

**RECENT DEMOGRAPHIC SHIFTS:  
WHAT DO THEY MEAN FOR THE U.S. AND COLORADO?**

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Two hundred years ago, the English economist Thomas Malthus predicted that population growth would outstrip the earth's natural resources, causing widespread famine and poverty. It was this gloomy prediction that first started people thinking of economics as the "dismal science." Fortunately, the prediction turned out to be false, thanks to technological advances that greatly increased the productivity of farmland. But population change continues to be a topic of great interest to economists today. The United Nations helped rekindle this interest a couple of months ago by making the rather startling prediction that world population would begin declining by the year 2050. And if any doubt remained that economists had reason to be concerned about such issues, that doubt was dispelled when Chairman Greenspan recently went to Capitol Hill to testify to Congress about the implications of population changes for savings, investment, and economic growth.

Tonight I would like to focus on three such demographic shifts. The first is the aging of the population, which will soon take a dramatic leap forward as the baby boomers begin to reach retirement age. The second demographic shift is the surge in immigration from abroad—an inflow that rivals in magnitude the last great wave of migration from Europe in the early 1900s but comes this time from developing countries in Asia and especially Latin America. Last but not least is a population trend of special interest to Colorado--the migration of people within the U.S.

In my talk I will describe each of these shifts in some detail and discuss their implications for both Colorado and the nation. Before doing that, however, I want to set the stage by summarizing what

Census 2000 and subsequent estimates by the Census Bureau have to tell us about population growth in Colorado.

### **Census results for Colorado**

Let's start with the growth of the state's total population. To no one's surprise, population continued to grow faster in Colorado than the nation between the two census years—30.6 percent in Colorado versus 13.2 percent in the U.S. (Chart 1). Among the 50 states, Colorado ranked third, trailing only Nevada and Arizona. States in the west and south gained the most population during the decade, while states in the northeast and the middle of the country gained the least—a fact to which I will come back later in my talk. Interestingly, however, no state lost population—the only decade in the twentieth century that happened.

Such statewide data can conceal important differences in population growth across communities. In the case of Colorado, however, the population gains of the 1990s were fairly widespread, with both urban and rural areas enjoying big gains (Chart 2). Five of Colorado's seven metro areas saw their populations increase over 25 percent, led by Greeley with population growth of 37 percent. But many non-metro counties enjoyed equally big population gains during the decade. Also, though not shown in the chart, only a few rural counties in Colorado actually lost population during the decade—a sharp contrast to some other states in our district such as Kansas and Nebraska.

Since the Census 2000 data were released, the Census Bureau has produced population estimates for 2001 and 2002 based on a much smaller sample (Chart 3). These estimates show that population growth remained strong through July 2001 and then slowed over the following twelve

months. Even in the latter period, however, population continued to grow faster in Colorado than in the nation as a whole—1.7 percent in Colorado versus 1.1 percent in the U.S.

### **Aging of the population**

Having summarized the Census 2000 results and the latest population estimates for Colorado, I would like to step back now and discuss some broader demographic trends with important implications for the future. The first of these shifts is the aging of the population. One of the most dramatic population shifts in this century was the baby boom—the birth of 76 million children between the years of 1946 and 1964. The aging of these baby boomers accounts for the sharp increase in people aged 35 to 54 during the 1990s (Chart 4). In both Colorado and the U.S., this age group grew faster than any other during the 1990s—more than 30 percent in the U.S. and close to 50 percent in Colorado. In another 10 years, the oldest members of this group will reach 65, and for the next twenty years the proportion of the population age 65 and over will increase dramatically in both Colorado and the U.S.

This projected increase in the elderly population might not be a problem if the working age population increased at the same rate. But the baby boom was followed by a baby bust, and for a variety of reasons women are now having fewer children. As a result, the working-age population is expected to grow only modestly at the same time the elderly population is surging. The combined effect of these trends will be to produce a sharp increase in the old-age dependency ratio, the ratio of the elderly population to the working-age population (Chart 5). Based on current population trends, the Social Security Administration projects that the aging of baby boomers will sharply boost this ratio between 2010 and 2035. The old-age dependency ratio will level off for a few years after the baby

boomers die. But the ratio will then resume climbing at a steady rate, as fertility among women remains low and medical advances raise life expectancy. By the year 2080, the old-age dependency ratio will have doubled to 0.4, which means that there will be four elderly people for every ten working-age people.

To the extent the rise in the old-age dependency ratio reflects an increase in life expectancy, it is a development to be welcomed. The increase in the dependency ratio does raise the question, however, whether we as a society will be able to support the elderly without a decline in our standard of living. As a matter of simple arithmetic, the labor force will have to become more productive, people will have to retire later, or some group—either the elderly or the working age population—will have to consume less.

The aging of the population also has highly adverse implications for the long-term budget outlook. Government spending is far greater for the elderly than for any other age group including children, reaching almost \$23,000 per person by age 82 (Chart 6). Furthermore, most of the spending occurs through federal programs such as Medicare, Social Security, and Medicaid. Because benefits for the elderly are so high, the sharp increase in the elderly population beginning in 2010 will boost government spending sharply (Chart 7). Under current policies, the Congressional Budget Office projects that spending on Social Security, Medicare, and Medicaid will rise to 15 percent of GDP by the year 2030, almost double its current share. Assuming we do not cut back on benefits for the elderly, the increased spending will have to be financed in one of two ways, neither of which is very

attractive—by borrowing from the public and increasing government debt, or by raising taxes on the working age population.

Are there any ways out of this dilemma? Most economists would probably agree that the single most important thing we can do to maintain our standard of living and avoid big deficits down the road is to increase national saving. Such an increase in national saving would free up resources for private businesses to invest in new plant and equipment, expanding the economy's productive capacity and increasing output per worker. Where economists differ is on the best way to achieve such an increase in national saving. Before the nation entered recession, some economists argued that the federal government should run big budget surpluses until the baby boomers began retiring, which under existing forecasts would have required either an increase in taxes or a reduction in government spending. Others argued that people should be encouraged to save more themselves by creating a system of private retirement accounts that at least partially replaces Social Security benefits. Such a system of private accounts raises many thorny issues, however, such as what to do about people who end up with no retirement income because they made unwise or unlucky investment decisions. For now, fiscal policy is focused on reviving the economy. Once the economy has recovered, however, we will again have to face the issue whether to increase national savings by running government budget surpluses or by encouraging private saving.

### **Immigration**

Let me turn next to the second major demographic shift—the increase in immigration. The last great wave of immigration was in the late 1800s and early 1900s, when large numbers of people came

to this country from eastern and southern Europe (Chart 8). The current wave began in the late 1960s, when Congress replaced the system of quotas based on national origin with a new worldwide quota system giving priority to immigrants with relatives in the U.S. That legislation led to a sharp increase in immigration from developing countries in Asia and Latin America, where wages were much lower than in the U.S. More people also began to enter the country illegally, crossing the border with Mexico. As a result of these changes, the number of foreign-born in the U.S. began to climb sharply, reaching 31 million by the year 2000. That figure represented 11 percent of the total population, less than in the late 1800s and early 1900s but more than twice as high as in 1970.

The foreign-born population has also increased greatly in Colorado over the last three decades, including an especially big jump in the 1990s, though they still represent a smaller share of total population than in the U.S. as a whole (Chart 9). According to the recent census, there were 370,000 immigrants living in the state in 2000, accounting for 8.6 percent of the total population. That was up considerably from 1990, when there were only 140,000 immigrants in the state, representing only 4.3 percent of the total population.

As I mentioned earlier, much of the recent immigration to the United States has been from Latin America and from Mexico in particular (Chart 10). Given Colorado's location, it comes as little surprise that Mexico accounts for an even higher percentage of this state's recent immigrants. Among those immigrants who lived in Colorado in 2000 and entered the country sometime during the previous ten years, about six out of ten were born in Mexico—almost twice as high a percentage as in the nation

as a whole. In contrast, Asia was two-thirds as important a source of immigrants to Colorado as to the nation, and Europe about equally important.

Where in Colorado are the immigrants settling? Immigrants to this country have traditionally settled in large urban areas, because these areas not only have more employment opportunities but also established immigrant communities to draw upon for support. Consistent with this pattern, by far the biggest inflow of immigrants during the 1990s was in the Denver-Boulder-Greeley metro area, where the increase in new foreign-born residents contributed almost 8 percentage points to population growth (Chart 11). Somewhat surprisingly, however, the next biggest impact of immigration was in the state's non-metro areas, where the increase in new foreign-born residents contributed 4 ½ percentage points to population growth. Colorado was not the only state to experience such an inflow of immigrants to rural areas during the 1990s—other states did as well, including several in our own district. In some cases, these immigrants took low-skilled jobs at rural manufacturing plants, especially food processing. In other cases, such as Colorado, they took low-paying service jobs in resort areas.

Experts disagree sharply whether immigration at current levels is good or bad for the national economy. Some people argue that the country needs high levels of immigration to keep the labor force growing and ensure that there are enough working-age people to support the growing elderly population. Because most new immigrants are young adults, the immediate effect of their arrival in this country is to reduce the old-age dependency ratio—the ratio of the 65-and-over population to the working-age population. However, these immigrants not only have children who must be supported, but at some point they add to the elderly population by retiring themselves. Economists who have tried

to take all these effects into account have generally concluded that immigration will limit the rise in the old-age dependency ratio and alleviate the fiscal problems caused by an aging population. However, they also find that the net benefit from each additional immigrant is relatively small. Thus, while there may be good reasons to allow high immigration, solving the problems of an aging population is probably not one of them.

One reason economists have found that high levels of immigration do little to solve the problems of an aging population is that immigrants tend to have fewer years of education and hold lower-paying jobs than native-born residents (Chart 12). In 2002, a third of the foreign-born population aged 25 and over had failed to complete high school, twice as much as the native-born population of that age. And for immigrants born in Central America, most of whom are from Mexico, the percentage who did not finish high school was even greater—almost two-thirds.

The low average level of education of recent immigrants has also led to concerns that immigration might be depressing wages for unskilled native workers, many of whom are already close to the poverty level. The evidence on this point is mixed, however. Immigration supporters argue that the jobs taken by immigrants are often jobs native-born workers do not want. They also point out that wages for unskilled workers do not tend to be any lower in cities with high rates of immigration. Immigration opponents counter that the only reason unskilled wages have not fallen in these cities is because unskilled native-born workers have migrated to other cities with fewer immigrants, causing the impact of immigration on unskilled wages to be spread over a much wider area.



Of course, even if unskilled and poorly educated natives are hurt by recent immigration, other groups in the economy may benefit. One such group are the people who consume the goods and services produced by immigrants—for example, the people who are able to buy meat at lower prices because immigrants perform physically demanding jobs in meat-packing plants, or the people who do not have to pay as much for hotel stays or fast food because immigrants take unskilled jobs in the lodging and restaurant industries. A second group that benefit from immigrants are the companies that employ them—companies that might earn lower profits or even go out of business if they could not hire immigrants.

Given this state of affairs, with some groups in the economy losing from immigration and others receiving important benefits, it is easy to see why the issue of how many and what kind of immigrants to admit is such a contentious one. What does seem clear, however, is that no matter how many immigrants we decide to allow into the country in the future, high priority should be given to educating the children of immigrants who are already here. That is the best way to ensure that second-generation immigrants do not suffer the same economic and social handicaps as their parents and that they make the maximum possible contribution to the long-run performance of the economy.

### **Domestic Migration**

The last demographic shift I want to discuss is domestic migration--the movement of people between different regions of the country. One important form of domestic migration has been the movement of people from the Northeast and Midwest to the Southeast and West. This migration has been going on for over fifty years and is due to a variety of factors including more favorable climates,

lower costs of doing business, and greater scenic amenities. Colorado has been one of the biggest recipients of this inflow of people (Chart 13). According to the latest Census, 50 percent of Colorado's population in 2000 was born in another state. That was one of the highest percentages in the nation--less than in Nevada, where over sixty percent of the population was born in another state, but much higher than in the U.S. as a whole, where only 29 percent of the population was born out-of-state.

Besides the long-term shift in population from the Northeast and Midwest to the Southeast and West, there has always been substantial migration within the U.S. in response to regional business cycles. Different regions have often experienced booms and slumps at different times. When that has happened, people have tended to move out of depressed regions and into booming regions, seeking better jobs and higher wages. The out-migration of people from a slumping region can obviously have adverse effects on businesses that sell locally consumed goods and services, such as retailers and homebuilders. However, most economists consider the geographic mobility of labor an important strength of the U.S. economy—one that sets it apart from the European Economic Union, where workers are less likely to move in response to high unemployment and regional slumps therefore tend to be much more prolonged.

Colorado has been at both ends of this second form of migration (Chart 14). During the energy and real estate boom of the 1970s and early 1980s, many people moved into Colorado from other regions, boosting population growth well above the national average. Then when the boom collapsed in the mid to late 1980s, people moved out of the state in large numbers, causing population growth to dip below the national average. In the early 1990s, the tables were reversed once again. As the Colorado

economy recovered and other states such as California remained in a slump, people began moving into the state again and population growth moved back above the nation average. The inflow of people moderated somewhat when the economies of other states finally rebounded. But in-migration remained high throughout the rest of the decade, as the boom in high-tech and telecommunications gave Colorado one of the fastest rates of job growth in the nation.

These movements of people in response to regional booms and busts have affected many areas of the state, and not just Denver (Chart 15). During the economic boom of the 1970s, the increase in residents born in another state contributed about 20 percentage points to Colorado's population growth, with metro areas and non-metro areas sharing equally in the gains. In the 1980s, the period covering the slump in energy and real estate, the inflow of people from other states added only a few percentage points to population growth in the two types of areas. The out-of-state contribution to population growth then rebounded during the economic boom of the 1990s, with non-metro areas experiencing an even bigger influx in proportional terms than metro areas.

Looking ahead, domestic migration will continue to be a major determinant of population growth in Colorado, but it may not quite as important in the future as it was in the past. As I noted earlier, much of the in-migration to the state has been part of the long-term shift in population from the Northeast and Midwest to the Southeast and West. Colorado's scenic amenities will ensure that some of this long-term migration continues. As Colorado's population has grown, however, the state has come to enjoy less of an advantage in terms of quality of life, cost of living, and cost of doing business—a factor that may reduce Colorado's attraction to firms and workers in other states. Over the last

decade, for example, the increased demand for housing has pushed up home prices, boosting the state's cost of living (Chart 16). Back in 1990, Denver's cost of living was just slightly above the average for 300 cities across the nation, many of which were much smaller than Denver. By the end of last year, the cost of living in Denver was 6 percent above the average for those 300 cities. The cost of living in other Colorado cities compared more favorably with the nation at the end of last year, but these cities enjoyed less of an advantage than they did back in 1990.

A good case can also be made that there will be less movement of people across states in response to divergences in regional economic performance. Over the last twenty years, the variation in job growth and unemployment rates across states has steadily diminished (Chart 17). One reason is that regions have become more similar in industrial structure. Another reason is that the deregulation of banking and other financial services has reduced regional differences in the cost and availability of credit. These changes have not eliminated regional business cycles, but they do seem to have dampened them, suggesting that we may see less movement of people out of regions experiencing cyclical slumps and into regions experiencing cyclical booms. A good example is Colorado's experience during the recent recession. Job growth in the state was as weak as it was at any time during the energy and real estate slump of the 1980s. But despite that fact, the net inflow of people to the state remained positive because in contrast to the 1980s, job growth in other states was declining at the same time.

### **Summary**

Let me conclude by briefly summarizing my remarks. I began by pointing out that population growth was much faster in Colorado than the nation during the 1990s but moved closer to the national

average in 2002. I then went on to describe three major demographic shifts now underway. First was the aging of the population, which will make it harder for the U.S. to maintain its standard of living and fiscal balance. Second was the increase in immigration from abroad. I concluded that this trend might help offset some of the adverse effects of an aging population, but not enough to make a big difference due to the fact that recent immigrants tend to have less education and fewer job skills than natives. The last shift I discussed was the continued migration of people within the United States—including both the long-term movement of people from the Northeast and Midwest to the West and Southeast, and the movement of people from regions experiencing economic downturns to regions experiencing economic booms.

These shifts present difficult challenges. In the course of my talk, I suggested some possible responses to the first two shifts, such as raising national saving so as to increase the economy's long-run capacity to provide for the elderly, and giving high priority to educating the children of immigrants to ensure they contribute to the economy. Domestic migration can also pose problems, both for the regions gaining population and the areas losing population. However, I argued that such population shifts may become less important as the cost of living in different regions becomes more similar and regional economies become more synchronized.