and Tamaulipas between 2000 and 2008 than between 1992 and 2000. The percentage growth rate in the border states was substantially higher than in the rest of the country in each period, with each of the border states growing faster than the national average in each period.

In the United States, numeric population growth has fluctuated from cycle to cycle, with the greatest annual average gain between 1989 and 2000 and the lowest from 1973 to 1979. In the border states, however, the greatest growth occurred during the 1979-to-1989 cycle, when the four states accounted for 45 percent of the nation's numeric gain. In the other cycles, the share ranged from 26-to-37 percent. The average gain in the border region has not fluctuated much by

CHART 11 ANNUAL CHANGE IN POPULATION WITHIN THE UNITED STATES, 1991 TO 2013, AND MÉXICO, 1991 TO 2010



NUMERIC (In Thousands)

PERCENTAGE



Sources: Consejo Nacional de Población (México, estimates) and U.S. Department of Commerce, Census Bureau (United States, estimates).

cycle, but was lowest from 2000 to 2007. In the last four cycles, the border region has accounted for 11-to-12 percent of the population increase in the border states and 4-to-5 percent of the national increase. In Texas, the annual average numeric population gain in the border region has increased over time, but it was less in California during the last two cycles than in the earlier cycles. The numbers in the border regions of Arizona and New Mexico have fluctuated. About 98 percent of the population increase in the border region has occurred in the 11 urban areas.

On a percentage basis, growth in the U.S. border states has exceeded that in the balance of the country, though the geographic differential has been less in the current cycle and in the two preceding cycles than during the cycles of the 1970s and 1980s. Growth rates in the border region were substantially higher than in the balance of the border states during the two cycles of the 1970s but since 1989 the growth in the border region has been only slightly faster than in the balance of the border states. The growth rates in the border region and border states have slowed much more than in the balance of the country since the 1970s. Growth in the border region in most cycles has been a little faster than in the balance of the state in California, New Mexico, and Texas. In contrast, the border region of Arizona has grown less rapidly than the balance of the state since the early 1970s.

In most of the urban areas, the fastest percentage growth occurred during the two cycles of the 1970s and the slowest growth has occurred since 2000. McAllen has consistently grown among the fastest of the 11 areas while Del Rio's growth rate has been near the bottom in each of the last four cycles.

COMPONENTS OF POPULATION CHANGE

For the world as a whole, population change consists of the number of births less the number of deaths (net natural change). Natality typically is measured by the fertility rate: the average number of births per woman. Mortality commonly is measured by life expectancy. Nationally, population change consists of net natural change and net international migration (immigration less emigration). At subnational levels, net domestic migration also is a component of population change.

CONAPO provides annual data for the components of population change from 1990 through 2050 for México and from 1990 through 2030 for the Mexican states. The U.S. Census Bureau provides figures for México from 1980 through 2050.

The components of population change in the United States generally are not readily available, either for the historical period or for projections. The University of Wisconsin in 2012 released net migration figures by age group by decade back to 1950 for all states and counties, calculated from the change in the decennial census counts and from birth and death data. This method does not split net migration into its domestic and international components.

The components of population change are available for the national projections made by the Census Bureau. Arizona provides projections of the components by year for the state and counties, but the projected components are not available for California, New Mexico, or Texas.

United States and México

Fertility Rates and Life Expectancy

Various organizations estimate fertility rates and life expectancy by country. Generally, the differences between the estimates of the various organizations are not substantial. CONAPO and the Census Bureau are the primary sources of both historical and projected figures for México and the United States, respectively. However, in order to present a consistent 50-year historical record, estimates of the World Bank are presented in this subsection.

The fertility rate in the United States has historically been substantially lower than in México. The U.S. rate fell throughout the 1800s. During the depression of the 1930s, the rate was less than 2.3. The rate increased during the post-World War II baby boom to a peak of nearly 3.8 before it began to drop significantly during the 1960s. The lowest fertility rates in the United States occurred in the 1970s (as low as 1.74). By 1990 the rate had returned to 2 and has remained nearly steady since then.

While the fertility rate in the United States was fluctuating, though dropping on average into the 1970s, the rate in México was steady, resulting in a very large difference in the fertility rates (see the top graph of Chart 12). The largest differential occurred in 1972, when the fertility rate was 6.53 in México and 2.01 in the United States. Once the fertility rate began to decrease in México in the early 1970s, it fell sharply. By 2010, the rate in México was only 0.3 higher than in the United States.

CHART 12 FERTILITY RATES IN THE UNITED STATES AND MÉXICO, 1960 to 2050



HISTORICAL

PROJECTED



Sources: World Bank (México and United States, historical); Consejo Nacional de Población (México, projections); and U.S. Department of Commerce, Census Bureau (United States, projections).

Some further narrowing of the difference in national fertility rates is expected (see the bottom graph of Chart 12). México's fertility rate is expected to stabilize after 2025 at just under the "replacement fertility rate" of 2.1.³ The fertility rate in the United States is projected to slowly lower to 1.93.

Historically, life expectancy was substantially longer in the United States than in México. Life expectancy in the United States was nearly 50 years at the beginning of the 20th century and reached 70 by 1960, compared to only 57 in México. Most of the differential between the nations had been closed by 2010, with life expectancy in the United States a little more than 78 years compared to just less than 77 in México, according to the World Bank (see Chart 13). However, CONAPO estimates life expectancy in México to be only 74 years, with less rapid increases occurring since 1990. CONAPO projects a gradual rise in life expectancy in México to more than 79 years by 2050. This forecasted gain in life expectancy is the same as that projected for the United States by the Census Bureau — the figure for México remains more than four years lower than in the United States.

Even though the Mexican population during the 1960s was much younger than the U.S. population, the crude death rate (the number of deaths divided by the size of the population) was higher in México than in the United States. The greater lengthening of life expectancy in México has caused the crude death rate to drop below that of the United States. The crude rate fell from



CHART 13 LIFE EXPECTANCY IN THE UNITED STATES AND MÉXICO, 1960 to 2010

Source: World Bank.

³ A fertility rate of 2.1 (in developed countries) causes the size of a generation to be identical to that of the prior generation. At some point after a fertility rate of 2.1 is first reached, a nation's population growth will be zero if net international migration is zero.

12.4 in 1960 to 4.7 in 2010 in México while the decline in the United States over this period was from 9.5 to 8.0.

Births and Deaths

According to CONAPO, the number of births in México rose through the early 1970s to more than 2.3 million per year. The annual figure was essentially steady through the mid-1990s but has since dropped slightly to 2.2 million. Further declines are projected, with the figure dropping below 2.1 million in the late 2040s (see the two graphs in Chart 14).

The U.S. Census Bureau's estimates of the number of births in México have been similar to those of CONAPO, ranging from a little higher in some years to a little less in other years. Their projections also are similar until about 2030. After that, the Census Bureau projects Mexican births to fall substantially more, to less than 1.7 million in 2050, about 400,000 fewer than projected by CONAPO.

In contrast, the number of births in the United States has fluctuated, dropping considerably during the 1960s and early 1970s, then going back to the level of the baby boom by 1990. In addition to these long cycles, the number of births goes up and down with the economic cycle, which accounts for the decline in the number of births since 2007. Unlike the downward trend in the projected number of births in México, the number in the United States is expected to rise to 4.8 million in 2050, considerably above the 4.3 million peaks in 1957 and 2007. The primary reason for the differing projected trend lines of the two countries is that net international inmigration to the United States is expected to continue while México continues to experience net international out-migration. This international migration largely consists of young adults of prime child-bearing age.

With the increasing population of the United States, the number of deaths increased substantially over the last 50 years, even though the crude death rate declined somewhat. In contrast, the number of deaths in México held steady as improvements in life expectancy offset the increasing population size. Going forward, the number of deaths in each country is expected to steadily rise. The U.S. Census Bureau's estimates of the number of deaths in México has been slightly lower than those of CONAPO. Their projections continue to show slightly fewer deaths through 2050.

Net natural change (births less deaths) increased in México through the early 1970s, did not change much over the next 30 years, but recently has begun to decrease. In contrast, net natural change in the United States has fluctuated. Since 1970, the figure generally has been less than in México, despite the much greater number of people living in the United States.

In both countries, net natural change is expected to steadily become smaller as fertility rates decline somewhat and as the population ages, causing deaths to become much more numerous. The magnitude of the projected decrease in net natural change between 2010 and 2050 is similar in the two countries on both a numeric and percentage basis, with the amount of net natural change very similar in the two countries throughout the 40-year projection period.

The U.S. Census Bureau's estimates of net natural change in México have been somewhat higher than those of CONAPO since the late 1990s. Their projections continue to show somewhat

CHART 14 BIRTHS, DEATHS, AND NET NATURAL CHANGE IN THE UNITED STATES AND MÉXICO, 1960 to 2050



HISTORICAL

PROJECTED



Sources: World Bank (México, historical); Consejo Nacional de Población (México, projections); U.S. Department of Health and Human Services (United States, historical); and U.S. Department of Commerce, Census Bureau (United States, projections).

higher figures through about 2030, but increasingly lower figures thereafter relative to CONAPO.

Net International Migration

CONAPO has produced an annual time series of international in-migrants to, and out-migrants from, México for the period from 1990 through 2050. The figures through 2010 are estimates while the subsequent figures are projections. The figures do not distinguish between documented and undocumented migration and do not identify the nations with which migration is occurring. Other sources estimate that more than 95 percent of those who have left México live in the United States.

According to CONAPO, international out-migration from México was about 491,000 in 1990, then rose through the 1990s to a peak of around 744,000 in 1999. It fell after that to approximately 361,000 in 2010. International in-migration to México was only about 48,000 in 1990. The figure rose to a peak of approximately 198,000 in 2009.

Net emigration from México rose from about 442,000 in 1990 to a peak of around 641,000 in 1999, then tailed off to about 183,000 in 2010, according to the estimates made by CONAPO. The severity of the economic recession in the United States contributed to the decline after 2007. The U.S. Census Bureau's estimates of net international migration in México are similar to those of CONAPO for a few years, but show considerably less net emigration from México in most years between 1990 and 2010. From a peak in 1999 similar to that of CONAPO, the Census Bureau estimates that net emigration dropped off to only about 41,000 in 2010.

In the United States, annual estimates of net international migration are not available. While the U.S. federal government does report the annual number of legal immigrants to the United States, no estimate is made of the number of emigrants. In addition, no official estimate is made of the number of undocumented immigrants.⁴

An estimate of U.S. net international immigration for a decade can be made based on the change in decennial census counts and the numbers of U.S. births and deaths over a decade. This method results in estimates of net international migration of 12.1 million during the 1970s, 7.8 million during the 1980s, 18.5 million during the 1990s, and 13.3 million during the 2000s.⁵

The U.S. net international migration estimate of 13.3 million during the 2000s is slightly less than the sum of legal immigration of 10.3 million and an estimate of net undocumented immigration of 3.4 million made by the Pew Hispanic Center. The difference presumably is the emigration of legal U.S. residents.

⁴ The Immigration Reform and Control Act (IRCA), passed by the U.S. Congress in 1986, provided legal status to about three million people who entered the United States illegally before 1982. These people are included in the legal immigration statistics, with most gaining legal status between 1989 and 1992. Thus, nearly all of the undocumented immigrants currently living in the United States entered the country after 1981.

⁵ The method also can be used to create an annual time series of net international migration, using the annual change in population estimated by the Census Bureau.

The Pew Hispanic Center has estimated the number of unauthorized immigrants living in the United States in 1990 and in each year since 1995. The estimate is largely derived from the results of the Current Population Survey and the American Community Survey. Since the estimates are subject to survey error even at the national level, in most years Pew rounds the estimates to the nearest 100,000. Pew also produces estimates of the number living in those states with a substantial unauthorized population (including California and Texas), but these state estimates have a wide margin of error. The difference in the number of unauthorized immigrants from one year to the next represents the net of the number of unauthorized immigrants less the number of undocumented residents leaving the United States (e.g. returning to their home country).

In September 2013, Pew revised its estimates of the number of unauthorized immigrants living in the United States back to 2000 and released a preliminary estimate for 2012. The new time series indicates that the number rose from 3.5 million in 1990 to 12.2 million in 2007, an annual average increase of about 510,000. The increases were greatest from 1999 through 2001. The number fell by 500,000 in 2008 and by 400,000 in 2009, presumably largely due to the deep recession in the United States. After 2009, the number began to rise, though the gain over three years totaled only 400,000.

Pew also produces annual estimates of the number of unauthorized immigrants living in the United States who came from México. Mexicans have accounted for more than half of the unauthorized immigrants living in the United States since 1995. Between 1990 and 2007, Mexicans accounted for 63 percent of the increase in unauthorized immigrants living in the United States. Their number rose from 1.45 million in 1990 to 6.95 million in 2007, but fell by 300,000 in both 2008 and 2009. The number of unauthorized immigrants living in the United States who came from México continued to decrease after 2009, with the net number dropping another 300,000 over three years, placing the figure at 6.05 million in 2012.

This continued decline from México is in sharp contrast to undocumented immigration from the rest of the world, which since dropping in 2008 and 2009 has returned to the typical prerecession level. Pew cites several possible reasons for the continued decline in unauthorized immigrants from México who are living in the United States: border enforcement, dangers of crossing, decline in birth rates in México, and economic conditions in México. The continued decline, while unauthorized immigration from other countries is rising, is consistent with World Bank data on remittances.

In total, unauthorized immigrants accounted for 37 percent of total immigration to the United States between 1996 and 2007. During this period, legal immigration ranged from about 650,000 to more than 1.2 million per year. Since 2007, the legal number has been 1.0-to-1.1 million per year while the net number of undocumented residents declined. In contrast, unauthorized immigrants accounted for two-thirds of all immigrants from México between 1996 and 2007. Annual legal immigration of Mexicans ranged from around 115,000 to 219,000 over these years; in recent years the number has been between 139,000 and 190,000.

The time series of the sum of legal and net unauthorized immigration to the United States from México from 1996 through 2012 is considerably different from the CONAPO time series of net

emigration from México. While the CONAPO series is not limited to migration with the United States, the difference between the two time series is more than that due to net emigration from México to other countries. The CONAPO series shows considerably more net emigration from 1996 through 2000, somewhat less from 2001 through 2007, and more from 2008 through 2012, especially from 2008 through 2010 (see Chart 15).

In contrast, the U.S. Census Bureau's estimates of net emigration from México are much more in line with the time series of the sum of legal and net unauthorized immigration to the United States from México. While wide differences are present in some years, these differences offset over the 1996-to-2012 period.

According to CONAPO, emigration from México is projected to slowly rise to about 399,000 in 2030 and then hold largely steady. Immigration to México is projected drop to about 73,000 by 2020, and then hold at that level. Net emigration is projected to increase, reaching about 316,000 in 2020. After that, the number is projected to hold in the 325,000-to-330,000 range through 2050 — well below the level through the mid-2000s but considerably above the recent estimated level. The Census Bureau's projections for México continue to show less net emigration, but the differences from the CONAPO figures are small after 2030 (see Chart 16). The projected annual net emigration from México is larger than the annual number of legal immigrants from México to the United States over the last several years, implying that undocumented immigration will resume, though in much smaller numbers than in the period through 2007.

Estimates and projections of net immigration to the United States are displayed in Chart 17. The estimates are calculated as the difference between the annual population change estimated by the Census Bureau and net natural change. Thus, the figures include both legal and undocumented immigration and are based on when the immigrant entered the country rather than when legal status was obtained. The projections made by the Census Bureau indicate the annual net number of international migrants will rise from the recent trough, but remain below the peak values of the 1990s.

Summary of Population Change in México and the United States

In the last two decades, the more significant slowing in population growth in México than in the United States can be traced largely to the greater slowing in net natural increase, due both to a decline in births and an increase in the number of deaths. However, the projected greater slowing in population growth in México over the next 40 years results from differing trends in net international migration of the two countries. In the United States, net immigration is projected to rise by 52 percent between 2015 and 2050. In México, considerable net emigration is projected to continue, though the amount will be less than that from the 1990s through the mid-2000s.

In the United States, net natural change has accounted for between one-half and two-thirds of the total population change. The share is projected to remain in this range through 2030 before dropping to less than 40 percent by 2050. In contrast, net natural change has accounted for more than 100 percent of the total population change in México.



CHART 15

Sources: The estimates of the U.S. Department of Commerce, Census Bureau, and Consejo Nacional de Población (CONAPO) are for net international migration to and from all countries. The 2011 and 2012 figures really are projections. The sum of legal immigration — from the U.S. Department of Homeland Security's Yearbook of Immigration Statistics — and undocumented immigration — from the Pew

Hispanic Center — only reflect migration between México and the United States.



CHART 16

Sources: U.S. Department of Commerce, Census Bureau, and Consejo Nacional de Población (CONAPO).



Sources: The estimates for 1971 through 2010 are derived from the annual population change estimated by the U.S. Department of Commerce, Census Bureau, and births and deaths reported by the National Center for Health Statistics. The projections for 2011 through 2050 are from the U.S. Department of Commerce, Census Bureau.

Border States and Border Region

Mexican Border States

CONAPO has estimated the components of population change by state annually from 1990 through 2010, with projections from 2010 through 2030. In the six border states combined, net natural change accounted for between 85 and 90 percent of the population change in both the 1990s and 2000s. Net domestic migration was positive, more so in the 1990s than 2000s. Net international migration was negative, though not by a large amount in the 2000s.

According to the projections, net domestic migration to the border states will be much lower, though still positive, while net international out-migration will become larger, though not nearly as negative as during the 1990s. Thus, net natural change will account for more than 100 percent of the population increase in the 2020s, even though the amount of net natural change is projected to decline.

Among the six border states, only Coahuila did not experience net domestic in-migration during the 1990s and 2000s, but net domestic migration is expected to swing negative in Chihuahua and Tamaulipas as well. Net domestic migration to Baja California is expected to continue to slow, but should stay relatively steady to Nuevo León. Each of the six states has experienced net international out-migration, except for Baja California during the 2000s. Net emigration is

expected from each of the border states except Baja California with the magnitude of the net outflow expected to increase somewhat from recent levels.

Another way to compare population change and its components across the six Mexican border states is to examine rates. Fertility rates do not vary much across the six states, ranging from 2.0 to 2.3 in 2010, all down considerably from the 1990 level, and are expected to range from 2.0 to 2.2 in 2030. Crude birth and death rates also do not vary much across the states.

In contrast, migration rates in the 1990s differed widely across the border states, with net domestic migration varying more than net international migration. Baja California received a substantial net inflow domestically while Coahuila experienced a net outflow to other Mexican states. The differences had narrowed substantially by 2010. Net domestic migration between 2010 and 2030 is expected to vary from slightly negative in some states, particularly Chihuahua, to slightly positive in other states, especially Nuevo León.

U.S. Border States

Estimates and projections of the three components of population change by state are not available except for projections for Arizona. In an attempt to estimate the importance of each component to the growth of the population of the border states, birth and death data were collected from each state and domestic migration figures from the Internal Revenue Service were examined. These data were combined with the population change calculated from the decennial censuses. Since the IRS data are not complete counts of all domestic migrants, the residual between population change, net domestic migration and net natural change cannot be assumed to be entirely net international migration, but likely predominantly consists of immigration less emigration. Timing differences in the data also affect the accuracy of the estimated numbers by component.⁶

Between 2000 and 2010, the relative importance of each of the three components of population change varied across the four border states. New Mexico and Texas were similar, with net natural change accounting for a little more than half of the population change, net domestic migration making up about one-sixth, and the residual accounting for just more than one-fourth. Net domestic migration was considerably more important in Arizona, accounting for 40 percent of Arizona's population change, with both net natural change and net international migration relatively less important than in New Mexico and Texas. The situation was considerably different in California, which experienced substantial net domestic out-migration, pushing the shares of population change due to net natural change and net immigration much higher.

Two-thirds of the 2000-to-2010 population change in the four border states combined resulted from net natural increase; net domestic migration accounted for only a couple percent. These shares were similar to those in the balance of the country.

In order to expand the analysis beyond the 2000-to-2010 decade, the projections for Arizona were utilized. The share of population change caused by net international migration is expected

⁶ The birth and death data are on a calendar year basis, the decennial census population change is as of April 1, and the IRS data reflect tax returns filed between January and September, though primarily through April 15.

to remain similar to the residual share in the 2000s. Net natural increase will gradually become a lesser share of population change due to the increase in deaths, while net domestic migration is projected to become a somewhat larger share.

Migration

More information on migration is available from the 2010 decennial census for México and from the American Community Survey (ACS) for the United States. Historically, migration was included on the long form of the U.S. decennial census that was sent to a sample of households, but the long form was eliminated for 2010. These data are now collected through the ACS, which began in 2005. Though the ACS is conducted on an ongoing basis, the annual sample is small. For less populous counties (those with less than 20,000 residents), the Census Bureau accumulates five years of data before releasing the results. The latest ACS data are for the 2008-through-2012 period. Even with the aggregation of data over five years, sampling error is a significant concern for less populous counties and is an issue in more populous areas for small subgroups of the population.

The ACS asks respondents to report their place of residence one year earlier. The results are tabulated as same house, different dwelling unit in the same county, different county in the same state, different state, and "abroad." The "abroad" category includes immigrants and U.S. citizens who had been living outside the United States. The results for México cannot be directly compared to those for the United States because the Mexican census asks respondents to indicate their place of residence five years earlier. The options for respondents are same state, different state, United States, and another country.

A distinction between the results of the Mexican census and the U.S. ACS is that the Mexican data include a category of "no especificado" — not specified. In tables produced by INEGI, these missing data are included in the calculation of percentage shares of the total. For this report, shares were recomputed, excluding the missing data. In the United States, the Census Bureau imputes missing data.

Total

Nations. In the United States, 2.9 percent of ACS respondents between 2008 and 2012 who were age 1 or older had been living outside of their state of residence in the prior year: 2.3 percent in another state and 0.6 percent abroad. Interstate and international migration during this period was less than normal due to the poor economy limiting employment options, particularly from 2008 through 2010.

In México, 4.4 percent of decennial census respondents age 5 or older had been living outside of their state of residence five years earlier: 3.3 percent in another state and 1.1 percent in another country. Of those moving to México between 2005 and 2010 from another country, 92 percent came from the United States. Movement from the United States was unusually high during this period due to the severity and length of the recession in the United States.

Border States. The poor economy particularly affected interstate migration to the U.S. border states, which at 1.8 percent was lower than the 2.4 percent to the balance of the nation. Interstate migration varied considerably by border state, from 3.6 percent of Arizona residents to 1.3

percent of California residents (see the top graph of Chart 18). The share moving from abroad varied only from 0.5 percent in New Mexico to 0.7 percent in the other border states. International migration to the border states was 0.7 percent, slightly higher than the 0.6 percent to the balance of the nation.

In México, migration rates were marginally higher in the border states than in the rest of the country, with 3.4 percent versus 3.3 percent moving from another Mexican state and 1.2 percent versus 1.1 percent coming from another nation. Migration over the last five years — domestic and international — varied considerably by border state (see the bottom graph of Chart 18). Movement to Baja California was highest, with 5.5 percent moving from another Mexican state and 2.1 percent coming from another nation. Interstate migration was lowest to Chihuahua (2.0 percent) and international migration was lowest to Nuevo León (0.5 percent).

Net domestic migration can be calculated from the decennial census of México. Though Baja California had one of the nation's highest in-migration rates, it also had a high rate of outmigration. Among the border states, Nuevo León had the highest rate of net domestic migration at 1.4 percent, followed by Baja California at 1.0 percent and Sonora at 0.9 percent. Eight of the 32 "states" (including the federal district) had a higher rate than Nuevo León. In- and outmigration were nearly equal in Coahuila; Chihuahua experienced net out-migration to other Mexican states.

Border Region. In the United States, movement to the border region was greater than the migration to the balance of the border states: 2.4-versus-1.7 percent moving from another state and 1.0-versus-0.7 percent coming from abroad. In Texas, however, the share moving from another state was lower to the border region than to the rest of the state.

In México, migration to the border region was greater than to the balance of the border states, with 4.5 percent of border region residents in 2010 living in another Mexican state in 2005 compared to 2.7 percent in the balance of the border states and 1.9 percent living outside the country compared to 0.7 percent. Sonora and Tamaulipas in particular had higher migration rates in the border region than in the balance of the state.

Urban Areas. Among the 11 urban areas in the border region of the United States, the share moving from another state in a one-year time period ranged from less than 1.3 percent in Calexico, Eagle Pass, Laredo, McAllen, and Brownsville to 4.2 percent in Yuma and 5.8 percent in Douglas. Migration from abroad ranged from 0.7 percent in Calexico, Tucson, and Brownsville to 1.3 percent in El Paso and 1.2 percent in Laredo.

In the 11 urban areas in the border region of México, 4.5 percent of the residents had moved from another state in the five-year period and 1.9 percent had moved from another country. Reynosa had the highest interstate percentage (6.9) followed by Tijuana (6.1). Acuña, Juárez, Matamoros, and Piedras Negras had rates of less than 3. The international rate was highest to San Luis Río Colorado (4.4 percent) and Agua Prieta (3.7 percent) and lowest to Reynosa (1.0 percent).

CHART 18 PERCENTAGE OF RESIDENTS WITHIN THE UNITED STATES AND MÉXICO WHO MIGRATED INTO THEIR CURRENT STATE OF RESIDENCE



UNITED STATES, OVER THE LAST YEAR, 2008 TO 2012





Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

By Age

Mobility in the United States by age group — mostly five-year age groups but with 18-to-19 year olds split out due to their high mobility — is available from the ACS, but given the small percentage of people moving across state lines in a year and the ACS sampling error, the results at subnational levels need to be used with caution. For México, migration is measured over a five-year period, from 2005 to 2010, with information available by five-year age group. Age is expressed as of 2010, with the actual migration occurring on average at an age 2.5 years younger.

Nations. In the United States, movement from state to state over the 2008-to-2012 period was highest in the 18-to-34 age bracket, peaking at 6.2 percent among those 18-to-19 years old. Interstate mobility steadily decreased with age beyond the 18-to-19 group to about 1 percent among those 65 or older. The proportion moving from abroad also was highest among those 18 to 34, but the rates were much lower, peaking at 1.4 percent among those 20-to-24 years old. Migration from abroad also declined with age after the 20-to-24 group to 0.2 percent among those 75 or older.

As in the United States, domestic migration rates in México were highest among young adults (age 20 to 34). The rates dropped steadily by age in older age groups than the peak of 25 to 29. The highest rates of international migration were among those 25 to 39.

Border States. Interstate migration rates were lower to the U.S. border states than to the balance of the nation in all age groups less than 65, but were especially lower among the prime 18-to-34 age bracket. Migration to the border states accelerated slightly at retirement age, with the rates at age 65 or older marginally higher than in the balance of the states. Interstate migration rates to the border states were below average because of the very low rates to populous California in every age group. Interstate migration rates to Texas were slightly lower than the national average, mostly in the 18-to-29 age bracket. Interstate migration rates were above average to Arizona and New Mexico in all age groups except 18 to 19 in New Mexico. Rates of migration from abroad were marginally higher to the border states than to the balance of the country in all age groups except under 5.

In México, domestic migration rates to the border states relative to the rest of the country between 2005 and 2010 were much higher among those from 15-to-24 years old in 2010. This was offset by lower interstate migration rates to the border states in all age groups starting with age 30. Interstate migration rates varied a bit by state, with Baja California, Nuevo León, and Tamaulipas attracting slightly younger migrants while migrants to Coahuila and Sonora were slightly older. In all age groups, Baja California had the highest rate of domestic in-migration and Chihuahua had the lowest rate.

Similarly, international migrants to the border states were younger than international migrants to other states, with higher rates for those younger than 20 and lower rates among those 25-to-34 years old. All six of the border states had peak international migration rates among those from 25-to-39 years old. The highest rates were in Baja California in each age group except those less than 15, while Nuevo León had the lowest rate, and Coahuila second lowest, in each age group.

Border Region. Interstate migration rates to the U.S. border region were higher than to the balance of the border states in every age group, especially 18 to 29. Interstate migration rates to the border region were higher than the national average among those 50 or older, especially those 60 to 74, and also among those 20 to 24. The border region's rates were the same or slightly lower than the national average in other age groups.

The border region's higher interstate migration rates than in the balance of the border states resulted from the higher figures in every age group in California, in nearly every age group less than 70 in New Mexico, and in the 18-to-29 age groups in Arizona. In contrast, the border region rates were lower than in the balance of Texas in each age group under 65.

Migration rates from abroad were higher to the border region than to the balance of the border states in all age groups, but particularly among young adults. Thus, the border region migration rates from abroad were higher than the national average in all age groups, with the largest differentials from ages 20 to 34. Migration rates to the U.S. border region by age are shown in the top graph of Chart 19.

Migration rates to the border region of México were considerably higher relative to the balance of the border states in all age groups, for both domestic and international migrants. As seen in the bottom graph of Chart 19, domestic migration rates of those living in the border region in 2010 were highest among those from 15-to-34, with a large differential from the balance of the border states among those in their 20s. Among those who had moved to the border region from another country, the highest rates were among those in their upper 20s and 30s.

Interstate migration rates to the border region were highest in Baja California in all age groups, followed by Sonora and Tamaulipas. The rates were lowest in Coahuila and Nuevo León. The rates in the border region were higher than to the balance of the state in all age groups in Chihuahua, Sonora, and Tamaulipas. The border region rates were lower in Coahuila in all age groups and in Nuevo León in most age groups.

By Educational Attainment

A cross-tabulation of migration by educational attainment is available from the ACS for the population 25 or older.

Nation. Interstate migration in the United States was highly correlated to educational attainment, with the rates highest among those with graduate degrees and the lowest among those without a high school diploma. Migration rates from abroad also were highest among the highly educated, but those without a high school diploma had a rate nearly as high.

Border States. Relative to the balance of the country, the border states had a lower rate of interstate migration and a higher rate of movement from abroad in each educational category. Arizona, followed by New Mexico, had the highest interstate migration rates while California had the lowest, in each educational category. Differences in the international migration rates by educational attainment across the states were small.

CHART 19 BORDER REGION PERCENTAGE OF RESIDENTS IN THE UNITED STATES AND MÉXICO WHO MIGRATED INTO THEIR CURRENT STATE OF RESIDENCE, BY AGE GROUP



MÉXICO, BETWEEN 2005 AND 2010



Source: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2007-11 American Community Survey).
Among those not moving across state lines, the educational attainment of residents of the border states was not much different than residents of the balance of the nation; the proportion without a high school diploma was higher in the border states, but so was the percentage with some college and a bachelor's degree. California had the highest percentage of those with at least a bachelor's degree among those not moving across state lines.

Of those moving from another U.S. state, the educational attainment in the border states was somewhat higher than in the balance of the nation, with a higher share having some college or a bachelor's degree. The educational attainment of those who moved to California was considerably higher than those who moved to the other border states.

Of those who moved from abroad, a significant difference between the border states and the balance of the country existed in the educational attainment, with a higher share of the migrants to the border states not having a high school diploma. All of the border states had a high share of immigrants without a high school diploma, but this was offset partially in California by a higher-than-average share with a university degree.

Border Region. In the border region, domestic and international in-migration rates were higher than in the balance of the border states in each educational category. The border region had a higher interstate rate than the national average among those with at least a high school diploma.

Among those who remained in the same state, residents of the border region were less well educated than residents of the balance of the border states. The educational attainment of those moving from another state to the border region was somewhat less than those moving to the balance of the border states, with lesser shares earning at least a bachelor's degree. Those moving from abroad to the border region were less well educated than those moving to the balance of the border states, with the border region having lesser shares with at least a bachelor's degree.

Place of Birth

Another way of looking at migration is to compare the current place of residence to the place of birth.

Nations. In the United States during the 2008-to-2012 period, 59 percent of the residents were living in the same state in which they were born. Twenty-seven percent were born in another U.S. state, 1 percent were natives who were born outside the country, and 13 percent were foreign born. In México, 81 percent of residents were living in the same state in which they were born in 2010. Eighteen percent were born in another Mexican state, and only 1 percent were born outside the country. Thus, relative to the United States, a much higher share of Mexicans were living in the state in which they were born, with lesser shares born in another country or born in another state (see Chart 20).

These figures understate the mobility of Mexicans, since they do not include a large number of people born in México who were living in another country at the time of the Mexican census. The apparently lower mobility of Mexicans also is related to the higher percentage of Mexican



Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

than U.S. residents who are children: a lower share of Mexicans had reached the prime age to migrate.

Border States. In the United States, the share of foreign born was more than twice as high in the border states (22 percent) than in the balance of the country (10 percent). The shares born in state (55 percent in the border states and 60 percent in the balance of the nation) and in another state (23 percent in the border states and 28 percent in the balance of the nation) were lower in the border states. These results are consistent with the one-year migration rate.

The place-of-birth percentages varied widely across the four border states. The percentage born in state ranged from 38 percent in Arizona to 61 percent in Texas, the percentage born in another state varied from 18 percent in California to 48 percent in Arizona, and the foreign-born share was only 10 percent in New Mexico but 27 percent in California.

In México, a lesser share of border state residents (76 percent) than residents of other states (82 percent) were born in the state of residence. The proportion of residents born in another Mexican state was 22 percent in the border states and 17 percent in the rest of the nation. This differential is greater than the differential in the five-year domestic migration rate, which was barely higher in the border states than in the balance of the nation. This suggests that recent migration to the border states has been less than in the past.

The proportion born outside of México was higher in the border states (1.9 percent) than in the rest of the nation (0.6 percent), but these figures are small compared to the five-year international migration rates. This indicates that many of the people moving to México from another country between 2005 and 2010 were born in México.

The place-of-birth percentages were considerably different in Baja California than in the other border states. The percentage born in a different Mexican state was 42 percent in Baja California, compared to 13-to-24 percent in the other border states. The percentage born in another nation also was higher in Baja California (4 percent) than in the other border states (0.6-to-2.4 percent).

Border Region. In the United States, a lesser proportion of the border region's residents were born in the same state (51 percent) relative to the residents of the balance of the border states (55 percent), though in Arizona the proportion was higher in the border region. The percentage born in another U.S. state was somewhat higher in the border region (25 versus 22 in the balance of the border states), a result of higher percentages in California and New Mexico; the percentages were lower in the border region of Arizona and Texas. The foreign-born percentage was somewhat higher in the border region (23) than in the balance of the border states (21), but the opposite was the case in California.

The percentage born in state in the border region of México (63) was considerably less than in the balance of the border states (84), with big differences in Chihuahua, Sonora, and Tamaulipas. The share of residents born in another Mexican state was more than twice as high in the border region (33 percent) than in the balance of the border states (16 percent). Similarly, the percentage born in another nation was higher in the border region (4 versus 1 in the balance of the border states), in each of the border states.

Unlike the rest of the nation, in the border region the percentage born in another state was higher in México than in the United States.

Urban Areas. The place of birth varied across the 11 urban areas of the border region of the United States. As a whole, 50 percent of the residents were born in state, but this share was 40 percent or less in each of Arizona's urban areas and more than 60 percent in four of the six urban areas in Texas. One-fourth of the residents of the 11 urban areas were born in another state, but this share was 10 percent or less in Calexico and in the four most easterly of the Texas urban areas; it was 40 percent or more in the three urban areas in Arizona. The foreign-born proportion was 23 percent in the 11 areas, but exceeded 30 percent in Calexico and Eagle Pass and was less than 15 percent in Tucson and Douglas.

The place of birth also varied across the 11 urban areas of the border region of México. As a whole, 61 percent of the residents were born in state, but this share was less than 50 percent in Tijuana and more than 80 percent in Piedras Negras. More than one-third of the residents of the 11 urban areas were born in another state, but this share was less than 25 percent in Acuña, Agua Prieta, Matamoros, and Piedras Negras; it was 48 percent in Tijuana. The foreign-born proportion was 4 percent in the 11 areas, ranging from 2.3 percent in Reynosa to 6.5 percent in San Luis Río Colorado.

By Age

The place of birth is available by age in the United States. For the nation for the 2008-to-2012 period, the proportion born in state declined with age from 89 percent among those less than 5 years old to less than half of those 60 or older. The percentage born in another state rose with age, from 9 percent of those younger than five to 38 percent of those 62 or older. The foreign-born proportion rose with age, but only through the young-adult age groups. The foreign-born proportion was only 1 percent among those younger than five, peaked at 21 percent in the 35-to-44 age group, then dropped to 11 percent of those 75 or older.

The relationship between place of birth and age was stronger in the border states than in the balance of the nation, and stronger yet in the border region. In the border region, the proportion born in state dropped from 90 percent among those younger than five to 22 percent among those 65 or older. The proportion born in another state rose from 8 percent among those less than five to 51 percent of those 75 or older. The foreign-born percentage was 2 percent among those younger than five, 37 percent among those 35 to 44, and 27 percent among those 75 or older.

The foreign-born percentage was considerably higher in the border region than in the balance of the border states among those 45 and older, but was lower among those 18-to-34 years old. This indicates that a higher share of recent young-adult immigrants settled outside the border region.

By Educational Attainment

Nation. As with the one-year migration rates, the percentage of the population age 25 or older born in another U.S. state is highly correlated with educational attainment. The proportion born in another state rose with attainment from 20 percent among those without a high school diploma to 44 percent of those with a graduate degree. In contrast, the foreign-born percentage was highest among those without a high school diploma at 36 percent and was less than 18 percent in each of the other educational attainment categories.

The educational attainment of residents who were born in another state was much higher than those who were born in the same state, again indicating that the more highly educated made up a disproportionate share of those moving across state lines. While a high proportion of the foreign born did not have a high school diploma, the percentage of the foreign born with bachelor's degrees and especially graduate degrees exceeded that of people who were born in the same state.

Border States. Among those born in the same state, residents of border states were more highly educated than residents of the balance of the nation, mostly reflected in a higher proportion with some college and a lesser proportion stopping with a high school diploma. Californians born in state had a relatively high educational attainment, but the attainment of those born and living in Arizona and New Mexico was considerably below average; Texas also had a high share without a high school diploma.

Of those born in another U.S. state, the educational attainment in the border states was higher than in the balance of the nation, indicating that the border states — particularly California — had disproportionately attracted more educated interstate migrants. In contrast, a low share of those who had moved to Arizona from another state had at least a bachelor's degree.

A significant difference existed in the educational attainment of the foreign born living in the border states versus those living in the balance of the country. A much higher share of immigrants living in the border states did not have a high school diploma, with lesser shares in each of the other educational categories. All of the border states, but particularly New Mexico, had disproportionately received immigrants with low educational attainment.

Border Region. Foreign-born residents of the border region were less well educated than the foreign born living in the balance of the border states, with the border region having a higher share without a high school diploma and lesser shares with at least a bachelor's degree. Thus, there was a sharp difference in the educational attainment of foreign-born residents of the border region relative to the foreign born living outside the border states. Otherwise, the educational attainment of border region residents was not much different than those living in the balance of the border states.

DEMOGRAPHIC CHARACTERISTICS

Three demographic characteristics are examined in this section: the age distribution of the residents, average household size, and ethnicity (of U.S. residents). These data come from the decennial censuses of each nation and are not subject to sampling error.

Age Distribution

Changing fertility rates and life expectancy as well as migration patterns have significant impacts on the age distribution. As birth rates have fallen and as life spans have lengthened in the United States and in México, substantial declines in the share of the population who are children have been offset by increasing shares in older age groups, particularly those of retirement age.

In 2010, the median age of residents of México was 26 years, considerably younger than residents of the United States, who had a median of 37 years. The median age across the 78 municipios in the border region of México ranged from 22 to 41 while the range across the 37 border counties in the United States was from 28 to 51. However, as seen in Chart 21,⁷ the median age in the border states and in the populous urban areas did not vary much across México, while greater variation was seen in the United States.

The remainder of this subsection examines the age structure as measured by five-year age groups through age 84 and for those 85 or older: a total of 18 age categories. Projections are available for the same age groups except for municipios, for which five broad age categories are available.

Nations

In 2010 in the United States, the 45-to-49 and 50-to-54 age groups were most populous. Each was part of the baby-boom generation, who were 46-to-64 years old in 2010. The next most populous group was 15-to-19 years old, due to the large number of young immigrants. Other than these slightly more populous groups, the five-year age group sizes did not vary much through age 59, after which they became much less populous.

The age distribution was considerably different in México in 2010. The largest five-year age groups were those between 5 and 19. The less-than-5 group was not quite as large, a reflection of the decline in fertility rates. Beyond age 19, the age groups became progressively smaller in size.

In 2010, the age group shares in México were larger than in the United States among those less than 40 years of age, particularly among those less than 25. Greater shares of Americans than Mexicans were 40 or older, especially among those 55 or older (see the top graph of Chart 22).

Historically, the age distribution in México was substantially different from the age structure in the United States. México had much higher shares of children and lesser shares among those of middle age or older. As recently as 2000, México's age distribution was 100 years behind that of the United States — its age structure in 2000 was quite similar to that of the United States in 1900. The differences in the age distribution between México and the United States began to narrow more significantly between 2000 and 2010, in response to a sharp reduction in the

⁷ The median age of the large urban areas shown in the chart is for the most populous county or municipio of the area. Due to the nature of a median, it is not possible to calculate the median for the border states as a whole or for the border region without access to the raw data.



CHART 21 MEDIAN AGE WITHIN THE UNITED STATES AND MÉXICO, 2010

Note: The median age of the large urban areas is for the most populous county or municipio of the area.

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 census) and U.S. Department of Commerce, Census Bureau (United States, 2010 census).

fertility rate in México since the early 1970s and an increase in life expectancy greater than in the United States.

Between 1970 and 2010, the population aged in each country. In México, significant declines in share occurred in each age group younger than 20; the share increased in each older age group, particularly among those from 30-to-54 years old. In the United States, shares dropped in each age group below the age of 25, with increases in all older age groups, particularly those from 45-to-64 years old (the age of the baby-boom generation in 2010).

The evolution of the age distribution is expected to continue, more rapidly in México than in the United States. Between 2010 and 2050 in the United States, large gains in share are projected to occur among those 65 or older, while shares will become smaller among those less than 30 and those 40-to-59 years old. In México, more substantial declines in shares are expected among children and young adults (through age 39), while gains in share are predicted to occur among those 45 or older, particularly among those 55-to-79 years old. By 2050, the differences in the age distribution between the two nations are expected to have narrowed substantially, with México having only a somewhat larger share of those under 25 and a lesser share 75 or older (see the bottom graph of Chart 22).

CHART 22 AGE DISTRIBUTION IN THE UNITED STATES AND MÉXICO



2050



Sources: Instituto Nacional de Estadística y Geografía (México, 2010 census), Consejo Nacional de Población (México, 2050 projection) and U.S. Department of Commerce, Census Bureau (United States, 2010 census and 2050 projection).

The dependency ratio is defined as the number of dependents (those under the age of 15 plus those 65 or older) per 100 people of working age (those 15-to-64 years old). The larger the ratio, the greater is the stress on the working-age population to support the younger and older generations. The ratio was 49.0 in the United States in 2010, compared to 55.2 in México.

Since 1900, the U.S. dependency ratio has ranged from 47 (in 1940) to 68 (in 1960). It is projected to increase from 49 in 2010 to 64 by 2030 and remain at that level through 2050. The ratio historically was very high in México, reaching 100 in 1970. The ratio is projected to drop a little further to 51 in 2020, then slowly rise to 58 in 2050. Thus, México's dependency ratio is projected to drop below the U.S. figure in the next few years and remain lower through 2050, in contrast to a much higher dependency ratio historically.

Border States

Residents of the U.S. border states in 2010 were younger relative to the balance of the nation, with a larger share in each age group under 40 and a smaller share in each age group 45 or older. Each of the four border states had a median age less than the U.S. total. In California and Texas, higher shares than in the nonborder states were present in each age group under 40, while shares were lower in every age group older than 44. Arizona and New Mexico had higher-than-average shares of children, but also had above-average shares of those from 60-to-74 years old.

In México in 2010, the age structure in the border states was somewhat different from the balance of the nation. The border states as a whole had a lesser share under age 25 and a higher share in the 25-to-54 age bracket. Shares were marginally lower in the older age groups. Each of the six border states exhibited this pattern to some extent; the differences in the age distribution across the six states were not substantial.

In 2010, the dependency ratio in the six Mexican border states was 52.6, a little less than that of the balance of the nation (55.8). The ratio varied from 50.2 in Baja California and Nuevo León to 55.3 in Chihuahua. In the U.S. border states, the ratio was 48.6, marginally less than the figure for the nonborder states (49.1). The ratio ranged from 46.8 in California to 53.9 in Arizona.

Between 1990 and 2010, changes in the age distribution of the four U.S. border states taken as a whole were similar to the national average, but the changes in the individual states did not necessarily follow the pattern. In particular, New Mexico had a greater decline in the shares of those under 20 and a greater increase in the shares of those from 50-to-79 years old. Texas did not have as large a decrease in share among those from 20-to-39 years old.

In coming decades (from 2010 to 2040), relative to the rest of the country, the U.S. border states are projected to have more of a decline in share among those less than 10 years old and between 25-and-39 years of age, offset by more of an increase in share among those 55-to-74 years old. Thus, the differences in the age distribution of the border states relative to the rest of the country in 2010 are projected to narrow over time. In 2040, the border states are projected to still have higher shares among those under 25, and lesser shares among those 45 to 54 and those 75 or older, than in the rest of the country.

In México, changes in the age distribution between 1990 and 2010 were somewhat different in the border states than in the balance of the nation, with a lesser decline in the share of children and a greater decrease among young adults. Thus, the differences in the age distribution of the border states relative to the rest of the country in 2010 were not as large as they were in 1990. The changes over the two decades were generally consistent across the six border states.

Over the 2010-to-2030 period, the national changes in the age distribution in México are expected to apply relatively equally across the six border states and across the rest of the nation: a significant decline in the share of children and young adults and increasing shares of older adults. Relative to the rest of the nation, the border states in 2030 are expected to have a lesser share of those between 10-and-19 years old and a higher share of those from 50-to-64 years old.

Border Region

Those living in the border region in 2010, on both sides of the border, were younger than the residents of the balance of the border states. In the United States, the proportion of the population less than 25 years of age in 2010 was higher in the border region than in the balance of the border states, while the proportion from 30-to-64 years old, but particularly from 40-to-54 years old, was lower in the border region than in the balance of the border region of the population less than 40 years of age in 2010 was higher in the border region than in the balance of the border region than in the balance of the border states.

A comparison of the age distribution in 2010 on the two sides of the border region is shown in Chart 23. While the age distribution in the Mexican portion of the border region was considerably younger than in the United States portion, the differences were not as great as at the national level (see Chart 22).

While the border region population as a whole was younger than the population living in the balance of the border states, this relationship was not present in each of the border states. In the United States, the higher shares in the border region under the age of 25 almost entirely resulted from the age distribution in New Mexico and Texas. The border region shares were lower than in the balance of the state in Arizona among those less than 15 and in California among those under 20. Similarly, New Mexico and Texas were primarily responsible for the lower shares of those 30-to-64 years old in the border region. In Arizona, the border region shares were higher than in the balance of the state among those 50-to-64 years old. Arizona was largely responsible for the slightly higher shares among those 65 or older in the border region.

In México, the larger shares in the border region than in the balance of the border states among those younger than 40 largely reflected the age distributions in Chihuahua and Tamaulipas. Coahuila, Chihuahua, Sonora, and Tamaulipas contributed to the lesser shares in the border region among those 45 or older. In Nuevo León, where the border region population was quite small relative to the number of residents in the balance of the state, the border region residents were considerably older than their counterparts in the rest of the state.

The dependency ratio in the border region in 2010 was higher than in the balance of the border states in both countries, but particularly in the United States (51.5 in the border region versus



Sources: Instituto Nacional de Estadística y Geografía (México, 2010 census) and U.S. Department of Commerce, Census Bureau (United States, 2010 census).

48.2 in the balance of the border states). In Texas, the border region's figure was much higher than the ratio in the balance of the state, while in California, the border region's ratio was less than in the balance of the state. In México, the dependency ratio in the border region (53.3) was a little higher than in the balance of the border states (52.1). A large difference existed in Nuevo León, with small differences in the other states.

Just as the change in the age distribution in the U.S. border states has not been much different from the national average, the change in the border region has been quite similar to that in the balance of the border states. In México, changes in the age distribution in the border region have not been substantially different from those in the balance of the border states.

Relative to the balance of the U.S. border states, the U.S. border region is projected to have a less substantial shift in the age distribution between 2010 and 2040, with lesser decreases in the shares of children, young adults, and those from 40 through 54 years of age. Increases in the shares of those 60 or older are not projected to be as large in the border region as in the balance of the border states. None of the border regions in the individual border states follow this pattern completely.

Projections by age for municipios in México, and therefore for the border region, are limited to five age groups: less than 15, 15 to 29, 30 to 44, 45 to 64, and 65 or older. The trends of the 1990-to-2010 period are expected to continue through 2030, with decreases in the shares of children and young adults and increases in the shares of the older population. However, the magnitudes of the changes are projected to be somewhat different than in the 1990-to-2010

period, particularly in relation to the changes in the balance of the border states. Between 1990 and 2010, the border region did not experience as significant a shift in the age distribution as in the balance of the border states, while the shift from 2010 to 2030 is expected to be somewhat larger in the border region than in the balance of the border states.

Urban Areas

Relative to the entire U.S. border region, the age distribution of residents of the 11 urban areas in 2010 was very slightly weighted to young adults. A similar pattern existed in México. Thus, relative to the national average, residents of the U.S. border urban areas were younger, with a higher proportion under 30 and a lower percentage 45 or older. The differences were not as large in México, with a higher proportion of the border urban area residents between the ages of 25 and 44 and a lower share 50 or older, relative to the national average.

Across the urban areas along the U.S.-México border, the age distribution varied more in the United States than in México. Some of the U.S. areas had an age distribution similar to the U.S. national average, while others had an age structure similar to the Mexican portion of the urban area. San Diego, Tucson, and Douglas had age distributions closest to the U.S. national average, while the areas along the Texas border — especially McAllen and Laredo — had age distributions much younger than the U.S. average. In México, Mexicali had the oldest age distribution, while Nogales had the youngest.

The differences in the age distribution between the U.S. and Mexican portions of the urban areas were greatest in Tucson-Nogales and Douglas-Agua Prieta. This largely resulted from relatively high proportions of older adults in the Tucson area and in Cochise County outside of Douglas. In contrast, the age distributions on the U.S. and Mexican sides were not that different in Laredo-Nuevo Laredo, McAllen-Reynosa, Brownsville-Matamoros, Eagle Pass-Piedras Negras, and Calexico-Mexicali.

The dependency ratio in the 11 urban areas as a whole was 51.3 in the United States and 52.8 in México in 2010. In the United States, Yuma and each of the urban areas in Texas other than El Paso had figures of at least 59, while the ratio in San Diego was only 44. The ratio did not range as widely in México, from 50 in Tijuana and Mexicali to between 57 and 58 in Acuña, Agua Prieta, Piedras Negras, and San Luis Río Colorado. The difference in the ratios across the border ranged from 6 points lower in San Diego than Tijuana to 9 points higher in McAllen versus Reynosa and in Brownsville relative to Matamoros.

All of the urban areas in México are expected to experience a similar change in their age distribution over the 2010-to-2030 period: a large decrease in the share of children (0-to-14 years old), a moderate decline in the share of young adults (15 to 29), a small drop in the share of the 30-to-44 group, a large increase in the proportion of the 45-to-64 group, and a moderate gain in the share of the retirement-age population.

In the United States, the 11 urban areas as a whole are projected to experience a decline in share between 2010 and 2040 in every age group through age 59, with substantial increases in each age group beginning with age 65. However, the projected changes in the age distribution vary widely by urban area. El Paso comes closest to matching the average of the 11 urban areas. At the other

extreme, Yuma and especially Douglas are projected to experience increases, not decreases, in the shares of children and young adults. San Diego, the most populous of the urban areas, is projected to experience greater-than-average declines in the shares of young-to-middle-age adults, with greater increases in the shares 60 or older.

Household Size

The average household size can be calculated from the results of the 2010 census in each country by dividing the population living in households (which excludes those living in group quarters such as prisons and college dormitories) by the number of occupied housing units.

In the United States, the average number of persons per household was 2.58 in 2010. The average household size in México was far higher at 3.93. Only 9 percent of the households in México consisted of a single person compared to 27 percent in the United States and the percentage of households consisting of two people was only 16 percent in México versus 33 percent in the United States. The considerably higher proportion of older adults in the United States is a major factor contributing to its higher share of one-person and two-person households. Young adults living alone or with an unrelated roommate also are more common in the United States.

The higher proportion of households of four-or-more members in México mostly is a function of the higher fertility rates in México and the high proportion of young adults raising children. Extended families living in the same household also are more common in México.

The average household size was quite a bit higher in the U.S. border states (2.81) than in the balance of the country (2.52). New Mexico's figure of 2.55 was less than the U.S. average but the 2.90 in California was substantially above average.

The average household size in the border region of the United States of 2.88 was higher than the 2.80 in the balance of the border states. The average in the border region of Arizona and California was less than in the balance of those states, but the border region figure in Texas was high at 3.30, compared to 2.70 in the rest of Texas. The average household size was less than 2.5 in the Douglas and Tucson urban areas, but exceeded 3.3 in Laredo, McAllen, Eagle Pass, Brownsville, and Calexico, and was more than 2.9 in Del Rio, El Paso, and Yuma.

In contrast to the United States, the average household size in the border states of México was less than in the balance of the nation (3.71 versus 3.98) and the figure in the border region (3.65) was less than in the balance of the border states. The average ranged from 3.60 in Baja California to 3.85 in Nuevo León. The average in the border region was much less than in the balance of the state in Nuevo León and less in Coahuila, but higher in Chihuahua, Sonora, and Tamaulipas. Across the 11 border urban areas, the figure ranged from 3.52 in Mexicali to more than 3.8 in Agua Prieta and Nuevo Laredo.

Though still large, the difference in the average household size between the United States and México was not as wide in the border states and particularly in the border region (see Chart 24). The difference was small (less than 0.2) between the U.S. and Mexican sides of the border in the McAllen-Reynosa, Laredo-Nuevo Laredo, and Calexico-Mexicali urban areas.

Ethnicity

In the United States, the percentage of the population who identified themselves as of Hispanic or Latino origin is examined in this subsection, with those of Mexican origin distinguished from Hispanics of other origins. Questions on race and ethnicity are not included in the census of México, except for the identification of the indigenous (Native American) population in the long (sample) form of the questionnaire.

Of those counted in the 2010 U.S. census, 16.4 percent identified themselves as of Hispanic or Latino origin. More than half of these, 10.3 percent of the entire population, were of Mexican origin. The Hispanic proportion of the residents of the U.S. border states (37.1 percent) was considerably higher than in the rest of the nation (10.2 percent). The difference was particularly wide among those of Mexican origin, though the border states also had a slightly higher share of Hispanics of other origins. Across the border states, the Hispanic proportion varied from 29.6 percent in Arizona to 46.3 percent in New Mexico. However, the proportion of Mexican origin did not vary as widely, from 25.9 percent in Arizona to 31.6 percent in Texas. New Mexico had a much higher proportion of Hispanics of other origins than the other states.

The percentage of the residents of the border region who were Hispanic (54.5 percent) was higher than in the balance of the four border states (35.1 percent). As seen in Table 1, the border region had a much higher share of those of Mexican origin, but a somewhat lesser share of those of other origins. The Hispanic and Mexican shares were particularly high in the border region of Texas, with a wide differential from the balance of the state. In contrast, the Hispanic share in



CHART 24 AVERAGE HOUSEHOLD SIZE WITHIN THE UNITED STATES AND MÉXICO

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 census) and U.S. Department of Commerce, Census Bureau (United States, 2010 census).

California's border region was much lower and was less than in the balance of the state (though the Mexican origin share in the border region was equal to that in the rest of the state).

In seven of the 11 urban areas, including all six areas in Texas, the Hispanic share ranged from 79-to-96 percent and the share of Mexican origin was between 72-and-92 percent. However, the Hispanic share was less than 40 percent in the populous San Diego and Tucson areas and in Douglas. The Mexican share in each of these three urban areas was less than 33 percent. The ethnic shares in California's border region versus the balance of the state indicate that the Hispanic or Mexican proportions are not a good basis for defining the border region. Even in Texas, a number of counties not located in the border region had higher Hispanic and Mexican shares than some of the counties within the border region.

TABLE 1 PERCENTAGE OF THE POPULATION OF HISPANIC AND MEXICAN ORIGIN IN THE UNITED STATES, 2010

	Hispanic	Mexican	Other Hispanic
United States	16.4%	10.3%	6.1%
Four Border States	37.1	30.5	6.6
Balance of Nation	10.2	4.3	5.9
Border Region	54.5	49.6	4.9
Balance of Border States	35.1	28.3	6.8
Arizona	29.6	25.9	3.7
Border Region	39.7	35.9	3.8
Balance of Border States	27.0	23.3	3.7
California	37.6	30.7	6.9
Border Region	34.6	30.7	3.9
Balance of Border States	37.9	30.7	7.2
New Mexico	46.3	28.7	17.6
Border Region	58.6	50.3	8.3
Balance of Border States	44.2	25.0	19.2
Texas	37.6	31.6	6.0
Border Region	87.3	80.9	6.4
Balance of Border States	32.0	26.0	6.0
			•••

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

SOCIOECONOMIC CHARACTERISTICS

In this section, education, labor force participation, earnings, and similar topics are explored. For México, all of the data except that regarding poverty and income inequality come from the decennial census. Much of the data are derived from the 100 percent count — from the questionnaire sent to all households. Other data, such as employment by occupation and sector, come from the long form of the census questionnaire that was completed by a sample of households, so sampling error needs to be considered. Due to the sampling error, some of the data are not reported for municipios, precluding the calculation of data for the border region.

Due to the brevity of the 2010 decennial census in the United States, all of the socioeconomic data discussed in this section come from the American Community Survey. To reduce sampling error and to obtain data for all of the border counties, the five-year ACS data were collected, for 2008 through 2012.⁸

Educational Attainment

Considerable detail is available by age and grade completed in México, since the educational attainment question is asked of all respondents to the decennial census. Much less detail is available in the United States due to the small ACS sample. Since the educational systems are somewhat different in the United States and México, the comparison of attainments in the two countries should be considered to be an approximation.

Literacy Rate

Literacy for the population 15 or older is determined from the decennial census for México, by five-year age group. The literacy rate, a basic indicator of educational attainment, was 93 percent in México in 2010. The literacy rate is not measured in the United States, but is believed to be around 99 percent.

In México, the literacy rate varied considerably by age, from nearly 99 percent among those 15to-19 years old to only 60 percent among those 85 or older. At 97 percent, literacy was higher in the border states than in the rest of México (92 percent), but the difference among those 15-to-19 years old was slight (99.3-versus-98.6 percent). Literacy in the border region of México was marginally higher than in the balance of the border states among those 15 or older and the same among those 15-to-19. The literacy rate in the border region's 11 urban areas was marginally higher than in the entire border region. Among those 15 or older, the highest literacy rate among the urban areas was in Nogales at 98.5 percent; the lowest was in Sal Luis Río Colorado at 96.7 percent. The literacy rate of those 15-to-19 varied only from 99.2 to 99.6 across the 11 urban areas.

Mean Years of Schooling

The median or mean number of years of schooling is another way of measuring educational attainment. According to the Human Development Index produced by the United Nations, educational attainment among 187 countries, as measured by mean years of schooling, is third highest in the United States at 12.4 while México ranks tied for 83rd at 8.5. México ranks just above the median country and above the median Latin American country. Moreover, educational

⁸ The discussion of the data limitations on page 27 also applies to the socioeconomic characteristics discussed in this section.

attainment in México is higher than in countries such as China (less than 8) and India (less than 4.5) that have experienced strong economic growth, in part due to international companies locating operations in those countries.

The 2010 Mexican census reports the mean grade attained among those 15 or older and by fiveyear age group. The mean grade attained is not reported for the United States by the Census Bureau. It can be approximated, though the exact results vary with the assumptions made regarding the number of years to assign to a Census Bureau category such as "some college, no degree." From the ACS, the calculated average is limited to the population 25 or older, with no information available by age group.

México. Nationally, the mean number of years of schooling in 2010 among those 15 or older was 8.63, close to the United Nations figure. The mean was higher than this in each of the six border states, ranging from 8.82 in Chihuahua to 9.81 in Nuevo León. The figure for the border states as a whole was 9.35, compared to 8.47 in the balance of the country. The mean in the border region of 9.04 was less than the mean in the balance of the border states (9.53). The mean was lower in the border region than in the balance of the state except in Chihuahua. The mean in the 11 urban areas as a whole (9.16) was slightly higher than the figure for the entire border region. Educational attainment was highest in Nogales (9.67) and Mexicali (9.58) and lowest in Acuña (8.46) and Agua Prieta (8.79).

By age group, the highest mean attainment in México in 2010 was among people 20-to-24 years of age, even though some people in this age group have not completed their schooling. The mean fell steadily with age from 10.39 years of schooling in the 20-to-24 age group to 2.73 among those 85 or older. The average for the border states was higher than for the balance of the country in all age groups, with the differential widest among those 45 or older. The border region average was less than in the balance of the border states in all age groups, with the largest differential among those 20-to-59 years old. The geographic variations in educational attainment were least among those 15-to-19 years old, but it is unclear how much of this is due to increasing homogeneity and how much reflects that a substantial proportion of this age group are still pursuing their education.

United States. In the 2008-to-2012 period, the mean attainment nationally was 13.23 years, higher than reported by the United Nations. It was lower in the border states (12.91) than in the balance of the nation (13.32) and was lower in the border region (12.59) than in the balance of the border states (12.95). Among the four border states, Texas had the lowest attainment at 12.76 years, with Arizona the highest at 13.17. Attainment in the border region was higher than in the balance of the state in California, about the same in Arizona, but lower in New Mexico and Texas. Among the 11 urban areas, mean years of schooling was highest in San Diego (13.48) and Tucson (13.38). The figure was less than 11.25 in Calexico and in each of the areas in Texas except El Paso, including only 10.35 in Eagle Pass.

Comparison. In order to compare directly to the United States, the average of the 25-or-older population has been calculated for México. Even though many of those from 15-to-24 years old are still in school, the median attainment of the 15-or-older population was higher than that of 25-or-older residents in México.

Educational attainment was much higher in the United States (13.23) than in México (8.24). As seen in Chart 25, wide differences were present between México and the United States in each geography. While the attainment in the U.S. border states was a little less than in the rest of the nation, the opposite was the case in México. In both countries, the average attainment in the border region was a little less than in the balance of the border states, but in México the border region figure still was higher than the national average. The widest difference between the two countries was in the states other than the border states.

In the 11 urban areas as a whole, the mean attainment was 8.90 years in México and 12.63 in the United States. The differential was widest between Douglas and Agua Prieta (4.59 years) and San Diego and Tijuana (4.50). Agua Prieta had one of the lower attainments among the 11 urban areas in México while the figure in Douglas was above the U.S. urban area average. San Diego had the highest attainment while Tijuana was near the Mexican average. The least difference in educational attainment was in Eagle Pass-Piedras Negras (1.48 years), with differences of less than 2 years also in Calexico-Mexicali and McAllen-Reynosa.

Percentages With High School Diploma and Bachelor's Degree

The most common means of expressing educational attainment is by reporting the percentage of the population attaining each grade level. The differences in the educational systems and reporting of educational attainment in the two countries are discussed in Appendix A.

CHART 25 MEAN YEARS OF EDUCATIONAL ATTAINMENT AMONG THOSE 25 OR OLDER WITHIN THE UNITED STATES AND MÉXICO



Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

The remainder of this section focuses on the percentages with at least a high school diploma and with at least a bachelor's degree. Since the Mexican census results present years of schooling, not whether a diploma or degree was earned, the figures for México are only approximations. Educational attainment by five-year age group is available for México, but the small sample of the ACS limits the amount of age detail available for the United States to the 25-to-34, 35-to-44, 45-to-64, and 65-or-older age groups.

Nations. In the 2008-to-2012 period, 85.7 percent of U.S. residents aged 25 or older were high school graduates. In México, only approximately 29 percent of the residents age 25 or older had earned the equivalent of a high school diploma in 2010. The Mexican figure is equivalent to the percentage of high school graduates in the United States during the 1940s. The 2010 differential between the countries was not quite as great when measuring educational attainment as the percentage earning at least a bachelor's degree: 28.5 percent in the United States and approximately 13 percent in México — a share equivalent to the U.S. figure in the mid-1970s.

Among those 25 or older, two-thirds of Mexicans had less than a 10th grade education, compared to 8 percent in the United States. Of those whose maximum attainment was a bachelor's degree, the difference was not as wide (17.9 percent versus 11.3 percent), but the difference was substantial among those with a graduate degree (10.6 percent versus 1.5 percent).

Average educational attainment increased substantially during the 20th century in the United States. Gains also occurred in México, but the gap in average attainment between the two countries widened before it began to narrow in recent years. One reason for the differential in educational attainment between the two countries is that Mexican law has lagged behind the United States in defining compulsory school attendance. Prior to 1992, only the sixth grade was compulsory in México. Even after México made the ninth grade compulsory in 1992, this was considerably short of the requirements in the United States (attendance is compulsory until a specific age, which varies by state from 16 to 18). In 2012, the 12th grade became the compulsory requirement in México, which should cause the differential in educational attainment between the two countries to narrow more quickly in coming years.

Border States. The share with at least a bachelor's degree (28.5 percent) was the same in the U.S. border states as in the balance of the country, but the share with at least a high school diploma was 5.5 percentage points lower in the border states (81.4-versus-86.9 percent). Based on the share with at least a high school diploma, Arizona was the only border state near the national average; the figure was about 81 percent in California and Texas. Based on the share with at least a bachelor's degree, California exceeded the national average but each of the other border states was below average.

The average educational attainment of residents of the border states of México was somewhat higher than that of Mexicans elsewhere in the country, measured as high school graduates and as bachelor's degree holders. Educational attainment as defined as those graduating from high school was between 31-and-33 percent in five of the six Mexican border states; it was lowest in Chihuahua at 28 percent. Differences were wider as defined as those earning at least a bachelor's degree, with the percentage ranging from 13 in Chihuahua to 19 in Nuevo León.

Though the differences in educational attainment between the two countries were not as wide among residents of the border states as among residents of the nonborder states, the differences between the two nations were substantial in the border states.

Border Region. Educational attainment in the border region of the United States was less than in the balance of the border states on both measures. The border region high school graduation rate was nearly 4 percentage points less than in the balance of the border states and the share with at least a bachelor's degree was 2 percentage points less. Educational attainment was higher in the border region than in the balance of California and little difference existed between Arizona's border region and balance of state. In contrast, a very large differential existed in Texas between the border region and the balance of the state.

Border region residents in México were substantially less well educated than residents in the balance of the border states. Border region residents were less well educated in each of the border states, ranging from a minor difference in Chihuahua to a substantial difference in Nuevo León. Relative to the nonborder states, the percentage of border region residents earning at least a high school diploma was marginally higher, but the share with at least a bachelor's degree was lower.

The differences between the two countries in the border region were similar to those in the border states, as border region residents in both nations had inferior educational attainment relative to residents in the balance of the border states.

Urban Areas. In the United States, San Diego and Tucson had the highest educational attainment among the 11 urban areas in the border region, with the share holding at least a bachelor's degree higher than the national average. Educational attainment in Calexico, Yuma, and each of the urban areas in Texas other than El Paso was substantially lower.

In México, educational attainment was highest in Mexicali. It was lowest in Acuña, Agua Prieta, and San Luis Río Colorado.

By Age. In the United States, educational attainment in each of the border states compared most favorably to the balance of the nation in the older age groups; the share with at least a bachelor's degree was higher in the border states as a whole among those 45 or older. This relationship does not extend to the border region; educational attainment in the border region is similar to the balance of the border states among young adults but lower among older adults.

The 25-to-64 age group is of particular significance since it approximates those of working age who have completed their educations. Educational attainment was a little higher in the 25-to-64 age group than in the entire 25-or-older group across all of the geographic areas. Educational attainment was lower in the border states than in the balance of the country in the 25-to-64 age group, especially as measured by the share of high school graduates. Within the border states, attainment was lower in the border region than in the balance in this age group.

Educational attainment varied more widely by age in México than in the United States. In each age group, attainment in the border states exceeded that in the balance of the country while the figures in the border region were inferior to those in the balance of the border states.

The spread in educational attainment between the United States and México was not as great among young-adult age cohorts as in the older age cohorts, but the differences still were wide. Among those 25-to-34 years old, 87 percent of U.S. residents were high school graduates, compared to 38 percent in México. The shares in this age group with at least a bachelor's degree were 32 percent in the United States and 18 percent in México. Educational attainment in the border region of the two nations is compared by age group in the Chart 26.

Labor Force Participation

The Mexican census asks if people 12 years of age or older are economically active, and if so, if they are working. A workforce participation rate and an unemployment rate can be calculated from these data. A similar question is included in the ACS for those 16 or older.

By Age

Labor force participation is reported for México for five-year age groups between the ages of 15 and 84. Less detail is available for the United States, as the 35-39 and 40-44 age groups are combined, as are the 45-49 and 50-54 groups; five-year age groups stop at age 74. In addition to the detailed age-group data, this analysis focuses on those 20-to-64 years old, since workforce participation is much lower in younger and older age groups than in the 20-to-64 group.

Nations. In the United States, the labor force participation rate of those 20-to-64 years of age between 2008 and 2012 was 78 percent: 83 percent for men and 73 percent for females. The rate was highest among those 35-to-44 years of age at 83 percent, though little difference existed in the rates among age groups between 25 and 54 years old, with the rate ranging only from 81 to 83 percent. Among males, the rate peaked at 89 percent in the 35-to-44 age group. Among females, the rate was highest at 78 percent in the 25-to-29 age group. In all age groups except 16 to 19, the participation rate for men was higher than for women, with the largest difference in the 30-to-44 age group.

In México, the labor force participation rate of those 20-to-64 years of age in 2010 was 66 percent: 91 percent for men and 43 percent for females. As in the United States, the rate was highest among those 35-to-44 years of age at 71 percent, though little difference existed in the rates among age groups between 25 and 54 years old, with the rate ranging only from 69 to 71 percent. Among males, the rate peaked at nearly 97 percent in the 35-to-39 age group; among females, the rate was substantially lower in each age group, with the highest figure of 48 percent in the 40-to-44 age group. Workforce participation among women in México in 2010 was about half that of men in the prime working ages, while the differential between the genders was much smaller in the United States (see Chart 27).

For those not economically active, respondents to the Mexican census indicate whether they are retired, a student, a homemaker, disabled, or not active for another reason. Among those younger than 20, most of those who were inactive in 2010 were students. The most common response for inactivity at all older age groups was homemaker, with retired also common past age 60.

CHART 26 BORDER REGION EDUCATIONAL ATTAINMENT IN THE UNITED STATES AND MÉXICO



PERCENTAGE WITH AT LEAST A HIGH SCHOOL DIPLOMA

PERCENTAGE WITH AT LEAST A BACHELOR'S DEGREE



Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).



* Age 16 to 19 in the United States

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

The labor force participation rate in México was substantially lower than in the United States in each age group between the ages of 20 and 64. In contrast, participation rates were much higher in México at ages 65 or older. At all ages, labor force participation rates among males were higher in México than in the United States. However, participation rates among females in México were lower at all ages than in the United States, with very wide differentials among those less than 65 years old.

Female participation rates increased substantially in the United States from the 1960s through the 1980s. Female participation rates in México in 2010 were comparable to those in the United States prior to 1960 among women younger than 25 and older than 44. Among those 25-to-44 years old, the Mexican rate was comparable to the U.S. rate in the late 1960s, prior to the largest gains in the participation rate.

Border States. In the United States, workforce participation in the border states was a little lower than in the balance of the nation in all age groups under 60 and about equal in the older age groups. For those 20 and older, the differential between the border states and the balance of the country was entirely due to a lower participation rate among females in the border states. For the 20-to-64 age group, the participation rate in the border states was 1.4 percentage points lower than in the balance of the country: 3.5 percentage points lower among females and 0.6 higher among males. Across the four border states, the participation rate ranged from 73.9 percent in New Mexico to 77.0 percent in California among those 20-to-64 years old.

Workforce participation in the border states of México was higher than in the balance of the nation between the ages of 20 and 54 but substantially lower among those 60 or older. For the 20-to-64 age group, the participation rate in the border states was 3.5 percentage points higher, entirely due to a higher participation rate among females in the border states of 4.8 percentage points. The male participation rate was identical at 90.0 percent in the border states and in the balance of the nation. The age 20-to-64 participation rate was highest at 72.7 percent in Baja California and lowest at 65.5 percent in Coahuila. For those not economically active, a higher percentage indicated they were students in the border states than in the rest of the country through age 24; retirement also was more common in the border states.

Among those 20-to-64 years old, the differential in the participation rates between the two countries was not as wide in the border states (8 percentage points) as in the balance of the country (13 percentage points), due to a lesser differential among females. The differential was least among those 25-to-44 years old.

Border Region. Participation rates in the border region of the United States were lower than those in the balance of the border states in all age groups except 20 to 24. Among those 20 to 64, the difference was 2.2 percentage points. Male participation rates were lower by 0.9 percentage points with a 3.2 differential for females. Among females, the border region participation rate was less than in the balance of the border states in all age groups; the rate was lower for males among those 25 or older, especially those 55 or older.

The big difference in the participation rates between the border region and the balance of the state occurred in Texas, with a 6.3 percentage point difference in the 20-to-64 age group. In contrast, the participation rate was higher in the border region than in the balance of California.

In México, participation rates in the border region were higher than those in the balance of the border states in all age groups 15 or older, particularly among those 20-to-69 years old. Among those 20-to-64, the difference was 3.6 percentage points, with a difference of 1.6 for men and 5.0 for women. Male participation rates were higher in the border region than in the balance of the border states among those 20-to-29 and 55-to-79. Among females, the border region participation rate was higher than in the balance of the border states in all age groups. In the border region relative to the balance of the border states, a higher share of those economically inactive were students, with a lesser share retired.

In the 20-to-64 age group, the participation rates were higher in the border region than in the balance of the state in Chihuahua and Tamaulipas. In Coahuila and Sonora, the rates were slightly higher, but in Nuevo León, the participation rate was considerably lower in the border region than in the balance of the state.

The differential in the labor force participation rate in the border region between the United States and México was 4 percentage points, compared to a differential of 10 points in the balance of the border states. Labor force participation rates in the various geographies of the United States and México are shown in Chart 28.



CHART 28 LABOR FORCE PARTICIPATION RATES AMONG THOSE 20-TO-64 YEARS OLD WITHIN THE UNITED STATES AND MÉXICO

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

Urban Areas. In the 11 urban areas in the border region, the labor force participation rate was 74.9 percent in the 20-to-64 age group in the United States. The rate was highest in San Diego at 78 percent. It was lowest in Calexico and Brownsville at 67 percent.

In the 11 urban areas in México, the participation rate was 71.4 percent in the 20-to-64 age group. The rate was highest in Nogales at 74 percent and in Tijuana at 73 percent. It was lowest in Piedras Negras at 67 percent and was nearly as low in Nuevo Laredo and San Luis Río Colorado.

Thus, the difference between the nations in the 11 urban areas was only 3.5 percentage points. The participation rate was higher in México than in the United States in Calexico-Mexicali, Douglas-Agua Prieta, McAllen-Reynosa, and Brownsville-Matamoros. The U.S. rate was more than 5 percentage points higher than the Mexican rate in San Diego-Tijuana.

By Educational Attainment

Both countries provide information on labor force participation by educational attainment, but the data are not comparable since they are reported for the entire 25-to-64 age group in the United States and for everyone 12 or older in México.

Nations. In the United States, labor force participation increased steadily with educational attainment, from less than 62 percent among those who had not graduated from high school to 86 percent among those earning at least a bachelor's degree. In México, labor force participation also was higher among those with more education, but the relationship was not as strong. For example, the participation rate among those completing junior high was higher than that of those attending high school while the participation rate of those not completing junior high was the lowest of the seven categories.

Border States. Among those with less than a high school diploma, participation rates were higher in the U.S. border states than in the rest of the country, but participation rates were slightly lower in the border states than in the balance of the nation among those with more education. In each category of educational attainment, participation rates were higher in California and Texas than in Arizona and New Mexico.

In most attainment categories, participation rates were a little higher in the border states of México than in the rest of the country. In each category, participation rates were highest in Baja California. Coahuila had among the lowest rates in each category, along with Nuevo León in the lowest attainment categories and Chihuahua in the highest categories.

Border Region. Participation rates in the U.S. border region were lower than in the balance of the border states in each educational attainment category, but particularly among those with the least education. Except in New Mexico, the participation rate was lower in the border region than in the balance of the border states, with the exception of those without a high school diploma in New Mexico. The differential between the border region and the balance of the state was largest in Texas among those with less education.

Participation rates in the border region of México were considerably higher than in the balance of the border states in each educational attainment category. Generally, the participation rate was higher in the border region than in the balance of the border states in each category of educational attainment, with some exceptions in Nuevo León.

Urban Areas. Labor force participation was considerably below the average of the 11 urban areas in each of the educational attainment categories in the Douglas urban area, below average in each category in Brownsville, and below average except among those with a bachelor's degree in Calexico. Participation was high in San Diego among the less well educated and high in Del Rio among the more highly educated.

Labor force participation in the 11 Mexican urban areas was higher than in the entire border region except among those with the least educational attainment. Participation was below the average of the 11 urban areas in each of the educational attainment categories in the Piedras Negras and Nuevo Laredo urban areas. Participation was high in Tijuana among the less well educated.

Unemployment

The determination of unemployment from questions asked in the 2010 Mexican census and the American Community Survey is similar, with one exception: in the United States, a person who

is not working must have actively looked for work in the last four weeks in order to be considered part of the labor force, and therefore unemployed.

By Age

Nations. In the United States, unemployment rates between 2008 and 2012 were highest among those 16-to-19 years of age at 26.5 percent and lowered considerably with age to less than 6 percent among those 75 or older. The rate was higher for males than females except in the 30-to-44 age bracket. For the entire 20-to-64 age group, the unemployment rate was 8.9 percent for men and 8.1 percent for females.

In México, unemployment rates in 2010 also were highest among those less than 20 years of age, but the lowest rates occurred among those 35-to-49 years old. The rate was higher for males than females in all age groups. For the entire 20-to-64 age group, the unemployment rate was 4.8 percent for men and 2.6 percent for females.

The unemployment rates were lower in México than in the United States in all age groups. The severity of the economic recession and the slow recovery from the recession in the United States caused the U.S. unemployment rates for this period to be higher than the historical norm. Among those 20-to-64 years old, the U.S. unemployment rate was 8.5 percent, while the rate in México was 4.1 percent.

Border States. Unemployment rates in the U.S. border states were a little higher than in the balance of the nation except for an equal rate among those 30 to 34. For the 20-to-64 age group, the differential was 0.5 percentage points, entirely due to higher unemployment rates among females in the border states; the unemployment rate for males was lower in the border states for those 20-to-44 years old. The unemployment rate among those 20-to-64 years old varied across the four border states from 7.0 percent in Texas to 10.2 percent in California.

Unemployment rates in the border states of México were higher than in the balance of the nation in all age groups, though the differential was small among those 25-to-54. For the 20-to-64 age group, the differential was 0.4 percentage points. The percentage-point differential between the border states and the balance of the country in the 20-to-64 age group was 0.5 among men and 0.2 among females. The unemployment rate in the border states ranged from 3.6 percent in Nuevo León to 5.3 percent in Coahuila.

The unemployment rate in the border states among those 20-to-64 years old was 4.5 percentage points higher in the United States than in México. The differential between the countries was nearly the same in the balance of the nation.

Border Region. Unemployment rates in the U.S. border region were lower than those in the balance of the border states among those 20 to 29, but otherwise were similar. Among those 20-to-64, the difference was only 0.1 percentage point. Male unemployment rates were lower in the border region than in the balance of the border states among those less than 35, but were higher among those 60 or older. There was no difference in the 20-to-64 age group. Among females, the border region unemployment rate was 0.3 percentage points lower than in the balance of the border states among those 20-to-64 years old.

Unemployment rates were higher in the border region than in the balance of the state in Arizona, New Mexico, and Texas. In contrast, the unemployment rate was lower in the border region than in the balance of California, by a substantial amount among those younger than 30.

Unemployment rates in the border region of México were higher than those in the balance of the border states except among those 20-to-29 years old. Among those 20-to-64, the difference was 0.4 percentage points. Male unemployment rates were higher in the border region than in the balance of the border states except among those 20-to-29; the difference in the 20-to-64 age group was 0.5 percentage points. Among females, the border region unemployment rate was lower than in the balance of the border states among those less than 35 but higher among those 35-to-74. The female unemployment rate among those 20-to-64 years old was nearly identical in the border region and balance of the state.

In the 20-to-64 age group, the unemployment rate was higher in the border region than in the balance of the state in Chihuahua and slightly higher in Nuevo León and Sonora, but lower in Coahuila.

The unemployment rate in the border region among those 20-to-64 years old was 4.2 percentage points higher in the United States than in México. The differential between the countries was 4.7 points in the balance of the nation. The unemployment rates in each country are displayed in Chart 29.

Urban Areas. In the 11 urban areas in the border region of the United States, the unemployment rate was 8.8 percent in the 20-to-64 age group. The rate was lowest in Laredo at less than 6 percent. It was highest in Calexico at 16.6 percent and also was in the double digits in Yuma.

In the 11 urban areas in the border region of México, the unemployment rate was 4.6 percent in the 20-to-64 age group. The rate was highest in San Luis Río Colorado at 5.7 percent and in Juárez at 5.6 percent. It was lowest in Reynosa at 3.1 percent.

In the 11 border urban areas, the unemployment rate in the United States was 4.2 percentage points higher than in México. The differential was 2 percentage points or less in El Paso-Juárez and Laredo-Nuevo Laredo. It was nearly 7 percentage points in McAllen-Reynosa and nearly 13 points in Calexico-Mexicali.

By Educational Attainment

Nations. In the United States, unemployment rates ranged significantly with educational attainment, from 14.2 percent among those without a high school diploma to 4.1 percent among those with at least a bachelor's degree. In México, unemployment rates did not vary much with educational attainment, with the exception of a higher rate among those not completing junior high.

Border States. The range in the unemployment rate across the educational attainment categories was not as great in the U.S. border states (from 4.7-to-12.1 percent) as in the rest of the nation (from 4.0-to-15.3 percent). The unemployment rate was lower in the border states than in the balance of the country among those without a high school diploma, but was a little higher in each



CHART 29 UNEMPLOYMENT RATES AMONG THOSE 20-TO-64 YEARS OLD WITHIN THE UNITED STATES AND MÉXICO

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

of the other attainment categories. In each category of educational attainment, unemployment rates were higher in Arizona and California than in New Mexico and Texas.

Unemployment rates in the border states of México were significantly higher than in the balance of the nation among those with less than a ninth grade education, but were slightly lower among those with at least a bachelor's degree. In each category of educational attainment, unemployment rates were among the highest of the border states in Coahuila and among the lowest in Nuevo León.

Border Region. In the border region of the United States, the unemployment rate was slightly higher than in the balance of the border states among those without a high school diploma but slightly lower among the other educational categories. The unemployment rate was lower in the border region than in the balance of California in each category of educational attainment, but in the other border states, the unemployment rate was higher in the border region except among those with high educational attainment.

Unemployment rates in the border region of México were higher than those in the balance of the border states among those with the least educational attainment but not much different among the other categories of attainment. The unemployment rate was lower in the border region than in the

balance of Coahuila in most categories of educational attainment, but the unemployment rate was higher in the border region in most categories in Sonora and in all categories in Chihuahua.

Urban Areas. The unemployment rate in the United States was higher than the average of the 11 urban areas in each of the educational attainment categories in the Calexico and Yuma urban areas and below average in each category in El Paso, Laredo, and Brownsville. The unemployment rate among those without a high school diploma was quite high in Calexico and each of the urban areas in Arizona.

In México, the unemployment rate was at least a little higher than the average of the 11 urban areas in each of the educational attainment categories in the Juárez, Matamoros, and Nogales urban areas. The rate was below average in each category in Mexicali and Reynosa.

Employment by Age

Employment rates, as calculated by employment divided by population, differ from labor force participation rates by the amount of unemployment. Patterns in the employment rate, or employment-to-population ratio, by age are similar to those for the labor force participation rate. In México and the United States, the highest rates occur in the 35-to-44 age group. Employment rates in the United States were higher than those in México in each age group through age 64, with the largest differentials occurring in the 45-to-59 age bracket.

In the United States, employment rates in the border states during the 2008-to-2012 period were lower than in the balance of the nation in each age group under the age of 65, with the largest difference among those 16 to 19. In México, employment rates in 2010 were higher in the border states than in the balance of the country in each age group from 20 through 54. Employment rates in the border states were only slightly higher in the United States than México among those under age 45. In the balance of the nations, employment rates in the United States were quite a bit higher than in México except among those 65 or older.

Employment rates in the U.S. border region were lower than in the balance of the border states in each age group. The employment rates in the border region of México were higher than in the balance of the border states in each age group through age 79. Employment rates in the border region were higher in México than in the United States among those younger than 45 and 65 or older.

Overall Employment-to-Population Ratio

In the prior subsection, the employment-to-population ratio was examined by age. In this subsection, the overall employment-to-population (E-P) ratio is reviewed. The overall figure is linked to measures of economic well-being. As with the other indicators examined in this section, the data for México come from the 2010 census while the data for the United States come from the 2008-to-2012 ACS.

In the United States, the employment-to-population ratio was 45.9. The E-P ratio was lower in México at 38.0. The lower figure in México primarily results from lower employment rates among those younger than 65, due to the lesser workforce participation rates among females. While the higher proportion of children in México also contributes to a low E-P ratio, this is

offset by the lower share of those of retirement age and the higher employment rates in México in the 65-or-older age group.

The E-P ratio was lower in the U.S. border states at 44.6 than the 46.3 in the balance of the country. The E-P ratio was below the U.S. average in each of the border states, ranging from 42.6 in Arizona to 45.4 in Texas. In contrast to the United States, the E-P ratio in the border states of México was greater than in the balance of the nation (39.1 versus 37.7). The ratio ranged from 36.7 in Coahuila to 41.8 in Baja California.

The E-P ratio in the U.S. border region of 41.0 was lower than the 45.0 in the balance of the border states. The average in the border region of California was close to the figure in the balance of the state, but the border region figure was lower in the other border states, especially in Texas. The figure in the border region of México (39.4) was a little higher than in the balance of the border states (38.9). The ratio in the border region was the same or less than in the balance of the state in Coahuila, Chihuahua, Nuevo León, Sonora, and Tamaulipas, but the high figure in Baja California pushed the region's figure above the balance of the border states.

The E-P ratio was 44.7 in the San Diego urban area and 42.4 in the Tucson area, but was less than 35 in Calexico, Yuma, and Brownsville, and was less than 40 in the other urban areas. Across the 11 border urban areas in México, the ratio exceeded 40 in Tijuana, Mexicali, and Nogales but was 37 or less in Nuevo Laredo, Piedras Negras, and Juárez.

The difference in the employment-to-population ratio between the United States and México was not as wide in the border states and particularly in the border region (see Chart 30). The E-P was higher on the Mexican side of the border in seven of the 11 urban areas, but the exceptions included the populous areas of San Diego-Tijuana, Tucson-Nogales, and El Paso-Juárez.

Employment by Sector, Occupation and Class

Employment data from the ACS and decennial census count people by where they live. In contrast, the economic sources of employment discussed in Volume III count jobs by where the jobs are located.

Class

Nations. In the United States, those who are part of the workforce are categorized into one of several classes: employee of a private, for-profit company; worker at a private, not-for-profit organization; government worker (subdivided into federal, state or local government); self-employed in own incorporated business; self-employed in own, not-incorporated business; and unpaid family worker. Two-thirds of the workers in the United States between 2008 and 2012 were employees of for-profit companies, 8 percent worked at not-for-profit organizations, 15 percent were government employees, 10 percent were self-employed (including both categories of self-employed), and 0.1 percent were unpaid family workers.

In México, fewer classes are defined, with the categories translating into employees, employers, self-employed, and unpaid workers. More than two-thirds of those economically active in 2010 were classed as employees and one-fourth were self-employed.



Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

In order to compare the two countries, the four Mexican categories are used, with the selfemployed in own incorporated business class in the United States considered to be employers; employees in the United States are considered to be the sum of government workers and privatesector workers (both for profit and not for profit). The class of worker distribution in the United States and México was considerably different, with a much higher share in the United States working as employees (90-versus-69 percent) and lesser shares of not-incorporated selfemployed (6-versus-25 percent) and unpaid (0.1-versus-3.2 percent).

Border States. The worker class distribution in the U.S. border states was somewhat different than in the balance of the country, with a higher percentage self-employed in not-incorporated businesses and a lesser share working for not-for-profit organizations. Differences across the U.S. border states generally were small except for New Mexico, which had the highest proportions of the four border states working for government and at not-for-profit organizations; the proportion working at for-profit companies was 7-to-10 percentage points lower in New Mexico than in the other border states.

The proportion of employees in the border states of México was 10 percentage points higher than in the balance of the country; the self-employed proportion was 8 percentage points less and only 1.2 percent were unpaid versus 3.7 percent in the balance of the country. Differences were not significant across the Mexican border states; Sonora had a somewhat higher share of selfemployed, offset by a lesser share of employees. The differential in the class-of-worker distribution between the two countries was much less in the border states than in the balance of the two countries. Relative to the Mexican border states, the proportions in the U.S. border states were 11.5 percentage points higher for employees, 10 percentage points lower for self-employed, and 1 percentage point lower for unpaid workers (see Chart 31).

Border Region. The U.S. border region shares were different from those in the balance of the border states, with a higher percentage working for each of the three levels of government, especially the federal government, and a lesser share working as employees of for-profit businesses. Relative to the national average, a higher share of border region workers were employed by government or self-employed in an unincorporated business, with lesser shares of employees, both for profit and not for profit.

Employment by class is not reported for municipios and therefore cannot be calculated for the border region of México except for the major category of employees. The share of employees in the border region was marginally higher than in the balance of the border states, though the opposite relationship was present in Nuevo León.

Urban Areas. In the 11 urban areas of the United States, 65 percent of those working were employees of a private-sector, for-profit business. This share was highest in San Diego at 66 percent and was less than 60 percent in Calexico, Douglas, and Del Rio. The low share in Calexico was offset by high shares in state and local government, while the federal government



CHART 31 EMPLOYMENT SHARES BY CLASS OF WORKER IN THE BORDER STATES OF THE UNITED STATES AND MÉXICO

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

share was high in Douglas and Del Rio. The local government share ranged from 7 percent in San Diego to 15 percent in Calexico; the share for state government ranged from 4 percent in San Diego to 11 percent in Eagle Pass, and the federal government share ranged widely, from less than 2 percent in McAllen to more than 13 percent in Douglas and Del Rio. Not-for-profit employees were most common in Tucson, with a small share in Laredo and Eagle Pass. McAllen had the highest share of self-employed in not-incorporated businesses.

Among the 11 urban areas in México, the share of employees ranged from 73.8 percent in Agua Prieta to 85.4 percent in Acuña.

Sector

Both México and the United States classify economic activities by the North American Industry Classification System (NAICS). The NAICS defines 20 sectors, which are presented in the ACS results. The Mexican census groups the sectors into only five categories for the nation and states, and only four for municipios. Agriculture is defined as the only "primary" activity. "Secondary" activities include mining, utilities, manufacturing, and construction; the construction sector is reported separately from the others by nation and state. All other activities are "tertiary," which is reported in two subgroups: trade (wholesale and retail combined) and services, which consists of 13 NAICS sectors.

Nations. Based on the responses to the ACS, each of four sectors employed at least 9 percent of the workers in the United States: health care and social assistance, retail trade, manufacturing, and educational services.⁹ Three others —accommodation and food services; construction; and professional, scientific and technical services — each accounted for between 6 and 7 percent. The other 13 sectors each had shares of less than 5 percent, including less than 1 percent in management of companies, mining, and utilities.

Differences in the sectoral mix between the United States and México were substantial. In the United States, the agricultural share of 1.4 percent was much lower than the 13.5 percent in México. The shares also were lower in the United States in mining, manufacturing and utilities (12.0-versus-16.3 percent); wholesale and retail trade (14.4-versus-19.5 percent); and construction (6.5-versus-8.5 percent). The services share was much higher in the United States: 65.7 percent compared to 42.2 percent.

Border States. In the United States, the sectoral mix from the ACS did not vary much between the border states and the balance of the country. The main differences were lesser shares in the border states in the manufacturing sector and in the health care and social assistance sector, offset by somewhat higher shares in several sectors, particularly construction; professional, scientific and technical services; and administrative support. The sectoral mix varied somewhat across the four border states, particularly in New Mexico, which had a greater share of public administration and a lesser share of manufacturing.

⁹ In the NAICS, public-sector and private-sector activities are not clearly delineated, except for the "public administration" sector. For example, the educational services sector includes public education. In contrast, a variant of NAICS is used in the reporting of economic data discussed in Volume III in which a "government" sector, which includes all public-sector activities, replaces the "public administration" sector.

In México, the employment shares in the border states were not much different from those in the balance of the country in three of the five categories: construction; wholesale and retail trade; and services. However, the border states had a much higher share in the mining, manufacturing, and utilities category, offset by a lower share in agriculture. Differences existed in the sectoral mix across the six border states, especially in agriculture. Sonora and Chihuahua had relatively high shares of agriculture while the share in Nuevo León was quite low. Coahuila and Chihuahua had the highest shares in mining, manufacturing and utilities.

Significant differences existed in the sectoral shares between the U.S. border states and the Mexican border states (see Chart 32), similar to the national differences. While the differential in the agricultural share in the border states was not as broad as it was nationwide, the differential in mining, manufacturing and utilities was wider.

Border Region. The sectoral mix of the U.S. border region varied a little more widely relative to the balance of the border states than did the border states relative to the rest of the nation. In particular, versus the balance of the border states, the border region had a considerably lesser share of manufacturing (in all four states) and a lower share of finance and insurance (in each state except California), with greater shares in public administration (in each state), educational services (in each state), and health care and social assistance (in Arizona and Texas).



CHART 32 EMPLOYMENT SHARES BY SECTOR IN THE BORDER STATES OF THE UNITED STATES AND MÉXICO

* MMU: mining, manufacturing and utilities

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

In a few sectors, the relative importance in the border region versus the balance of the state varied across the four border states. In the border region, the professional, scientific and technical services sector was relatively larger in California, but relatively less important in New Mexico and Texas. Transportation and warehousing was relatively sizable in the border region of Texas but was relatively small in the border region of Arizona and California. Agriculture was relatively more important in the border region of Arizona, New Mexico and Texas, but was relatively small in the border region of California.

In the border region of México, the shares for agriculture and services were lower than in the balance of the border states, while the share in the mining, manufacturing, utilities, and construction (secondary activities) was higher. However, the border region of Nuevo León had considerably more agriculture than the balance of the state.

Relative to the balance of the border states, the difference in the U.S. and México sectoral share was wide in the secondary sector in the border region but less wide in agriculture.

Urban Areas. Considerable differences in the sectoral shares were present across the 11 urban areas of the United States. Shares varied considerably in the manufacturing; professional, scientific and technical services; educational services; health care and social assistance; and public administration sectors. San Diego had much higher shares than most of the other areas in manufacturing and professional, scientific and technical services. Calexico and Yuma had high shares in agriculture. Laredo had a high share in transportation and warehousing.

The 11 urban areas in México had a lesser share of agriculture and a greater share of secondary activities than the rest of the border region. Substantial differences in the sectoral mix existed across the 11 urban areas. Mexicali and San Luis Río Colorado had the highest shares of agriculture and were below average in the secondary activities. Acuña, Juárez, and Reynosa had the highest shares in the secondary activities.

Occupation

In the United States, the Standard Occupational Classification is used to define 820 occupations and to organize these occupations into 22 occupational groups. The ACS essentially presents its occupational data by occupational group, though three of the groups are split into two pieces. In México, occupations are classified differently, using the Sistema Nacional de Clasificación de Ocupaciones, which has nine divisions by which the decennial census results are presented. (The nine divisions are collapsed into four categories for municipios.) Since the occupational classification systems used by México and the United States differ, and since the detailed data on occupations are not available from the Mexican decennial census and ACS, it is not possible to compare the occupational mixes of the two countries using these datasets.

Nations. Based on the responses to the ACS, sizable shares of United States employment were in three occupational groups: administrative support (13.9 percent), sales (11.0 percent), and management (9.7 percent). Seven groups had shares of 5-to-6 percent but 11 had shares of less than 4 percent.
Among the nine divisions in México, 18 percent of workers were classified in the professional and technical division, 17 percent in the unskilled category, and 15 percent in sales. The smallest division was management, with 4 percent of the workers.

Border States. In the United States, the occupational mix in the border states was not substantially different from the mix in the balance of the country. The main differences were lesser shares in the border states in the production group and the health practitioners and technical group, offset by somewhat higher shares in several groups, including construction and extraction; and farming. The occupational mix varied somewhat across the four border states, with the mix in New Mexico most different from the other states, including lesser shares in the business and financial, computer and mathematics, and sales occupational groups but a greater share in science occupations. Arizona had a high share in administrative support and California had a high share in arts, design, entertainment, sports, and media occupations.

In México, the occupational shares in the border states (see Chart 33) were different from those in the balance of the country in some of the nine divisions. The share in the border states was much higher in the production and transportation division and higher in the professional and technical, administrative assistant, and management divisions. The share in the border states was far lower for agricultural occupations and lower in the sales and unskilled labor divisions. Differences existed in the sectoral mix across the six border states, especially in the agricultural division. Nuevo León had the lowest shares in agriculture and in the unskilled division, and the highest shares in the various "white collar" divisions.



CHART 33 EMPLOYMENT SHARES BY OCCUPATIONAL DIVISION IN THE BORDER STATES OF MÉXICO

Source: Instituto Nacional de Estadística y Geografía (2010 Census).

Border Region. The occupational mix in the U.S. border region is shown in Chart 34; it was moderately different relative to the mix in the balance of the border states. In particular, the border region had a lesser share of production occupations (especially in California and Texas) and management occupations (in each state except California). A somewhat lower share of business and financial positions was present in each state except California. Somewhat greater shares were present in the border region in several generally lower-paying groups: education (in each state); healthcare support (mostly in New Mexico and Texas); protective service (in each state); food preparation and serving (mostly in Arizona and California); building and grounds cleaning and maintenance (primarily in Texas); and personal care (mostly in New Mexico and Texas).

In the border region of México, the share in the crafts, production, and transportation category was higher than in the balance of the border states. The shares were lower in the border region in the other categories, especially agriculture and the professional and technical, administrative assistant, and management grouping.

Urban Areas. The occupational mix in the San Diego urban area was substantially different from most of the other border urban areas, with high shares in most of the high-paying occupational groups. In Calexico, Yuma, and each of the urban areas in Texas, the shares were low in these high-paying groups. Calexico and Yuma had high shares in farming and protective





Source: U.S. Department of Commerce, Census Bureau (2008-12 American Community Survey).

service. Each of the urban areas in Texas had a high share in the education group but otherwise the occupational groups with high shares varied across the urban areas in Texas. Eagle Pass and Laredo had high shares in transportation and material moving occupations.

Among the 11 urban areas, the share in the professional and technical, administrative assistant, and management category was highest in Mexicali and Nuevo Laredo and lowest in Agua Prieta and Acuña. The share in the crafts, production and transportation category was very high in Acuña and high in Reynosa, but low in Mexicali, San Luis Río Colorado, and Nuevo Laredo. In the sales, service and unskilled category, the share was highest in San Luis Río Colorado and lowest in Acuña.

Earnings and Income

The ACS requests respondents to report their earnings and other sources of income by type. The data are tallied by individual and by household, with frequency distributions, means, and medians reported.

The Mexican census includes just one question on the earnings of individuals; no information is available on total income. Rather than being expressed in pesos, the earnings data are expressed relative to the minimum monthly salary, which is set by the federal government annually; the minimum is not the same across México. Expressed as a daily figure, the minimum in 2010 ranged from 54.47 pesos to 57.46 pesos. Based on the average exchange rate of 12.628 pesos per dollar in 2010, the minimum daily wage ranged from only \$4.31 to \$4.55 in U.S. dollars. However, using the exchange rate to convert the pesos to dollars ignores the differences in the cost of living between the two countries. Purchasing power parity (PPP) considers the cost-of-living differential as well as the exchange rate.¹⁰ According to the OECD (Organisation for Economic Co-operation and Development), the PPP for "actual individual consumption" was 7.600 pesos per dollar in 2010. On this basis, the minimum *daily* wage in México was \$7.17 to \$7.56 in U.S. dollars, essentially equal to the minimum *hourly* wage of \$7.25 in the United States.

México

The earnings data from the Mexican census are reported as a frequency distribution (see Table 2). Earnings were higher in the border states than in the balance of the nation, with higher shares in each category from 2-to-3 times the minimum and higher. Among the border states, the earnings distribution was highest in Nuevo León and Baja California, while Chihuahua and Tamaulipas had the largest shares earning less than the minimum wage.

The distribution available for municipios is much less detailed (see the bottom portion of Table 2). Earnings in the border region were similar to those in the balance of the border states, with a lesser share of earnings being less than the minimum wage but also a lesser share earning at least twice the minimum. In Nuevo León, earnings were higher outside of the border region but in Tamaulipas, earnings were higher in the border region than in the balance of the state. Among the 11 urban areas, earnings were highest in Tijuana, followed by Mexicali. San Luis had the highest share of workers earning less than the minimum wage, while the shares earning at least twice the minimum wage were low in Juárez and Acuña.

¹⁰ Purchasing power parities are discussed in the Gross Domestic Product subsection of Volume III.

TABLE 2

EARNINGS OF ALL WORKERS WITHIN MÉXICO IN 2010 EXPRESSED AS A FREQUENCY DISTRIBUTION RELATIVE TO THE MINIMUM SALARY

Ratio to the			Balance of	
Minimum Salary	México	Border States	Nation	Border Region
None	8.3%	3.2%	9.4%	
0-1	9.6	5.9	10.4	
1-2	24.0	21.3	24.6	
2-3	22.5	27.1	21.6	
3-5	20.2	23.6	19.5	
5-10	10.7	13.1	10.2	
>10	4.6	5.8	4.3	
<1	17.9	9.1	19.8	8.0%
1-2	24.0	21.3	24.6	24.7
>2	58.0	69.7	55.5	67.3

Source: Instituto Nacional de Estadística y Geografía (2010 Census).

For the nation and states, the approximate median earnings can be calculated based on the frequency distribution, but the limited detail by municipio does not allow the estimation of a median for the border region. Considering all economically active people, the approximate median earnings in México in 2010 was 2.36 times the minimum. The approximate median relative to the minimum was higher in the border states (2.72) than in the balance of the country (2.26), ranging from 2.43 in Chihuahua and 2.44 in Tamaulipas to 2.90 in Baja California and 3.06 in Nuevo León.

The earnings data are available by class of worker for the nation and states: employees, employers, and self-employed. (The fourth class of worker consists of those who are not paid.) Looking only at the employee class, the national median was 2.57 times the minimum monthly salary than for all workers. The differential between the border states (2.76) and the balance of the country (2.51) was not as large as for all economically active people. The 2.76 approximate median of employees in the border states was higher than the approximate median of 2.47 among those self-employed, but only about half the median of employers (5.45).

Based on a minimum daily wage of \$7.35 in PPP-adjusted U.S. dollars (the middle of the three minimum wage values), the national median earnings of employees of 2.57 times the minimum, and working 250 days a year, the approximate median annual earnings of employees in U.S. dollars in 2010 was \$4,722 in México.

United States

As in México, the earnings figures are available by class of worker for the United States. Given that the typical nature of the work — the occupational mix — varies so much by worker class, care is needed in interpreting the earnings figures. Nationally, median earnings were highest among federal government employees and for those self-employed in an incorporated business. Earnings were least among those self-employed in an unincorporated business. Employees of for-profit businesses, the largest category, also had a median less than the overall median. In

each of the border states, certain employee classes were paid relatively well compared to the national median for the class, while other classes were not paid as well. For example, private-sector employees in Arizona earned nearly as much as the national median for those classes, while other workers earned several percent less than the national median.

The median earnings figure in the United States between 2008 and 2012 (in 2012 dollars) was \$33,216. The median in California (\$35,112) was higher than the national median, but the medians were lower in Arizona (\$32,270), New Mexico (\$29,402), and Texas (\$31,563). A median cannot be calculated for aggregations of geographic areas, such as the border region. Median earnings varies widely across the 37 counties in the border region, from less than \$17,000 to more than \$36,000.

The geographic variation in the earnings figures reflect in part differences in the cost of living. An experimental measure of living costs — the regional price parity (RPP) — is produced by the BEA for states and metro areas, but not for counties. The latest RPP figures for 2011 indicate that living costs were 11 percent above the U.S. average in California but below average in the other border states (by 1 percent in Arizona, 5 percent in New Mexico, and 3 percent in Texas). Adjusted by the RPP, median earnings in each of the border states was below the national average, by 7 percent in New Mexico, 5 percent in California, and 2 percent in Arizona and Texas.

Income. A number of income measures are available in the United States. Per capita income and median household income are among those available from the ACS. Since per capita income is an average, it is possible to calculate this figure for combinations of geographic regions, such as the border region.

Relative to the earnings figure, the border states compare less favorably to the U.S. average on the per capita income figure. The border states have a lower-than-average employment-to-population ratio and also are below average on sources of income other than earnings.

The per capita income figures are shown in Chart 35. Before adjusting for living costs, per capita income in the border states was 1.3 percent less than the national average, while the average in the balance of the country was 0.2 percent above average. The figure in the border region was 16.1 percent less than the national average while the figure in the balance of the border states was 0.5 percent above the national average.

Per capita income varied widely by border state, both within the border region and in the balance of the states. The differential between the border region and the balance of the state also varied substantially by state. The figure for the border region was lower than the figure for the balance of the state by 43 percent in Texas, 21 percent in New Mexico, and 8 percent in Arizona, but in California, the border region figure was 1 percent higher. Similarly, per capita income varied widely across the 11 urban areas in the border region, from 9 percent higher than the national average in San Diego to 48-to-52 percent below average in the four most easterly of the urban areas in Texas. The per capita figure was more than 34 percent below average in each of the six urban areas in Texas, in Yuma, and in Calexico.



CHART 35 PER CAPITA INCOME WITHIN THE UNITED STATES (IN 2012 DOLLARS)

Source: U.S. Department of Commerce, Census Bureau (2008-12 American Community Survey).

After adjusting for living costs, the per capita income in each of the border states was below average, with the differential ranging from 5 percent in California and Texas to 11 percent in New Mexico. Taken together, the figure for the four border states was 5 percent less than the U.S. average, while the figure in the balance of the nation was 2 percent above average.

Since the RPP figures are only available by state and metro area, it is not possible to adjust for the cost of living in the border region, except for those urban areas that coincide with metro areas. While adjusting for living costs narrowed the range in incomes across the urban areas, the differences still were substantial. Adjusted per capita income was below average in all of the areas, ranging from 3 percent below in San Diego to more than 40 percent below in Laredo, McAllen, and Brownsville.

The median household income is only available for individual states, metro areas, or counties. The border states and the metro areas in the border region all compare substantially more favorably on the median household income measure than on the per capita measure, since average household size is larger than the national norm in the border states. The border states also compare more favorably on median household income than on median earnings. Based on median household income, three of the four border states had a cost-of-living-adjusted figure in excess of the national average: by 11 percent in California, 6 percent in Texas, and 2 percent in Arizona. The figure for New Mexico was 5 percent below average.

Poverty Rate

In the United States, the official poverty rate is calculated using a set of assumptions and a specific methodology. Alternative experimental measures have been produced over time, some

of which have resulted in very different estimates of the poverty rate. Based on the official definition, the Census Bureau annually reports two sets of poverty rates based on data collected from two surveys. The Current Population Survey (CPS) provides a long time series, but the poverty rate estimates at state and substate levels have very large margins of error. More accurate estimates of the poverty rate at a subnational level have been produced from the ACS since 2005, which can be linked to the historical data available every 10 years from the decennial censuses conducted through 2000.

México also has produced poverty estimates based on different methodologies. Using the current methodology, poverty rates by state have been produced for 2008, 2010, and 2012 and poverty rates by municipio have been estimated for 2010. The estimates are produced by the Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL).

Since the methodology used in México is considerably different from that used in the United States, the official rates published by the two countries should not be compared.

United States

Over the 2008-to-2012 period, the poverty rate in the United States averaged 14.9 percent. Looking at the annual figures from the ACS, the poverty rate rose from a cyclical low of 13.0 percent in 2007 to 15.9 percent in both 2011 and 2012. Because of the length and severity of the recession and the weak recovery following the recession, the average poverty rate from 2008 through 2012 is high relative to historical figures.

In the U.S. border states, the 2008-to-2012 poverty rate (16.3 percent) was higher than the rate in the balance of the country (14.5 percent). Across the four border states, the rate varied from 15.3 percent in California to 19.5 percent in New Mexico (see the top graph in Chart 36).

The poverty rate in the U.S. border region (21.2 percent) was substantially higher than in the balance of the border states (15.7 percent). The poverty rates in the border regions of New Mexico and Texas were considerably higher than in the balance of these states; the poverty rate in the border region of California was a little less than in the balance of the state. Of the 37 counties in the border region, 10 — all in Texas — had a poverty rate higher than 30 percent and only four had a rate less than 15 percent.

The poverty rate in the 11 urban areas was 21.0 percent, and ranged from 14 percent in San Diego to 35 percent in Brownsville and McAllen. The poverty rate was less than 20 percent in Douglas and Tucson, but was more than 30 percent in Eagle Pass and Laredo.

México

In 2010, the poverty rate in México was estimated to be 46.2 percent. The rate is divided into two parts: moderate poverty (35.8 percent) and extreme poverty (10.4 percent). The poverty rate in the border states (31.6 percent) was considerably lower than in the rest of the nation (49.3 percent), as seen in the bottom graph of Chart 36. The extreme poverty rate was only 4.1 percent in the border states compared to 11.8 percent in the rest of the country. The poverty rate across the six border states ranged from 21.1 percent in Nuevo León to 39.2 percent in Chihuahua and 39.4 percent in Tamaulipas. The extreme poverty rate was highest in Chihuahua at 6.6 percent.

CHART 36 POVERTY RATES WITHIN THE UNITED STATES AND MÉXICO



UNITED STATES, 2008-12 AVERAGE

MÉXICO, 2010



Note: the poverty rate is calculated differently in México and the United States; the rates should not be directly compared.

Sources: Consejo Nacional de Evaluacion de la Politica y Desarrollo Social (México) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

The poverty rate in the border region of México (35.2 percent) was higher than in the balance of the border states (29.4 percent). The differential between the border region and the balance of the border states was entirely in the moderate poverty category. The poverty rate in the border region of Nuevo León and Sonora was considerably higher than in the balance of these states; the poverty rate in the border regions of the other states was the same or a little less than in the balance of the state. Across the 78 municipios of the border region, the poverty rate ranged from 20.2 percent in Allende (Coahuila) and 20.3 percent in Tecate (Baja California) to 69.9 percent in Manuel Benavides (Chihuahua) and 73.3 percent in Guerrero (Tamaulipas). The extreme poverty rate was as high as 25.5 percent in Manuel Benavides.

The poverty rate in the 11 urban areas was 34.3 percent, a little less than in the entire border region. The rate ranged from 25.1 percent in Piedras Negras to 46.5 percent in Agua Prieta. The relative rank of the poverty rates on the Mexican side of the 11 urban areas is not correlated (actually, slightly negatively correlated) to the relative rank of the poverty rates on the U.S. side. For example, Douglas had the second-lowest poverty rate in the United States while Agua Prieta had the highest rate in México; Piedras Negras had the lowest rate in México but Eagle Pass ranked ninth in the United States.

Between 2010 and 2012, the poverty rate in México fell from 46.2 percent to 45.5 percent, partially offsetting the 1.6 percentage-point rise between 2008 and 2010 that occurred during the recession. Extreme poverty dropped by 0.2 percentage points between 2008 and 2010 and by an additional 0.6 percentage points between 2010 and 2012. Between 2008 and 2012, the poverty rate rose more in the border states (1.7 percentage points) than in the balance of the country (0.8 percentage points). The change in the extreme poverty rate was similar in the two geographies. Among the six border states, the poverty rate fell 5 percentage points in Coahuila but rose by about 4 points in Baja California and Tamaulipas between 2008 and 2012. In 2012, the poverty rate was lowest in Nuevo León at 23.2 percent and highest in Tamaulipas at 38.4 percent.

A Comparison of the Rates in the Two Countries

The OECD publishes poverty rates by country based on various definitions of poverty. Estimates are available for México and the United States after taxes and after transfers. The OECD's figures indicate that the poverty rate in 2010 was only a little higher in México (20.4 percent) than the United States (17.4 percent). Estimates also are available by age group. Relative to the United States, the poverty rate in México was lower in the 18-to-25 age group but considerably higher in the 66-to-75 age group.

The OECD also provides historical estimates of the poverty rate. In each country, the poverty rate has fluctuated to some extent but has shown no trend over the last two decades.

Income Inequality

Income inequality is a measure of the distribution of income across a population. It is not associated with the median level of income. The Gini coefficient is a common measure of income inequality. A value of zero indicates perfect equality while a value of 1.0 indicates perfect inequality. For any given geographic area, various Gini coefficients can be calculated, based on varying definitions of income. For example, the coefficient based on household income will differ from one based on per capita income. Income inequality typically is based on total

income, but also may be calculated based on income that excludes transfer payments (such as food stamps).

In the United States, the Gini coefficient available from the ACS is based on total household income. A similar measure is available for México and its states, but should not be compared directly to the figure for the United States due to differences in calculation.

Inequality was marginally larger than the U.S. national average in populous California and Texas, but was a little lower than average in Arizona and New Mexico. Tamaulipas had a Gini value less than the Mexican average, while the figure for Nuevo León was above average. The values in the other border states were close to the national figures (see Chart 37). In both countries, the approximate Gini coefficient¹¹ for the border states as a whole was hardly different from the figure for the balance of the nation.

The Gini coefficient is available for counties in the United States, but sampling error is a concern for less populated areas, including many of the counties in the border region. The coefficient



CHART 37 INCOME INEQUALITY WITHIN THE UNITED STATES AND MÉXICO

Note: the Gini coefficient is calculated differently in the United States and México and should not be directly compared.

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Encuesta Nacional de Ingresos y Gastos de los Hogares) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).

¹¹ The Gini coefficient for the aggregation of the border states, as well as for other geographic areas consisting of more than one component area, was estimated by weighting the Gini coefficients of the component areas by their share of the total number of households in the larger area.

varied widely across the border counties, from 0.38 to 0.54, but all of the extreme values were for lightly populated counties. The estimated Gini coefficient for the border region was 0.465, slightly less than the figures for the nation and the border states. Income inequality was relatively high in the Brownsville and McAllen urban areas at just under 0.5, but was relatively low in the Yuma, Douglas, and Del Rio areas.

The OECD publishes Gini coefficients for México and the United States after taxes and after transfers. In 2010, the figure was 46.6 for México and 38.0 for the United States. The time series indicates that income inequality has fluctuated in México but was similar in 2010 to the figure in 1984. In contrast, income inequality has increased in the United States over the last three decades.

APPENDIX EDUCATIONAL ATTAINMENT

Somewhat different educational systems in the United States and México and limitations in the reporting of educational attainment by the federal agencies producing the information result in any comparisons of educational attainment in the two countries to be approximate.

United States

Through 2000, educational attainment was collected as part of the long form of the decennial census sent to a sample of households. Since 2005, annual data on educational attainment are available from the American Community Survey. However, for areas with a population of less than 20,000, which includes 18 of the 37 border region counties, the data are reported only as a five-year average. Sampling error remains an issue even when using the five-year average.

The Census Bureau reports educational attainment in different tables, as indicated in Table A-1. Table B15003 provides the full detail on educational attainment, but is not produced for fiveyear averages. Table B15002 was used instead for the entire population, while Table B15001 was used to obtain data on educational attainment by age. Since the Census Bureau does not report mean years of schooling completed, as does INEGI for México, the means for areas in the United States were calculated using the approximations provided in the middle column of Table A-1. For example, individuals with a maximum educational attainment of between nursery school and the fourth grade are assumed to have completed an average of two years.

México

Educational attainment is collected as part of the decennial census questionnaire sent to all households. While sampling error is not an issue, a considerable number of respondents did not fully specify the level of educational attainment. The number of years of schooling in high school and in college is presented, but whether a diploma/degree was earned is not reported.

The educational system in México, viewed in the context of how the decennial census results are presented, is shown in Table A-2. The mean educational attainment is calculated by INEGI based on the full detail reported by respondents.

Table A-3 presents the matchup of the U.S. and Mexican data to the greatest extent possible. However, these comparisons are not exact.

TABLE A-1 EDUCATIONAL ATTAINMENT TALLIES BY CATEGORY FROM THE AMERICAN COMMUNITY SURVEY

Table B15003Only for total population, age 25 or older; not available for five-year averageCategories:No schooling Nursery schoolKindergarten	Table B15002By gender, available for nine racial/ethnicgroups, age 25 or olderCategories:No schooling (0)	Table B15001By gender and for five age groups, age 18 orolderCategories:
1st grade 2nd 3rd 4th	Nursery school to grade 4 (2)	Less than 9th grade
5th 6th	5th to 6th (5.5)	
7th 8th	7th to 8th (7.5)	
9th 10th	9th (9) 10th (10)	
11th	10th (11)	9th-12th, no diploma
Regular high school diploma GED or alternative credential	High school diploma (11.5)	High school diploma or GED or alternative
Some college, less than 1 year Some college, 1+ years, no degree Associate's degree	Some college, less than 1 year (12.5) Some college, 1+ years, no degree (13.5) Associate's degree (14)	Some college, no degree Associate's degree
Bachelor's degree Master's degree	Bachelor's degree (16) Master's degree (18)	Bachelor's degree
Professional school degree Doctorate degree	Professional school degree (19.25) Doctorate degree (20)	Graduate or professional degree

Note: assigned years of schooling for calculation of mean years of schooling is shown in parentheses in the middle column.

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

TABLE A-2 EDUCATIONAL ATTAINMENT TALLIES BY CATEGORY FROM THE MEXICAN DECENNIAL CENSUS

Nivel de Escolaridad	Level of Schooling		
Sin escolaridad	No schooling		
Educación básica	Basic education		
Preescolar	Preschool, nursery school		
Primaria (grados 1 – 6): por grado	Primary (grades 1 – 6): by grade		
Secundaria (grados 7 – 9): incompleta, completa, no especificado	Junior high (grades 7 – 9): not completed, completed, not specified		
Estudios técnicos o comerciales con primaria terminada	Technical or business school instead of junior high		
Educación media superior	High school		
Estudios técnicos o comerciales con secundaria terminada (4 o 5 grados): por grado, no especificada	Technical or business school instead of high school (4 or 5 grades): by grade, not specified		
Nermal básico	A system in Mávice that anded in the 1090s		
	A system in mexico inal ended in the 1960s		
Estudios tecnicos o comerciales con preparatoria terminada (3 o 4 grados): por grado, no especificada	grade, not specified		
Profesional (6 o más grados): por grado, no especificado	Undergraduate university (6 or more grades): by grade, not specified		
Maestría	Master's degree		
Doctorado	Doctorate degree		

Source: Instituto Nacional de Estadística y Geografía (2010 Census).

TABLE A-3 EDUCATIONAL ATTAINMENT COMPARISON, UNITED STATES AND MEXICO

	Number	Percent		Number*	Percent
TOTAL, AGE 25 OR OLDER	204,336,017	100.0%	TOTAL, 25 AÑOS Y MÁS	57,229,145	100.0%
No Schooling Completed	2,673,395	1.3	Sin Escolaridad	5,135,520	9.0
Nursery to 6th Grade	5,335,850	2.7	Preescolar y Primeria	19,865,183	34.7
7th to 9th Grade	7,987,885	3.9	Secundaria y Estudios Técnicos o Comerciales Con Primaria Terminada	13,608,598	23.8
10th to 12th Grade, No Diploma	13,182,689	6.4	Preparatoria o Bachillerato (grados 1-2 y no especificado) y Estudios Técnicos o Comerciales Con Secundaria Terminada (grados 1-2 y no especificado)	1,879,102	3.3
High School Graduate or GED	57,706,852	28.2	Preparatoria o Bachillerato (grados 3-4) y Estudios Técnicos o Comerciales Con Secundaria Terminada (grados 3-5) y Normal Básica	6,630,508	11.6
Some College, Including Associate's Degree	59,244,324	29.0	Profesional (grados 1-3 y no especificado) y Estudios Técnicos o Comerciales Con Preparatoria Terminada (grados 1-2 y no especificado)	1,855,592	3.2
Bachelor's Degree	36,529,875	17.9	Profesional (grados 4-6) y Estudios Técnicos o Comerciales Con Preparatoria Terminada (grados 3-4)	7,383,831	12.9
Master's Degree	15,189,414	7.4	Maestría	735,486	1.3
Professional School Degree and Doctorate Degree	6,485,733	3.2	Doctorado	135,325	0.2

* The total excludes those respondents providing no information on educational attainment.

Sources: Instituto Nacional de Estadística y Geografía (México, 2010 Census) and U.S. Department of Commerce, Census Bureau (United States, 2008-12 American Community Survey).