

# Southwest Economy



## Texas Health Coverage Lags as Medicaid Expands in U.S.

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► *The future looks bright for this state. I am confident that Texas will adapt and succeed as it has always done. This is a tribute to its people, its culture and the strong leadership this state.*

**T**he Texas economy is highly resilient despite the challenges its energy industry faces. This resiliency is due in large part to an increasingly diversified economy, migration of people and firms to the state and expansion of the petrochemical industry along the Gulf Coast.

Importantly, it is also a product of the entrepreneurial spirit and “can-do” attitude of the great people in this state. This spirit is embodied in its leaders and is exemplified by Richard W. (Dick) Evans Jr., chief executive officer of Cullen/Frost Bankers Inc. and Frost Bank. He is the subject of the “On the Record” interview in this issue of *Southwest Economy*. Dick is a true giant of the Texas banking community and a past Federal Reserve Bank of Dallas director. After 44 years at Frost Bank, Dick is retiring. We wish him well and thank him for his invaluable service to the Dallas Fed, his customers, his employees and the state of Texas.

Also in this issue, Jesse Thompson discusses the significant growth experienced by Texas’ ports over the past two decades: The value of foreign trade has grown over 400 percent since 1996. Texas is home to four of the nation’s top 15 port districts. Ongoing investment in infrastructure and in petrochemical plants along the Gulf Coast, Mexican energy reforms and pending trade agreements will ensure that Texas’ ports continue to make strong economic contributions. This, in turn, will promote job creation for our citizens and open markets for our goods.

While the longer-term outlook for our ports is bullish, there are shorter-term challenges due to declining oil prices. In this issue, Martin Stuermer and Navi Dhaliwal discuss the role the Organization of the Petroleum Exporting Countries has played in driving down prices by maintaining near-record levels of production. The ample supply has put substantial pressure on high-cost competitors, particularly U.S. shale producers.

Despite these challenges, the future looks bright for this state. I am confident that Texas will adapt and succeed as it has always done. This is a tribute to its people, its culture and the strong leadership in this state.

A handwritten signature in black ink that reads "Robert S. Kaplan". The script is fluid and cursive, with a large, stylized 'R' and 'K'.

*Robert S. Kaplan  
President and Chief Executive Officer  
Federal Reserve Bank of Dallas*



# Texas Health Coverage Lags as Medicaid Expands in U.S.

By Jason Saving and Sarah Greer

**ABSTRACT:** Texas is one of a handful of states declining to expand Medicaid coverage as part of the national health care program. The state has the largest number of uninsured residents, though more people have signed up for the low-income health plan this year.

**N**ewspaper headlines earlier this year announced that Texas had claimed a dubious distinction: It had surpassed California as having the largest number of residents with no health insurance (5 million) despite a population two-thirds that of California.

For the past decade, Texas had led the nation in the *share* of its residents lacking health insurance—19.1 percent, according to the most recent Census Bureau calculation (*Chart 1*).

One contributor to Texas' high rate of uninsured may involve its decision to not expand eligibility for Medicaid, the federal-state insurance program for the poor. California expanded the program as envisioned by the Affordable Care Act (ACA) and will now reap the benefits from so doing. Texas, on the other hand, will likely continue to have an elevated level of uninsured individuals unless it, too, expands Medicaid.

## Medicaid's Unique Funding

Medicaid is the largest single funder of health services for the poor in

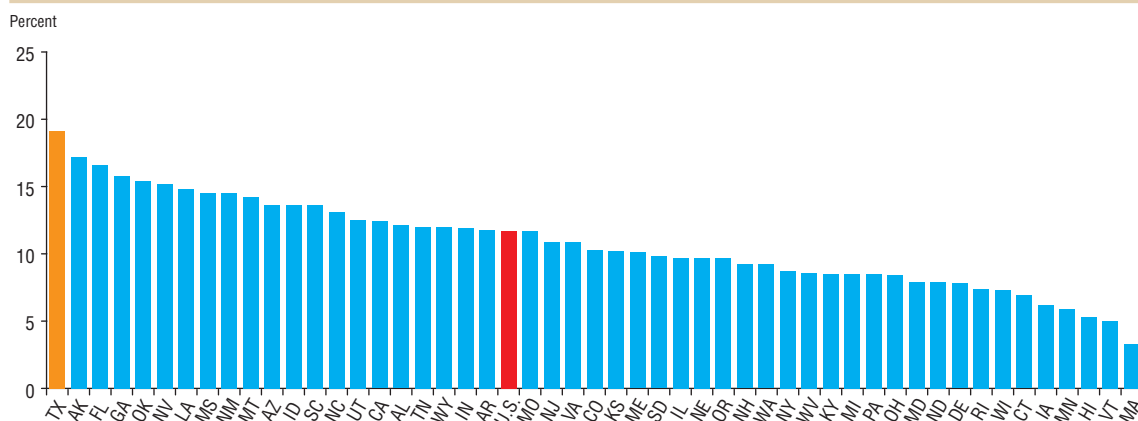
the United States; spending exceeded \$475 billion in 2014. Enacted as part of President Lyndon B. Johnson's "Great Society," the program established a comprehensive federal effort to provide low-income Americans with health coverage.

A unique aspect of Medicaid is its funding. Whereas other health assistance programs such as Medicare are purely federal responsibilities, Medicaid is a state and federal partnership funded by both. The exact matching rate for each state is determined by the state's per capita income.<sup>1</sup> Poorer states receive more generous matching rates, in part because poorer states would be expected to have higher caseloads while simultaneously possessing less ability to pay for them. In 2015, for example, 23 states had a matching rate between 50 and 55 percent, while in eight other states, it was 70 percent or higher (*Chart 2*).

Another unique aspect of the program is that the federal government does not set Medicaid eligibility standards. Rather, each state is empowered to set its own eligibility cutoff as a percentage

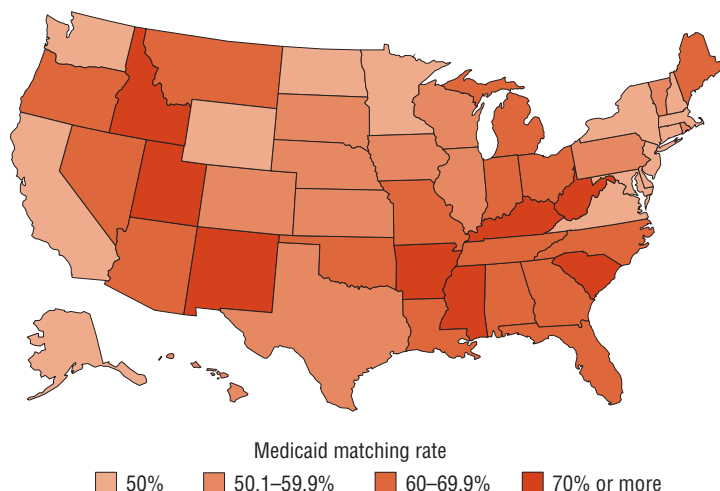
**Chart 1**

Texas Led Nation in Share of Residents with No Health Insurance in 2014



SOURCE: Census Bureau.

**Chart 2** | Poorer States Receive Higher Federal Matching Rates



SOURCE: Kaiser Family Foundation.

of the federal poverty level.<sup>2</sup> Historically, some states have set their cutoffs at more than 100 percent of the poverty level, which guarantees access to more low-income residents but requires additional state resources. On the other hand, some states have set their rates at less than 20 percent of the poverty level, which reduces costs but raises the rate of uninsured in those states. Texas and Alabama tie for the lowest coverage threshold, 18 percent of the poverty level, while Connecticut's 201 percent is the highest (Chart 3).

Cost-sharing, coupled with substantial state discretion, was initially viewed as a way to encourage state participation in the program, because state participation was not—and is not—mandatory. Indeed, only 26 states opted into Medicaid when it was implemented in 1966.

Some of the remaining states strenuously objected to the Medicaid program or to their state's proposed share of Medicaid funding, but most joined the program within a few years as they saw federal tax dollars flowing to their neighbors: 15 states alone from 1967–69. The

last two holdouts, Alaska and Arizona, joined in 1972 and 1982, respectively.

Today, Medicaid and the Children's Health Insurance Program serve 61.7 million people, about 19 percent of the nation's population. Since its inception, about 57 percent of total program funding has come from federal government general revenue (such as the income tax) and the remaining 43 percent from state general revenue (including sales taxes and state income taxes).

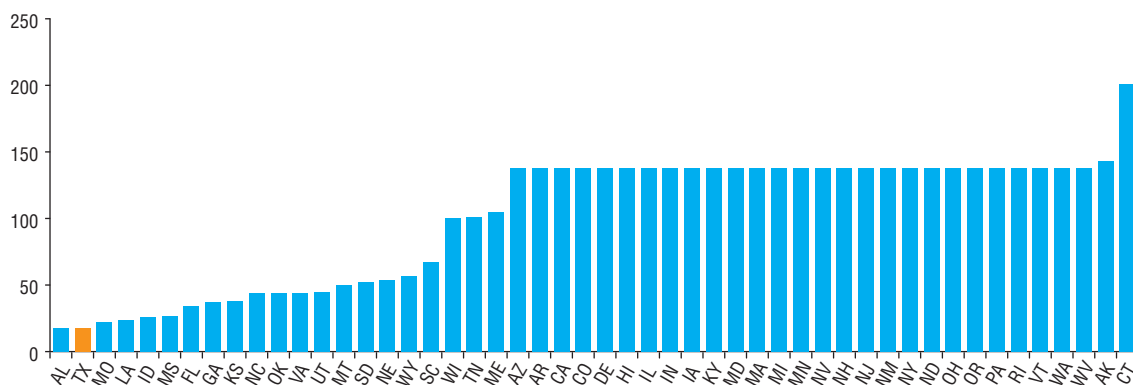
### Program Expansion?

The ACA became law in 2009 and was designed in large measure to raise the percentage of Americans with health insurance. To understand how and why expanding Medicaid entered that equation, it's important to know how Americans received health insurance in the pre-ACA world.

In the early 20th century, retailer Montgomery Ward pioneered employee health coverage as a way to encourage workforce efficiency. Employer-provided coverage grew slowly until World War II. Amid labor shortages, businesses expanded alternative compensation programs, such as health benefits, in response to government-imposed wage controls. Since then, employer-provided coverage has remained the dominant form of health insurance, with 49 percent of Americans receiving health benefits from this source.

**Chart 3** | Texas Ties with Alabama for Most Stringent Medicaid Income Threshold

Percent of federal poverty level\*



SOURCE: Kaiser Family Foundation.

The remaining 51 percent of Americans fall into four broad categories: those who are old enough to receive Medicare (13 percent), those who are poor enough to receive Medicaid or the Children's Health Insurance Program (19 percent), those who purchase their own individual policies (often at relatively high cost) from the marketplace (6 percent) and those without health insurance (10 percent).<sup>3</sup>

One portion of the ACA created state health insurance exchanges at which individuals who earn more than 100 percent of the federal poverty line could purchase subsidized coverage if their employer didn't offer a plan (or offered a plan that was too expensive to fit their budgets). The second part expanded Medicaid eligibility to 138 percent of the federal poverty line. These twin provisions would result in almost everybody either receiving coverage outright (Medicaid) or having the opportunity to purchase insurance at a discount (the exchanges).

However, questions immediately arose about expanding Medicaid. Under the ACA, any state that refused to expand Medicaid would also lose access to federal funding for its *existing* Medicaid program. Yet, past court decisions have found that the federal government cannot force states to "enact or administer" federal regulatory programs.

Was the ACA's sanction against nonparticipating states so severe it would constitute an unconstitutional compulsion? In a 7-2 decision in 2012, the Supreme Court ruled that it was and said that each state could make its choice on Medicaid expansion without threat of financial sanctions.<sup>4</sup>

### State-by-State Decisions

Though Medicaid state reimbursement rates range between 40 percent and 60 percent depending on the state's per capita income, the ACA offered a much more generous rate for any new Medicaid spending that resulted from the expansion: 100 percent funding for the first three years and 90 percent funding for the following seven.

Twenty-four states, along with the District of Columbia, expressed their

immediate intention to sign on to the expansion and began participating on the first day full federal funding was available, Jan. 1, 2014. An additional four states agreed to participate over the next year and a half, with three other states—Alaska, Montana and Utah—taking steps to join in the second half of 2015.

Provided these decisions come to fruition, 31 of the nation's 50 states will be participating by the end of this year (Chart 4).

Evidence to date suggests participation in Medicaid expansion has enabled these states to dramatically decrease the rate of the uninsured. While almost all states have experienced declining rates from 2013-14 as the economic recovery took firmer hold and the exchanges offered discounted insurance plans, nine of the 10 states whose rates of the uninsured fell fastest had implemented the expansion.<sup>5</sup>

Given that the dramatic decline in the ranks of the uninsured has been driven at least in part by Medicaid expansion and the federal government's generous matching rate, it begs the question: Who opted out and why?

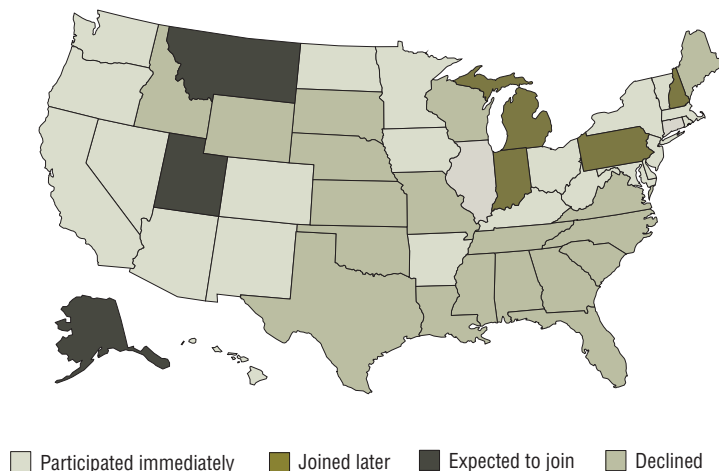
States opting out are predominantly—though not exclusively—located in the South and have generally offered sparser Medicaid coverage

than their peers who are participating in the expansion. Some of the reasons given for nonparticipation stem from opposition to the program itself, either because it potentially discourages work or because it may crowd out private insurance (*see Box*). But questions have also been raised about the specific nature of this expansion, such as future costs.

One argument made in Texas and elsewhere is financial: that even a 10 percent share of the cost is too much. The Congressional Budget Office estimated last year that 50-state Medicaid outlays will rise by an additional \$46 billion between 2015 and 2024 because of the ACA's Medicaid expansion. This would represent an increase of about half a percentage point in overall state spending over that period of time—a burden that would have to be carefully weighed against the benefit of a lower uninsured rate.

A related argument revolves around the staying power of the 90 percent matching rate. Some state officials have expressed skepticism that the rate will be maintained over the long run and fear being caught in a situation where they would be induced to accept Medicaid expansion only to see the favorable rate end after 10 years (or be rescinded earlier by Congress).

**Chart 4** | Thirty-one States Expected to Participate in Medicaid Expansion by Year-end 2015



SOURCE: Kaiser Family Foundation.

## Does Medicaid ‘Crowd Out’ Private Insurance?

The question of Medicaid crowd-out is not new, but it has been reignited with the recent Affordable Care Act (ACA)-related expansion. The term “crowd out,” coined by health economists in 1996, is the notion that public health care expansion does little to grow coverage rates because many recipients would have purchased private insurance if no public option were available.<sup>1</sup>

Past studies of crowding out focused on earlier expansions that affected children and pregnant women, while the ACA would target both parents and childless adults above the poverty line.

While Medicaid coverage varies from state to state, it provides health care at little to no cost, which is better than any private plan could offer—hence, the concern that newly eligible people will substitute public for private insurance. On the other hand, Medicaid has notoriously low reimbursement rates to physicians, causing many providers to opt out of serving those patients. This restricts where patients can receive care and may act as a deterrent to switching to Medicaid.

Access to employer-sponsored insurance (ESI) is an important factor. Those enrolled in ESI may be less likely to substitute Medicaid because they will only receive a portion of the savings. That said, access to affordable ESI isn’t prevalent among the low-income workers who would qualify for Medicaid.

Most estimates of crowd-out range from very minimal—around 3 percent—to quite large—about 50 percent. A study that focused on effects of adult enrollees in Ohio found that while 19 percent of eligible adults substituted public for private insurance, only 2.9 percent made the switch.<sup>2</sup> This is in stark contrast to an earlier analysis that suggested a crowd-out rate of 49 percent.

There are some important differences in these studies, however. The Ohio study focused on adults rather than children and used a narrower definition of crowd-out. The second, earlier calculation is the reduction of private insurance relative to the increase in Medicaid coverage, rather than intentional substitution.

Since the expansion due to ACA will mostly affect adults, the experience in Ohio seems more relevant to the recent discussion, suggesting that the crowd-out effect of Medicaid expansion will likely be relatively low.<sup>3</sup>

One final point concerns the ACA’s mandate of minimum coverage requirements for health insurance plans. Even without Medicaid expansion, higher minimum standards might themselves crowd out low-cost private plans that could otherwise have served as an alternative to Medicaid.

### Notes

<sup>1</sup> See “Does Public Insurance Crowd Out Private Insurance?,” by David M. Cutler and Jonathan Gruber, *The Quarterly Journal of Economics*, vol. 111, no. 2, 1996, pp. 391–430.

<sup>2</sup> See “Public-Private Substitution Among Medicaid Adults: Evidence From Ohio,” by Eric E. Seiber and Timothy R. Sahr, *Medicare & Medicaid Research Review*, vol. 1, no. 1, 2011.

<sup>3</sup> Effects of crowd-out in Texas are likely very low, since Medicaid eligibility is currently so limited.

Depending on how Medicaid costs evolve, this could result in a larger-than-expected state Medicaid expenditure over the long run.

### What About Texas?

Texas is one of the 20 states that has neither embraced Medicaid expansion nor signaled it will likely do so

by the end of 2015. The best available estimates suggest that Texas, by not signing on, will save about \$5.7 billion in state funds over the 2014–22 period, providing somewhat greater room to spend on other priorities such as education and infrastructure. On the other hand, those \$5.7 billion in state funds would have been accompanied by an

estimated \$65.6 billion in federal funds that would have flowed to Texas if it were participating in Medicaid expansion (*Chart 5*).<sup>6,7</sup>

Remarkably, the \$65.6 billion Texas would receive from the federal government nearly matches California’s \$68.8 billion despite California being far more populous. This difference primarily stems from the fact that ACA’s favorable matching rate for Medicaid expansion applies to everyone who is newly eligible for Medicaid, no matter how low a state’s pre-ACA threshold might have been.

That means states such as Texas, whose pre-ACA thresholds are low, would receive disproportionately large federal support for expanding Medicaid. Meanwhile, states such as California, whose pre-ACA thresholds were high and who have expanded Medicaid, are receiving disproportionately low payments.

A look at how the rate of the uninsured fell nationwide in 2013–14 illustrates something interesting about Texas. While Texas did not expand Medicaid, its share of the uninsured fell by a full 3 percentage points—the 13th largest drop nationally (*Chart 6*). Why did Texas’ rate fall so much when the state didn’t expand Medicaid?

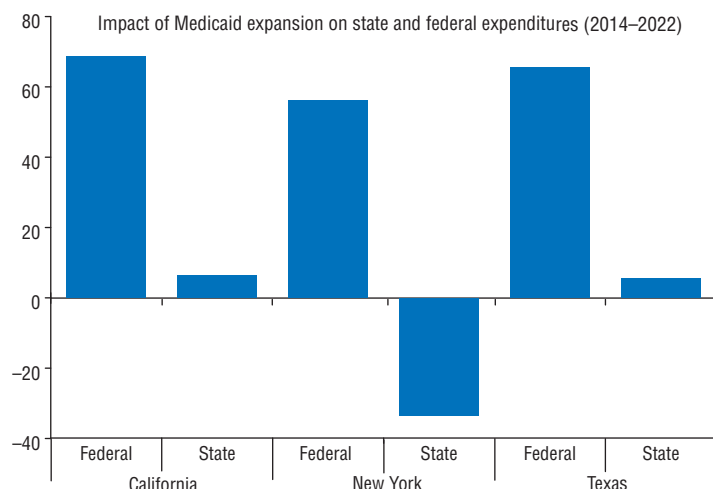
The primary reason: the ACA’s health insurance exchanges, which were primarily designed to capture people whose employers didn’t offer the benefits (or workers who found the plans too costly). In part because Texas has a disproportionate number of low-wage workers, Texans are about 5 percentage points less likely to be covered through their employers.<sup>8</sup> For this reason, it would be expected that the exchanges would have a disproportionate impact on the uninsured in Texas.

Still, Texas Medicaid enrollment rose 11.8 percent in the 18 months following the nationwide Medicaid expansion rollout. While this was surely due in large part to a deterioration of state economic conditions following the Great Recession, it is also true that Texas has not historically been a state that broadly advertised its Medicaid program and indeed recently experienced substantial turbulence in its program administration.

## Chart 5

### Texas Saves State Funds by Not Expanding Medicaid, Loses Federal Funds

Billions of dollars



SOURCE: "The Cost and Coverage Implications of the ACA Medicaid Expansion: National and State-by-State Analysis," by John Holahan, Matthew Buettgens, Caitlin Carroll and Stan Dorn, Nov. 28, 2012, Urban Institute.

When visitors to [healthcare.gov](http://healthcare.gov)—the ACA internet homepage—enter their personal information to see if they qualify for subsidized coverage, rejected candidates who are sufficiently poor are advised to look into Medicaid as an alternative. This may have played a secondary role in driving up Medicaid enrollments among Texans who were previously eligible for Medicaid but either weren't aware of the program or might have had qualms about signing up.

### Growth Trade Off

Texas now leads the nation in the number of individuals who lack health insurance coverage, in part because the state has declined to participate in the ACA's expansion of Medicaid.

Historically, Texas has been relatively accepting of inequality as the cost of faster-than-average growth, and it can be argued that health insurance inequality is a consequence of this trade off.

But, the high rate of those lacking insurance imposes very real costs, from less access to health care for the poor to higher county hospital tax payments. It remains to be seen whether a way can be found to reduce the ranks of the uninsured in Texas while preserving the state's low-tax governance.

*Saving is a senior research economist and advisor and Greer is a research analyst in the Research Department of the Federal Reserve Bank of Dallas.*

### Notes

<sup>1</sup> More precisely, the matching rate is a function of a rolling three-year average of per capita income provided by the Bureau of Economic Analysis.

<sup>2</sup> States can also decide whether to include childless adults in their Medicaid program and, if so, set a separate coverage threshold for them.

<sup>3</sup> Data are from the Kaiser Family Foundation and are available at <http://kff.org/other/state-indicator/total-population/>. Medicaid estimate includes the Children's Health Insurance Program (CHIP).

<sup>4</sup> See the Supreme Court case *National Federation of Independent Business v. Sebelius*.

<sup>5</sup> Because most children receive health coverage under CHIP, the gains would come predominantly from adults.

<sup>6</sup> See [https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8384\\_es.pdf](https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8384_es.pdf).

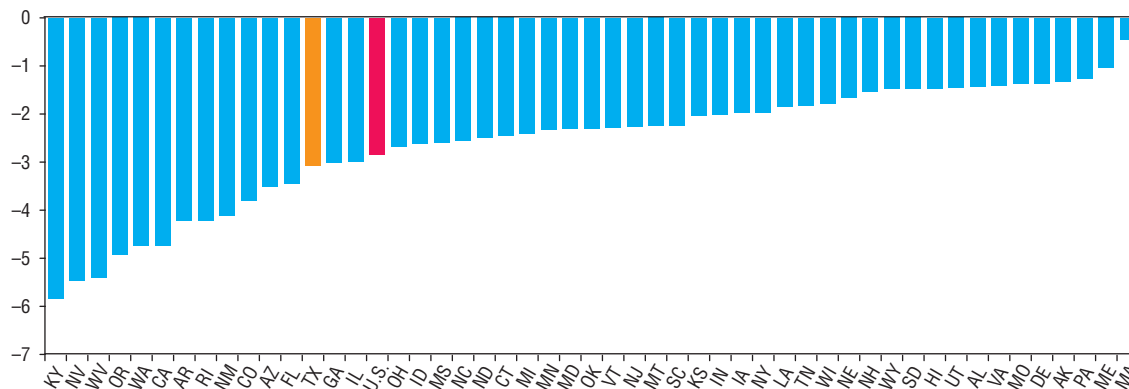
<sup>7</sup> Opting out of Medicaid expansion may also impact states' ability to partially offset the cost of uncompensated care with Medicaid funding. The five-year waiver under which Texas receives federal funds for this purpose expires in September 2016, and its prospects for renewal are unclear at this time.

<sup>8</sup> See [www.texmed.org/uninsured\\_in\\_texas/](http://www.texmed.org/uninsured_in_texas/).

## Chart 6

### Texas Records 13th-Largest Drop in Rate of Residents Lacking Health Insurance

Percent



NOTE: Drop is from 2013 to 2014.

SOURCE: Census Bureau.

*A Conversation with Dick Evans*

## Texas Banking Legend Shares Lessons Learned

*Richard W. (Dick) Evans Jr. will retire in March 2016 as chairman and CEO of San Antonio-based Cullen/Frost Bankers Inc. Over his 44-year tenure, he helped Frost Bank navigate the difficulties of the 1980s and emerge as one of Texas' largest financial institutions. He discusses what he has learned during this time, which included serving on the Federal Reserve Bank of Dallas board and the Federal Advisory Council, and his views regarding opportunities and challenges facing Texas and the banking industry.*

### **Q. During your career, you have seen a lot of turmoil and growth in the Texas economy. What makes Texas different from other states?**

I think at the core, what makes Texas different are the people and a can-do attitude. Our state's history is a big part of that. Our background as an independent country (the Republic of Texas) and strong ties to agriculture and nature have instilled a certain Texan spirit. We believe that you have to take responsibility to make things better every day. You could call it an attitude of not making excuses.

When you live in this state, you see how nature plays an integral role in shaping the Texas mentality. What we learn about living through vicious cycles in the weather, of good and bad times—these become lessons that we apply to business. We have learned that ups and downs are inevitable, but being prepared for them is what allows you to work through and endure hard times.

### **Q. Looking ahead, what factors will be the most important for the state to maintain relatively high job growth?**

I believe that Texas cannot continue to grow and prosper unless we solve our problems in two key areas.

The first is education. We need to focus on teaching more effectively. While

a college education is important and a great goal for many Texans, not everyone needs to have a PhD. We also need to think more broadly about refocusing education and developing respect toward the trades. Even today, we continue to hear about the lack of skilled workers. We have to understand the needs of the job market and match education to it, not just assume that any degree will do. It's all about learning skills.

The second issue is water. Water can be a very emotional subject in Texas. To many people, everything seems OK until water doesn't come out of the faucet. By then, it's way too late to act. We have to be sure that through every possible avenue—whether it be conservation, water markets or new technologies—we have a secure supply of water to continue to grow. We need collaboration, especially between regulators, inventors and investors, so that we can find new solutions to our water problems.

### **Q. The dramatic oil price decline over the past year is negatively affecting the state—but nothing like the drop in the 1980s did. What's different this time?**

Comparing the situation today to the 1980s is really comparing apples to oranges. In the '80s, oil prices dropped but in an environment where most people were expecting them to contin-

ue to rise. So the drop was not expected and not planned for. In the most recent oil price decline, lenders' expectations were much more rational, and when oil was at \$100 a barrel, most anticipated a downward slide to \$70 or \$80. So, while the magnitude of the recent price crash was larger than expected, both borrowers and lenders were better prepared.

Along with the oil price drop, there was an overbuilding in real estate in the 1980s. Many lenders were making deals without any equity. That couldn't work. Real estate was chasing oil, but because of the nature of the business, it couldn't react as quickly to the change in oil markets. That left lenders in a bad position. On top of that, there was a change in the real estate tax laws that tightened the rules on write-offs. That took the passive investors out of the market and sent real estate crashing. Neither of these factors has been an issue this time around.

Finally, the technology component has been hugely transformative to the energy landscape. Wildcat drilling and speculation were common in the '80s, but today it is much more of a science. Efficiencies in exploration and production have taken quite a bit of the volatility out of the industry.

### **Q. Frost Bank is the only top 10 Texas bank to survive the 1980s. What are the key reasons?**

I think the main reason is that we knew and worked with our customers through the difficult times. The truth is that when a borrower gets into a ditch, it takes both the borrower and lender to get out of it. I believe that we made it through because we had the right kind of customers—people who were willing to try their hardest to work through their debt. We had a good enough relationship with our customers that we were able to work with them and make it through the tough times. We understood what our customers were trying to accomplish and did our best to give them the tools they needed to succeed.

Between 1980 and 1990, we charged off \$400 million. If you had told us in 1980 that we would go through something like that, we would have said



► *Despite all the struggles [in the 1980s], I never thought about quitting. That never occurred to me. It was not a fun time, but the experiences and challenges made me into the banker I am today.*

that we couldn't do it. But what you learn in times like that is to take things one step at a time. We just went to work, every day, to solve the problem piece by piece. A friend of mine once asked me if I ever considered quitting the banking business during that time. Despite all the struggles, I never thought about quitting. That never occurred to me. It was not a fun time, but the experiences and challenges made me into the banker I am today.

**Q. How has banking changed since 1971, when you started as a commercial loan officer at Frost?**

Both banking in general and Frost in particular have been through a lot of changes, thanks to technology. We've gone from a \$350 million bank to a \$28 billion financial services company. When I started at Frost, the rule was to have one employee per \$1 million in assets. If we followed that rule today, we would have 28,000 people. But because of advances in technology, we can run our company with just 4,200 people, without any reduction in service level. The technology has transformed how we do business and how we interact with and serve the customer. Staying ahead of the curve is more important now than ever if you want to be a successful banker.

**Q: How has the structure of banking shifted in Texas?**

Up until the 1980s, Texas was a unit banking state. (Branch banks weren't allowed.) This led to a larger proportion of small and mid-sized banks making up the Texas financial system. After the crash in the 1980s, the laws changed to allow branch banking and out-of-state

banking, which brought more large banks into the mix.

Recently, there has been a lot of consolidation of Texas banks as they struggle under additional regulation. A lot of this has been in the form of smaller banks merging to try to get over the \$1 billion mark (asset value) and remain viable in an increasingly burdensome regulatory environment. I think that as compliance becomes more costly, we will continue to see these bank mergers. Today, we have one-size-fits-all regulation, but smaller banks can't operate that way.

**Q. What advice can you give to bankers from your many years of experience?**

Foremost, I would tell bankers to work for an organization that is committed to the development of human capital and cares about your growth as an individual. Communication is a very important part of that. We are at a point in time where cross-generational communication is a challenge across all sectors of business and will only continue to get harder unless we all work to improve it.

A successful bank has to be able to meld the intellect and skills of young people with the wisdom and experience of those who have been in the industry a long time. There must be a mutual understanding and communication, with established bankers working with the younger generation to mentor them and guide their dynamism and skill in constructive directions. Both the young and the old have to realize that they can't do it all alone and that working together, exchanging ideas and being open in our communication is the key to our future prosperity.

**Q. What did you gain from your experience as a Dallas Fed board member? What key challenges face the Federal Reserve?**

I am an ardent believer in the benefits of a strong, independent central bank. That is why I spent nearly 16 years serving in some capacity in the Federal Reserve. I was honest, direct and sometimes controversial in my role because I wanted the Fed to understand what was going on beyond the data and what was happening in real life with the businesses and individuals that make up the economy. I think the Fed is very well-designed in its balance of data-driven economists who look at the numbers behind the economy and the bankers and community leaders who deal with the day-to-day workings of the economy and help the Fed interpret the "straws in the wind."

My concern is that the Fed is moving away from a model of leadership and guidance toward an analytical, model-driven one. Nobody questions the importance of data, but part of being a central bank is about leading, inspiring confidence and bringing a human element into the mix.

Lately, there has been this "analysis paralysis" where the focus on data has taken precedence over leadership, and it has led to a lot of confusion. When analysts need to parse through every phrase of every press release that the Fed puts out in order to try to figure out what they are going to do, that isn't leadership. It has become so technical that nobody really knows what is going on. Nevertheless, I think that the Fed is a strong, resilient institution, and it will be able to adapt to the needs of the public and the financial industry as times change.

# Texas Ports Stay Busy as Trade Values Fall Along Gulf, Rise Inland

By Jesse Thompson

**ABSTRACT:** The value of trade moving through Texas land-based ports since 2014 has grown while falling at coastal ports, largely due to lower oil prices. Nonetheless, the long-term Texas port outlook is bright.

**T**he overall impact of trade is impressive: Exports sent via Texas ports support as many as 1.1 million jobs.<sup>1</sup> The value of trade moving through Texas—the total of imports plus exports—was 5.1 times higher in 2014 (\$721 billion) than in 1996 (\$142 billion).<sup>2</sup> The expansion was about twice that of the rest of the nation (*Chart 1*).

Even as activity increased during the past five years, the rise wasn't universally felt—the value of trade stagnated at water ports, such as Houston, while rising strongly at inland crossings that include Laredo and El Paso.

Overall, growth in the value of trade slowed after 2011. Imports rose only 4.1 percent to \$388.2 billion in 2014 from \$372.9 billion in 2011, due largely to falling oil imports. Exports expanded 19.4 percent to \$332.8 billion in 2014 from \$278.8 billion in 2011. Declining energy prices have since depressed the value of total trade.

Over time, each of five port districts covering the state has charted its own path through shifting trade

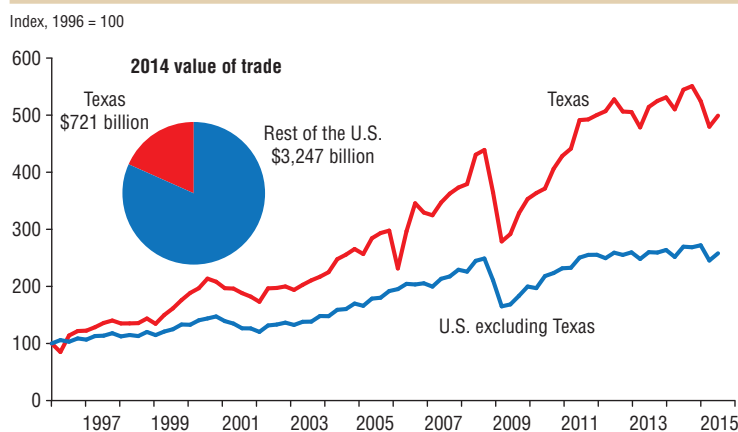
patterns as free-trade agreements, globalization, a growing economy and increased oil and gas production changed the landscape of Texas commerce. These same forces are driving investment in infrastructure to meet anticipated demand to move more goods in and out of Texas.

## Land and Air Port Activity

Four of the nation's top 15 port districts are in Texas. Customs and Border Protection port districts usually encompass large geographic areas. For example, the Dallas–Fort Worth port district covers a box-shaped region that includes San Antonio, Midland, Amarillo and Tulsa, Oklahoma (*Table 1*).

DFW has a relatively small share of total U.S. trade but has worked its way up in the value of goods traded from a ranking of 20th a decade ago to 15th today. The district encompasses both the so-called “Silicon Prairie” of the DFW metropolitan area and the flourishing technology cluster in Austin. This concentration of high-tech industries is why more than half of all exports through the

**Chart 1** Texas Trade Growth Outpaces Rest of Nation



SOURCE: Census Bureau.

**Table  
1**

**Texas Port Districts, 2014**

District	Ports	Share of 2014 district trade (percent)
<b>Dallas–Fort Worth</b>	Dallas–Fort Worth	90.53
<b>Land port</b>	Tulsa, Oklahoma	7.38
<b>\$60.89 billion</b>	San Antonio	0.92
	Austin	0.90
	Oklahoma City, Oklahoma	0.02
	Addison	0.01
	Amarillo	*
	Fort Worth Alliance Airport	*
	Lubbock	*
	Midland	*
<b>El Paso</b>	El Paso	76.58
<b>Land port</b>	Santa Teresa, New Mexico	22.73
<b>\$88.70 billion</b>	Presidio	0.54
	Columbus, New Mexico	0.12
	Albuquerque, New Mexico	0.02
	Fabens	*
<b>Houston–Galveston</b>	Houston	67.56
<b>Ocean port</b>	Corpus Christi	10.30
<b>\$247.45 billion</b>	Houston Intercontinental Airport	7.59
	Texas City	7.07
	Freeport	3.72
	Galveston	3.25
	Port Lavaca	0.52
<b>Laredo</b>	Laredo	71.58
<b>Land port</b>	Hidalgo	11.01
<b>\$278.19 billion</b>	Eagle Pass	8.83
	Brownsville–Cameron County	6.49
	Del Rio	1.82
	Progreso	0.14
	Rio Grande City	0.10
	Roma	0.03
	Edinburg Airport	*
<b>Port Arthur</b>	Port Arthur	72.39
<b>Ocean port</b>	Beaumont	27.27
<b>\$45.73 billion</b>	Orange	*
	Sabine Pass	*

\*Values either missing or less than 0.01.

NOTE: Locations are in Texas unless otherwise noted.

SOURCE: Census Bureau.

DFW port district consist of high-value computer and electronic components and equipment. Another 10 percent of exports through DFW is machinery, including industrial goods, aerospace and oilfield equipment.

Six Asian countries accounted for nearly two-thirds of the district's trade in 2014: China, Korea, Japan, Taiwan, Malaysia and Thailand. The lion's share, however, is with China. Its proportion of district trade more than quadrupled from 8.4 percent in 1996 to 37 percent in 2014, principally due to rising imports. This was accompanied by China's entry into the World Trade Organization at the end of 2001. DFW's trade with the Republic of Korea has grown the fastest since 2010, expanding 69 percent in

those four years, aided by a 2012 U.S.–Korean free-trade agreement. The total value of trade handled by DFW grew 10.4 percent year over year in the first half of 2015 (*Chart 2*).

The Laredo port district was the nation's third largest in terms of value in 2014—trailing New York and Los Angeles. It was the seventh largest in 1996 and owes much of its expansion to the North American Free Trade Agreement, which lowered barriers and costs to trade with Mexico beginning in 1994. Nearly 3 million trucks and 500,000 railcars cross the border at Laredo annually.

The bulk of the Laredo trade consists of intermediate and finished goods for the transportation equip-

► *The Laredo port district was the nation's third largest in terms of value in 2014—trailing New York and Los Angeles.*

ment and computer and electronic products industries along with machinery (excluding electrical machinery) and other manufacturing-related products. Many of these items pass back and forth between U.S. facilities and Mexican maquiladora plants, where materials and intermediate goods are processed and assembled on a duty-free basis before being reexported. These plants play an integral part of the Texas border economy.<sup>3</sup> The value of exports through Laredo grew 0.8 percent in the first half of 2015 on a year-over-year basis.

Mexico accounts for 97 percent of the value of the trade moving through Laredo and El Paso. The two port districts combined accounted for two-thirds of the value of U.S. trade with Mexico in 2014. El Paso, West Texas' major U.S.-Mexico border crossing, ranks 14th nationally, with computer and electronic products and equipment comprising a larger share of goods relative to Laredo. Exports through El Paso declined 4.5 percent year over year in the first half of 2015 due to a fall-off in computer and electronic products and transportation equipment (*Chart 2*).

### Lower Coastal Trade Value

Along the coast, ports remain busy, though the value of goods traded has declined (*Chart 3*). The Houston-Galveston district ranked fifth nationally in 2014 in the total value of exports and imports, which together equaled \$247 billion. Among U.S. seaports, it is the third largest in total value and the largest in foreign tonnage—the weight of foreign cargo moving in and out of the port.

The Houston port district grew rapidly from 2002 to 2008 as the value of trade nearly quadrupled, paced by rising prices and quantities of commodities transactions—principally energy-related—with emerging markets. Although Mexico is the port's largest trading partner, it accounts for just 12 percent of activity. A number of other nations, led by China, Brazil, Venezuela and Colombia, are increasing their share of commerce. While trade with the Republic of Korea and

China expanded rapidly from 2012 to 2014, the value of transactions with Canada increased the most, averaging 39 percent growth annually, as crude oil exports surged.<sup>4</sup>

The goods traded through the Houston port reflect economic activity along Texas' Gulf Coast, which has a large presence of oil and gas refining (the Texas Gulf Coast had 25 percent of U.S. operable refining capacity in 2014) and petrochemical manufacturing (the state had 70 percent of U.S. basic petrochemical capacity in 2014).

Rising U.S. energy self-sufficiency after 2010, following the emergence of shale oil, reduced demand for light, sweet crude oil imports from countries such as Nigeria. This damped Texas coastal trade growth as the value (and volume) of oil-related product imports dropped. The oil-related import share of Houston-Galveston imports fell from nearly 60 percent in 2011 to 42 percent in 2014.

On the export side, the value of oil, gas and petroleum and coal products accounted for nearly 40 percent of Houston-Galveston exports in 2011. That share rose to 42 percent in 2014. Since 2014, the value of those products has plunged 9.1 percentage points, part of an overall export value decline of 12.8 percent.

Fifty miles east of Galveston, Port Arthur focuses on oil-related trade. Crude oil from Saudi Arabia alone

accounted for 36 percent of its imports in 2014 and a quarter of its total trade. Mexico, another source of heavy crude, was responsible for 18 percent of total trade and Venezuela 16 percent. On the export side, refined products and petrochemicals comprise nearly \$9 of every \$10 of Port Arthur exports. The value of those goods slumped 24 percent in the first half of 2015 from 2014 levels (*Chart 3*).

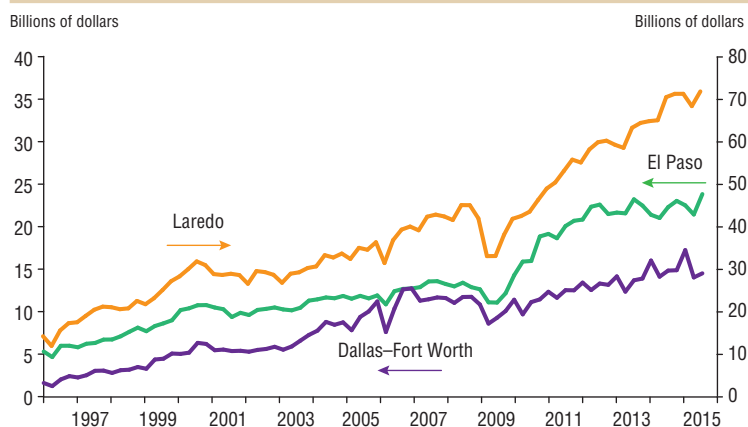
Nearly all of the coast's recent value of trade decline can be attributed to the 60 percent fall in oil and natural gas prices from the first half of 2014 to the first half of 2015. The lower value of trade is reflected in the price of motor fuels, natural gas liquids, commodity plastic resins and other organic petrochemicals and related products even as volumes traded have increased. In particular, gasoline, diesel, natural gas and propane export volumes rose substantially.

### More Growth Coming

Since 2014, the value of trade through Texas land-based ports has grown while falling at coastal ports, largely due to lower oil prices. Still, the outlook for all Texas ports is strong.

Population is a significant driver of import demand, and the number of Texas residents has increased at a 1.7 percent annual average rate from 2010 to 2014. By comparison, the U.S. as a whole grew at an annual rate of 0.8

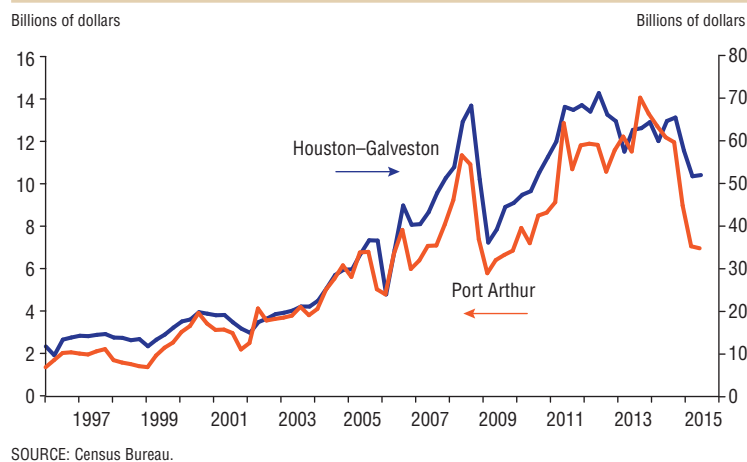
**Chart 2** Port of Laredo Paces Growth of Inland Trade in Texas



SOURCE: Census Bureau.

# Chart 3

## Coastal Ports Trade Value Drifts Lower as Oil Prices Slide



SOURCE: Census Bureau.

percent over that time. New residents boost demand for imported food, clothing and consumer products. As an example, demand for consumer goods contributed to strong increases in imports of containerized goods through the Port of Houston between 2010 and 2014.

Along the U.S.-Mexico border from Santa Teresa, New Mexico, to Laredo and on to Corpus Christi, the Kansas City Southern Railway and the Union Pacific have invested hundreds of millions of dollars to expand rail capacity in anticipation of more freight demand. Federal agencies have launched several initiatives to improve infrastructure at border crossings and along major highways, including Interstate 35, which runs from Laredo's Mexico crossing to Duluth, Minnesota, near the Canadian border.

Extra freight capacity will be needed if the Mexican government's recent efforts to reform its state-owned oil company, Pemex, succeed and the number of U.S. firms operating there substantially increases. Machinery, equipment and railcars of pipe and special sands for oil and gas drilling will be needed to access Mexican oil resources.<sup>5</sup>

Companies such as Dow Chemical and Cheniere Energy and public entities have already invested tens of billions of dollars for new chemical and liquefied natural gas plants, export

terminals and supporting infrastructure along the Texas coast to export the benefits of the boom in oil and gas production.<sup>6</sup> A \$68.9 million investment in the Barbour's Cut terminal on the Houston Ship Channel, expected to be operational in 2016, is one example of infrastructure investment underway to support greater numbers of larger ships, with some likely to traverse the expanded Panama Canal. In the process, ties with Asia are anticipated to strengthen.

Additional free-trade agreements could further boost activity. The U.S. has such arrangements with 20 countries, which accounted for 61 percent of Texas' exports in 2014. During the 10 years ended in 2014, exports to these markets grew 118 percent. As future agreements such as the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership are concluded, Texas could realize additional benefits, solidifying its standing as a hub of trade growth by air, land and sea.

*Thompson is a business economist in the Research Department at the Houston Branch of the Federal Reserve Bank of Dallas.*

### Notes

<sup>1</sup> "Texas Exports, Jobs and Foreign Investment," U.S. Department of Commerce, International Trade Administration, July 2015, [www.trade.gov/mas/ian/statereports/states/tx.pdf](http://www.trade.gov/mas/ian/statereports/states/tx.pdf).

<sup>2</sup> All dollar values are nominal and have not been adjusted for inflation.

<sup>3</sup> "Changing World of Maquiladoras," Texas Comptroller of Public Accounts, *Fiscal Notes*, September 2014, <http://comptroller.texas.gov/comptrol/fnotes/fn15Q1/maquiladoras.php>.

<sup>4</sup> U.S. crude oil exports, though generally banned, are allowed to Canada as long as they are consumed there.

<sup>5</sup> "Potential Impacts of Mexico's Energy Reform on the Texas Transportation System," Texas A&M Transportation Institute, 2014, <http://tti.tamu.edu/policy/wp-content/uploads/2014/12/Mexico-Energy-Policy-Brief-final.pdf>.

<sup>6</sup> "Booming Shale Gas Production Drives Texas Petrochemical Surge," by Jesse Thompson, *Southwest Economy*, Fourth Quarter, 2012, [www.dallasfed.org/assets/documents/research/swe/2012/swe1204h.pdf](http://www.dallasfed.org/assets/documents/research/swe/2012/swe1204h.pdf), and "Producers, Refiners View Strategies to Trim Texas' Glut of Ultralight Condensate Oil," by Jesse Thompson, *Southwest Economy*, Fourth Quarter, 2014, [www.dallasfed.org/assets/documents/research/swe/2014/swe1404d.pdf](http://www.dallasfed.org/assets/documents/research/swe/2014/swe1404d.pdf).



## HOUSING: Texas Leads Nation in Production of Mobile Homes

**T**exas is the nation's largest producer of manufactured or "mobile" homes and the second-largest consumer. Manufacturers in the state were responsible for 27 percent of mobile homes fabricated nationwide in 2014, according to the Manufactured Housing Institute. Approximately 1.9 million Texans reside in manufactured housing, accounting for 7.4 percent of the Texas housing market, according to the 2013 American Community Survey's five-year estimate.

The state makes up 10 percent of the nation's 18 million people living in manufactured homes and ranked 23rd in the nation in share of residents living in mobile homes.

Consumers benefit from access to cheaper housing. The average mobile home in Texas cost \$60,200 in 2013, far less than comparable conventional single-family housing, according to the 2013 U.S. Census' American Housing Survey. Additionally, manufactured home purchasers generally don't require a large line of credit similar to a mortgage, and residents are known to have a higher satisfaction rate than those who rent housing such as apartments, according to researchers at Duke University.

There are downsides to mobile home living, including a rate of depreciation that is 3–4 percent faster than "stick-built" housing. In addition, local zoning regulations have created a shortage of mobile home parks, leading to spikes in demand and rising land rents.

—Emily Gutierrez



## LABOR: Fewer Texans than U.S. Average Hold Two or More Jobs

**T**exas was one of seven states in which fewer than 4 percent of workers held more than one job in 2014, according to the Bureau of Labor Statistics (BLS). The national average was 4.9 percent, a rate that's held constant since 2010.

In all, 11 states were below the national average, with most located in the South. While 3.9 percent of Texas workers had more than one job, Florida had the lowest incidence, 3.3 percent. Conversely, the highest rate of multiple jobholders was in South Dakota, 8.7 percent, followed by Vermont, 8.5 percent, and Nebraska, 8.4 percent.

The availability of full-time jobs, including overtime hours, may partly explain why there are fewer multiple jobholders in Texas, where the unemployment rate averaged 5 percent in 2014 (compared with 6.1 percent nationally). Hours worked in nonfarm jobs averaged 36.5 hours per week in 2014 in Texas, BLS data show. By comparison, the national private sector average was 34.5 hours.

The U.S. multiple-jobholding rate, which peaked at 6.2 percent in 1996, is based on the BLS Current Population Survey. Respondents are regarded as being multiple jobholders if they hold two or more wage or salary jobs.

—Michael Weiss



## ENERGY: U.S. Plans to Exchange Light Crude Oil for Mexico's Heavy Oil

**E**ven as Congress weighs ending a 40-year ban on oil exports, an agreement has been reached that would allow the U.S. to swap its light, sweet oil for Mexico's heavy sour crude. The deal, recently approved by the U.S. Department of Commerce, is permitted under provisions of the 1975 export ban, although this is the first time any licenses will be issued.

Since the emergence of horizontal drilling and hydraulic fracturing, the U.S. has produced an abundance of light, sweet crude oil, much of it from Texas shale oilfields. As a result, light crude imports fell and exports of oil to Canada, which are exempt from the ban, increased from 46,000 barrels per day in 2011 to 491,000 barrels per day by January 2015, according to the U.S. Energy Information Administration (EIA).

U.S. refineries, many retrofitted to handle the high sulfur, heavy crude, are ill-equipped to handle so much light, sweet shale oil. In turn, half of Mexico's refineries lack the proper equipment to process domestically produced heavy crude and have increasingly imported lighter oil as a blend.

This planned swap will allow the U.S. and Mexico to optimize their refineries while providing environmental benefits. The increased U.S. shale oil would allow Mexican facilities to reduce the sulfur content of their currently high-sulfur gasoline, according to the EIA.

—Sarah Greer

# Mexico Development Bank Lending Rises Following Financial Reforms

By Michael Perez

There are indications that Mexico's financial reforms are working. The loan portfolios of the nation's six development banks increased 28 percent in the 18 months following the reforms' initiation in January 2014.

Mexico's development banks are publicly owned institutions serving economic sectors not generally reached by commercial banks (*Table 1*). The big banks' relatively high collateral requirements and stringent screening mechanisms exclude many potential customers.

Extending more credit signals an important strategic shift. The development banks have traditionally maintained a low-risk appetite, with restrictions on short- and medium-term loan issuance. The new regulations direct the development banks to more actively expand credit by mandating that they more aggressively serve their target markets. Examples include increased lending to small- and medium-sized enterprises and low-income households.

Development banks also now have options to help struggling firms. They can make multiple loans to the same borrower without finance ministry permission and may assume more risk and incur losses so long as their equity and reserves are not depleted. Lending can be based on pledged collateral, and the development banks' increasing asset base allows them to offer more backstops for commercial bank loans to small and medium enterprises.

Total assets for the six development banks reached U.S. \$88 billion in August 2015, equal to one-fifth the size of commercial banks. That figure reflects a 16 percent increase in assets since the reforms were signed. The growth, however, has not been uniform across each loan type or development bank (*Chart 1*). Payroll loans financed by Bansefi and Banjercito have driven consumer lending growth. Bancomext

**Table 1**

Mexico's Development Banks Target Specific Markets

Bank name	Specialization
Nacional Financiera (Nafin)	Small-, medium-sized businesses
Banco Nacional de Obras y Servicios Públicos (Banobras)	Public infrastructure, municipal projects
Banco Nacional de Comercio Exterior (Bancomext)	Export and import financing
Banco Nacional del Ejército (Banjercito)	Armed forces
Banco del Ahorro y Servicios Financieros (Bansefi)	Lower-income households, the unbanked
Sociedad Hipotecaria Federal (SHF)	Housing, housing development

SOURCE: Comisión Nacional Bancaria y de Valores (National Banking and Securities Commission).

and Nafin increased their business loan portfolios, with commercial loans making up the bulk of development bank lending.

Stagnant homebuilding has limited SHF's mortgage lending activity. A government initiative, backed by a \$25 billion appropriation, seeks to stimulate home construction and could improve the outlook.

Greater credit accessibility is a key objective of the reforms.<sup>1</sup> Mexico's ratio of credit to gross domestic product stood at 31 percent as of year-end 2014, well below Latin American counterparts Brazil (69 percent) and Chile (109 percent). Furthermore, small- and medium-sized enterprises receive only 4 percent of business loans while providing the great

majority of jobs in Mexico. The reforms mitigate these issues by expanding banking competition and improving loan guarantees.

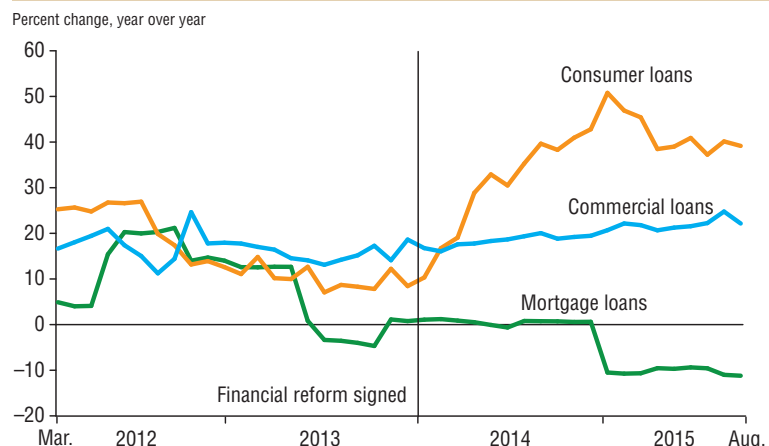
While it is too soon to pronounce the financial reform effort complete, it has reshaped lending strategies of Mexico's development banks. A focus on providing individuals and businesses access to essential financial resources will bring banking to more households and firms. Similarly, increased development bank participation will provide more formal finance to small businesses, better helping them serve as engines of growth.

## Note

<sup>1</sup> More information on the financial reforms can be found at: [www.dallasfed.org/assets/documents/research/swe/2014/swe1403d.pdf](http://www.dallasfed.org/assets/documents/research/swe/2014/swe1403d.pdf).

**Chart 1**

Development Bank Loan Portfolio Grows After Reforms



SOURCE: Comisión Nacional Bancaria y de Valores (National Banking and Securities Commission).

# OPEC Likely to Keep Pumping Despite Budget Woes of Some Members

By Martin Stuermer and Navi Dhaliwal

**ABSTRACT:** Low oil prices are hurting OPEC countries' budgets. However, differences in their ability to cope with depressed prices have increased the likelihood that the cartel will keep on pumping, creating further downside risks to prices and Texas oil producers.

**T**he Organization of the Petroleum Exporting Countries (OPEC) abandoned its traditional role of cutting production to keep the world oil market in balance in November 2014.<sup>1</sup> Faced with declining oil prices and falling market share, the cartel decided to keep on pumping rather than cut supply.

The cartel's declared goal was to squeeze competitors that had higher production costs, such as those in U.S. shale plays. Prices have fallen since then, hurting producers in Texas and the U.S. that have trimmed rig counts and reduced employment.

OPEC's strategy has also come at a cost to its members. Most are highly dependent on oil and gas sector revenues to finance their government budgets, and low oil prices have led to substantial deficits. OPEC countries' average fiscal balance—the difference between revenues and expenditures, expressed as a share of gross domestic

product (GDP)—reversed from a surplus of more than 5 percent of GDP in 2012 to a deficit exceeding 10 percent of GDP in 2015 (*Chart 1*).

The shortfall raises the question of how long OPEC countries can sustain deficits if oil prices stay low. Could this deterioration in fiscal balance prompt the cartel to reverse course?

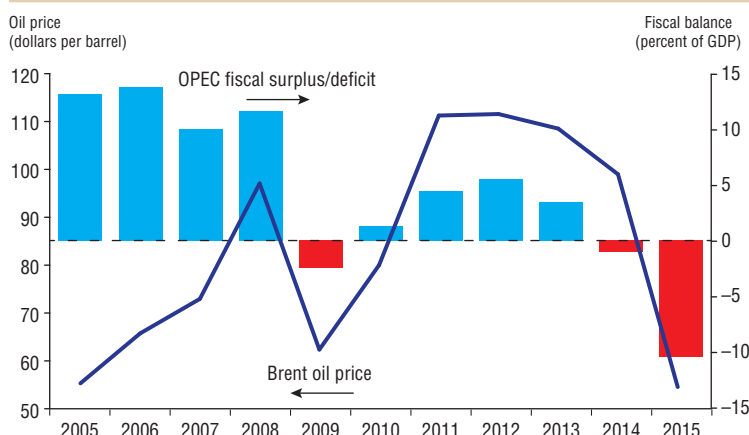
## Differences Within OPEC

Three indicators of OPEC members' ability to cope with low oil prices are highly divergent: fiscal breakeven prices, oil asset buffers and gross debt-to-GDP ratios (*Table 1*).

The differences are significant in the first measure, the fiscal breakeven oil price—the price at which a government can balance its 2015 budget.<sup>2</sup>

The estimates range from \$36 to \$207 per barrel. For example, Libya, Venezuela and Algeria would require oil prices of about \$207, \$87 and \$100, respectively, in 2015 to balance their

**Chart 1** OPEC Members' Deficit Expands on Falling Oil Prices, Rising Expenditures



NOTES: Fiscal balance is a GDP-weighted average of all OPEC members. 2015 forecasts use data through Sept. 16, 2015. Iran and Qatar data use April–March fiscal years; all others are calendar years.

SOURCES: Energy Information Administration; International Monetary Fund; authors' calculations.

budgets. Meanwhile, Kuwait and Qatar both are expected to run a surplus in 2015, and therefore, their fiscal breakeven oil prices are below the International Monetary Fund (IMF) 2015 forecast of \$52 per barrel. Saudi Arabia would need to fetch about \$89 per barrel to balance its budget.

The estimates are a lower bound that assume all oil produced by members is sold at the world price, though in some countries oil is stockpiled or its sale is subsidized domestically.

The second indicator, oil asset buffers, shows strong differences in members' capabilities to sell assets in order to balance their budgets.<sup>3</sup> Many oil-rich countries have used seed money from oil sales to build sovereign wealth funds that they can draw upon in times of fiscal distress. By dividing the total value of a country's sovereign wealth fund by its forecast 2015 deficit, an estimate can be obtained of how many years a shortfall could be bridged through a fund liquidation. The estimate assumes no revenue increases or additional debt, and that the assets held are liquid and constant in value over the term of the liquidation.

Saudi Arabia and Iran could sustain the current strategy for several years, as both have relatively large asset bases. The United Arab Emirates could potentially sustain it for decades, given a low 2015 deficit and trillion-dollar sovereign wealth funds. Kuwait and Qatar, likewise, have sovereign wealth funds valued in the hundreds of billions of dollars beyond their 2015 surpluses. By comparison, Libya, Iraq and Venezuela possess very few sovereign wealth fund assets, making low oil prices difficult to navigate. Ecuador has no sovereign wealth fund assets.

A third indicator, the gross debt-to-GDP ratio, suggests how much more debt a country could take on were it to keep incurring its current deficit in future years. If a country has a low debt-to-GDP ratio, it has room to issue new debt to finance a government funding shortfall.

While there is debate within the economic literature on what levels of debt are sustainable, high debt may lead to volatile or reduced economic growth. Again, there are pronounced differences between the relatively low debt ratios

► *OPEC's strategy has come at a high cost to its members. Most are highly dependent on oil and gas sector revenues to finance their government budgets, and low oil prices have led to substantial deficits.*

**Table 1** Fiscal Breakeven Prices, Oil Asset Buffers and Debt-to-GDP Ratios Suggest Mixed Ability to Endure Depressed Market

Country	Fiscal breakeven price (dollars per barrel)	Oil asset buffers (years)	Debt-to-GDP ratio (percent)
Saudi Arabia	89	4.94	7
Iraq	78	0.02	76
Iran	61	5.41	16
United Arab Emirates	70	55.66	19
Nigeria	74	0.07	12
Venezuela	87	0.02	53
Kuwait	50	No 2015 deficit	10
Qatar	36	No 2015 deficit	30
Libya	207	2.81	51
Algeria	100	2.09	10
Angola	57	1.40	57
Ecuador	86	No sovereign wealth funds	37

NOTES: Fiscal breakeven price calculations are based on 2015 oil reserves, assuming all production was sold at a world crude oil price of \$52 per barrel (International Monetary Fund October estimate). 2015 daily oil production was assumed to equal daily production from January to August. Iran national account and government finance data use April–March fiscal years; Qatar government finance data use April–March fiscal years. All other countries use calendar years.

SOURCES: Energy Information Administration; International Monetary Fund; Sovereign Wealth Fund Institute; authors' calculations.

► *In Texas alone, employment in drilling-related industries tumbled 20 percent from January to October 2015.*

of Saudi Arabia, Iran and Kuwait and the higher ratios of Iraq, Venezuela and Libya.

These three indicators provide a snapshot of current fiscal capacity to sustain low oil prices. Countries can also adjust to declines in oil revenues by raising taxes and slashing government expenditures, which would strongly affect the estimates. The indicators are sensitive to exchange rate movements and to changes in oil production, which are also partly a function of differing geological costs of production.

### **Supply Cuts Unlikely**

The broad differences among member countries to withstand low oil prices help make OPEC supply curbs unlikely. If fiscal constraints were approximately the same and all countries would suffer as much from low oil prices as Venezuela and Algeria do, OPEC would more likely change course and curb production in a bid to support prices. However, Saudi Arabia and its Persian Gulf allies, which informally lead OPEC, are able to offset diminishing revenue from the oil sector by taking on debt or selling government assets while making budget adjustments.

Moreover, if output cuts were to occur, the burden of reduced production would likely also fall on Saudi Arabia and its Gulf allies. Saudi Arabia is by far the most important cartel member, accounting for 30 percent of OPEC's output. It is also the only country with a significant amount of spare production capacity.

The Saudis shouldered most of the production cuts from 1980 to 1985 in an effort to prop up prices and again in 2008 in response to the global economic crisis. While countries in fiscal trouble such as Libya, Ecuador, Iraq and Venezuela might be most eager to benefit from the price support of OPEC supply cuts, their share of cartel oil production is relatively low and they likely wouldn't substantially contribute to any potential output cut.

It is also unclear that Saudi-backed supply cuts would successfully drive

up prices and boost revenues. When Saudi Arabia and other countries restrained oil production in the 1980s, they experienced larger oil revenue declines than countries that did not cut. Ultimately, the output curbs couldn't substantially increase prices, and Saudi Arabia ramped up production in 1986.

This time around, Iraq and Libya have expressed plans to boost production as much as possible. Similarly, Iran has said it intends to increase production after economic sanctions are lifted in 2016.

Even if supply cuts could raise prices, the result would likely prompt increased drilling by rival producers in the Middle East, the U.S. and Russia. Since U.S. shale producers are important marginal producers and also able to relatively quickly start and stop production, they would be among the first to increase supply in an oil market with higher prices. That could again drive prices down.

### **Compensating for Lower Income**

With Saudi Arabia unlikely to budge, other OPEC countries will compensate for low oil prices by pumping at even higher rates. This will perpetuate the status quo of lower oil prices in the wake of increasing oil supply from OPEC because none of the parties alone has an incentive to reduce production. This is consistent with statements from OPEC's general secretary, who said at the cartel's June 2015 meeting that the production quota is not a ceiling anymore but an "indicator."

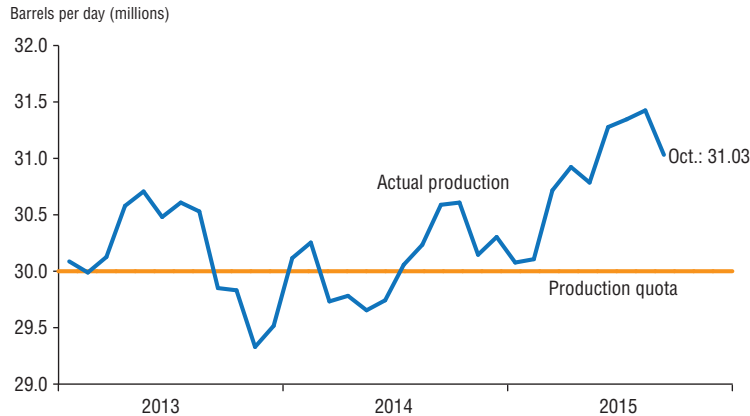
OPEC countries produced about 1 million barrels per day in excess of the current quota, amounting to roughly 3 percent more than planned (*Chart 2*). Unless there is an unexpected positive shock to demand, this will pose a sizeable downside risk to oil prices.

### **Effects on Texas Producers**

U.S. and Texas producers will continue to face the consequences of low oil prices.<sup>4</sup> They were among the first to cut drilling activity. As a result, U.S. oil and gas extraction and support industries have experienced a production slowdown. The U.S. rig count has

## Chart 2

### OPEC Is Producing Above Its Target



SOURCE: Energy Information Administration.

declined about 60 percent since last year's OPEC decision, and oilfield-related employment is off nearly 16 percent. In Texas alone, employment in drilling-related industries tumbled 20 percent from January to October 2015. U.S. producers' world market share has flattened since OPEC implemented its strategy, while the cartel transformed earlier market share losses into market share gains (Chart 3). These trends will likely continue.

Overall, the OPEC strategy is one of collateral damage, where all parties are losing but some can sustain more losses than others. It is highly unlikely

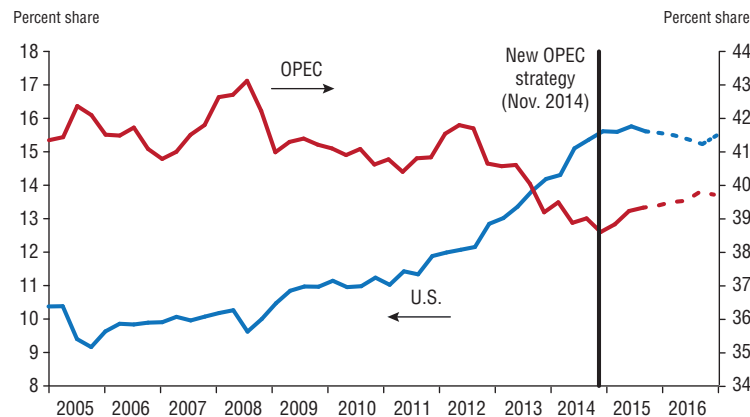
that OPEC will agree to curb production in the short-to-medium term.

Saudi Arabia and its Gulf allies have the least to gain from supply cuts; they enjoy significant fiscal buffers and risk losing market share to other countries if output is trimmed. As a consequence, OPEC will further increase its market share, while U.S. producers experience a flattening or even a decrease in the near future.

*Stuermer is a research economist and Dhaliwal is a research assistant in the Research Department of the Federal Reserve Bank of Dallas.*

## Chart 3

### Shift in Market Share from OPEC to U.S. Halts in 2015



NOTES: Market share is defined as the share of production in total world production. Dashed lines are forecasts.

SOURCE: Energy Information Administration.

## Notes

<sup>1</sup> OPEC member countries are Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates and Venezuela. Indonesia, a net oil importer, rejoined OPEC in December.

<sup>2</sup> The fiscal breakeven price equals government expenditures minus nonoil revenue in current U.S. dollars, divided by oil production in barrels.

<sup>3</sup> Oil asset buffers equal the ratio of sovereign wealth fund assets to the fiscal deficit, both in current U.S. dollars.

<sup>4</sup> See "Lower Oil Prices Weaken Prospects for Job, Economic Growth in Texas," by Michael D. Plante, *Southwest Economy*, First Quarter, 2015.

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## SNAPSHOT

## Conference to Consider Texas Residential Real Estate amid Oil Slump

**T**exas has experienced a strong multifamily housing recovery following the Great Recession, while single-family construction has been constrained by a number of factors. New-home supply now trails demand, leading to unprecedented price appreciation and record-low inventories.

The Federal Reserve Bank of Dallas and the Real Estate Center at Texas A&M University will sponsor a one-day conference, "Finding Shelter: Assessing Texas Residential Real Estate amid the Oil Slump," on Feb. 12 at the Dallas Fed.

The conference will consider what's ahead for the Texas residential market in 2016. Participants will explore trends and challenges, with a focus on supply constraints that have limited the expansion of single-family real estate inventory. Additionally, experts will discuss prospects for the U.S. and Texas economies and address the role of the real estate and energy sectors following the recent oil price collapse.



For more information, see the Research Events listing on the Dallas Fed website.

—Laila Assanie

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