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Utah Bucks the Recession

The most recent economic downturn has struck unevenly both across the nation and within the Twelfth District. Nationally, the Northeast and mid-Atlantic states have suffered a disproportionate share of job losses. In the West, the recession is most severe in California. Lost in the attention on significant economic woes, however, are some ongoing success stories in the intermountain region of the West—states that not only have avoided job losses in the current recession but that have recorded significant economic growth. One of these states is Utah, which over the course of the recession has recorded one of the strongest growth rates both in the West and in the nation.

Is such a performance typical for Utah? This *Letter* addresses the question by examining both the components of Utah's current growth and the historical relationship between economic fluctuations in Utah and the nation. The analysis suggests that Utah's performance in the current recession *is* better than would be expected based on its previous record. Reasons for this superior performance range from events specific to Utah to longer-run change reflecting a restructuring of the Utah economy.

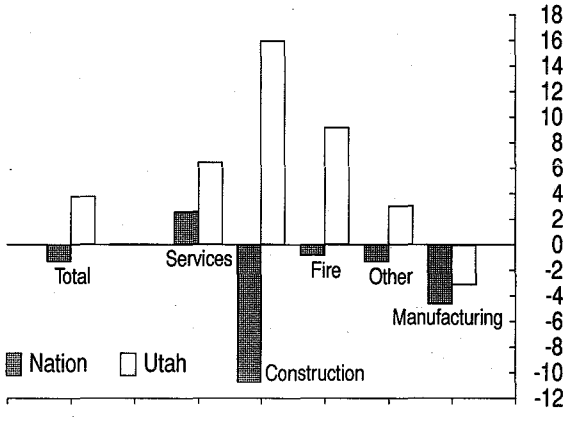
Current performance

The Utah economy has outperformed the nation recently in several indicators of economic activity, including income growth, construction, building permits, and job creation. From July 1990, the start of the recession, to December 1991 Utah added 27,000 jobs, for a 3.8 percent increase in employment. This performance ranks Utah fourth in the nation—after neighboring Idaho, with 5.6 percent employment growth, South Dakota, and Alaska. National employment, by comparison, has contracted by 1.3 percent over the same period, with job losses across regions ranging from 0.6 percent in the Southeast to 5.3 percent in New England.

As Chart 1 shows, much of Utah's superior performance is explained by employment growth in the nonmanufacturing sectors. The service sector has been a source of strength in Utah as well as in several other regions during the recession, with half of the states recording growth in service jobs of over 3 percent. In this category, Utah's strong performance again ranks fourth in the nation during this recession.

Chart 1

Utah vs. Nation July 1990 - Dec. 1991



What sets Utah apart, though, is its strength in the other nonmanufacturing sectors. Nationwide, construction employment contracted 11 percent over the recession period. Only fifteen states recorded increases in construction employment, and only four states recorded double-digit increases, with Utah's 16 percent increase ranking it second in the nation. The increase in finance, insurance, and real estate employment (FIRE) is even more unusual. Utah's 9.2 percent growth ranks it first in the nation, twice that of second-ranked Idaho (4.8 percent), and well above the national average of –0.8 percent.

While Utah has recorded superior growth, it is not immune to the national contraction in defense and other manufacturing sectors. Manufacturing accounts for 14 percent of Utah employment, much of it reliant on defense contracts. In addition, military bases are large employers in the state. Employment in the manufacturing sector has fallen 3.1 percent over the period—ranking it close to average in performance among the rest of the states. Several large manufacturing concerns have announced layoffs—including

National Semiconductor—and defense reductions are reflected in cutbacks at Hercules. Communities surrounding military facilities report weakness due to personnel reductions.

Other regions reliant on defense and manufacturing, however, have performed much worse than Utah. In part this reflects ongoing diversification of Utah's manufacturing sector. The manufacture of sporting goods and other civilian products using "advanced" composite materials is expanding, as is production of airbags for automotive safety.

In sum, Utah's performance reflects strength in nonmanufacturing sectors, and relative resilience in manufacturing. Should we be surprised that Utah is bucking the national trend? Is the Utah economy largely set apart from the national economy? To explore this we turn to a more systematic examination of the linkages between Utah and the nation.

Modeling Utah's links to the nation

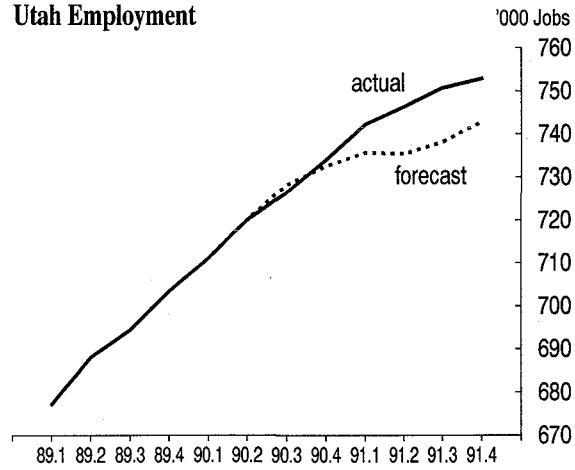
By using a statistical methodology known as vector autoregression, we can examine the economic linkages between Utah and the nation. Fluctuations in economic growth in Utah as well as other Twelfth District states are modeled as a function of past economic fluctuations in the state and the nation. By making assumptions regarding the causal direction of economic shocks, a measure of linkage or spillover between the nation and a state, or between a state and its neighbors, can be derived.

Forecasting with the estimated model yields an overall measure of linkage which is the portion of error in forecasting Utah's economic activity due to national shocks rather than shocks specific to Utah. Furthermore, fluctuations in particular sectors within Utah can be examined to determine the source of this overall linkage.

The model of Utah and the nation is estimated using quarterly employment growth as a measure of economic activity. The sample period extends from 1947.1 through 1991.4. The results suggest that Utah is by no means a "closed" economy. According to the model, 45 percent of the fluctuations in the Utah economy are attributable to national shocks. This degree of linkage is about average for the 50 states, though slightly above the average for the Twelfth District. Within the Twelfth District, California is most linked to the national economy (70 percent), followed by Washington (47 percent), then Utah; the least closely linked are Alaska and Idaho (at 21 percent each).

What does this model suggest for Utah's current recessionary performance? Chart 2 compares an out-of-sample forecast of Utah's employment to Utah's actual performance from 1990.3 through 1991.4 (The forecast uses actual growth in the Utah economy through 1990.2 and actual national performance through 1991.4.) The results suggest that Utah's economy *did* do better than the historical model predicts. Actual quarterly growth rates were consistently above the forecast until 1991.4, resulting in 9,200 additional jobs by the end of the forecast period. Note that the model forecast assumes that the structural linkages remain constant over time. The better than expected performance suggests that some structural change may lie behind Utah's superior performance.

Chart 2
Utah Employment



Actual versus Forecast Performance

Sectoral spillovers

To explore which sectors of the Utah economy are most affected by national shocks, the model was estimated for the following sectors: manufacturing, services, finance, and "other" nonmanufacturing—including construction and trade.

The results suggest that Utah manufacturing exhibits a moderate degree of linkage with national economic fluctuations. Some 16 percent of the variation in Utah's manufacturing sector employment is attributable to national fluctuations. The

manufacturing sector, however, responds more sharply than other sectors to an initial national shock. This higher sensitivity reflects the overall higher volatility of the sector.

Utah's nonmanufacturing sectors exhibit a wider range of linkages, with services and finance showing less linkage, but "other" nonmanufacturing—principally trade—exhibiting a greater link to the national economy. Linkages among nonmanufacturing sectors range from 6 percent for services, to 7 percent for finance, to 20 percent for other nonmanufacturing.

Using the model to forecast the sectors reveals that Utah's better than predicted growth shown in Chart 2 appears to be related to the performance of the nonmanufacturing sector. While the relatively rapid growth of sectors that are less closely linked to the nation—including services and finance—was predicted by the model, higher than expected growth in "other" nonmanufacturing explains most of the additional job growth over the forecast period.

Manufacturing, however, also performed better than expected for most of the forecast period. The forecast suggests that Utah's manufacturing, which historically has responded sharply to national shocks, would decline more quickly than it actually did. It remained above the forecast until 1991.4, when Utah manufacturing suffered several layoffs.

This better than expected performance of the Utah economy potentially indicated that the estimated link between Utah and the nation is an inaccurate measure of the current relationship. As the model holds the underlying structure of the economy constant, this inaccuracy perhaps points to some restructuring occurring in the Utah manufacturing and nonmanufacturing sectors that weaken the state's linkage to the nation.

Understanding Utah's performance

Utah's service and financial sectors exhibit weak historical linkages to national economic fluctuations. This suggests that these sectors have performed well in Utah because developments specific to the state have increased their comparative advantage. An example may be the in-migration of service and financial sector firms seeking lower costs, affordable housing, and a pro-business regulatory environment. The prosperity of business and financial service companies such as Novel, WordPerfect, and Discover Card are further examples of Utah-specific developments.

An expanding population in Utah due to both in-migration and natural increase also supports construction and real estate. The relative health of Utah construction, however, also is due to the fact that Utah avoided much of the overbuilding that occurred in the late 1980s in other regions—in part because the state had a period of economic weakness in the early to mid-1980s as energy prices declined. Again, the growth in this sector is linked to region-specific rather than national trends.

Utah's manufacturing sector, in contrast, responds more sharply to economic shocks, though the degree of response in part reflects the underlying volatility of the sector. The relative resilience of Utah manufacturing in the face of the national downturn, however, points to some restructuring within the sector. Indeed, Utah's manufacturing base shows signs of diversifying away from defense to civilian products. The manufacture of airbags for cars, and the development of "advanced material" products for automotive and recreational equipment, serve as examples for other manufacturing regions seeking to make the transition from a defense-based to a civilian-based economy.

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The *FRBSF Weekly Letter* appears on an abbreviated schedule in June, July, August, and December.