

SIX DEMOGRAPHIC SURPRISES

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If demographic trends were as regular and predictable as population analysts would like to them to be, demography would be a dull science. Moreover, despite the increased sophistication of forecasting models and computing equipment, human behavior continues to change in ways that seem to defy prediction, even over the course of a single decade. While we are still in the early years of the 1980s, I think it is instructive (and chastening) to review ways in which the course of American demographic events in the 1970s deviated from what had been foreseen at the beginning of that decade. Lo, six demographic surprises — although they can easily be subclassified into a larger number of component surprises.

1. *The Birth Rate.* In 1970, the Bureau of the Census issued for projections of the United States population in which the forecast of births for the 1970s ranged from 37.3 to 48.4 million. A year later the bureau revised its estimates upward, on the premise that the average age of childbearing would drop. These four new estimates ranged from 40.1 to 49.3 million decade births. Actual births for the decade proved to be 33.2 million. All eight series of projections exceeded the actual number by a substantial margin, and the direction of the revision in 1971 proved to be the opposite of the course of events underway. The C and D series of 1971, which were probably the most widely used, were 39 and 30 percent, respectively, above recorded births. By the mid-1970s, the median age of mothers had begun to rise rather than fall. Several sub-surprises can be said to have contributed to the low number of births, such as the rise in age of marriage, the decline in expectation of marriage, the extent of deferment of childbearing, and the legalization of and increase in abortions.

2. *The Death Rate.* In the same Census Bureau projections series, only one assumption of mortality levels was used. Thus the range of deaths varied narrowly, depending on the number of births and subsequent child mortality. The range of the 1970 and 1971 death projections for the decade was from 20.8 to 21.3 million. The observed number was 19.3 million. Again, all series were high. If the projections of the C and D series of 1971 are used as a standard for comparison, projected deaths exceeded actual by 10 percent.

Improvement in life expectancy was slow in the 1960s (rising only seven-tenths of a year during the decade). Perhaps influenced by this fact, the census projections used a high series of mortality rates that assumed life expectancy would increase by only about half of a year in the 1970s, or less than in the 1960s. Instead, death rates fell and life expectancy rose by 3.4 years, nearly seven times the projected rate. In fact, it reached a level well above that assumed for the year 2000. Thus, even mortality — long touted by demographers as readily predictable over the near term — departed significantly from its charted course in less than a decade, with the pace of mortality reduction taking the opposite trend from the forecast. Much of the mechanism seems to have been rapidly lowered death rates from heart disease and strokes.

3. *Household Size.* A third surprise of the 1970s was the accelerated decline in average household size. Here was a trend whose direction was correctly foreseen. With the exception of a period during the baby boom of the 1950s, household size had been declining for a long time. During the 1960s, average household size dropped from 3.33 to 3.14 persons, or by 5.7 percent. In 1968, the Bureau of the Census issued projections of 1980 household size ranging from 2.88 to 3.28 persons. (There were eight different series, depending on birth rate, marriage, and household formation assumptions.) The two most favored series ranged from 3.08 to 3.19 persons. By 1980, however, actual household size had plummeted to 2.76 persons, well below any of the series and a drop of 12.1 percent since 1970. The projected decline would almost certainly have been lower, if the bureau had had the benefit of the 1970 Census in making its projections. But, the extent of the disparity between the actual and projected 1980 numbers illustrates clearly the strong unpredictable deviation from previous trend line that developments in living arrangements, fertility, and (to a lesser extent) mortality produced on household size in the 1970s. In particular, the creation of new nonfamily households and of one-parent family households — which are typically rather small in size — proceeded far more rapidly than had been foreseen.

4. *The Regional Shift in Population.* The migration of people from the North to the South and West was — like the trend in household size — a continuation of a past trend that was predicted in direction but surprising in its dimensions. By 1980, more than half of the population lived in the census South and West, and for the first time the center of population had crossed the Mississippi River — neither event predicted. The most ambitious set of regional projections for the 1970s was a seven-volume work prepared by the Bureau of Economic Analysis (BEA), Department of Commerce, for the Water Resources Council. This material was put together in 1972 — two years into the decade — and published in 1974.

At the national level it was keyed to the Census Bureau's lowest

new projection and came within three million of the 1980 Census total population. The regional expectations were so far off, however, that by 1980 the Southern New England, Mid-Atlantic, and East North Central States had grown in population by only one-seventh as much as projected (1.1 million instead of 7.6 million), the West had increased by more than double the amount forecast (8.3 million instead of 4.0 million), and the South's population had risen by three-fifths more than predicted (12.5 million instead of 7.8 million). To express it another way, it was predicted in 1972 that the northern industrial states would garner 39 percent of the nation's population growth over the rest of the decade. But so rapidly did both the real and perceived advantages of living in this region fall, that only 6 percent of all growth actually took place there. The South and West, which were expected to obtain 60 percent of national growth, wound up with 92 percent. Despite the poor quality of these projections, their use was required in some federally sponsored planning activities. Thus the well-intentioned inability to foresee regional shifts was not without its practical consequences.

5. *Growth of Rural and Small Town Population.* If ever a piece of conventional wisdom existed about the dynamics of population movement in 20th century America, it was that population flowed from rural to urban area. The modern history of the country was, in many respects, a history of urbanization. It was obvious in the latter part of the 1960s that the farm population of the United States — which was the major source of rural-to-urban migrants — had declined to a level that did not allow further outflows anywhere near as large as those of the past. Still, neither the demographic forecasting at the beginning of the 1970s nor the public and academic discussions of the time gave any hint of an imminent reversal in the traditional migration pattern.

The 1972 BEA projections estimated an 11.4 percent growth for metropolitan counties in the 1970s, compared with 5.3 percent growth for nonmetropolitan counties. A relative differential of about this extent was projected to continue for the rest of the projection period, which extended until 2020.

In reality, at the very time the forecasts were made, the net flow of migration had reversed and more people were moving into nonmetropolitan areas than out of them. From 1970 to 1980, metropolitan counties increased in population by 9.8 percent, but the nonmetropolitan counties grew by 15.8 percent, or three times the projected rate. The prevailing framework of thought had not anticipated the rise of nonpecuniary motivations for residential location that characterizes so much of the nonmetropolitan growth trend, nor had it adequately assessed the decentralization of manufacturing and other developments that led to growth of rural and small town employment opportunities.

6. *The Role of Illegal and Refugee Immigration.* By its very nature,

the amount of illegal immigration into a country is difficult to estimate much less to predict. Whatever the true amount into the United States may be the consensus seems to be that it rose to major proportions during the 1970s, and thus became a significant factor in population growth. For many years, the Census Bureau has used a projection of 400,000 annual net inmovement of people from abroad, but this has not allowed for illegal entries. The phenomenon is certainly not new, but its increase is beyond earlier expectations, and is commonly believed to account for that part of the 5 million higher-than-expected 1980 Census count that is not due to improved enumeration.

A further source of unexpected increase has come from refugee admissions. No one would utter the unutterable in 1970 that the Vietnamese, Cambodian, and Laotian governments would fall, followed by outmovement of several hundred thousand people. The influx of Cubans to the United States in 1980 was another example of sudden refugee immigration of significant proportions.

It is not my point in recounting these demographic surprises to imply criticism of the forecasters who made the projections discussed (although I think some is merited in particular cases). Rather, the predictions did typically reflect the prevailing wisdom. I view the problem as generic. The demand for projections is insatiable. The ability to make them accurately is limited even by people of good credentials. What will the surprises of the 1980s be? I wish I knew.