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Checking the Forecast: A Look Back at the Texas 2000 Project

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In the late 1970s, Texas experienced a remarkable spurt of migration-induced population growth. One of the main reasons for the surge in migration was the much-touted Texas business climate. This part of the Sun Belt was awash in energy and capital: oil prices tripled (from about $12 per barrel in 1972 to $36 per barrel in 1979) as a result of cuts in oil production by the then-powerful OPEC cartel. In contrast, economic growth in the Rust Belt was stifled by high energy prices, obsolescent infrastructure, and burdensome taxes. Texas prospered while the rest of the nation suffered stagflation.

Those were heady days for Texans. We considered ourselves the "economic flagship for the nation." The most difficult problem facing state government was what to do with the billion-dollar budget surplus caused by the unexpected rise in tax revenues precipitated by the increase in oil prices.[1] Sales tax collections also increased as a result of economic and population growth.

Enter the Texas 2000 Commission

Against this background, the newly elected governor, William P. Clements, established the Texas 2000 Commission in 1981. Clements had vowed during his campaign to make state government more like a business. Once in office, he focused on the seeming lack of long-range planning in state agencies and authorized the Texas 2000 Commission to study a collection of already-defined issues and recommend courses of action to resolve these issues. The Commission was created by executive order, but because it had no legislative foundation, it lacked funding. The research and analysis were assigned to diverse unpaid appointees and volunteers from academia, business, and government.

The first step was to produce a baseline planning document that contained background information about the issues, a discussion of risks and benefits associated with each issue, and forecasts of future trends. Texas Past and Future: A Survey, published in June 1981, listed the issues to be examined, including "population growth, changes in the state's economy, water, energy, transportation, agriculture, state and local finance, research and development, and future relations with Mexico."[2]

As the former Executive Director of the Texas 2000 Project, I am pleased that the projections we developed in many areas drew the attention of Texas public policymakers to the challenges of a population and an economy in transition and to the potential impacts of this transition on the supporting infrastructure of the state. While many of the projections were not fulfilled in terms of precision, they are all accurate in terms of direction and magnitude. I believe that Texas benefited greatly by discussing these potential impacts and taking policy action to reduce many of the down-side impacts.

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Forecasts Revisited

How well did we foresee the future? We projected the state's gross product would increase from about $98 billion in 1980 to about $220 billion in 2000. This change corresponds to an annual average growth rate of approximately 4.1 percent. Inasmuch as the 1980 gross product and the forecast are expressed in constant 1972 dollars, the growth rate relates to real growth in the economy, not counting inflation. Between 1980 and 2000, real product actually grew at the rate of 3.5 percent.[3]

Why did our overall growth forecast turn out to be too optimistic? In 1973, the price of oil had increased from $3 per barrel to about $15 per barrel. In 1978, the price began to rise again. After spiking at nearly $40 per barrel in 1981, it began to fall a few dollars per year. Then in 1985, the price dropped from $27.50 to a little more than $10 per barrel. With the exception of a brief spike at the time of the Gulf War and two smaller spikes, the price of oil has remained at $10-$20 dollars per barrel. The oil price collapse from $27.50 per barrel to less than half that amount reduced both the income from oil and gas extraction in Texas and state severance tax revenues.

The collapse also induced a massive change in expectations in Texas. During the price increases, money was plentiful, and it was assumed this abundance would continue for the indefinite future. It was silly to hold cash because inflation was eroding dollar-denominated balances at rates as high as 13 percent per year. Rising property values and favorable federal real estate investment tax laws made real estate an especially popular investment. In this easy money environment, financial institutions made some very questionable investments. After 1985, the calling-in of some of these investments created a crisis in liquidity that reverberated throughout the world financial community. The ensuing $132 billion savings and loan crisis transformed the easy money environment almost overnight. New capital dried up and investment in Texas slowed to a trickle. The tight money doldrums lasted well into the 1990s.

This recession rendered our projections too optimistic. In 1985, we knew that oil prices could not continue to rise forever. OPEC was a powerful cartel, but elementary economics teaches that all cartels eventually collapse because the temptation for cheating is too great. We had no faith in OPEC's staying power, but we also had no idea that oil prices would actually go down. Over the previous seven years, inflation had dipped below 6.7 percent only once and had topped 10 percent three times. That any price, much less the price of oil, would actually go *down* was utterly beyond the pale of all recent experience.

Industry-by-Industry Trends

In addition to forecasting the total growth in the Texas economy, we also estimated growth trends for individual industries. The general theme highlighted the transition from a natural resource-based economy to a human resource-based economy. Before the OPEC oil price hikes, the farm sector and the oil and gas extraction industries' shares of gross state product were dwindling, while the service, retail, financial, and manufacturing industries were growing. The value of production from the farming and mining sectors was not shrinking in the absolute sense; it simply was not growing as fast as the other industries.
In our analysis of future growth, we discussed the general idea that the boom could not last forever because the very conditions that induced the expansion would be reversed by the effects of the growth. For example, the assets that made Texas attractive to migrants—availability of jobs, low cost of living, availability of energy and other natural resources, and reasonable prices for real estate—could be mitigated by the arrival of yet more migrants. The more people arrived, the more these special attributes were diluted. Even though our projections were based on the idea that the economy would continue on its present course, we built in a decreasing growth rate to account for the boom choking itself off.

The Energy Industry

At the time the Commission was formed, the common wisdom was "85 in 85." That is, the price of oil was expected to rise to $85 per barrel by 1985. We estimated the highest price for oil would be around $100 per barrel because higher prices would make ethanol and synfuels technology economically feasible. We did not think OPEC would attempt to push the price much above $85 per barrel because the cartel did not want to trigger a deep recession in the developed countries that would, in turn, drive demand down.

Before 1973, Texas was steadily losing employment and output in the oil and gas mining sector, mainly due to resource depletion. It was not profitable to keep pumping some wells for a mere $3 per barrel. The oil price increase, however, made it profitable not only to pump harder on existing wells, but also to increase exploration. Oil and gas extraction employment increased from about 104,000 jobs in 1970 to 269,000 jobs in 1984.[4]

The Construction Industry

At the time of the Commission's report, the construction industry in Texas was having a hard time meeting demand. With all the new people moving to the state, the excess demand for housing sent real estate prices soaring. Despite this remarkable growth, we projected that construction would be one of the slower growing industries over the long run. It was expected that the migration stream would eventually level off, and the construction industry would catch up to demand.

The Manufacturing Industry

Within the Texas manufacturing sector, we saw some industries that could be expected to grow and some that would not. Among the non-durable manufacturing industries, we noted that the growth of petroleum refining and petrochemicals would be conditional on the continued availability of feedstocks. We also observed that aircraft manufacturing and government were declining sectors, as would be expected from the post-Viet Nam demobilization. We considered finance, electrical machinery, and professional services to be the sectors with the highest growth potential.

Reading the 1981 piece reminds me not to make projections. Year 2000 oil production will be 20 percent less than predicted; natural gas will be 26 percent better than predicted. Had I lumped the two, I would have been on target. Lignite production has leveled out at about 53 million tons, less than 30 percent of my prediction, and the U.S. and Texas uranium market has collapsed. My Texas prediction of 6 million pounds of uranium in 2000 exceeds the entire U.S. production by 25 percent. Obviously, the big event was the mid-1980s collapse of oil prices, which with low, and continued low, world oil prices, has put the mature Texas fields at a distinct disadvantage.

In the early 1980s, the major oil companies were announcing synfuels plants. These did not materialize, however, and the extra demand for lignite vanished. The other big surprise has been in natural gas. We projected natural gas production to decrease in Texas, but, actually, 2000 production will be about what it was in the middle l980s. Here technology had a much larger impact on an energy resource that was domestic and did not have to compete quite as directly as oil. With abundant low-price natural gas and readily available, very low-cost foreign oil, demand for nuclear energy, with its problems of safety and waste disposal, declined dramatically. Also, the small demand for uranium can easily be met by some very low-cost sources abroad.

According to many forecasts from the early 1980s, the commodity of natural gas was to have been exhausted by 2000. Now many projections claim that U.S. natural gas demand and production will increase about 50 percent over the next 10 to 15 years. I recently gave a talk in Houston entitled "Frailties of oil and natural gas supply and demand projections." Perhaps I should have given it 20 years ago.

—William Fisher

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Data, Then and Now

A comparison of our detailed industry-by-industry forecasts to actual outcomes is not feasible because of technical issues with the data. Specifically, the definitions of the industries have changed, and the price indexation methods have also changed. However, there is no problem using current federal government data to make the comparison because these data use a consistent set of definitions and deflation procedures throughout the entire time period. The current dollar chart shows the energy sector share falling dramatically, from 19.5 to 6 percent. Part of this decline can be attributed to the falling price of oil, and part is a decrease in production caused by resource depletion. The constant 1992 dollar-estimated share, which is supposed to be a measure of the real change in physical output of the industry, falls from 7.5 to 5.9 percent, a decrease of just less than a third. Comparisons for other industries are also generally in line with the idea of a shift away from natural resource-based industries to human resource-based industries. In real terms, the gaining industries include manufacturing, transportation and public utilities, trade, and services. The declining industries include oil and gas mining, construction, finance, and government. Between 1981 and the present, construction declined because the industry returned to its historical norm. In 1981, its share was larger than usual because of the booming population growth and business investment. Finance, labeled one of the gaining industries, instead suffered a decrease in its real output, partly because of the savings and loan crisis and partly because, like construction, this industry's share was unusually high in 1981. The government share has declined mainly as a result of reduced federal defense expenditures.

Conclusions

The question to be answered is whether the long-range planning undertaken by the Texas 2000 Commission prompted state government to make things better. For some of the issues, we can point to tangible evidence of success. The state legislature passed a comprehensive water plan in the last session, and school funding, the major government finance issue of the 1980s, has also been resolved through legislation. Relationships with Mexico have certainly been closer since the passage of NAFTA.

Changes in the energy situation are influenced mainly by international forces beyond our control and probably have little to do with the Texas 2000 project. Regarding changes in the state economy and population growth, we observe that the Texas economy is again booming and people are again flowing into the state. As for the issue of research and development, Austin and other Texas cities have become major centers for the growth of high-tech industries. This development could not have taken place unless industry perceived this state as a first-rate incubator for research and development activities. I would like to think that at least part of these sought-after outcomes could be attributed to the insight and planning made possible by the Texas 2000 Commission.

Notes

1. Since the oil and gas severance tax is an ad valorem tax, as the price of oil increased, so did the amount of tax collected.
2. Office of the Governor, Texas 2000 Commission, Texas Past and Future: A Survey, June 1981, iv.
3. Texas Comptroller of Public Accounts, Fall 1999 Economic Forecast.
4. Current employment in the industry is around 155,000 and is expected to continue to decline gradually.

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