

Truckonomics: An Industry on the Move

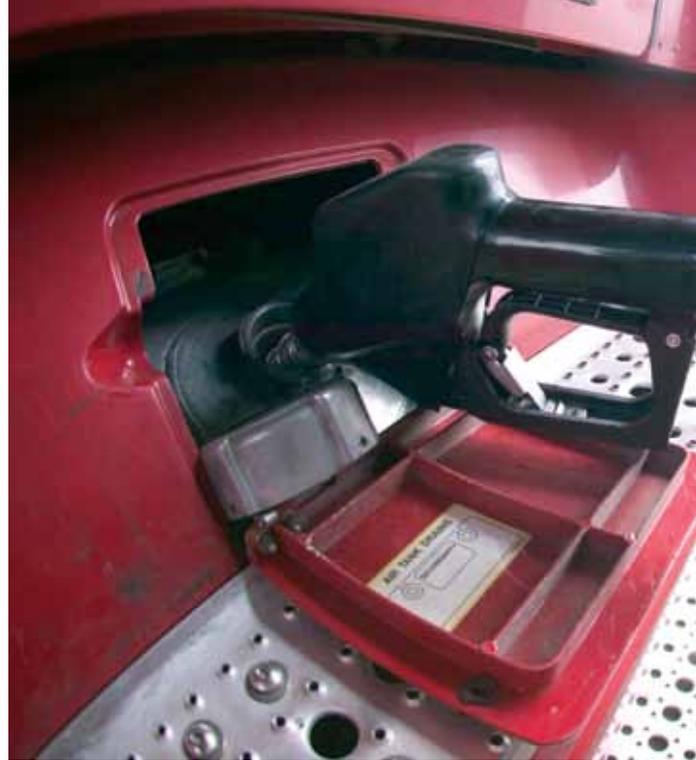


Chances are that the chair you’re sitting on or the computer monitor you’re gazing into or even the magazine that you’re reading spent some time on the back of a heavy-duty truck, either whole or in pieces. Though the industry continues to adapt to new technologies, intensified regulations, and challenging economic factors, its basic role in the economy remains the same.

Trucks move more than two-thirds of the nation’s goods, says the American Trucking Associations (ATA). Indeed, the ATA’s motto underscores the centrality of trucks in our nation’s economy: “Trucks bring it!”

Truck tonnage—which is how the industry measures freight movement in (usually) Class 8 trucks, or trucks that weigh more than 33,000 pounds—is considered to be a key indicator of the overall health of the national economy. This metric makes perfect sense. A nation’s gross domestic product (GDP) is measured by growth in consumer demand, business investment, and government spending. (For a look at GDP, see the Atlanta Fed’s new video at frbatlanta.org/about/fedexplained/.) And when consumers, businesses, and the government spend, then computers, cars and car parts, building supplies, and other goods they purchase have to be moved to the source of the demand. It follows that if trucks are moving comparatively more “stuff,” then demand must be rising, and vice versa.

In an economy that has recently shown some signs of slowing, the April report from the ATA on tonnage offered no surprises. April’s tonnage index slipped 1.1 percent from the previous month, breaking a seven-month growth streak. On the bright side, despite the slowdown from March, the seasonally adjusted index was up 3.5 percent from April last year. Overall in



2011, tonnage increased 5.8 percent, which was the same growth as in 2010, according to the ATA (see chart 1 on p. 33).

However, truck tonnage fell 4 percent between December 2011 and January 2012. Bob Costello, ATA's chief economist, attributed this drop to a natural recalibration after stronger-than-normal December volumes. GDP in the first quarter of 2012 stood at an annual rate of 2.2 percent.

The road behind: Recession

The trucking industry, as linked as it is to the construction industry, took a big hit in the recent recession. Demand for shipping dropped when demand for building materials dropped. Consumer demand fell as well. Now burdened with excess capacity, carriers were forced to lower their rates. Many of the smaller trucking companies failed outright or were acquired by some of the larger companies (see the table).

Trucking Company Failures, 2008-10

Year	Number of trucking company bankruptcies
2008	5,500
2009	2,220
2010	2,500

Note: Truckinfo.net estimates 1.2 million trucking companies in the United States in March 2006.
Source: Internal Revenue Service

Trucking has emerged from the downturn a little worse for wear. With fewer for-hire trucking companies, the industry is now experiencing a shortage of capacity. In addition, the companies that survived are holding a diminished, and aging, fleet of trucks, dealing with increased federal regulations, and managing higher diesel fuel prices. Companies also continue to experience a shortage of drivers—not a new phenomenon—which strains capacity further (see the third quarter 2004 issue of *EconSouth* at frbatlanta.org).

For point of reference, the for-hire trucking companies described here generally employ heavy-duty trucks, or trucks that the U.S. Department of Transportation's (DOT) Federal Highway Administration puts into its Class 8 category, which includes all tractor-trailer trucks. Class 8 trucks carry many different types of freight, including general, refrigeration, bulk, and flatbed freight.

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The road we're on: Fewer trucks, less capacity

Looking back at the industry in the years leading up to the

recession, Avery Vise, executive director of trucking research and analysis at Randall-Reilly Business Media and Information, tells a story of an industry that was thriving. In 2006, he said, demand was high and trucking companies had plenty of cash. The worst thing they expected at the time was a mandated decrease by the U.S. Environmental Protection Agency (EPA) in diesel emissions for heavy-duty trucks, to take effect in 2007.

So in 2006, many trucking companies conducted what is called a "pre-buy." To avoid having to buy the upgraded, costlier trucks, they purchased inventory ahead of their normal schedule. So when the recession began in late 2007 and demand plummeted, these companies were left holding all their new equipment, said Vise. With so much excess capacity, truck values also plummeted and the companies ended up upside down (that is, they had negative equity) on their equipment.

When times are good, most companies run their trucks through the warranty period—about 48 months—and then buy new ones to replace the old. More recently, many companies have held onto their trucks longer than normal for several reasons: they lost the equity in their trucks, did not have enough cash reserves, or could not get credit even if they did have equity. All these factors combined to increase the age of the fleet in the postrecession industry.

In 2011, the trucking industry was operating with 12 percent fewer trucks than at the height of their business in 2006, according to the ATA's Costello. At the same time, tonnage levels were running about the same as or a little higher than those in 2006. The ATA's for-hire Trucking Tonnage Index for December 2006 stood at 110.6. In December 2011, the index value was 124.5. (Trucks hauled 10.7 billion tons of freight in 2006; 9.2 billion tons in 2011.)

Constrained capacity is actually benefiting the industry, for now. It's as simple as the law of supply and demand: tonnage is up, capacity is down, and so trucking companies have the pricing power to raise their rates. According to Miller Wellborn,

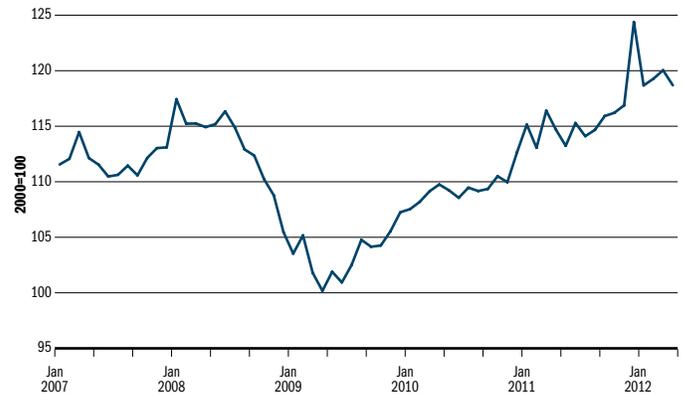
ECONSOUTH NOW PODCAST

Oscar Horton of Sun State International, a truck dealership, discusses the trucking industry in an interview. On frbatlanta.org, select "Podcasts."



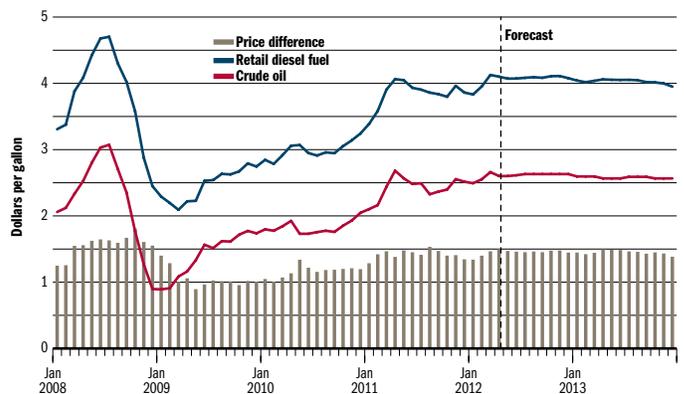


Chart 1
ATA's Truck Tonnage Index



Note: Data are seasonally adjusted.
Source: American Trucking Associations Inc.

Chart 2
U.S. Diesel Fuel and Crude Oil Prices



Note: Crude oil price is average refiner acquisition cost. Retail prices include state and federal taxes.
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2012

average \$4.06 per gallon in 2012, down 9 cents per gallon from the agency's outlook in April (see chart 2).

In general, "the vast majority of carriers can pass this cost on to customers," said Vise, "so on a net basis, high prices are not a big deal." The cost of fuel does become a big deal, he cautioned, when prices rise very quickly, as they did last year and as they did especially in 2008, when they spiked in July at more than \$4.70 a gallon. There is typically a 45- to 60-day lag between when the carrier makes a shipment and when the shipper pays the carrier for that shipment. If the shipper is paying a fuel surcharge based on the cost of fuel two months ago, and the prices are experiencing a double-digit rise, the carrier can be seriously harmed.

managing partner of Transport Capital Partners in Tennessee: "It's kind of like a light bulb went off for these company owners. They have learned that with a smaller fleet they can make more money." These companies have realized they have as much revenue as they had before, better margins, a smaller fleet to maintain, and fewer employees. Wellborn said that rates have gone up 10 to 15 percent, and are likely to go up another 10 percent over the next 18 months.

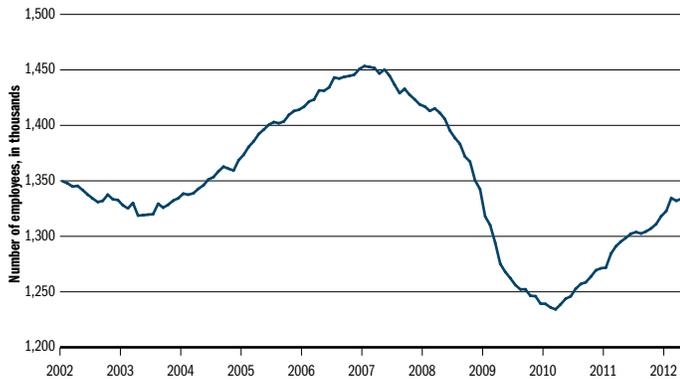
Over the last year and a half, the demand for new trucks has also increased. By the end of 2011, sales of Class 8 trucks stood at 171,358, a 60 percent increase from 2010. Class 7 truck sales were up 7 percent (41,212, compared to 38,350) over the previous year. (Listen to Oscar Horton, owner of a commercial truck dealership and a member of the board of directors of the Atlanta Fed's Jacksonville Branch, talk about his business in an *EconSouth Now* podcast.)

"But this is off a low base," emphasized Vise. "We're still not back to 2006 levels. And a lot of small trucking businesses still can't get access to financing." Small carriers represent the vast majority of the market, according to Vise. "More than 99 percent of them have fewer than 100 trucks. But some of the larger carriers are extremely large, and carriers with more than 100 trucks operate about 45 percent of the equipment."

The road we're on: Fuel efficiency

Top of mind for most consumers, rising fuel prices have also been a concern in the trucking industry. First, fuel is the second-highest expense for carriers, after labor—"sometimes the number one expense," said Vise. The year began with a rapid rise in gasoline and diesel prices, raising consumer fears, again, that inflation was imminent. However, by April, fuel prices stabilized. According to new data released by the U.S. Energy Information Administration (EIA), diesel prices were actually down 4.1 cents from a year ago. Looking ahead, the EIA estimates that diesel fuel retail prices, which averaged \$3.84 per gallon in 2011, will

Chart 3
Trucking Employment



Note: Data are monthly through April 2012 and are seasonally adjusted. March and April 2012 numbers are preliminary.
Source: U.S. Bureau of Labor Statistics

Firms that are forced to operate with minimal cash reserves in a time of rising prices are at risk of running out of cash. The fuel bill exceeds the surcharge, which is what brought down many of the trucking companies that failed in 2008.

But turnabout is fair play. The lag between current prices and two-month-ago prices can sometimes work in the trucking industry's favor. Almost as fast as oil prices rose in 2008, they dropped. Now the shippers were paying fuel surcharges significantly higher than the actual cost of the fuel. This situation actually helped save some of the trucking companies that were facing closure, Vise pointed out.

Because fuel prices can have such influence on the industry, companies—especially those that are owner-operator companies—are under constant pressure to reduce fuel consumption.

Some of the responsibility for fuel efficiency in trucks these days falls on the drivers, according to Vise. Idling was prevalent in the industry as recently as 10 years ago. Long-haul truckers, who spend more time on the road than at home, would leave their trucks running overnight at truck stops, for example, to get the benefit of heating or air-conditioning. Idling heavy-duty engines consume about a half gallon of fuel per hour—maybe not much for an individual truck, but a company with 500 trucks will lose quite a lot at that rate of consumption. So in recent years, as diesel prices have surged to three or four times the levels of the late 1990s, the industry has outfitted trucks with auxiliary power units for heating and cooling and to power televisions, refrigerators, and other amenities.

Fuel costs are not the only motivator for keeping fuel consumption low. The industry is facing an increased web of federal regulations intended to reduce consumption and to reduce the output of greenhouse gases. Trucks—not just heavy-duty trucks, but also pickup trucks and vans, fire trucks, and buses—make

up the transportation segment's second-largest contributor to oil consumption and greenhouse gas emissions. Trucks consumed 37.2 billion gallons of diesel fuel, for example, in 2010.

The EPA and DOT's National Highway Traffic Safety Administration announced their "Heavy Duty National Program" in 2011. This joint initiative, which will go into effect in 2014, will require that big tractor-trailers get 20 percent better mileage by 2018. The agencies predict that the new standards will reduce greenhouse gas emissions by about 250 million metric tons and save 500 million barrels of oil over the lives of the vehicles sold between 2014 and 2018.

Truck manufacturers are always working to improve fuel efficiency. Enhancements in truck aerodynamics, the production of lighter-weight trucks, and improved rolling resistance could all yield significant improvements in fuel economy, according to a 2010 U.S. National Academy of Sciences report. Manufacturers are developing trucks that will consume alternative fuels such as compressed natural gas or liquid natural gas. They are also designing "intelligent vehicle" systems that will reduce fuel consumption by encouraging drivers to make changes, such as reducing their speed, demonstrated to save fuel, according to a 2011 *National Geographic* article.

The road we're on: Employment

Postrecession, the trucking industry is experiencing something of a driver shortage, though not nearly at the levels of several years ago, when the shortage was a major concern for the industry. However, freight volumes are continuing to grow, and the diminished industry will sooner or later exceed capacity. Several intertwining factors, put into play before and during the recession, are working together to make it sooner rather than later.

First, jobs in trucking peaked in January 2007, several months before the official start of the recession. From this peak to the recession's end, the industry cut about 226,000 jobs (or 14.3 percent of trucking employment, according to numbers from the U.S. Bureau of Labor Statistics). Most of the eliminated jobs were drivers, said Vise, but many recruiters were also cut—no more drivers meant no need for the recruiters to hire them. Now that the trucking industry is growing again and the need for drivers is rising, companies now lack the human resources personnel to hire them (see chart 3).

What's more, many of the largest truckload carriers in the industry—including Swift, headquartered in Phoenix, Arizona, and Schneider National Inc. in Green Bay, Wisconsin—had eliminated their driver training programs altogether. Swift's and Schneider's programs in particular provided a steady pipeline of trained drivers. "Between those two companies, we lost thousands of drivers per year that would be coming into the industry," said Vise.

Another couple of factors are tied into the moribund housing sector. When housing revives, not only will it increase the

demand on freight delivery, but also many of the construction workers who left that industry to drive trucks will return to construction, according to Transport Capital's Wellborn.

In addition, federal regulation programs—some recently put in place along with some on the horizon—are also working to suppress the number of eligible drivers. In December 2010, the Federal Motor Carrier Safety Administration, part of the DOT, put into place its Compliance, Safety, Accountability (CSA) program. As the name suggests, CSA is intended to improve large truck (and bus) safety by reducing the number of crashes, injuries, and fatalities related to commercial motor vehicles. The program requires trucking companies to report accident and other information, data that are used to calculate a score that assesses driver safety. CSA then makes these scores publicly available. By making companies more accountable for their drivers' safety records, and making that information available to the public, the program has effectively made some drivers less employable. Another new program has increased the visibility of drivers' safety records by requiring them to keep electronic, rather than paper, logs. All these programs have combined to raise the bar for drivers.

Vise also pointed out that close to half the workforce does not even figure into the labor pool for truck drivers—fewer than

5 percent of truck drivers are women. Much of the industry is trying to develop strategies to woo not only women drivers but also other demographic groups. For instance, many companies are looking into reducing the length of time that long-haul drivers spend out on the road and away from family. Likewise, truck manufacturers are building heavy-duty trucks with automatic transmissions to appeal both to women drivers and older drivers, who might have trouble with the older 13-speed transmissions.

The road ahead

Whether the trucking industry recovers completely from the wounds it suffered during the recession depends on the direction of the greater economy. Currently, the economic recovery still appears vulnerable to headwinds. Unemployment and housing have been very slow to recover, as has construction. And the health of all these sectors is integral to the health of the trucking industry. Still, it seems clear that regardless of how the nation's economy does, the trucking industry has its work cut out: prepare for a critical shortage in drivers, adapt to regulatory changes, and keep on truckin'. ■

This article was written by Nancy Condon, associate editor of EconSouth.

Book Review continued from page 29

nology boom, a fact used as an example of how all jobs are created locally and how important cities are in the process. Unfortunately, what Clifton attributes to the city was in reality the result of the desire of William Shockley—winner of the Nobel Prize in 1956 for co-inventing the transistor—to set up his lab in his hometown, near where his mother still lived. The implication of crediting San Francisco with the jobs created by the Internet boom is that if Shockley had grown up in Syracuse, New York, for example, the Internet boom wouldn't have occurred, and the thought of the Silicon Finger Lakes instead of the Silicon Valley would have been impossible.

My point in highlighting these examples of inconsistent absolutes and exaggerations is that a less persistent, similarly skeptical reader may miss Clifton's more salient points, which include

why solving the problem of health care expenditures is not only important from a fiscal perspective but also from a productivity perspective; the importance of engaging workers as a means to increase productivity; and the importance of the distinction between innovation and entrepreneurship.

I also believe that Clifton's belief reflected in his declaration that "I don't like to read hardcore academic books" ends up depriving his readers of important information about how to accomplish the tasks he thinks are most important. For example, how do we foster more entrepreneurs? Edward Lazear, former chair of the Council of Economic Advisors from 2006 to 2009, has published an academic article in the *Journal of Labor Economics* that gives us some clues. Employers should be encouraged to be generous in the number of roles employees play, avoiding overspecialization. In addition, business

school curricula should be structured to produce generalists rather than specialists. Basically, the more general a business student's education and the more job roles the student takes on after graduate school, the more likely that person is to become an entrepreneur.

Despite my criticisms of the exaggerated tone, structure, and absence of supporting references, *The Coming Jobs War* is a quick read and contains some gems of ideas around which citizens, politicians, and "tribal leaders" could coalesce to make a difference and improve the economic future of the United States. But Americans should not pursue these goals because China is nipping at our heels. Rather, we must do so because achieving them will make the United States more prosperous and improve our overall well-being. ■