

# FRBSF WEEKLY LETTER

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## Effects of California Migration

During California's deep and prolonged recession, the state saw a sizeable net out-migration to other states. This was in sharp contrast to the net inflow of people to California from other states during the boom years of the 1980s. A large portion of those leaving California in recent years have gone to other western states in the District. The influx of Californians augmented the supply of workers in those states and, thus, facilitated economic growth, which in some states has been very rapid. Arizona, Idaho, Nevada, and Utah, for example, have been among the fastest growing states in the United States over the past year.

As the California economy recovers, a reversal of the migratory flows is possible. This *Weekly Letter* describes the order of magnitude of the initial migratory outflow from California in order to gauge the impact so far on other western states and to highlight the potential importance of a migratory reversal on the composition of activity within the District.

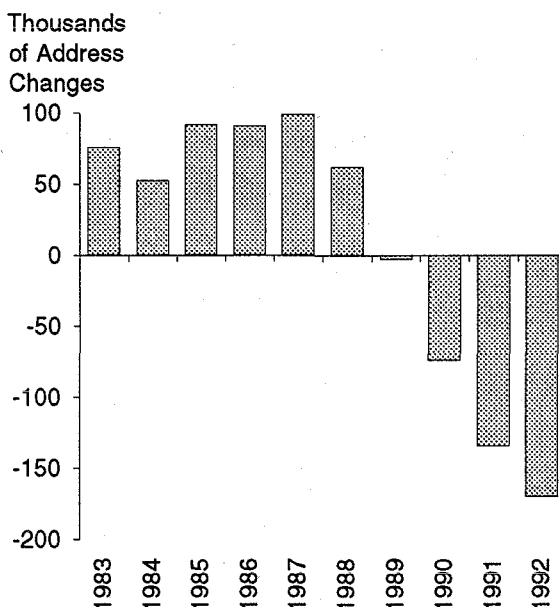
We conclude that the initial migratory outflow from California was particularly important to Nevada, Oregon, and Washington, where net immigration appears to have supported a significant share of the growth in civilian employment over the past several years. In the two fastest growing states in the District, Idaho and Utah, the net immigration was relatively modest compared with total employment gains. However, the extent of migration from California to Idaho still was sizeable relative to the number of original residents there. If the California recovery progresses well and the migratory pattern reverses, employment growth is likely to be restrained noticeably in Idaho, Nevada, Oregon, and Washington.

### 1990-1993 migration from California

Unfortunately, there is no complete, exact information on the number of migrants from California and their job histories. The best available annual data on state-to-state migration patterns is from IRS records of address changes between tax filing years; the most recent reading from this source pertains to early 1993. Approximation methods must be used to translate the movements of people into job figures.

According to the IRS data, during most of the 1980s, net migration to California from other states was large, nearly 100,000 people a year. But in the 1990s, this pattern was reversed: From 1990 to the first quarter of 1993, California had a net outflow of 381,000 people to other states (see Figure 1). Of this number, 317,000 account for movement to other states in the Twelfth District, with the biggest numbers recorded in Washington, Oregon, and Nevada.

**Figure 1**  
California Net Domestic Migration



Looking at these numbers relative to the original population in the destination state shows the largest inflow of California migrants was to Nevada—it amounted to about 5 percent of the 1990 population; Oregon had the second largest, at 3 percent; and for every other state in the District, except Hawaii and Alaska, the inflow from California amounted to at least 1 percent of its 1990 population.

To get a rough estimate of the impact of the California exodus on employment in other Twelfth

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District states, we first estimate the proportion of workers in the migrant population. The general rule-of-thumb is that the civilian labor force is about half the size of the population. This brings the estimate of the size of the labor force that moved from California to other Twelfth District states to half of 317,000, or 158,000 potential workers. Refinements to the calculation could move this estimate either up or down. On the one hand, not all migrants looking for work find jobs. On the other, the calculation ignores the multiplier effects of in-migration; that is, the spending by the new arrivals increases local demand and thereby increases the job prospects of the original residents.

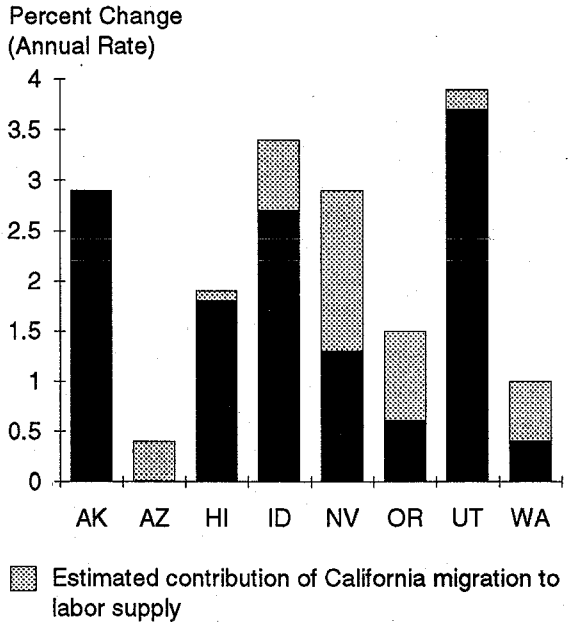
To place these participation-adjusted migration figures in perspective, we express them as a percent of the total increase in employment in the other eight District states from 1990–1993. For these eight states as a whole, the actual employment increase was 420,000 workers. This implies that the estimated proportion of employment change facilitated by in-migration from California was 38 percent; translated into growth rates, the California exodus was associated with 0.6 percentage point of the 1.7 percent annual rate of increase in employment in the District (excluding California).

The impact varies among states in the District. Figure 2 shows that the largest relative impact was on Nevada, where the estimated increase in the supply of labor due to the net migration from California equals 1.6 percent of employment in the state at the beginning of the period; that is more than half of the increase in employment for the state. The migration of workers from California also is estimated to have been large relative to overall employment gains in Arizona, Oregon, and Washington.

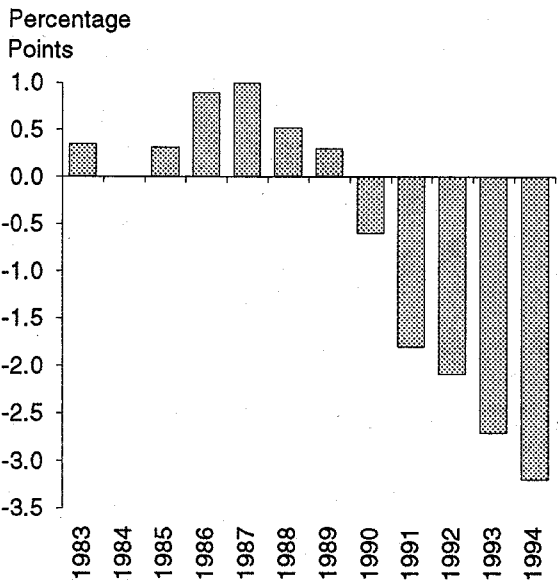
For the other states in the District, net migration from California was equal to a smaller fraction of the actual rise in total employment. This is true even for the states like Alaska, Idaho, and Utah, which had rather robust employment growth, though for Idaho the fraction in absolute terms is the third highest in the District.

Recent research, particularly Gabriel, Shack-Marquez, and Wascher (1993), suggests that migration patterns are well-explained by models that emphasize the differences in unemployment rates, wages, and house prices between the place of origin and the destination. The California pattern seems to bear this out: Better economic opportunities in other District states undoubtedly

**Figure 2**  
Civilian Employment Change, 1990–1993



**Figure 3**  
Unemployment Rate Differential (Other 12th District less California)



explain part of the directional pattern of migration from California in recent years. As illustrated in Figure 3, the average unemployment rate in other District states dropped below the California unemployment rate in 1990, and this differential continued to widen, reaching about 3 percentage points this year.

The relatively low house prices in many of the other states in the West also would have been

attractive to Californians who chose to move. On this point, a recent *Weekly Letter* (94-23) points out that in the 1980s housing prices in major California markets rose sharply relative to those in markets in other western states. By 1989, for example, the median home price in San Francisco was nearly four times the median price in Salt Lake City.

The distance between places also has a very strong impact on the pattern of migration. From this perspective, it appears that migration from California to Alaska, Hawaii, Idaho, and Utah was inhibited by the longer distances involved. In contrast, Nevada saw a large influx of workers from nearby Southern California, where the unemployment rate has been particularly high.

### Net outflows continue

More recent data on interstate migration from the California Department of Motor Vehicles (DMV) can help us get a more current reading on migration. Using the California State Department of Finance's rule-of-thumb of 1.5 persons per driver's license, the 126,000 net address changes to other U.S. states during 1993.Q2–1994.Q2 implies that the state lost about 190,000 persons from net domestic migration in the most recent fiscal year. It is clear from these data that a reversal of the net outflow from California had not begun by early 1994, when the unemployment rate in California still was high relative to other states. In the fiscal year ending in mid-1994, the relatively large net outflows of people from California to Arizona, Idaho, Oregon, and Washington continued at about the previous year's pace, and the net outflow to Nevada picked up a bit.

### Effects of a California recovery

The possibility of a reversal of the migration from California as the state's recovery takes hold raises several questions in predicting economic activity in the Twelfth District states. First, how much would the negative influence on other states of a reversal of migration from California be offset by the positive effects of increased demand from California residents? Earlier work by Cromwell (1992) suggested that the positive demand linkages between California and other District states are relatively strong. Using data from 1947–1991, Cromwell quantified the positive co-movement between unpredicted movements in California employment growth and unpredicted movements in employment growth in other District states. More recently, the employment growth rates in

California and other District states have diverged sharply, and the evidence of strong, positive linkages has become less compelling. What remains clear is that with more than 30 million people in the California market, even relatively weak linkages on a per capita basis (per California person) could translate into big demand effects on western neighbors.

Second, which states would be most affected by a reversal of the California exodus? According to the statistics presented above, the biggest impacts of a migratory reversal most likely would be on Idaho, Nevada, Oregon, and Washington.

Third, can we predict the timing and magnitude of any reversal of the overall migratory flows from California? Answering this question involves disentangling the contributions of cyclical factors—such as the state's relatively high unemployment rate—from the contributions of longer-run factors—such as the high cost-of-living and concerns about crime, pollution, educational quality, and the overall state and local fiscal situation. Simple models that explain net migration as a function of unemployment rate differentials only, such as the one described by Hensley and Chin (1994), imply that most of the recent net out-migration from California was a response to better job prospects elsewhere. Richer place-to-place migration models imply that some of the recent out-migration from California was due to factors other than job prospects, but the unemployment differential effect remains sizeable. Thus, the limited available information suggests that as the California recovery progresses, labor force growth in other District states will be restrained by fewer in-migrants from California.

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