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# ENSURING THE SUPPLY OF AGRICULTURAL TRUCK DRIVERS

WHAT THE STATE OF CALIFORNIA CAN DO



UC BERKELEY  
**LABOR CENTER**

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WITH PHOTOGRAPHY BY JAMES YEAR

# Executive Summary

California agricultural shippers experienced record increases in trucking costs in 2021. Some suggested a shortage of truck drivers was the cause. California state agencies were asked to review policies relevant to the industry's workforce and operations to see what state government might do to help. The agencies, in turn, commissioned this research to study the work and supply of truck drivers and gather suggestions to improve working conditions on the job as well as training and career pathways for drivers. Though state agencies funded the research and contributed data, the conclusions and recommendations are those of the authors alone.

We looked at a wide range of statistical data from state and federal sources. We talked to drivers, shippers, industry associations, and other stakeholders. We heard about problems facing drivers. Some of these concerns, like congestion and poor driving behavior, are perennial. For other problems, like the state's truck speed limit and limited truck parking, the state has options to consider ready at hand.

We did not find evidence of a shortage of people interested in becoming truck drivers, but we did find strong evidence of a retention problem. That problem is concentrated in the long-haul segment of the industry—the segment that caused shippers the most pain in 2021. Because of this high turnover, long-haul trucking is the primary gateway to the industry for new truckers. Drivers argued that the job was challenging because of long hours and time away from home, but poor-quality training and bad initial jobs discouraged many would-be drivers. In this area, the state has some unique opportunities to foster partnerships that will better utilize state training monies. These options include funding and fostering an alternative pipeline to trucking careers built on local training and local jobs that lead directly to agricultural trucking jobs.

## What Caused Freight Rates to Spike?

The increase in rates experienced by agricultural shippers in California resulted from the intersection of immediate disruptions from the COVID-19 pandemic and long-term cycles in the trucking industry. In short, COVID crushed demand for many trucking services at a time when the industry was already reducing capacity. Employers slashed workforces and then struggled to rehire drivers and add equipment as the economy restarted, demand surged, and labor markets tightened.

The trucking industry tries to stay lean to keep capacity tight, expanding when rates increase and shrinking when they fall. COVID produced a more extreme and rapid version of this cycle that far outpaced the ability of the industry to scale up. This cycle was experienced as a crisis for agricultural shippers, but high rates made for the best of times for the trucking industry.

## Agricultural Trucking

There are a wide variety of trucking jobs in agriculture. The biggest difference is between jobs that are local and those that are long-haul. We did not hear about or find evidence of an unusual shortage of local drivers, aside from some immediate COVID-related problems. Local jobs varied, however, in job tenure and hiring patterns. Some local jobs, like dairy, have very little turnover and hiring is relatively infrequent. Others, like tomatoes, have tremendous turnover because they are seasonal, requiring employers to go out and find new

drivers every year. Essentially, some local jobs have shortages at the start of every new season. The main area in which we heard about problems for shippers was long-haul refrigerated trucking.

Long-haul refrigerated is a “wait and hurry-up” service from the perspective of drivers. This characteristic stems from the nature of the freight itself, which is often fresh and perishable. Drivers typically wait while goods are loaded in their trailer. Sometimes freight may not be ready to load because it must still be harvested, cooled, processed, or packed. All of this means lots of non-driving work time and long hours. Drivers in the long-haul refrigerated segment can work 100 hours or more in a week and spend weeks at a time on the road. They are usually paid by the mile or load, so delays and disruptions mean increased amounts of unpaid work and possibly a lower paycheck at the end of the week. While pay for experienced drivers can be attractive—much more than \$100,000 a year—new drivers can earn very little, sometimes less than minimum wage when all work hours are counted.<sup>1</sup> In addition, most long-haul refrigerated drivers spend weeks away from home at a time. Drivers say that low pay and time away from home are what lead to turnover.

## Making the Job Better

Truckers identified a number of things that would make the job better. At the top of the list is rethinking the statewide 55 mph speed limit for trucks—California is the only state in the nation with such a policy. For drivers, the fact that cars were often traveling 20 mph faster or more was the main safety issue they faced.

Equally important and related to the speed limit for drivers is a desperate shortage of truck parking. Drivers argued that the state slowed them down, requiring them to take more breaks, but there was often nowhere to take them.

## Improving Retention

The trucking companies with the most turnover have the greatest incentive to recruit and train new drivers, which is the root of trucking’s retention problem from the perspective of drivers. New drivers are likely to attend training school for several weeks and then spend weeks or months out on the road with a trainer. Drivers are often required to sign a training contract that indebts them to the employer unless they stay with the employer for a year.

Once they are out on their own, drivers can expect to work 80-100 hours a week and be on the road away from home for weeks at a time. When all that time is counted, these new drivers may not make minimum wage. In terms of quality of training and first employment, this is like throwing workers into the deep end of the pool. Drivers argued that long-haul jobs with long, irregular hours have the greatest safety risk and should be filled with the safest, most experienced drivers. Instead, they are populated with drivers with the least experience.

In other words, our training system is organized backwards. Drivers should be trained locally and employed locally at the start of their careers. Difficult, dangerous long-haul work should then be the well-paid choice of safe and experienced drivers.

California spends millions of dollars from public and private funds to train new drivers each year. Right now, it is likely that much of the money feeds into this suboptimal system and subsidizes high turnover. According to California Department of Motor Vehicles data, the state has about 500,000 people licensed to drive a big



truck, but there is no way to tell whether or how those individuals are using those licenses. According to some estimates, the industry only needs about 165,000 drivers. Better tracking of where training dollars are going and fostering partnerships between successful trainers and good employers would maximize the return on those dollars and the benefit to workers.

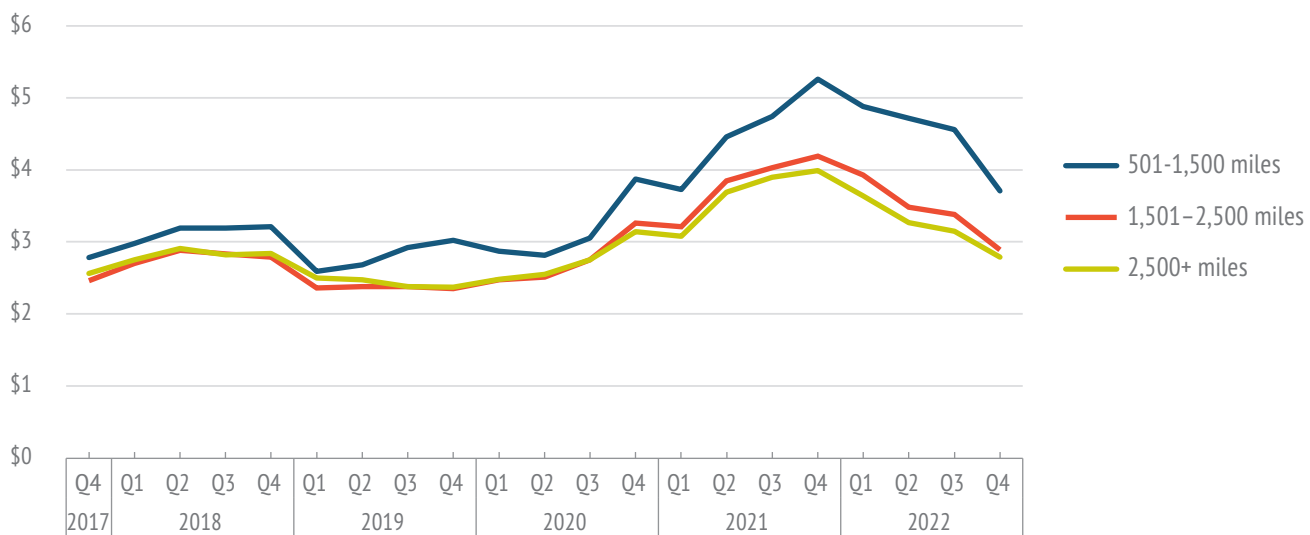
By focusing that money on local training and local jobs, workers would have greater opportunity for longer, higher-quality training and good local entry-level jobs. Training partnerships could be particularly fruitful in agricultural trucking for several reasons. Agriculture offers many local jobs that would be much better for training new drivers. Local agricultural drivers often operate in relatively small areas and are more likely to frequent the same sites. While hours can be long, they are less than those worked by long-haul drivers. Agricultural drivers are typically home every night and work regular schedules. Furthermore, many agricultural jobs are seasonal. There is an annual need to hire thousands of workers for these jobs. Training programs could be timed to train and graduate new drivers to fulfill this need.

Finally, the most obvious characteristic of the truck labor market is the imbalance of men and women, with the latter making up just a few percent of all drivers (depending on the exact job and data source). Hiring more women is an enormous opportunity to increase the supply of agricultural drivers. Long-haul training and work are riskier and cause more hardships, particularly for women as well as younger men with children at home. Local training and first employment programs would be the single best thing we could do to increase the number of women driving in the industry.

## Motivation for the Study

The COVID-19 pandemic resulted in global supply chain disruptions and labor shortages that severely impacted the US trucking industry. California’s agricultural shippers felt the impact in historic increases in shipping rates. The average cost per mile for moving refrigerated freight increased 56-87 percent between the second quarter of 2020 and the fourth quarter of 2021 (see **Figure 1**).

**Figure 1. Refrigerated Trucking Rates in California, By Distance**



Source: US Department of Agriculture, Agricultural Marketing Service, “Refrigerated Truck Rates and Availability,” last modified August 10, 2023, <https://agtransport.usda.gov/Truck/Refrigerated-Truck-Rates-and-Availability/acar-e3r8>.

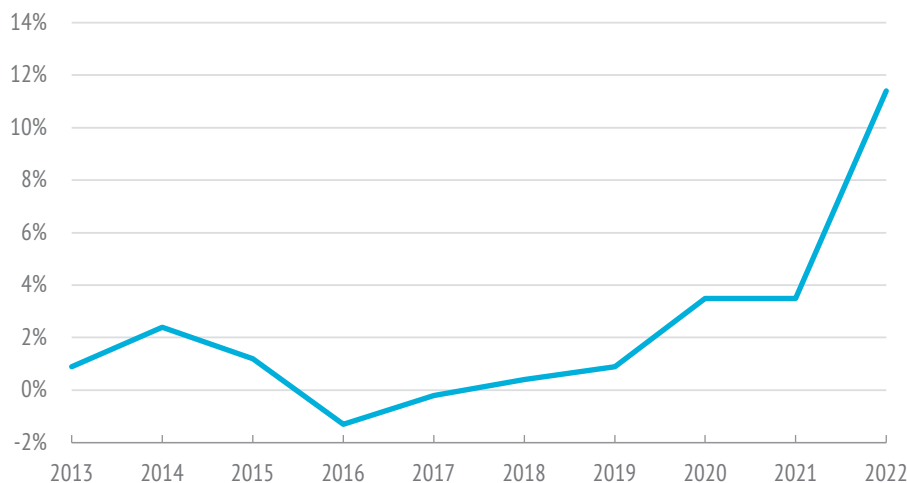
These increases in quarterly *averages* understate the impact on some shippers. Shippers of highly perishable produce—such as berries, citrus, and fresh vegetables—and some other crops reported paying double to move their products compared to just a year or two earlier. Some of that cost was passed on to consumers (see **Figure 2**). As 2021 progressed, however, shippers increasingly worried that higher shipping costs would cost them market share. As one major shipper reported:

We are used to rates from California to New York of around \$6,500 to \$8,000. I swore I would never pay more than \$10,000. But we are looking at \$13,000 right now. We can't stay competitive for long at that price.

Agricultural shippers raised the problem of the truck driver shortage with state agencies that commissioned this study to answer several questions. Is there a shortage of truck drivers? If so, why? And what, if anything, might the state do about it?

Though state agencies funded the research and contributed data, the conclusions and recommendations are those of the authors alone.

**Figure 2. Food at Home Price Changes, 2013-2022**



Source: US Department of Agriculture, Economic Research Service, “Food Prices and Spending,” last modified July 19, 2023, <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-prices-and-spending/>.

## What We Did

We looked for every opportunity to understand what was happening in the truck driver labor market. We talked with the state agencies, particularly the California Department of Food and Agriculture, to understand the concerns they were hearing from shippers. We talked directly with growers’ associations and individual growers and producers of different commodities—including dairy, carrots, almonds, citrus, and strawberries—to understand their concerns. We then reviewed the existing research on the truck driver shortage. Based on our

conversations, we began to focus our attention on the supply of trucks and drivers with Class A commercial driver's licenses available for longer in-state and out-of-state movements, which were the shippers' primary concern.

We then identified a range of statistical data from state, federal, and other sources on employment numbers, wages, licensing, motor carrier authorities, freight rates, and shipping and export volumes to understand longer-term trends in agricultural shipping and trucking service and labor markets. While these resources provided critical context and understanding of long-term trends in supply and demand for trucking services, there is a lot that statistical data and trends can't tell us about why workers would (or would not) want to be truckers.

We spent several months engaging with the California Trucking Association (CTA) and the Harbor Trucking Association (HTA). We developed several versions of a survey for carriers that was geared toward understanding the driver shortage from the perspective of employers. Unfortunately, CTA and HTA ultimately decided not to participate in the research. We were, however, able to talk with individual carriers and many owner-operators to get their perspectives.

In the end, ultimately, we knew the most important need was to learn how truckers themselves understood the problem. We had to understand the kind of jobs they do to move the state's agricultural goods, why they take those jobs, and why they leave them. We also wanted to get their thoughts on the root of the problems facing the industry and what might make the job more attractive. They did not disappoint us.

To get the perspective of drivers, we went out to where freight was getting moved. We observed drivers, loaders, and shipping office staff at work. We followed and talked with drivers as they worked. We visited a number of locations, including dairy farms, single-crop processing sites, co-op packing houses, and a large cooler that handled many different products for a range of customers and trucking carrier locations.

In June, July, and September 2022, we conducted 100 in-depth interviews in English and Spanish with drivers waiting to load or unload at the sites in the San Joaquin Valley and in the city of Salinas. Over the summer and early fall, we recruited several dozen more drivers who we couldn't interview in-person to answer the same questions online. That recruitment happened in the San Joaquin and Sacramento Valleys and the Port of Los Angeles. At the Port of LA, we spent two days talking with drivers and recruited for the online survey. See **Appendix A** for more information.

## What This Report Is Not

Many important issues affecting the supply and work of truck drivers are not covered in this report. Much of what we discussed with drivers and shippers is affected by federal policy, which is often contentious and evolving. Among these problematic federal issues are: insurance requirements; hours of service rules for drivers; electronic logging devices; driver-facing cameras; speed limiters; overtime pay and compensable hours for truckers under the Fair Labor Standards Act (FLSA); requirements of entry-level truck driver training; drug-testing requirements for drivers; safety rating for carriers; accreditation of trucking schools; the legal age for interstate driving; tax credits and deduction rules for truckers; truck leasing rules; and transparency of broker agreements. Many of these issues are the subject of existing and proposed federal legislation, agency rulemaking, and court battles, while others are key areas addressed by the Biden administration's Trucking Action Plan.

Although interstate rules of operation are mandated by federal statutes and regulations, intrastate requirements are generally left up to the states (unless specifically required or limited by federal law). In these areas, California has typically instituted more stringent intrastate requirements than federally mandated interstate operations. However, there are a few areas in which California has been more lenient; for example, California has been much more generous than the federal government with its hours-of-service requirements for agricultural operations.

Drivers raised many of these issues and more with us. However, this report was commissioned to look at state policy, so issues of federal policy are addressed in this report only as needed to understand the work of drivers and intersections with state policy.

There are other issues under state control that the study did not address because they are not directly relevant to increasing the supply of truck drivers. One such example is the proposal to increase the weight of trucks on the state's roadways. Most drivers had little to say about this regulatory change. Those who did have an opinion were opposed the increase for safety reasons, arguing that "80,000 pounds is heavy enough."

## Waves of Disruptions: How COVID Intersected With Cyclical Demand

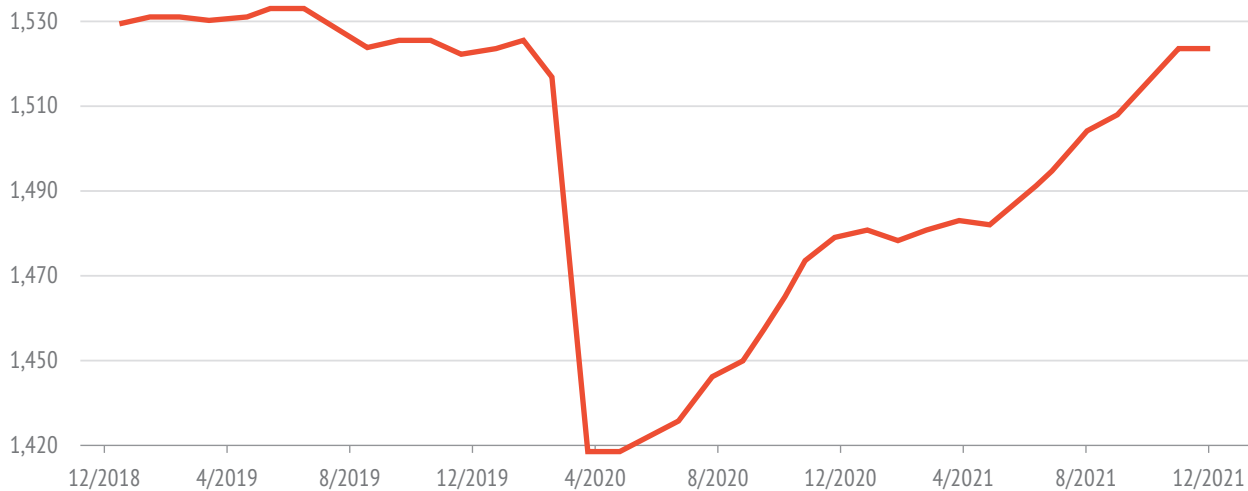
Supply and prices in the trucking industry are cyclical. Trucks are, for the most part, interchangeable and readily available. When rates are high and trucking is profitable, new firms enter the market, and existing firms expand. This trend continues until carriers add too many trucks, demand slackens, or both. Then, some portion of equipment, facilities, and labor will be underutilized, and rates fall. Even then, firms may have strong incentives to "keep the wheels rolling" by cutting the rate they charge customers, even taking a loss on individual loads to maintain market share or generate revenue to cover fixed expenses and survive down periods. At that point, some carriers may fail, while others slow or stop replacing trucks to reduce capacity. Eventually capacity tightens, rates rise, and the cycle repeats.

The industry goes through this cycle every few years as carriers try to time the "right-sizing" of their fleet. Reducing or adding trucks means getting rid of or adding drivers, of course. For many fleets, downsizing is not particularly challenging. Large long-haul fleets can have very high turnover, often between 100 and 200 percent annually. Such fleets can simply slow hiring to reduce the number of drivers. Growing fleets is more challenging. Large fleets can grow most quickly by hiring experienced drivers, but such drivers are expensive. So, the fleets with highest turnover recruit and train workers completely new to the job, who may work for half the wage of more experienced drivers. While this cycle is fairly routine and predictable, it does take time, typically a year or more.

The broad trends that produced the incredibly "tight capacity" in trucking in 2021 actually began in 2018. In the first half of 2018, the trucking industry experienced very good conditions. In response, trucking carriers added trucks through the end of that year. In the first half of 2019, there were far more trucks than in 2018, and the economy was slowing. The result for carriers was described as a "bloodbath" in which several major carriers and thousands of small carriers went out of business.<sup>2</sup> As a result, going into 2020 trucking carriers were well into a contraction phase, reducing the number of drivers and slowing the recruitment and training of new drivers and the purchase of new trucks.

**Figure 3** shows the number of trucking employees in the United States from 2018 through 2021. It shows the declining numbers of truckers overall from the middle of 2019 to the sharp decline at the start of the COVID pandemic.

**Figure 3. Truck Transportation Employees on Non-Farm Payroll (Seasonally Adjusted)**



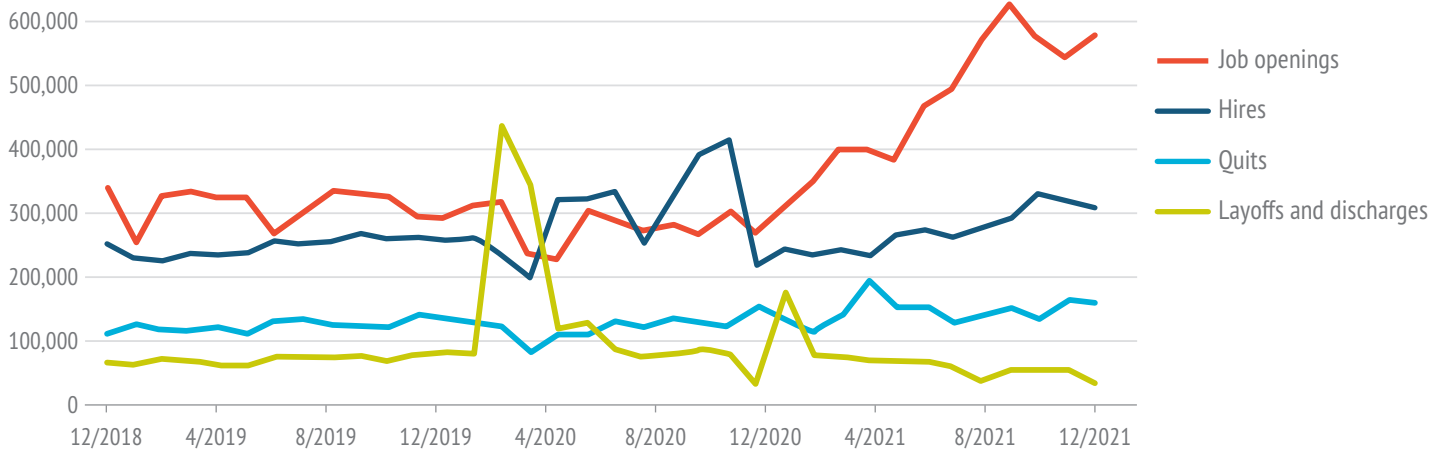
Note: Data in this chart represent wage and salary workers only and exclude owner operators and independent contractors.

Source: Analysis of U.S. Bureau of Labor Statistic data (Current Employment Statistics, CES) in Thomas Keane, “Federal Motor Carrier Safety Administration Program Updates,” Presentation at the CVSA Spring 2023 Board Meeting, Memphis, Tennessee, April 23, 2023.

COVID’s first effects on US trucking were cratering container volumes of Asian imports and exports. The impact was largely limited to drayage drivers on the West Coast. Within a few weeks, COVID caught up with the rest of the industry and supply chains more generally. Other segments of the industry experienced similar declines to drayage in the second quarter of 2020. Refrigerated carriers, those most critical to agriculture, were largely an exception. The abrupt shift to food consumption entirely at home and increased grocery demand resulted in shortages of basic food staples and produced nonstop work for most refrigerated truck drivers. The need to ship food was so high that the Federal Motor Carrier Safety Administration loosened the work rules for these drivers. Refrigerated freight rates for longer-distance trips out of California actually increased in the second quarter of 2020 as the rest of the economy and much of the industry shut down (see **Figure 1**).

Outside of refrigerated trucking, as **Figure 3** shows using US Bureau of Labor Statistics data, the industry overall responded initially to the COVID shutdowns by slashing its workforce. It then hired back many drivers through the rest of 2020. But as the economy continued to pick up in late 2020 into 2021, quits increased, hiring slowed, and the number of unfilled job openings soared (represented by the gap between job openings and hires during 2021 in **Figure 4**). It was then, of course, that the trucking industry, its customers, and the rest of the United States began hearing alarm bells about a driver shortage.

**Figure 4. Job Openings and Labor Turnover: Transportation, Warehousing, and Utilities Sector (Seasonally Adjusted)**



Note: Data in this chart represent wage and salary workers only and exclude owner operators and independent contractors.

Source: Analysis of Bureau of Labor Statistic data (Job Openings and Labor Turnover Survey, JOLTS) in Thomas Keane, “Federal Motor Carrier Safety Administration Program Updates,” Presentation at the CVSA Spring 2023 Board Meeting, Memphis, Tennessee, April 23, 2023.

## The History of the “Truck Driver Shortage”

Since the mid-1980s, when capacity has been tight and rates are rising, the trucking industry has claimed a shortage of truck drivers. The American Trucking Associations published the first analysis of the truck driver shortage in 1987.<sup>3</sup> The problem started after the industry was deregulated by the 1980 Motor Carrier Act. Deregulation set into motion tremendous competitive pressures that degraded working conditions and dramatically cut truckers’ wages.<sup>4</sup> The long-term result has been that key segments of the industry, particularly long-haul truckload, have extraordinary levels of turnover. Some of the largest carriers often have annual turnover well over 100 percent, meaning they have to hire (on average) more than one worker per year for each truck in their fleet.

In order to fill their fleets, which can number in the thousands of trucks, large long-haul carriers—what drivers call “mega-carriers”—primarily recruit workers totally new to the industry.<sup>5</sup> Training by large firms and private commercial driver’s license (CDL) schools lead directly to some of the toughest long-haul jobs. Drivers must typically spend weeks on the road, and when all hours are counted, they often don’t earn minimum wage. It is likely that these carriers bring several hundred thousand new workers into industry in some years.<sup>6</sup>



# Trucking Regulation and Deregulation

Beginning in 1935, the trucking industry was subject to extensive federal economic regulation limiting price competition and entry by new firms. The Interstate Commerce Commission (ICC) regulated the industry through licenses known as “operating authorities.” These authorities allowed motor carriers to carry specific freight to and from specific places at approved rates. Under regulation, large trucking firms were very profitable, and truck drivers (typically members of the International Brotherhood of Teamsters) were among the nation’s highest-paid blue-collar workers.

During regulation, nationwide collective bargaining developed, and wages and working conditions were standardized across the nation. Trucking firms in most the industry did not compete based on how much they paid workers or working conditions (e.g., the fact that drivers often slept in their trucks). Federal deregulation began at the end of the 1970s and culminated when President Jimmy Carter signed the Motor Carrier Act of 1980, which aimed to lower prices and improve efficiency.

Over the following decade, most of the leading firms in the industry were driven out of business. Intense competition through cost-cutting brought truckers lower wages, more unpaid work, and less-desirable working conditions. Total employee compensation per mile, including benefits, fell by 44 percent in long-haul trucking from 1977 to 1987. Within two decades of deregulation, conditions had deteriorated so much that Dr. Michael Belzer, a leading economist in the industry, characterized long-haul trucks as “sweatshops on wheels.”

For an overview of relevant ICC regulation, see: Dorothy Robyn, “The Trucking Industry and Its Regulation,” in *Braking the Special Interests: Trucking Regulation and the Politics of Reform* (Chicago: University of Chicago Press, 1987). See also Steve Viscelli, “The CDL Mill: Training the Professional Steering-Wheel Holder” in *The Big Rig: Trucking and the Decline of the American Dream* (Berkeley: University of California Press, 2016); Thomas M. Corsi and Joseph R. Stowers, “Effects of a Deregulated Environment on Motor Carriers: A Systematic Multi-Segment Analysis,” *Transportation Journal* 30 (1991): 4-28; Michael Belzer, *Sweatshops on Wheels: Winners and Losers in Trucking Deregulation* (New York: Oxford University Press, 2000).

Inadequate private training schools (some funded with public dollars), poor job quality, and segments of the industry that profit from high turnover are clearly part of the problem. Perhaps the best evidence is that the truck driver shortage does not appear to affect the entire industry. Less-than-truckload carriers, parcel carriers, and many small and private fleets have excellent jobs and little driver turnover.<sup>7</sup> In other words, only part of the industry suffers from a retention problem, but that segment is the gateway for most new drivers.

Importantly, the economics of agricultural trucking were never regulated (see insert above). This segment of the trucking industry has long exhibited the tough work schedules and conditions found more generally in long-haul trucking. Deregulation effectively served to bring long-haul trucking, which was previously highly unionized, down to the level of agricultural trucking jobs.

# Trucking Regulation and Agriculture

The US government has long recognized the critical link between the cost of trucking service and the end cost of food to consumers. During the Great Depression, the Roosevelt administration was keenly aware of the relationship between food—which represented about a third of the average family’s budget—and transportation costs. It didn’t want its efforts to restart the economy and boost wages to cause food price inflation that would hurt workers. In 1935, the US Department of Agriculture successfully argued that agricultural trucking should not be regulated. This approach kept wages in trucking low and working conditions tough. After deregulation, most interstate trucking began to resemble long-haul agricultural trucking, with lower wages and poorer working conditions.

Source: Shane Hamilton, *Trucking Country: The Road to America’s Wal-Mart Economy* (Princeton: Princeton University Press, 2014).

In short, the truck driver shortage is a chronic condition in a highly competitive market that simply doesn’t pay workers enough to stay in the job long term. That problem may now be affecting other segments, which typically hired drivers with clean driving records who also successfully ran the gauntlet of training and initial employment in long haul. Now, even good employers in segments that never complained about labor problems are finding it hard to hire enough qualified drivers and are beginning to raise pay and expand their driver training.<sup>8</sup> These developments suggest that the industry may now be so generally unattractive to workers that it could pose challenges beyond long-haul truckload jobs.

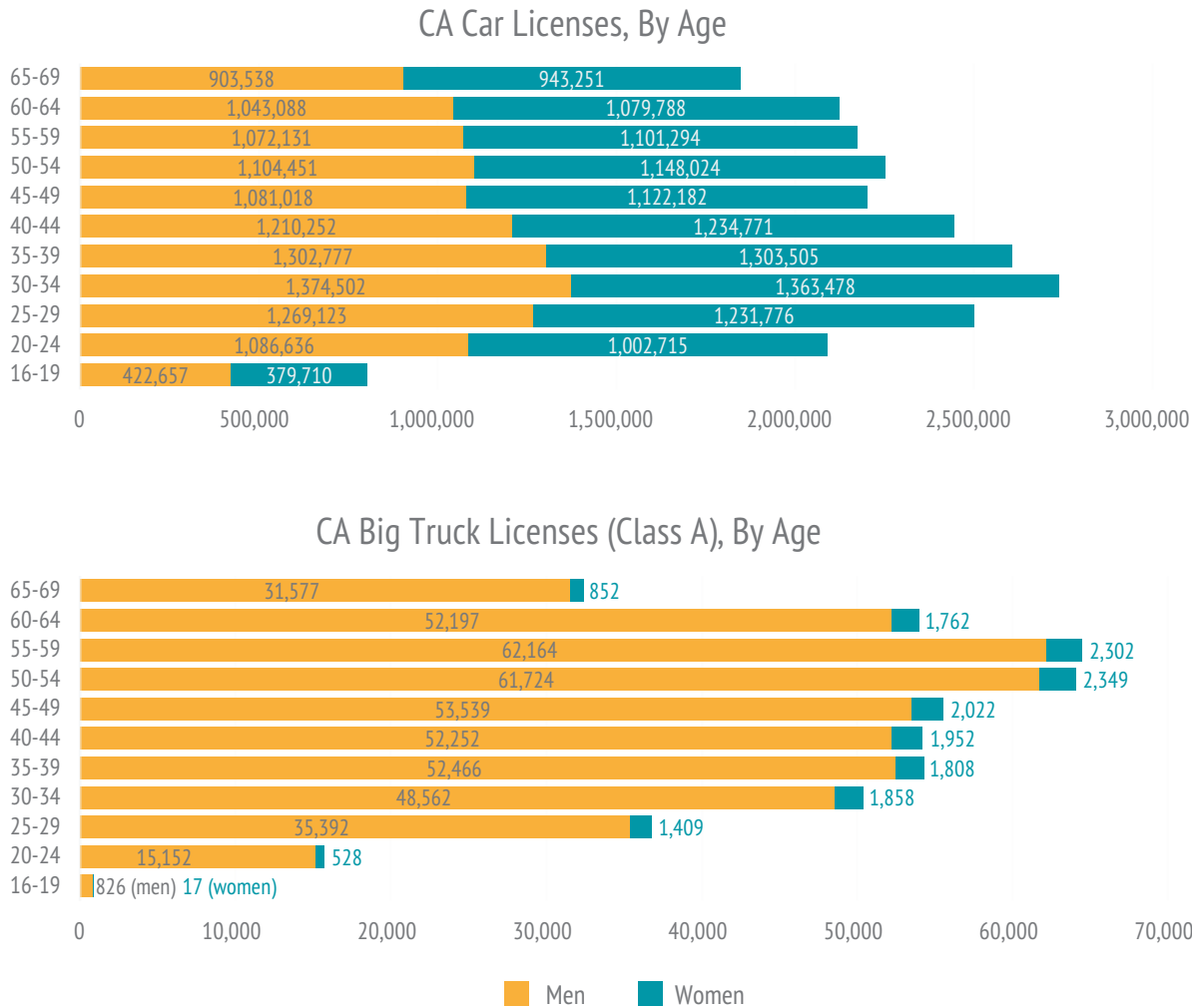
Of course, employers in voluntary labor markets can attract labor by raising wages and by making jobs more attractive in other ways.<sup>9</sup> One of the major challenges raised by employers and drivers is that the job is less attractive to younger workers for a number of reasons. We found strong anecdotal support in this regard.

As **Figure 5** shows, workers with Class A commercial driver’s licenses (CDLs) are older than car drivers. While the largest group of licensed drivers for passenger cars is between 30-34 years old, the two largest groups of drivers with Class A CDLs in the state are 50-54 and 55-59 years old.

It is not surprising, of course, that workers would learn to drive passenger cars before they learn to drive big trucks. While it may not sound like the most profound insight, talking to drivers helped us better understand this challenge for the industry. When asked why they became truck drivers, two things almost always come up in drivers’ answers. Pay is number one, of course. As drivers described, the financial need to take trucking jobs, with long hours and time away from home, intensifies with age, particularly as workers start families and hit pay ceilings in other jobs. As a result, the truck-driving workforce will naturally be older than car drivers.

The second most common reason is a genuine love of driving. But this raises two very important issues that employers and drivers believe are affecting the pool of young workers interested in becoming truckers. First, as several employers noted, fewer teenagers are learning to drive. Though the number of young licensed drivers is larger today, the headwinds of this long-term change are not in the industry’s favor.

**Figure 5. Licensing in California, By Class and Age**



Source: California Department of Motor Vehicle, data in email message to author, February 13, 2023.

Perhaps more importantly, according to drivers and employers, the culture and experience of driving has changed radically. One employer put it this way:

Kids today just aren't that into driving. When I was growing up, we couldn't wait to drive. It was freedom, fun. We looked at cars, we worked on cars—you could do that back then. I mean, we *loved* cars. Cars were the new technology you waited to come out. Now kids love their phones. [Driving] is just not important to them.

Drivers echoed that theme:

It used to be a respected, respected industry. You know, kids wanted to be truckers. You know, kids wanted to be truck drivers. They don't anymore. They want to be firemen and police officers, and that's cool.

The age structure of trucking's labor force is often cited as a *cause* of the truck shortage. However, the shortage may be better understood as the natural outcome of the job relative to one's stage of life, a circumstance that may be amplified by the decreasing appeal of the job and driving, generally.

# Retention Problem or Shortage? Licensing Data Points to Retention

A pre-COVID study of the driver shortage issue in California suggested the state would need 165,000 heavy-duty truck drivers by 2026.<sup>10</sup> Those drivers would need Class A commercial driver's licenses (CDLs). Data from the California Department of Motor Vehicles indicates that there already about 500,000 active Class A CDL holders in the state.

Many of these license holders are certainly workers who came in and tried out the job and decided to find another line of work. We met a number of younger workers who said their time in the industry would be short because of time away from home and waiting time.

We see similar numbers at the federal levels. The American Trucking Associations' own reports indicate that there are a slightly more than 3.5 million jobs that require a CDL but more than 10 million CDL holders.<sup>11</sup> Secretary of Transportation Pete Buttigieg recently reported that the US Department of Transportation estimates the United States issues 400,000 new CDLs annually, but the industry loses 300,000 drivers per year. Buttigieg said, "My department estimates that 300,000 people leave that career every year, and we just can't afford that."<sup>12</sup>

Even a quick glance at **Figure 5** shows a much more obvious characteristic of the workforce: women make up just a few percent of CDL license holders. Given gender norms and the kinds of jobs that often lead to trucking (including heavy equipment operation and warehouse work), we should not expect an equal number of men and women. Yet, there are good reasons to believe that the larger problem of poor training and bad entry-level jobs make this imbalance far greater than it would be otherwise.

Most new drivers must spend weeks living in a truck with a trainer and sometimes months with a co-driver. Then, once they are on the road solo, they live out of the truck, sleeping at truck stops and rest areas. Issues of sexual harassment and violence against women in training programs and concerns over physical safety on the job are ubiquitous.<sup>13</sup> Those are just the most immediate problems facing female drivers. Maintaining a family life, raising children, and other activities where gender norms suggest women should be home regularly are also significant barriers. Ideals of fatherhood are more amenable to trucking, but men also reported serious conflicts between the job and family life, as described further on in this report. The women we met in the study often liked the job and thought it could be a good one for other women, but they were far more likely than men to get into the job via a partner or family member.

Increasing the opportunities for new drivers to train locally and work locally would likely be the best things we could do to attract more women into the industry and support their success in long-term careers.



# California's Agricultural Trucking Needs

Renowned for its fertile land, favorable climate, and innovative farming practices, California is a powerhouse in agricultural production. The state's agricultural industry encompasses a wide range of crops, livestock, and agricultural products. California's top crops include almonds, grapes, strawberries, tomatoes, lettuce, dairy products, walnuts, pistachios, citrus fruits, and avocados. It is the leading producer of many of these crops in the United States, and in some cases, the world.

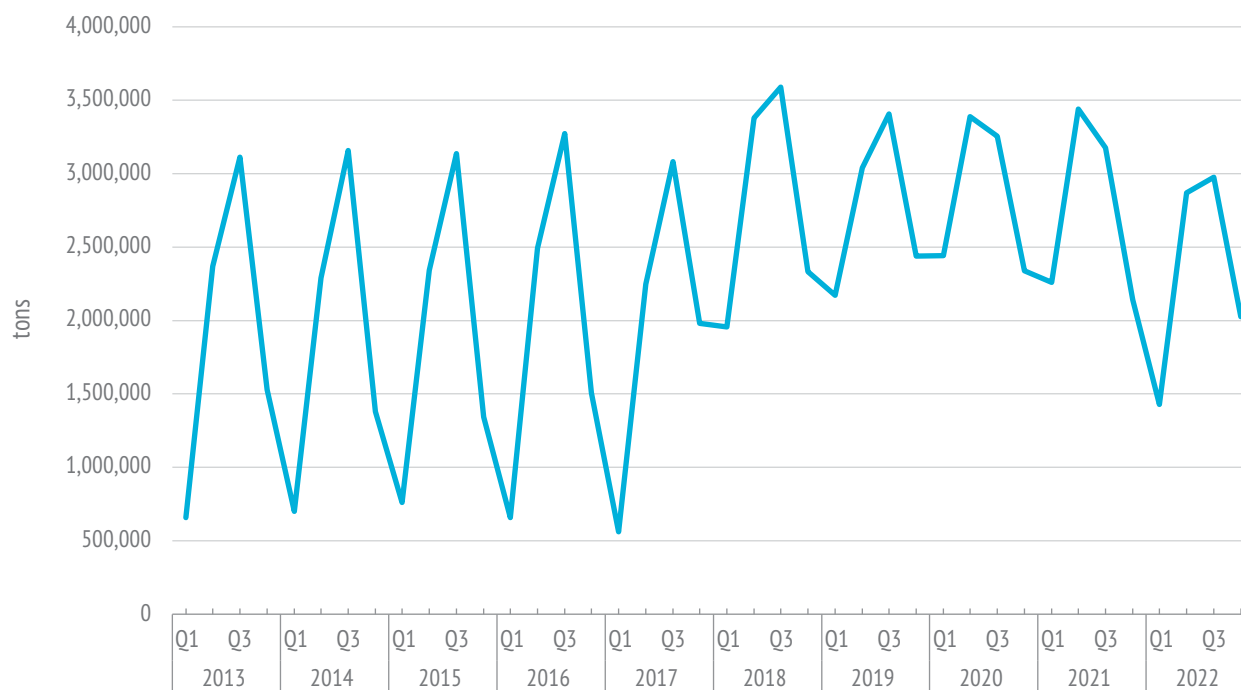


Carrots in the field. California leads the nation in agricultural production.

In terms of revenue, California's farms and ranches received \$51.1 billion in cash receipts for their output in 2021. The state exports a substantial portion of its agricultural products worldwide. California agricultural exports totaled \$22.5 billion in 2021, encompassing commodities such as almonds, dairy and dairy products, pistachios, walnuts, and wine.

Large-scale farming operations require the movement of vast quantities of inputs and crops to processing facilities, coolers and packinghouses, mills, or export terminals. Depending on the nature of the crop, different modalities and requirements ensure safe and efficient transport. Trucks play an essential role at some point in the production and distribution of all these products.

**Figure 6. Quarterly Refrigerated Truckload Shipment Volumes, By Origin and Commodity, California – All Commodities**



Source: US Department of Agriculture, Agricultural Marketing Service, “Quarterly Shipment Volumes by Origin and Commodity,” accessed August 18, 2023, <https://www.ams.usda.gov/services/transportation-analysis/agricultural-refrigerated-truck-quarterly-datasets>.

Trucks pull all manner of trailers, from standard box trailers to those designed specifically for a particular crop. While some trailers are hoppers or bins loaded in the field and headed for processing and canning, others are flatbed trailers moving produce that gets packed into grocery-store-ready containers right in the field and loaded onto the trailers. Even the latter will likely haul on to cooling and distribution facilities and several more truck trips. For crops like fresh flowers or delicate fruits, such as berries, extra care is taken to prevent damage during transport. Specialized containers or packaging materials—such as crates, cartons, or foam trays—may be used to protect the crops from bruising or crushing. Drivers handling these sensitive crops must exercise caution during loading and unloading and must secure and move the cargo properly to prevent shifting or damage.

The trucks that were in shortest supply and caused the greatest concern for shippers during 2021 were refrigerated trailers. Known as “reefers,” these insulated trailers are equipped with refrigeration units that regulate the temperature of freight. Maintaining the appropriate temperature is essential to preserve the texture, flavor, nutritional value, and market value of many crops. Refrigeration units are capable of cooling, freezing, and even providing controlled atmospheres to slow down the ripening process and extend the shelf life of produce. Reefer truck drivers must adhere to strict temperature control protocols and regularly monitor the temperature inside the cargo area to ensure compliance with industry and food safety standards. Loading and unloading processes are carefully managed to minimize exposure to ambient temperatures and ensure a seamless transition of the perishable goods during the journey from the farm to storage facilities to markets.



# Snapshot of a Tomato Hauler

California produces more than 90 percent of US processing tomatoes: more than 10 million tons annually. Tomato harvests begin in July and continue until October. At its peak, the harvest requires more than 40,000 truckloads of tomatoes a week to be moved out of fields to processing plants.

Because of its four-month season, tomato haulers must hire hundreds of new drivers every year.

Tomato drivers typically work seven days a week, 10-12 hours a day. They bring sets of empty hopper trailers out into the field. They drop those trailers and pick up loaded trailers that are hauled back to processing plants, where they are weighed and unloaded. Drivers are paid by the load and can complete 8-12 loads in a day, depending on the fields being harvested. Load pay is based on the distance from the cannery to the field, with longer loads fetching a higher rate. Typical weekly pay for tomato haulers is at least \$1500 a week. Averaged out, this results in a wage of \$16-20 per hour. Tomato haulers are not paid overtime (employers are exempt from paying overtime in California). Additionally, drivers are paid per load, effectively a piece rate.

Tomato driving is a good entry-level driving job in terms of skills. Drivers are typically on two-lane county roads in rural areas and work out of the same processing plants for weeks at a time, allowing them to get familiar with the area and avoid the worst congestion. Though the days can be long, the schedule is regular, and drivers can be home at night. Tomatoes and other big, intense harvests, like citrus and nuts, could provide the opportunity to train and employ hundreds of new truckers locally every year. Many of these crops peak in different seasons, spreading these opportunities through spring, summer, and fall.

Different products can come into cooling facilities from miles around. This picture shows product coming off flatbed trailers loaded in the field and iced or cooled with different methods, depending on the crop.



Adding even more complexity, bulk trucking serves the transportation requirements of crops like grains, rice, and nuts. And there are even more unique niches in agricultural hauling, such as moving livestock and dairy, including milk.

The need for trucks to move some products varies greatly over the course of the year, as harvests tend to overlap. This variation is indicated by quarterly data from the US Department of Agriculture for total tonnage moved by truck in **Figure 6**. During harvest, the industry relies on seasonal drivers to move crops from fields and lots of drivers to move produce to markets and export facilities within the state. This additional work means that many drivers must be hired for just a few months, with higher rates being paid to attract out-of-state truckers.

## Snapshot of a Dairy Driver

Dairy is a “just-in-time” perishable product. During the tightest periods in the driver labor market in 2021, some milk loads did not get moved on time—something we didn’t see in other crops (with the exception of exports lacking ocean transport). For dairy, the issue was not necessarily about pricing: service is typically under longer-term contracts and government price controls. The problem was a lack of extra drivers: if drivers were sick or quarantined, carriers could end up shorthanded.

Dairy drivers start their days very early and typically work 12 hours per shift. They may work four to six days a week, depending on need. We had a chance to follow drivers as they made their pickups. The drivers we met were very satisfied with their jobs. They earned a base rate of \$21 an hour but averaged about 20 hours per week in overtime at time-and-a-half pay (this overtime was not required by state law). These drivers also had good health benefits and employer-funded retirement accounts.

Dairy drivers must be licensed to load and care for milk and storage equipment at dairies, which they typically operate themselves during loading. How they load can severely affect the quality and value of the 6,500 gallons they typically take per trip. The driving work of dairy drivers can be a little more challenging than field jobs, depending on the dairy’s location, but does not require drivers to do lots of complex backing. The schedule of the work, with rotating days off, being home each night, and optional overtime made it more family-friendly than other jobs.

While turnover is relatively low in these jobs, the approximately 200-truck company we observed was hiring and training drivers with very little experience. Dairy jobs and similar work where harvests are long, like lettuce, provide good opportunities for local training and first employment.





Cooled product of all types in a refrigerated storage area ready for loading. Increasingly, drivers have a “grocery list” of different products they are picking up: “eight pallets of lettuce, four pallets of broccoli,” etc. They may be able to get them all at one place, but often these lists require multiple stops over days to assemble a complete haul.

## How Many Agricultural Truck Drivers Are There in California?

Trucks move millions of tons of agricultural products within the state (sometimes several times) and out of the state. Overall, this activity represents hundreds of thousands of loads requiring tens of thousands of drivers—though there is no dataset that specifically collects this information. Of course, many truckers who move stuff in state (or take loads out of state) live in the state, but often, those who move California’s agriculture come into the state to meet seasonal demand. The map on this page shows the home zip codes of the drivers we interviewed in person.

Estimates do exist for the total number of for-hire truckers in the state, broken down into general freight and specialized freight. Drivers moving agricultural products could fall under both categories. Importantly, drivers pulling refrigerated trailers will fall under the specialized category. We are interested in the number of employees as well as the number of self-employed workers in for-hire trucking, including small business people and contractors (who are discussed further on in relation to California’s AB-5 law). Overall growth in the number of drivers working in general freight has been strong, while the number of employees in specialized freight has stagnated. As **Figures 5** and **6** suggest, while the number of drivers self-employed in specialized freight has not grown much, the number of those self-employed in general freight has increased substantially.

This map shows the surveyed drivers' homes, by zip code.

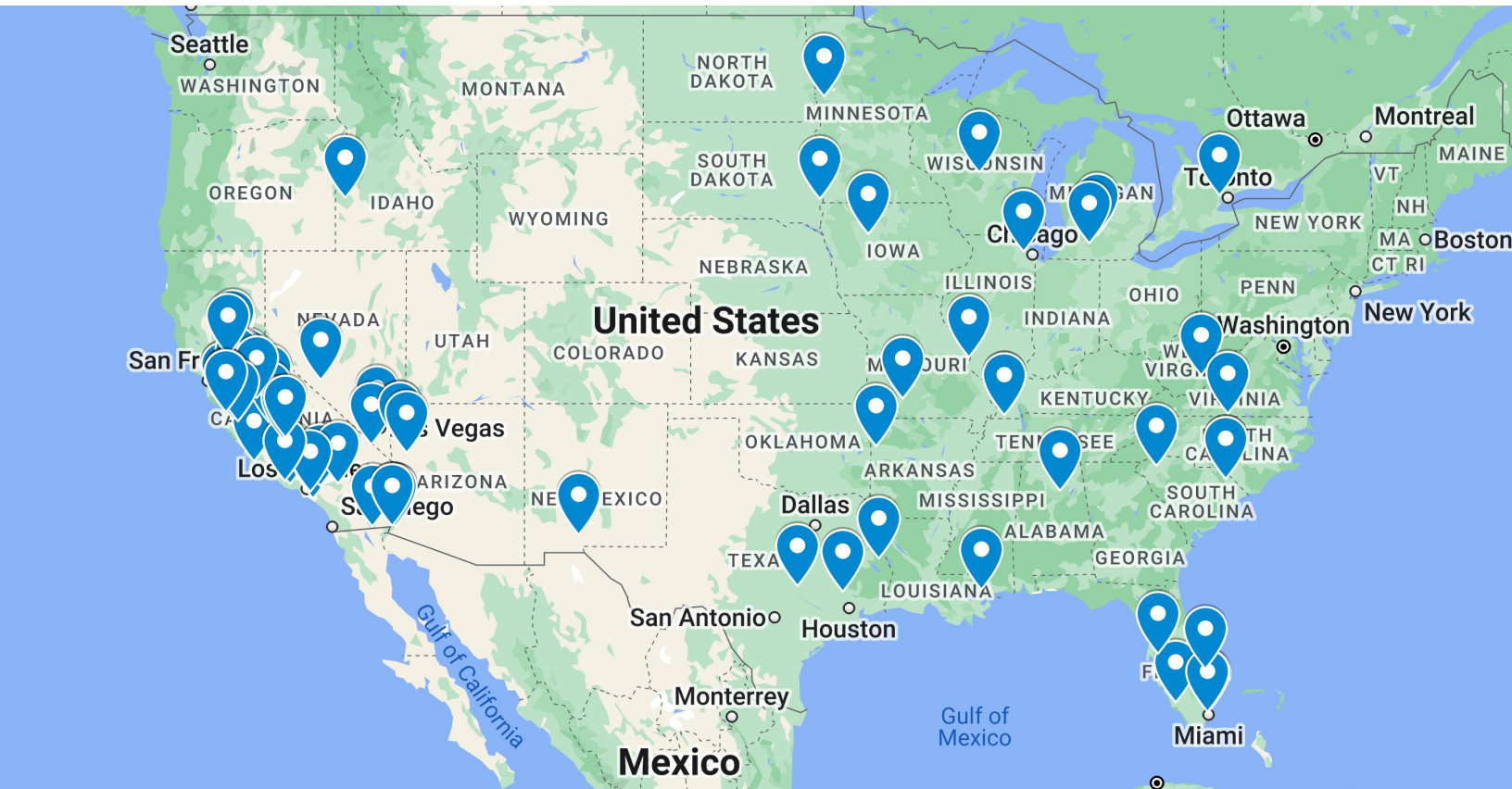
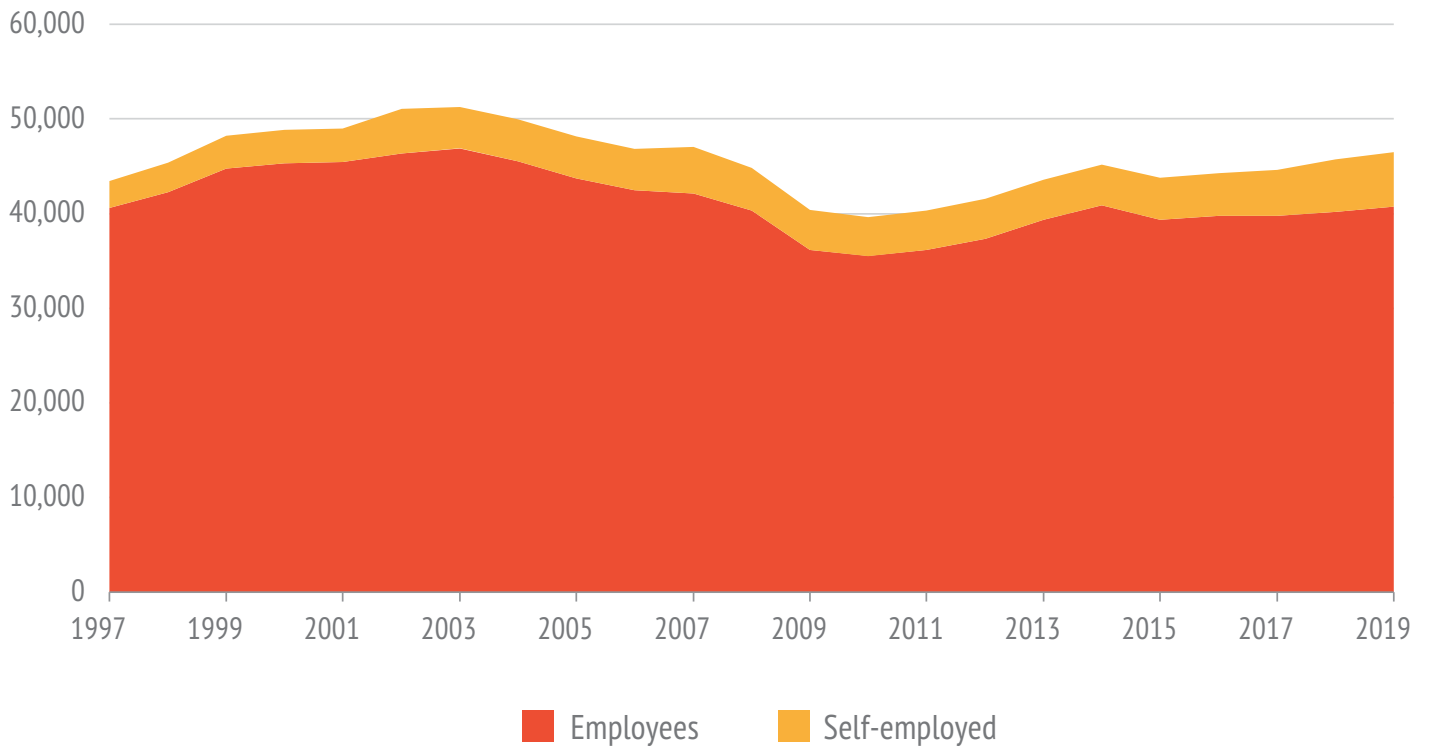


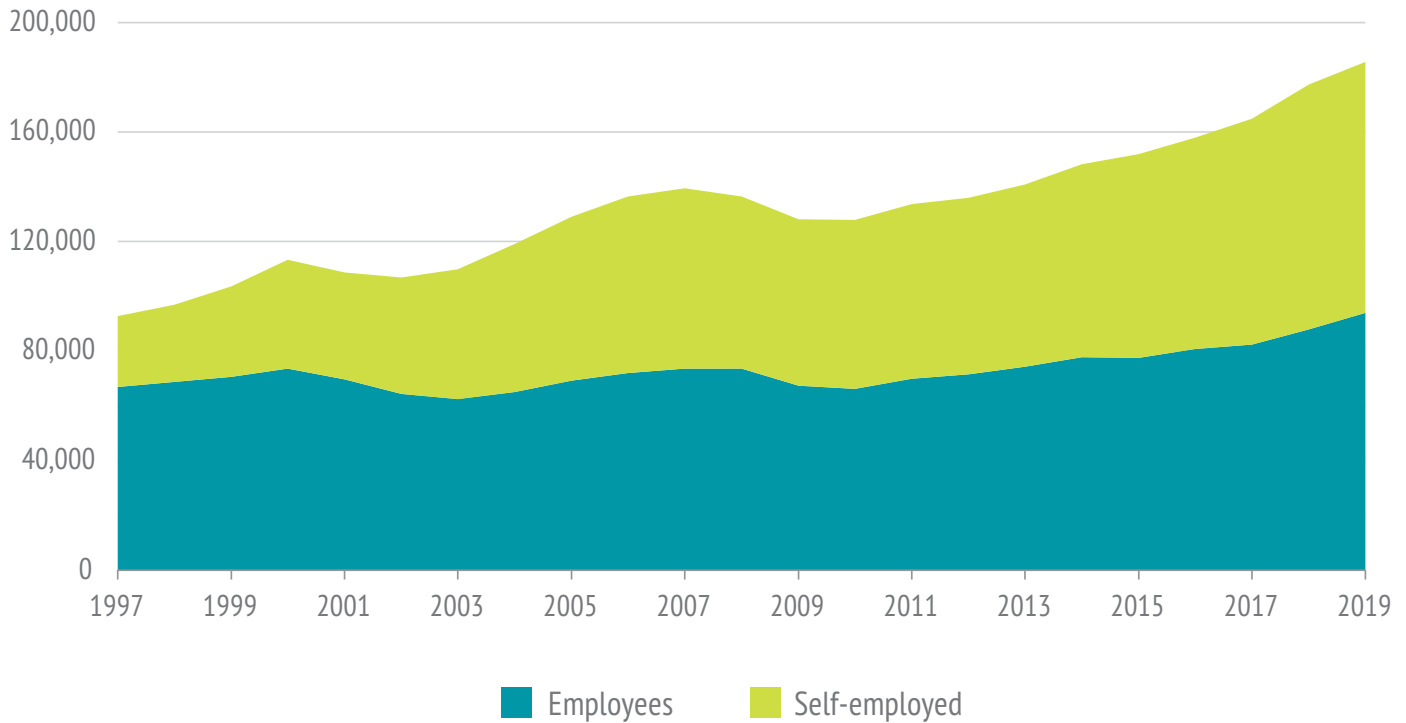
Figure 7. Employees and Self-Employed, Specialized Freight Trucking (NAICS 4842), State of California



Source: California Employment Development Department, Labor Market Information Division, Occupational Employment and Wage Statistics (OEWS), <https://www.labormarketinfo.edd.ca.gov/data/oes-employment-and-wages.html#OES>.



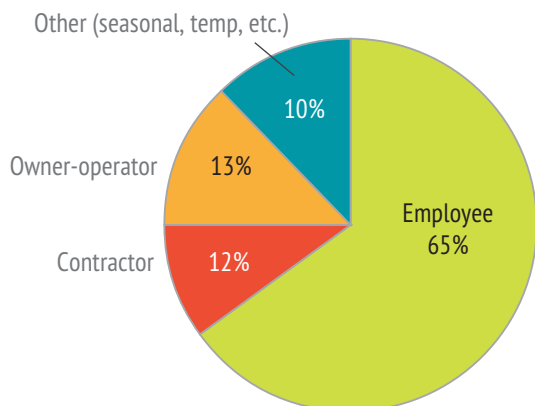
**Figure 8. Employees and Self-Employed Workers, General Freight Trucking (NAICS 4841), State of California**



Source: California Employment Development Department, Labor Market Information Division, Occupational Employment and Wage Statistics (OEWS), <https://www.labormarketinfo.edd.ca.gov/data/oes-employment-and-wages.html#OES>.

Critics of industry labor practices (and many drivers) point to the growth of non-standard employment relationships—especially leasing arrangements where drivers work for a single carrier but rent or lease the truck they drive from that carrier—as one of the main factors putting downward pressure on conditions for truckers. As **Figures 7 and 8** indicate, this growth has been far stronger in general freight than specialized freight, something that matched what we saw in the field. As **Figure 9** shows, we encountered far more employees working for small companies than we expected and far fewer contractors (truckers classified as independent contractors, who pay for the truck they drive but consistently work for a single motor carrier).

**Figure 9. Which Best Describes Your Employment Status as a Truck Driver?**



Source: Truck drivers surveyed, N=100.





Self-employed workers can also include independent owner-operators—truck drivers who own their own truck and have their own motor carrier authority. These drivers can haul freight for whomever they choose and may employ other drivers. Most of these drivers start out working for somebody else and learn the ropes before going into business for themselves. If they play their cards right, they can do quite well—at least when rates are high. We met several owner-operators who netted as much as \$250,000 in 2021. But 2021 was the best of times for these drivers. We met others in 2022 who were struggling with lower freight rates and rising fuel prices. They feared losing some or all of their trucks.

## Meet the Driver: Bernabe

- 👉 Age 62
- 👉 Bakersfield, CA
- 👉 Owner-operator with four trucks
- 👉 Trucking since 1995
- 👉 Born in Mexico, he started working in the US as a fieldhand before moving to trucking.

“I’m happy because trucking gave me everything. The United States, for me, is #1. I got everything on working hard. I made money. I own my house. I put my kids through school...but they have to do something for the drivers out here, for these young drivers. They’re bringing food for everybody, [but] they are treated terrible—just terrible.”

# What Makes Agricultural Trucking Such Hard Work

A number of things about hauling agricultural products make it inherently harder. First, many crops are highly perishable, this means they aren’t packed ahead of time and may not be ready to move when drivers get there. Many crops are picked rapidly and in large quantities as they mature, so facilities have a remarkable boom-and-bust quality to their operations. We carefully planned for busy days, so we would have lots of drivers to talk to and drivers would have lots of waiting time in which to talk. Facilities that were overrun with trucks during harvest were often empty on site visits a few weeks or months before harvest. And harvest itself might be unpredictable. Citrus fruit, for instance, can’t be harvested when too damp; a foggy morning might mean that outbound loads in the afternoon would be delayed.

Once drivers have the freight, they are encouraged to get it to its destination as quickly as possible. Drivers are incentivized to be fast by a mileage- and load-based pay system. Only 14 of 100 drivers in the in-person interviews were paid by the hour. Those drivers were moving loads locally or within the state.



# Waiting

Waiting is a problem for almost all truckload drivers, who take freight point to point from shipper to receiver. Yet, few drivers experience more waiting time than refrigerated drivers. The primary reason is that refrigerated trailers need to be “live-loaded,” that is, loaded while the driver is there. It’s partly the nature of the freight, which often can’t be loaded ahead of time. Refrigerated trailers are expensive, and the fleets that move agricultural goods tend to be smaller, so they don’t have large pools of extra trailers that make it easier to pre-load. Lots of time can be spent waiting for product to come in from the field, to cool, or to be packaged. In the interviews, drivers estimated that the median wait time before loading started was three hours, but many struggled to put an average on it. Sometimes they got right in, they said, but sometimes it could more than a day.

If wait times exceed a certain period, drivers might be entitled to get layover pay, but drivers reported they rarely got such consideration. Generally, waiting time is unpaid time, and both federal and California laws only require that drivers earn minimum wage for all hours worked. Carriers typically use Department of Transportation hours of service records to ensure they are complying with wage laws. However, drivers typically do not count many of the hours they work on those logs. As a result, drivers can earn less than minimum wage because of long unpaid waits. These practices are the subject of a number of class-action lawsuits that contend drivers may be entitled to minimum wage up to 24 hours per day.<sup>14</sup>

## Meet the Driver: Marlon

- 👉 Age 38
- 👉 Tulare County, CA
- 👉 Employee for a small company
- 👉 Trucking for two weeks
- 👉 Former bus driver

“The waiting time is ridiculous. I came here yesterday, and I guess the product wasn’t ready, so I was able to go and pick up another part of the load at a different location. Now I’ve been back here for 14 hours waiting on this part.”

The freight going into refrigerated trucks is typically “palletized,” placed in bins on pallets, meaning that it can be loaded using a forklift. Depending on pallet and trailer size, pattern of loading, and the weight of the cargo, trailers can take up to 30 pallets. The actual loading process can take an hour or two (drivers we interviewed estimated an average of 1.5 hours, in practice).

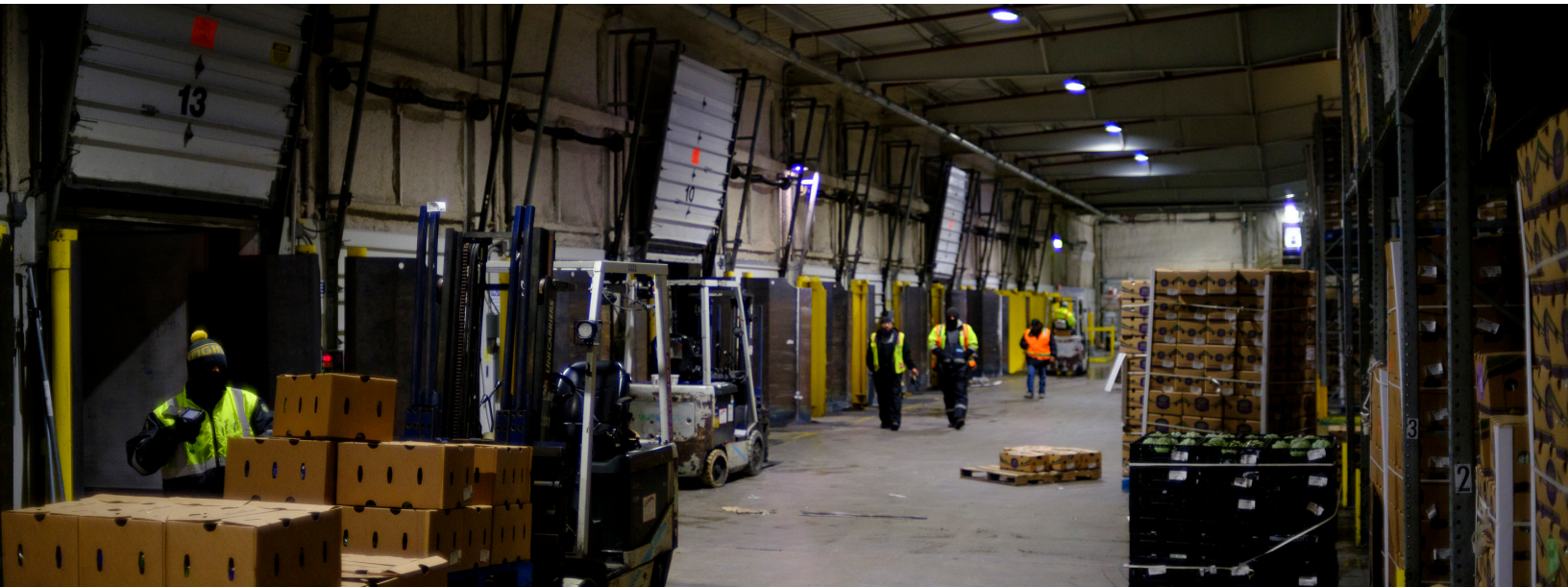
We did see a few examples of pre-loading of trailers. The drivers we talked to who hauled pre-loaded trailers greatly appreciated what that meant for them. In these cases, some drivers in a company were assigned the job of assembling loads locally for long-haul drivers to pick up. Drivers assembling loads were typically paid by the hour for all the time it took to assemble loads.



The biggest positive development we heard about with regard to waiting was the increased use of appointment systems to reduce crowding and contact due to COVID-19. One facility that we visited used an online appointment system that allowed drivers to check in from truck stops nearby. Remote check-in allowed drivers to avoid going to facilities unnecessarily to wait or burning up the hours they had available to work (discussed further below). Drivers greatly preferred these systems to “first come, first served” check-in systems, where they were not only waiting in line, but it was a bit of gamble whether their load would even be ready.

## Drivers’ Perspectives on Waiting

Waiting can be very frustrating for drivers because it likely means that they will either earn less in their paycheck or have to spend more time away from home. The lack of information about what is happening with the product or the loading process adds to the frustration drivers feel as they sit unpaid.



On the other side of the wall, workers move the product from storage areas into the trucks. Drivers usually don’t have any idea what’s happening back there.

As one contractor told us:

Sometimes seven hours, 10 hours, I wait. Sometimes they call you, “hey, the product is cooling down.” “Okay, how long?” “We don’t know, we’re gonna call you.” One hour, two hours, three hours, five hours, six hours, 12 hours! “What the hell? Do you guys grow the vegetable behind the wall?! [Are you] waiting for it to grow? What is going on?” “Oh, it’s coming from the field, blah, blah, blah, and [we] have to cool it down.” Sometimes it is an hour.... If you are hauling dry stuff, the inventory is always ready. Here, they have to pick it, pack it, weigh it, cool it—produce is the hard one. Sometimes you wait 24 hours, 48 hours. We get \$75 for the wait, but our expenses are too high. That is what a company driver gets.

As the quote above suggests, the extensive waiting time required for refrigerated freight can make working in this segment less attractive than other segments where freight is more predictable and likely to be pre-loaded.

We should note that the facilities where we interviewed drivers were well regarded by many interviewees. We did not find this surprising because they invited us to survey drivers on their property. They wanted to know what drivers thought and how they could improve the driver experience. In fact, many of the best practices described further on in the report were observed at our interview locations. And many drivers said that most facilities meant well, but the ones that didn't left a lasting impression on drivers. As they often made several stops per trip, it is likely drivers have bad experiences fairly regularly.

Particularly distressing to drivers was the treatment they sometimes received while they waited. It was common for drivers to say they were disrespected and treated rudely by staff at customer locations. A number said they felt like unwanted visitors or "criminals." Again, these experiences were not universal, according to drivers, but not uncommon. Some noted that they worked primarily alone, often for hours and hours at a time, and they were just trying to do their job. To get out of the truck and be treated poorly could be very upsetting.

A lot of it is the shippers and receivers when you get in to pick up or deliver and you are treated like secondhand trash. You walk in and their attitude is "Why are you bothering me." I had that twice yesterday. It's like, "I have an appointment at 9, and I'm going to sit here waiting until 4 or 5 to load." And the companies don't fight for the driver. They don't have any money to pay you for the time you are sitting. I probably lose an average of 30 hours a week to unnecessary waiting.

They treat you like you are an inmate when you get to the shippers or receivers. They don't even look at [us] as all we trying to do is our work.

The combination of long wait times and the need to get the freight delivered quickly means incredibly long work hours for drivers overall. The same was true for some local drivers, including those working port and seasonal field jobs. Our in-person interviewees reported a median of 14 hours of work a day, but days as long as 18 hours were reported by drivers. In other words, drivers out on the road can work 100 hours or more in a week. Drivers recognize these conditions are unusual and extreme.

Trucks being loaded. Loading of as many as 30 pallets can take an hour or more.





# Best Practices for Shippers

Treating drivers better can benefit shippers. Driver problems and complaints can create a stressful and unpleasant work environment for non-driving employees. Drivers often feel their circumstances are not understood by shippers. When a driver gets delayed, they probably aren't getting paid and could be late getting back to their family. It is also important to understand that drivers are living out of their trucks and might be in the middle of their second or third 100-hour work week. They have trash to get rid of; they need food, water, bathrooms, etc. Rather than seeing these as problems to be policed, turn them into opportunities to show drivers that you understand and care about them.

These were some of the best practices we saw and heard about from drivers:

- ☞ If you asked a driver to be there at a certain time and you aren't ready, apologize.
- ☞ Use apps to allow drivers to check in and to check on the status of loads from off site.
- ☞ Provide as much information about loading times and progress as possible on site.
- ☞ Ensure that employees understand drivers' work, work-hour regulations, and pay systems.
- ☞ Provide clean, easily accessible bathrooms.
- ☞ Make adequate trash receptacles available.
- ☞ Work with nearby businesses to find available overnight parking.
- ☞ Work with food trucks to provide on-site food options (dock and other staff like them, too).
- ☞ Supplement text with symbols and pictures whenever possible (many drivers do not read English or Spanish).
- ☞ Water, snacks, and ice are greatly appreciated during long, hot waits.

Federal regulations on hours of service limit workers from driving after they have put in more than 60 hours over seven days (or 70 hours over eight days). But almost all of the drivers we talked to said they got around these rules by operating under a 150-mile agricultural exemption or simply not logging their time spent working that was not driving. Neither of these practices are in compliance with the rules, nor do they actually allow drivers to avoid hours of service regulations. Essentially all but hourly drivers believed they simply would not be able to do their jobs if they logged their work hours according to the rules. In other words, agricultural drivers paid by the mile generally don't comply strictly with hours of service regulations.

As one driver put it:

We are truck drivers, and we try to make a living. So, we'll go off duty [when we shouldn't]. It's been several hours so far of waiting, so I know they call it illegal, but what can we do? Otherwise, we won't make any money.





## Meet the Driver: Vaughn

- 👉 Age 48
- 👉 Albuquerque, NM
- 👉 Employee for a small company
- 👉 Trucking for 30 years

“I think there is a shortage of good drivers. I think a lot of the problem is this is a lifestyle, this isn't a nine-to-five factory job. It's not clock-in, clock-out, go home. Some of the big carriers, they have a shortage. I think it is in their training. I think it is in their recruiting. And the ideology is 'get the driver in the truck and make the truck move.' Reality comes in a big hurry after that.”

# Time Away From Home

Long-haul refrigerated driving requires long stretches away from home. Drivers can get home more frequently if they work in teams, which 22 of the 100 drivers in the in-person interviews were doing. We met drivers covering very long distances but working in teams on regular routes (such as California to Chicago) who were out less than a week at a time. Solo drivers covering such distances were on the road for weeks at a time. Two to three weeks on the road was common, and some stayed out for a month or more at a time. Working long stretches was by far the toughest part of the job for most drivers. Their inability to see their family and friends and their loneliness on the road were the main reason drivers said they would leave the job.

We could fill pages with the things drivers had to say about how difficult it was to be away from home. It is worth hearing just a few of their comments to understand how important and emotionally charged this issue is for drivers.

When asked what might explain the difficulties carriers had finding enough drivers, the drivers had many opinions:

I think a lot of it with the new ones, if you've got a family, about the third phone call is going to be your wife saying, "Hey, it's time you come home." You've got your choice to make, do you stay married or stay in the trucking career. I've been married twice. It cost me once. Second time around, I got smart, I married a truck driver. We've been married 10 years. We meet up about twice a month, either at home or out on the road. It's working. I'm not gonna say it is great, but it's working.

I would like to quit because I'd like to be home now. I mean, I've spent my whole adult life out here.

When I started doing trucking, I was stopping in my home, like every two days, right? And it felt super easy. But I didn't realize how hard it is to leave home for more than a month. Especially when you have kids. And especially when you don't know how to cook anything. It is difficult. And people don't realize that. Most people goes like, "Oh, I'm gonna be on my big rig and seeing these beautiful panorama scenes." But when you're alone in the evening, and you're not playing with your kids, like every other day, you're gonna lie down at night and go "damn!" and that's the difficult part.

Drivers were asked if they would recommend the job to a friend or loved one. The vast majority said "yes," but those who didn't almost always mentioned time at home:

Yeah, if you don't mind being away from your family a lot and putting up with s\*\*\*\*\* hours, and you're looking to make money and not really have a life outside the business, yeah, it's a good way to make a living. But if I had it to do all over again, I probably wouldn't do it again. I missed too much s\*\*\* with my kids and that, that bothers me.

I would not recommend it, because most of the people that I ever known like living at home, in a house, with humans. We don't do that here. This is a whole different ballgame. I would not recommend it to anybody, especially women.





## Meet the Driver: Anthony

- 👉 Age 43
- 👉 Collins, GA
- 👉 Contractor for a large company
- 👉 Trucking for 11 years

“I’m out for months at a time. You don’t get to see your family growing up. But I’ve got five kids to support. If I went to a \$10 an hour job, I wouldn’t survive.”

# What Makes Agricultural Trucking Worth It

## Pay

At this point, you are probably wondering why *anyone* would do this job. Pay is the answer. Pay is what makes it worthwhile for drivers. The drivers we interviewed reported earning around \$1,550 a week or around \$80,000 a year. Many drivers we interviewed were immigrants and high school graduates who believed there were few other places they could earn the kind of income that trucking provides.

And good, experienced drivers did get paid well. Experienced drivers with clean driving records and stable work history can make more than \$100,000 a year. Many over-the-road drivers who don't live in California are making \$70,000, \$80,000, or more. They consider these very high incomes compared to the next-best job available to them.

Often, the younger workers who were most happy with their pay were immigrants. Almost one third of the drivers we interviewed were immigrants who came from all over the world. This number underestimates the percentage of immigrant drivers we encountered, however, because we were only able to conduct interviews in Spanish and English. Driver hesitancy due to language barriers was significant. We met many drivers from Eastern Europe, Asia, and South Asia with whom we spoke with briefly, but they did not complete a longer interview in English.

We did meet a few younger drivers working for large carriers who made far less than other drivers: less than half as much per mile. And we met a few contractors who were making even less due to the high cost of fuel. A few of these drivers were out for a month or more at a time and were on pace to make \$30,000-\$40,000 in 2022 (when freight rates were lower).

Because fuel is seven dollars a gallon, it costs me one dollar per mile. Each mile I go, a dollar goes from my pocket like this, open the window [gestures throwing something over his shoulder], and the rates are [from] like two years ago.

Other workers who had earned good incomes in other occupations, particularly construction, believed that trucking was more sustainable for them physically. Even if the hours were longer, they could maintain their income with trucking. This is another reason for trucking's older workforce: we found that it is often a second or third career for workers who have no other options to earn the income they need.

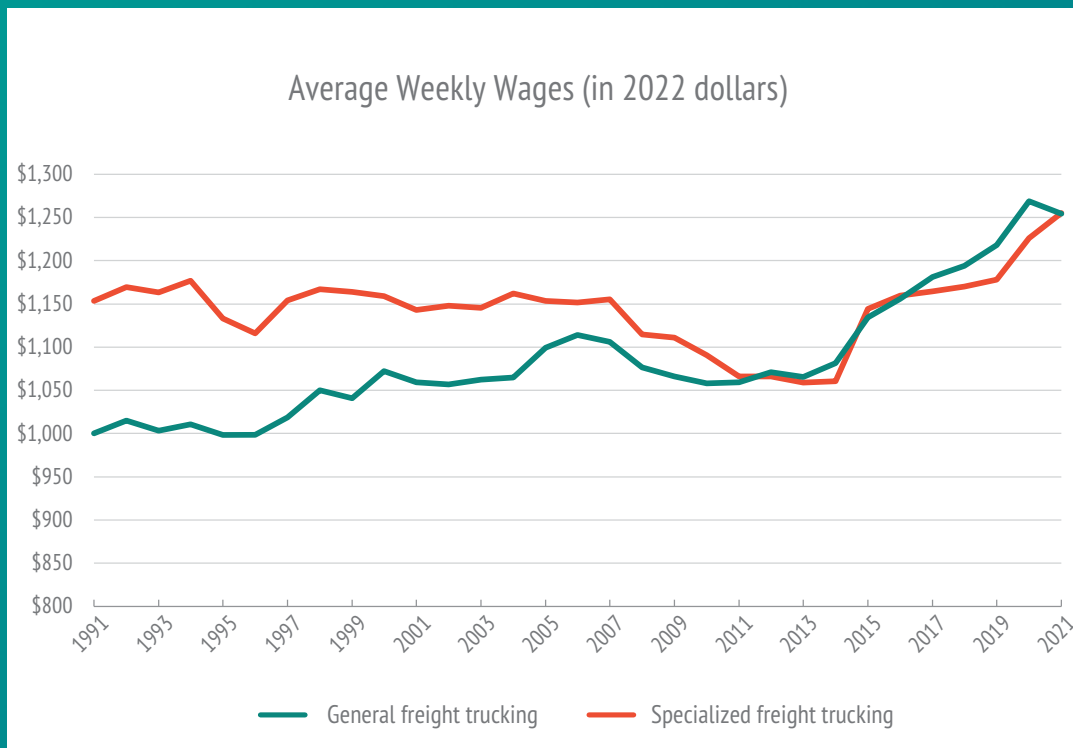
Still, many of the workers we met said that the income they made could never be enough to fully make up for the hours worked and time away from home.



# Pay in Trucking: Stagnant or Declining Until Recently

Trucking used to be one of the best-paid blue-collar jobs in the United States. From the 1960s until deregulation in 1980, most truckers' wages and working conditions were set by the National Master Freight Agreement negotiated by the International Brotherhood of Teamsters. After deregulation, trucker wages fell by as much as 40 percent per mile driven. Wages for workers in trucking then stagnated as the graph suggests. In recent years, wages have begun to increase. Average wages for workers in California trucking were about \$1,250 per week. Our interviewees reported earning an average of about \$1,550 per week but also averaged 13.5-hour days.

Figure 10. Pay in Trucking: Stagnant or Declining Until Recently



Note: These are all kinds of workers in truck transportation (including drivers of smaller commercial vehicles). Source: This graph was created using data from the California Employment Development Department Quarterly Census of Employment and Wages (QCEW), accessible at <https://labormarketinfo.edd.ca.gov/qcew/qcew-select.asp>. The QCEW produces a comprehensive tabulation of data on the number of establishments, monthly employment, and quarterly wages for workers covered by state Unemployment Insurance (UI) laws and federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program.

## Independent and Satisfying Work

As many of the quotes in this report should make clear, despite the frustration, concerns, and mistreatment drivers sometimes feel, they are proud of their work. They like doing useful, tangible, hard work. They don't have to deal with office politics or a "boss looking over their shoulder." They move the food we all eat; it is important work. And they take pride in their skills of safely operating their trucks. They work harder than most, and they know it; they are proud of that fact, too.

Despite the challenges, the vast majority of drivers we met who had more than a few years of experience said they loved the job, would stay in it until they retired, and would recommend it to a friend or loved one.





## Meet the Driver: Jorge

- 👉 Age 33
- 👉 Houston, TX
- 👉 Born in Colombia, raised in Texas
- 👉 Employee for small company
- 👉 Trucking for seven years

“The job is awesome. I mean, you get to travel across America. Get to know some cool places. California is beautiful. Downside is when you have family, you are away from them. But we are here doing something nice. I love it. I’m going home with this load, and then I’m taking my kids on vacation to Disney World. It’s worth it, you know, the sacrifices you’ve got to make out here.”





## Meet the Driver: Mike

- 👉 Age 46
- 👉 Pocahontas, IA
- 👉 Employee for a nine-truck company
- 👉 Trucking for 26 years

“I love what I do. I love trucking. I’ve been in it my whole life. I grew up in it. My dad still drives a truck. But it’s getting to where it is not any fun anymore. They say, if you love what you do, you never work a day in your life. Well, the last few years, I’ve been working a lot.”

# Do Drivers Think There is a Driver Shortage?

If you want to have some fun the next time you're filling up on the interstate, stop a trucker and ask them if there is a shortage of truck drivers. You'll find they have some very well-considered opinions on the matter.

We asked drivers whether they thought there was a driver shortage. If they said yes, we asked what they thought the causes might be. If they said no, we asked them what they thought all the fuss was about.

Let's start with the drivers who said, "No, there is no shortage." These drivers argued that there could not possibly be a shortage because their time was used so inefficiently, and the truck stops were full of trucks waiting for loads (remember, we were out in the field in 2022, not 2021).

No. I mean, there seems to be more trucks on the road nowadays than ever before. There seems like there's more of a shortage of freight than drivers. It's frustrating when they keep talking about this driver shortage, but I don't see a driver shortage. I see a good driver shortage. I don't see a driver shortage. The mega-carriers are pushing this driver shortage thing. I've never seen this many drivers out on the road. I've been doing this since '96, and there's more drivers out here now than I've ever seen in my life.

Many drivers who said "no" said it was only a political and recruiting message to get new, cheaper drivers into the job.

It's political, like anything else. Headlines, right? But if you're out there, you look for a place to park after seven o'clock, you'll know there's not [a driver shortage].

What you have is not a "truck driver shortage," it is a "truck driver f---ing short-of-pay" situation. Nobody wants to pay nothing.

You are talking about that "driver shortage?" That's a made-up term by big carriers. They have such a high turnover rate, it looks like a driver shortage. Yeah, they go cycle through them, and it goes on to a 200-percent turnover rate. And it makes it look like a driver shortage when they can't get drivers. They got drivers leaving every day fast as they can get them in there. If there was an actual shortage, the pay would be higher, and you wouldn't have guys sitting around waiting on loads.

The drivers who said "yes" followed it with arguments about retention problems resulting from too much unpaid time, time away from home, and insufficient pay for some drivers. Yes, they said, there is a driver shortage because few people want this job at low pay for long.





## Meet the Driver: Charles

- 👉 Age 45
- 👉 Bakersfield, CA
- 👉 Employee for a 12-truck company
- 👉 Trucking for six months

“I’ll probably do this a couple more years. I don’t want to be driving longer than that. I can’t complain about the pay. I’m making more than a lot of people, and I’m grateful for that, but it is not worth the time away from home and my kids.”

# The Role of Training and Recruitment

Drivers pointed to one problem over and over again in terms of the long-term decline in the profession: training. For experienced drivers, lack of training was inseparable from the narrative of a shortage of drivers. Quite simply, driver shortage claims drew government training grants and fed a revolving door of poor-quality training and bad jobs.

There's no driver shortage. It's propaganda. If there was a driver shortage, why's the truck stop filling up at two o'clock in the afternoon? Why are these mega-carriers like Swift and England getting kickbacks from the government for students, when 50 percent fail? [They] get more money, so they can get more students. Why is it recruiters are telling a rookie [they will make] \$50,000 a year, when that don't happen? I've been driving 36 years, and I've been hearing the same driver shortage story.

This constant recruitment and turnover of drivers was seen as leading to increasingly lower standards and training for drivers.

No, there is no truck driver shortage, that is just what the mega-carriers and American Trucking Associations say to recruit more drivers. If anything, there are too many people training to become drivers. What there is a shortage of well-trained and qualified drivers.

I don't think there's a shortage, I think there's just a shortage of people that know what they're doing, can get a license, and can pass the drug test. I mean, they're letting people drive that don't know what the hell they're doing.... I've taken I don't know how many people and trained 'em. And I'm shocked by the amount of lack of common sense. And that's what it is, not a shortage of drivers. It's just a shortage of people who know what the hell they're doing. And will do it. Period. That's it. You can get a gal, you can take one of these girls here. And you give them a Class A license, take them out, and train them properly. And they'll do just fine. Nobody tells them what to do. Nobody shows them what to do.

Drivers talked about how training programs were short and that trainers themselves were often inexperienced drivers, sometimes with just a few months behind the wheel. And then these trainer-trainee teams are sent over the road doing the most dangerous kind of driving.

I just think they make it too easy to acquire a CDL.

The lack of training, these guys out here, these three-week schools just ain't teaching them what they need to know.

I think you just have a lot of people who are undertrained at some of these mega-carriers out here. These guys are graduating school, they'll go with a trainer for a couple months, and then they put two trainees together for a couple months. I mean, a couple of months, you can't learn anything. You shouldn't be with another inexperienced person trying to drive out here on the highway.

Some pointed out that some trainers were only training other drivers in order to survive financially themselves. Trainers sometimes get incentives when trainees go out on their own. Others get paid extra per mile or for the miles the trainee drives (typically while the trainer sleeps). Most often, these are contractors leasing a truck from the company they work for (a common practice at some large carriers).



## Meet the Driver: Deborah

- ☞ Deborah, 56
- ☞ Virginia Beach, VA
- ☞ Employee with a 100-truck company
- ☞ Trucking for one year
- ☞ Deborah and her husband started driving a year ago and are thinking about buying a truck from the company they work for and working as contractors.

“When I went through my training, they were just pumping drivers out like crazy. By the time we were in our last week, they were getting another batch ready to come in. Just this morning, we saw a bad accident with a truck laying over on its side. It can happen just like that with these 80,000-pound vehicles. It ain’t no joke out here. I think people think it’s just a big fun car. It’s not.”



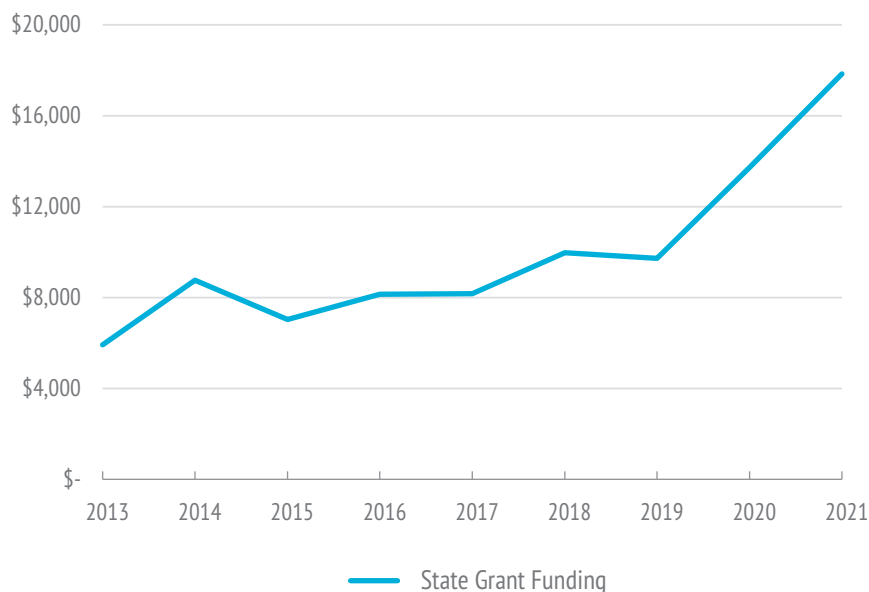
They need to take the incentive away from the trainer to pass this kid. Because if you're getting incentive, you're just looking to push them through, right? You're getting that extra or whatever it is. It takes everybody two, three years to enter any field. Over here, you can be in it, three months [then] you're out here by yourself. Hey, it's crazy. Such low time. [...] I would love to see proper training. I've been told—and I don't know what the statistics are, you probably look it up a lot—but the *average* experience out here is two years now. I've been out here 24 years, that tells you how many drivers are out here with no experience. And you see so many more wrecks because of it.

Some of the qualifications for their trainers.... You only have to be there like six months, something like that to be a trainer. And [...] it should be *way more than that*. I mean, you should at least have to have five or six years to be a trainer, you know, where you've drove in every season a couple of times. I mean, if you've only been doing it for six months, and you qualify to be a trainer, if you start at the end of winter, before winter starts again, you're already qualified to be a trainer, and you've never even driven in the winter months! You know, that's a whole 'nother animal there.

The Federal Motor Carrier Safety Administration (FMCSA) sets the basic requirements of training. FMCSA has developed more and stricter rules for the content and time requirements during training, but the state still retains control over licensing and testing requirements. In general, however, the problem was not testing and licensing from the drivers' perspectives, the problem was the lack of real-world training that drivers got. The drivers who went through the worst training programs ended up driving long-haul in the most difficult jobs where safety was most important. Essentially, they argued the system was organized backwards and had perverse incentives to push the least prepared drivers out the door.

Millions of dollars in federal grants and other funds for truck driver training may feed a revolving door for many workers.

**Figure 11. California Workforce Innovation and Opportunity Act Truck Driving Training Grants, 2013-2021 (Thousands of Dollars)**



Source: California Employment Development Department, California Workforce Innovation and Opportunity Act (WIOA) data in various email messages to author, 2021-2022.

# Driving Has Changed for the Worse

The overall experience of driving—with increasing congestion, dangerous conditions, and stress—was brought up regularly by drivers. While the thrill of the open road, seeing the country, and “road trip!” fun were frequent themes when drivers talked about what might have first attracted them to the job, the opportunities for drivers to actually enjoy these experiences are decreasing every day. In California, as most other heavily populated areas, driving is increasingly stressful.

Truck drivers always have preferences for where they like to drive. Some drivers don’t like cities because of congestion, others don’t like northern climates because of wintry road conditions, and some don’t like the heat in the South. Like the Northeast, California has many drivers who say they would prefer not to drive there. But California has lots of freight, and in the end, most drivers go where the good paying loads are. When the harvest is on, that’s California. There are much easier and cheaper states to truck in, but as one driver put it, “No one wants to come to California, but California pays.”

Because of California’s leading role in pushing for more stringent emissions rules (including the recent zero-emissions truck rule) combined with AB-5 (discussed further on in this report), drivers recognize that California is in a league of its own in terms of influence—for both good and bad, as they see it.

Many drivers are pretty sure California has at least a mild dislike for them.

God, it’s like California hates trucks. It’s hard enough driving here. But then the emissions rules, no idling, there’s no parking, 55 mph, even on wide-open interstate—don’t get me started on that. And, it’s like, I’m just trying to move your stuff!

The law is so much against us. They keep calling it safety. Safety, safety, safety, but the more they put on us—it feels like the law is *against* us—we are just out here trying to do our job, to bring people food, and they treat us like criminals.

Drivers referenced three main issues related to the experience of driving in California: the truck speed limit, parking, and the behavior of four-wheelers. These three problems are interconnected and fundamentally about safety for drivers. In all three, they’d like to see major changes.



## Meet the Driver: Rupinder

- 👉 Age 27
- 👉 Edmonton, Alberta, Canada
- 👉 Born in India
- 👉 Employee for a small company
- 👉 Trucking for two years

“I got put out of service for a one-inch crack on the underside of my truck. I had to call a welder that charged me \$1,100 before I could start working again. It may not be your fault, but you are going to sit and wait.”



# Safety

Safety was a critical concern of drivers. The threat of accidents and related stress were constant for these drivers. Furthermore, they said that hours of service restrictions were forcing them to drive when they otherwise would have rested or avoided congestion. The main challenge was the rule that required that drivers stop driving 14 hours after they started their day.

## Parking

Lack of parking and rest areas meant that there was nowhere safe or legal to stop for that break, so drivers were forced to drive tired.

One driver shared this lament about the lack of parking:

And then they close the rest areas. Why are they closed? For example, you go 99, there are two or three rest areas, all of them closed. You go to the truck stop, full, full of trucks. Can I stop in the middle of the highway because my time is not right? That's stupid. One time, I parked next to the highway because I felt tired, felt sleepy, and guess what? Big wide-open area. Two in the morning someone knocks on my door. It was CHP [California Highway Patrol], "Hey driver, what's going on? Here is your citation." I am 100 yards from the road. Cost me \$780. Because I try to save people and save myself from an accident. Because there is no rest area, there is no truck stop or parking lot available. If the government is trying to make everything safe, they should do something about it, [not give somebody a citation who does not deserve it]. Honestly, if you are telling me, [get] out of my house, give me a tent at least.

Another driver said:

There are all these empty lots, you see spaces, everywhere, but we can't find parking. And then we get tired, and we can't be safe. After all of this waiting.



## Meet the Driver: Victor

- 👉 Age 63
- 👉 Salinas, CA
- 👉 Born in Mexico
- 👉 Employee for a mid-size company
- 👉 Trucking for 12 years

“I’m proud to work for my company, but California is tough to drive in because we only can run 55 miles an hour. Ok, that’s fine. The electronic logbooks? It’s okay. But they say, ‘you’ll have to stop for a break and then after 11 hours.’ Well, that means truck stops or rest areas. I’m in the middle of traffic over here in San Mateo, San Francisco, Richmond. Where do I have to stop? There are no rest areas for trucks. That is the state of California. You can make the rules, but at least give drivers a place to stop.”

## California's Unique Speed Limit

Yeah, lose that 55 mile an hour speed limit for trucks. It's b.s. Especially being a split speed limit. That makes it even worse. It's been documented as dangerous. And it is common sense.

California's 55-mph truck speed limit was the single most frequent complaint that drivers voiced about the experience of driving in the state. California is the only state in the nation that has a 55-mph speed limit for trucks on all roads.<sup>15</sup> Drivers often said they understood the need for slower truck speeds in congested areas, particularly around cities. But, they noted, there are times and places where traffic is lighter and conditions are more appropriate for faster speeds.

While some said that it was frustrating to be unable to work at a faster pace, by far the biggest concern for drivers was safety.

Numerous drivers strongly insisted that split speed limits—where trucks were limited to 55 mph, but cars were permitted to travel at 65 or 70 mph—were inherently dangerous. While this study is clearly not intended to take a position on the safety of split speed limits, the daily experience of the truck drivers we interviewed has them universally convinced that split speed limits are unsafe. Drivers often noted that the 10 or 15 mph difference in speed limit far underestimates the actual difference in speeds because car drivers so often and excessively exceed those limits. Indeed, drivers had a lot to say about the split speed limits.

The difference in speed limit [is a huge issue]. In California, 55 for trucks, 65 or 70 for cars. When you got that much of a speed difference and they are wondering how come cars hit trucks all the time? Well, that's why. I'm going 55, they are going 70, they go around and pass this car and hit me in the back, it's not my fault. The speed limit ought to be the same for all vehicles. Because we're supposed to be professionals, how come my speed limit is 15 miles an hour slower than this guy—and he's texting on his phone!

I'm doing 55 mile an hour, and he's doing 75. He's not paying attention.

The waiting, driving in California. It has just gotten old. Like California, it's beautiful, but we have traffic laws for truckers [that] are awful. The speed limit, the speed limit?! Actually, that's my biggest thing.... It doesn't make sense.... This state is causing more accidents, and we're all bunched, and it causes accidents.

## Four-Wheeler Driving

Truckers are deeply affected by the increase in aggressive and reckless driving by car operators. Speeding, not signaling, tailgating, brake-checking, cellphone use, rapid lane changes were all regular complaints. We'll leave the way drivers talked about these issues to your imagination—it's probably best that way.





## Meet the Driver: Debbie (and Reyes)

- ☞ Age 58 (Debbie); age 4 (Reyes)
- ☞ Shenandoah, IA
- ☞ Contractor for 40-truck company
- ☞ Trucking for 42 years

Yes, your math is right, she started driving at 16, “cause my daddy told me I couldn’t.”

Her truck is 22 years old and has 4 million safe miles on it.

“You’re not going to get the young people out here because they already figured out the disrespect, the reckless driving—*the stupidity*—that surrounds these trucks all the time.”

# Assembly Bill 5

As we prepared this project and went into the field, we heard strong concerns voiced by industry representatives as well as shippers about the potential impacts of a new law known as AB-5.

In April 2018, the Supreme Court of California ruled in *Dynamex Operations West, Inc. v. Superior Court* that most wage-earning workers should be classified as employees and that the burden of proof for treating a worker as an independent contractor is on the potential employer. *Dynamex* relied upon an “ABC test” to determine whether a worker was an employee or an independent contractor. To be an independent contractor a worker must be: 1) free from direction and control; 2) perform services outside the usual business of the potential employer; and 3) be performing a traditionally independent trade or kind of work.

In September 2019, California Assembly Bill 5, known as AB-5, was passed and codified the *Dynamex* ruling as law.

As discussed above, the number of non-employee workers in California’s trucking industry has grown steadily in recent decades. The trucking industry has argued that AB-5 would require trucking firms to reclassify more than 70,000 independent contractors in the state as employees. While the actual number is likely less than half of that, those workers are concentrated in a few key segments, most notably rail and port drayage. The California Trucking Association (CTA) and Harbor Trucking Association (HTA) have argued that many of these drivers—some of whom own their own truck—do not want to work as employees. They argue that others will leave the state to work elsewhere or leave the profession altogether. Overall, they suggest that AB-5 will result in a number of very serious consequences for the state, including a severe reduction of small business trucking in California, a worsening of the shortage of truck drivers, and a shortage of trucking services in the state.

AB-5 was supposed to go into effect on January 1, 2020. However, citing concerns of immediate and irreparable harm and arguing that AB-5 was preempted by federal law that prohibits states from regulating the prices, routes, and services of motor carriers, CTA sought and won injunctive relief. Subsequently, the injunction was lifted, and AB-5 went into effect in July 2022, while we were in the middle of conducting driver interviews.

When this project began, we heard widespread concerns from shippers that AB-5 might further reduce capacity and increase shipping costs. At that time, we also heard of carriers beginning to transition to hiring their California drivers as employees (as some long-haul carriers did in late 2019 and early 2020) or helping to get drivers their own operating authorities. We also heard about many other carriers that were continuing business as usual.

We asked drivers about AB-5 during in-person interviews and through online surveys. They were first asked whether they were familiar with the law. If they said they were, we asked if they thought it would be good for drivers. If drivers were potentially subject to the law, they were asked what they would do in response to AB-5. Finally, drivers in online surveys were provided a text box where they could enter additional comments.

Given the serious concerns expressed by carriers and shippers, we expected AB-5 to be a top issue for drivers. But responses from drivers varied widely based on whether they were outbound and field drivers or port drivers. The vast majority of non-port drivers who were interviewed in person or filled out the online survey were not familiar with AB-5. Almost no non-port drivers expressed strong concerns about the law. A few drivers did object to this sort of labor regulation, believing that the government should not tell workers what

kind of employment relationship they should have. Overall, our survey results and time in the field suggest that AB-5 may not have as broad an impact as predicted by some opponents.

We were in the field in June 2022 and then again in July 2022, after AB-5 went into effect. We saw no evidence of any change in activity or driver views. Then, in the fall of 2022, we spent several days at the Ports of Los Angeles and Long Beach, by far the largest single concentration of contractors in the state, and drivers reported significant overcapacity of trucks. We handed out 500 cards promoting an online version of the survey. About 46 port drivers responded to the online survey.

Remarkably, despite the constant attention to the issue by industry representatives and the high prevalence of contracting at the ports, almost one third of port drivers reported not being familiar with the law. This finding could be a result of language issues or some of the drivers understanding the question as asking whether they understood the law *fully*. Conversations with drivers at the port further supported the idea that drivers had far less information about AB-5 and its implications than they would like. Many of the drivers who were familiar with AB-5 said they didn't know what it would mean for them or how they would respond. And there was some indication of misunderstanding the law, most notably that drivers believed the law forbade them from owning their own truck. Overall, however, although AB-5 was legally in effect, most of these drivers just seemed to be going about their work as they had before.

Twenty-two of the port drivers who said they were familiar with the law said that they thought it would be bad for drivers. About a dozen drivers added comments with their responses that echoed the themes of brief protests at the Port of Oakland in July 2022, after the law went into effect. We also heard these themes during in-person conversations when we were recruiting for the survey: that AB-5 would take away their rights, raise their costs, reduce incomes, and make it much harder to own a truck. Some drivers suggested they would leave the state in response to AB-5, but more said they would get their own authority and become *independent owner-operators* (statistical data from several sources supports this possibility, though the reality of what this means on the ground remains to be seen, as discussed below).

Overall, we found little evidence that the typical agricultural truck driver or shipper was concerned about the impact of AB-5 exacerbating any problems with the supply of drivers. We encountered almost no contractors residing in California, with the exception of port drayage drivers. Those drivers will need to become employees or start their own small trucking firm, and they represent a small but important provider of services to some agricultural shippers of exports like citrus, grapes, meat, and dairy.

## A Broader Look at AB-5's Impacts on Agricultural Trucking

Owner-operator is a general term used to refer to drivers who, in one way or another, bear all the expenses in owning and operating the truck they drive. Some owner-operators are small business owners or *independent owner-operators*. Independent owner-operators generally have and operate under their own motor carrier authority. They are essentially single truck or small motor carriers that can haul freight for different customers.

Other owner-operators are independent contractors but do essentially the same work as employee truck drivers and work for motor carriers under long-term leases. Some of these drivers don't actually own a truck, but rent or lease one from the company they drive for.

AB-5 affects those owner-operators who work as independent contractors for one motor carrier consistently. Essentially, the law says that the ABC test applies to determine employee status, unless an exception applies,



such as one that applies to independent business-to-business transactions. If no exception applies and you are a trucking company that uses a trucker to move freight for you, the application of the ABC test likely will require you to treat that trucker as an employee for tax and regulatory purposes. Importantly, AB-5 *does not* mean that truckers can't own their own truck: this was the main misconception we found among drivers. Employee truck drivers can own the truck they drive, their employer just needs to pay them for the use of their truck as an employee business expense.

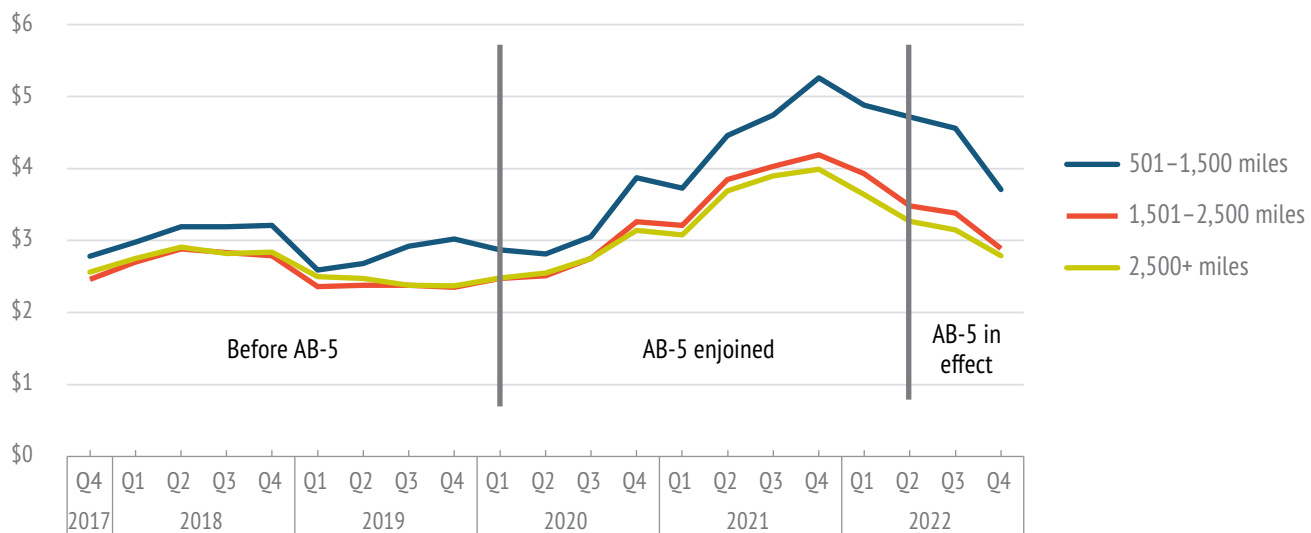
CTA and HTA have both publicly stated that AB-5 would profoundly impact the industry, with immediate disastrous consequences for shippers. In a press release on June 30, 2022, the day AB-5 went into effect, CTA stated:

Gasoline has been poured on the fire that is our ongoing supply chain crisis. In addition to the direct impact on California's 70,000 owner-operators who have seven days to cease long-standing independent businesses, the impact of taking tens of thousands of truck drivers off the road will have devastating repercussions on an already fragile supply chain, increasing costs and worsening runaway inflation.<sup>16</sup>

Almost a year since the law passed, we can get some sense of the impacts of AB-5. As yet, there are no obvious signs of negative impacts, and indications are that the industry may be making a smooth transition into compliance with the law with no significant disruption. Most encouragingly, rather than discouraging small business trucking, indications are that the law may be fostering an increase in small business formation.

Most importantly, from the perspective of agricultural shippers, AB-5 has not resulted in increased refrigerated freight rates. In fact, after the law went into effect, rates fell sharply for refrigerated freight, as shown in **Figure 12**. The average refrigerated rate out of California in the second quarter of 2022 for loads of 501-1000 miles was \$4.72 per mile. The average rate for the fourth quarter of 2022 for that distance was \$3.71, a decrease of more than 21 percent. The rate for 1001-2500 miles dropped about 17 percent. And for the longest loads, those over 2500 miles, the average rate dropped about 15 percent. In other words, the greatest decrease in rates occurred in the shortest hauls, the opposite of what we would expect if AB-5 were decreasing driver and truck capacity in the state by reclassifying California-based drivers.

**Figure 12. Refrigerated Trucking Rates out of California, By Distance**



Source: US Department of Agriculture, Agricultural Marketing Service, "Refrigerated Truck Rates and Availability," last modified August 10, 2023, <https://agtransport.usda.gov/Truck/Refrigerated-Truck-Rates-and-Availability/acar-e3r8>.

This drop in rates was not likely caused by AB-5 going into effect. As data in **Appendix B** shows, refrigerated freight rates in nearby states, such as Arizona, show trends similar to those of California.

CTA and some port drivers have also worried that AB-5 meant “small business is no longer allowed” in California. If enforced, the state believes AB-5 should have the opposite effect by providing more favorable conditions and increased opportunities for individual truckers to form a small business. In response to trucker protests and to facilitate a transition to independent operating for those drivers who want it, the Governor’s Office of Business and Economic Development provided a trucking business quick-start guide and a guide to a wide-range of state programs available for small business truckers, from technical assistance to equipment grants.<sup>17</sup>

Available data may indicate a growth of small business trucking currently in the works, but the reality on the ground remains to be seen. New authorities are the best indicator of small business formation in the trucking industry, as they are the license required to haul goods across state lines. The historic increase in freight rates discussed above drove equally historic growth in small business formation in trucking in recent years. **Table 1** shows the number of new motor carrier authorities FMCSA granted in the top three states for new authorities before AB-5, while AB-5 was enjoined, and after AB-5 went into effect. As the table shows, California led the nation in that growth before AB-5. While AB-5 was enjoined, California lost that top spot, but regained it with even stronger growth in new trucking businesses after AB-5 went into effect.

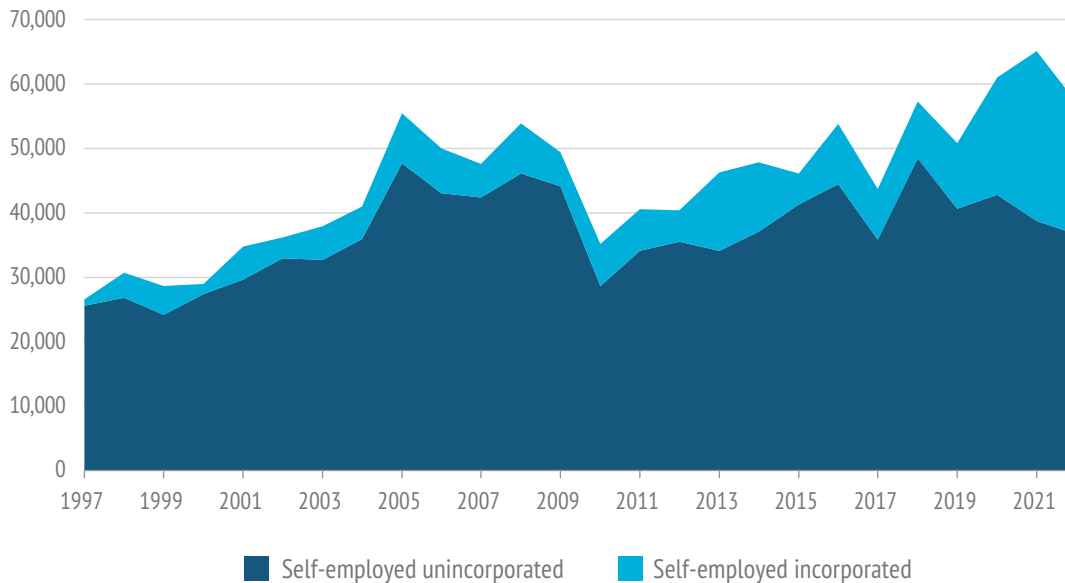
**Table 1. Motor Carrier Authorities Granted, Relative to AB-5**

Before AB-5 2018-2019		AB-5 Enjoined January 1, 2020 – June		AB-5 in Effect July 1, 2022 - Present	
# of New Authorities	% of New Authorities Nationally	# of New Authorities	% of New Authorities Nationally	# of New Authorities	% of New Authorities Nationally
9,751	14.4	30,501	12.2	13,792	14.9
8,981	13.2	34,440	13.7	11,327	12.2
4,966	7.3	18,159	7.2	6,326	6.8

Source: US Department of Agriculture, Agricultural Marketing Service, “Refrigerated Truck Rates and Availability,” last modified August 10, 2023, <https://agtransport.usda.gov/Truck/Refrigerated-Truck-Rates-and-Availability/acar-e3r8>.

Additional data suggests that much of this growth likely came from truckers previously working as independent contractors who formed their own trucking companies and became independent owner-operators. **Figure 13** shows the Bureau of Labor Statistics estimate of self-employed truck and sales drivers in California over time. The bottom portion of the graph shows the self-employed who have not formed a corporation. As **Figure 13** indicates, this share of self-employed drivers decreased, while those who had formed corporations dramatically increased, since AB-5 was adopted. The bottom portion of this graph likely represents a much better estimate of the true number of truckers who would be affected by AB-5. In 2022, there were about 36,600 self-employed unincorporated sales and truck drivers in California. This estimate may miss some drivers working outside the trucking industry but also includes a number of drivers of smaller trucks and vehicles not included in CTA’s estimate of more than 70,000 tractor-trailers drivers.

**Figure 13. Self-Employed Sales and Truck Drivers in California, 1997-2022**



Source: Data from the California Employment Development Department, Labor Market Information Division. Current Population Survey of Households (CPS). To access the data visit the Bureau of Labor Statistics at <https://www.bls.gov/cps/data-overview.htm>. The CPS is a monthly survey of households conducted by the Bureau of the Census for the Bureau of Labor Statistics. It provides a comprehensive body of data on the labor force, employment, unemployment, persons not in the labor force, hours of work, earnings, and other demographic and labor force characteristics.

The statistical data thus far suggests that what we are seeing might be an orderly transformation of business practices into compliance with the law and an improved environment for small business truckers. During our time at the ports and elsewhere, we heard about companies hiring drivers as employees, and we were surprised by the number of employees we met. We also heard from contractors who said they were planning to get their own authority. While a growth in employees would be a clear indication of AB-5's impacts, the reality of whether increased rates of incorporation and an increase in motor carrier authorities actually indicate compliance with AB-5 is still unknown at this point. Despite the grave concerns of some in the industry and some shippers, AB-5 has not yet had any noticeable negative impact on agricultural shipments.<sup>18</sup>

Further uncertainty remains because CTA continues to contest AB-5 and has added an additional legal argument to their challenge. It may be several years before we know the outcome of this challenge and longer still to understand the long-term impacts of the law.



# A Few Additional Notes

## Brokers

We met a number of successful owner-operators and a few employees and contractors who were considering becoming independent. The biggest concern of these drivers by far is brokers who take large cuts or who re-broker loads, leaving the driver little of what the customer is paying.

I use an app, I use a broker, too many ways [to get loads]... The government should give us the ability to negotiate the rate with the shipper, not with the broker. You are like at the end of the story. They throw you a piece of bread full of bites. Sometimes, half the bread is gone. Like a shark bite. Yeah, like you know, the shark always when they bite, they [catch] the whole thing, and they pull it, and see, half is gone. A load broker is like a shark, that full bread is supposed to be mine. Because I pay for the fuel, I paid for everything. Almost half is going to them, because it is not the first time, it is the second or third time [it has been brokered]. And they say, "You don't want it, don't do it, there is somebody waiting here. Just tell me yes or no." And after that, they go on vacation to Hawaii. There are a 100 people like me, and they say, "Ok, man, this is the last time I am asking you, do you want this load or not? Okay, bye, see you next year." That's it.

## Driverless Trucks

Drivers were asked whether they were concerned about driverless trucks. Most did not see an immediate threat to their jobs, but some were worried driverless trucks were not far off and would take their jobs. Among those who were not concerned were those who thought this technology would never work well enough to replace drivers. In general, however, we were surprised by how little information drivers had. They had heard about driverless trucks, but they had more questions than answers.

## Drivers' Messages to the Public

We asked drivers, if they could get a message to the public, what it would be? They said two things over and over.

First, drive better. That means knowing the limitations of big trucks. Don't pull in front of them and slam on the brakes, they can't stop that fast. Slow down, signal, and *put down your damn phone!*

A driver told us a story about a fatal accident he was involved in just a year before. A car driven by a drunk driver crossed the highway. His truck crushed the car and both vehicles caught fire. He tried to rescue the car driver. But he could not get him out. He watched helplessly while the driver burned to death. He was there until the body bag was removed.

I feel no trust, because people are not sharing the road, the people are not caring about truckers. I hope nobody ever goes through that. Everybody passing you, call you \*^@#\$, give you the finger. How much

harder can it be to be a truck driver? We work hard, day and night.... Nobody gives [us] anything. I don't need hot dogs. I don't need @\*^#%\$ b.s. hotdogs, "Hey, trucking appreciation." Driver appreciation. If you appreciate us, do something about it—make sure we are safe.

Another driver had this to say:

I think the public needs to be educated a little better about the trucks and working around them on the highway. I know we are big. I know we are slow. Sometimes we are stinkin', diesel fuel, diesel smoke. We're all just out here working. We're not out here to make your day hard. At the end of the day, you know that trailer back there? I bring beef into California, usually 44,000 pounds of beef. If a family gets a pound of beef a day, I'm feeding 44,000 families for a day. I just don't think people consider that in this day and age. That me-first mentality is all they think about. We're just out here trying to do a job, trying to keep a career going.

## Drivers' Messages to Regulators

Like their thoughts on speed limits and rest areas, drivers want regulators to understand their job better. What makes sense to policymakers and experts in offices won't always work out the way it's intended. Nothing brings this home to truckers more than the way parking and electronic logging devices that automatically track driving time have intersected to make their jobs more stressful and their paychecks lower, not to mention the expensive fines that result, even when drivers are trying to do the right thing.

What I would say to regulators is, come do this for a while and then start making laws: 794 pages of regulations is what we are living under. I think we're the most heavily regulated industry on the planet. And that's all I'm saying, come do my job for a while and then tell me how to do it.

The driver here is referencing the most common printing of the *Federal Motor Carrier Safety Regulations Pocketbook*, "the little green book," as it is called because of its cover. But he's exaggerating: the 5"x7" book is only 656 pages long.

The way experienced drivers see it, the need for more and more rules and regulations is driven by the same problems that cause the constant churn in the labor force. Drivers who aren't paid for their time, balancing safety and pay. Drivers sitting for hours and hours waiting to work. Drivers rushed out into the toughest jobs with poor training.

Experienced, safe drivers see themselves as paying the price for the poor operators and big carriers looking to use the cheapest drivers they can find. We met drivers with millions of safe miles under their belts—to them, that is the proof of how safe they are. They are professional drivers, and no computer and no rule knows better than they do when and how they should drive.

Experienced truckers see the problems underlying the driver shortage and their consequences every day. Some of them have lived with those problems for years, and no one wants them solved more. Truckers have a lot of good ideas about what to do about them, too. But they are also pretty sure no one's going to listen to them.

You as the government, you sit far over there. How can you hear my voice? Maybe they send you guys out with \$25 gift cards: "Give us good information." I know for me, I believe nothing is gonna change. You guys have something to do, [The regulators] have something to do, some extra regulation coming against us. And there is no way they are going to save somebody like me.

# How to Make the Job Better

These policy recommendations are offered to further discussion and review and do not reflect an official position or endorsement by the State of California nor any agency within it, including the funders of this work. These are the recommendations of the authors themselves and of the drivers and industry stakeholders with whom we talked.

## Speed Limits

- ☞ California should review the safety impacts of split speed limits and evaluate the costs and benefits of adjusting the 55-mph speed limitation on all roads.

## Rest Areas and Parking

California has conducted an inventory of truck parking demand and capacity.<sup>19</sup> The state should build on this existing work and prioritize:

- ☞ Adding new public facilities or expanding existing facilities;
- ☞ Working with local governments and private businesses to identify locations where additional truck parking can be accessed, if only seasonally, including existing under-utilized facilities;
- ☞ Creating or supporting the development of a centralized app and monitoring systems to identify available parking opportunities for drivers;
- ☞ Ensuring that, when roadwork and other projects reduce trucking parking, every effort is made to minimize the impact and to ensure drivers are kept informed on those impacts, their duration, and alternatives; and
- ☞ Including truck parking as a priority in infrastructure investments related to zero-emission vehicles.

## Waiting Times

- ☞ Shippers should expand the use of appointment times and apps that allow drivers to schedule appointments and better assess the timing of loads from off site.
- ☞ The state should ensure that all applicable laws regarding compensation for waiting are understood by drivers and ensure employer compliance. California drivers, for instance, may be entitled to separate compensation for non-driving work, including waiting time, if they are paid by the mile.



- ☞ The state should publish information regarding the rights of drivers to minimum wage while waiting. California drivers are entitled to the California minimum wage (or a higher local wage) for all hours worked, including waiting, and non-California drivers are entitled to the federal minimum wage for all hours worked, including waiting, at the federal or their home state's minimum wage, whichever is higher.

## Track CDL Holder Employment

Part of understanding the effectiveness of training grants is knowing what people do with commercial driver's licenses (CDLs) after they get them. Toward that end, the state should:

- ☞ Link Department of Motor Vehicles (DMV) information on CDLs to motor carrier authorities. Motor carriers should likewise be required to report CDLs operating under their authority to the DMV (this information is already required by insurance providers).
- ☞ Driver training programs should have similar tracking requirements. Training organizations should be required to report the number of students they train, the number who receive a CDL, and the license numbers of their trainees to the state's Employment Development Department.
- ☞ This data will allow the state to track the career success of training programs and entry level jobs and prioritize more effective programs for state funding.
- ☞ Such information should also be available to would-be drivers through workforce programs.

## Develop More Effective Local Training Programs

- ☞ In particular, to support the development of successful career pathways into agricultural trucking, the state should work with agricultural trucking companies and local training programs and community colleges to expand and create opportunities for local training that can lead to local jobs that give workers more time behind the wheel in local environments. These programs should be modeled as apprenticeships rather than the "boot-camp" style of many current programs.
- ☞ Such local training programs could feed directly into good local permanent jobs like dairy but also could be timed to coincide with hiring into jobs with seasonal variation, such as tomatoes, where local jobs can provide additional opportunities for appropriate on-the-job training.

## Driverless Trucks

- ☞ The state should continue to work with industry and labor to maximize the benefits of autonomous technology and ensure the costs are not borne disproportionately by truckers.

# Appendix A: Methods

The study methodology and instruments were designed in consultation with agricultural shippers, trucking carriers, relevant state agencies, and survey methodologists. Literature reviews and previous surveys informed survey design. Data was collected through phone calls, Zoom, in-person surveys at multiple sites, and online surveys with participants recruited at multiple sites.

Prior to beginning the study, shippers of agricultural commodities were chosen based on specialty crop status as designated by the Farm Bill and Specialty Crop Block Grant Program. Stakeholder identification and engagement was facilitated by the California Department of Food and Agriculture. During this first stage, interviews were held with industry stakeholders, which included large individual shippers, industry associations, co-ops, processors, and trucking carriers associated almonds, strawberries, carrots, dairy, lettuce, grapes, citrus, broccoli, tomatoes, and other crops. After preliminary issue assessment based on these conversations, the decision was made to focus attention on drivers with Class A commercial driver's licenses (CDLs) hauling refrigerated trailers, with a secondary focus on dairy drivers and field drivers.

Relevant state and federal data were identified, and data requests were made. Data collection—via driver and shipper surveys and in-depth interviews with drivers, shipper transportation managers, and other stakeholders, as well as field observations—was then planned. After consultation with several leading researchers familiar with the trucking industry, the proposed survey instrument was field tested and refined prior to deployment.

## Participants

The sampling population was drivers who haul the crops either into processing fields or out of them. To be eligible to participate, they were either currently employed by a firm, working as a contractor, or an owner-operator operating under their own authority and driving a truck at the time of the survey. They also had to be able to participate in English or Spanish. The two very broad categories of drivers require some elaboration.

One category was “outbound” drivers. Outbound drivers are leaving coolers, packinghouses, and processing facilities and taking finished/value-added agricultural products to national markets, in-state customers, and ports. Non-port destinations in state and national markets could be large distribution centers (typically, grocery warehouses) and processors (e.g., lemons might be going to a lemonade factory).

The other category was “inbound” drivers. These drivers are bringing in the products from the fields and orchards. Inbound drivers could not be interviewed in person because they had no downtime on site. These drivers were invited to answer the same questions online and given a postcard with a unique link to the survey.

## Field Sites

We conducted in-depth interviews at a single-crop processing site near Bakersfield and a major cooling facility near Salinas. We spent 10 days interviewing in June, July, and September 2022.

The questions in the driver's survey included, but were not limited to, the type of commodity and its destination, driver demographics, work history, current job, CDL, owner-operator recruitment, retention, and a health questionnaire for our colleagues at the UC Davis Western Center for Agricultural Health and Safety.

Typically, on field sites, we set up a designated area near the driver check-in section with pop-up canopies, tables, chairs, snacks, and drinks. We operated from approximately 10 a.m. to 6 p.m. daily, targeting the peak shipping period from 1 p.m. to 4 p.m., when truck traffic was notably higher. Our recruitment methods involved approaching drivers after they checked in, taking advantage of their time waiting for a loading dock. This proved to be the best opportunity for engagement, as drivers were more available to participate in surveys before being called to pick up their bill of lading.

When possible, we positioned ourselves between the drivers' parking area and the check-in location of a facility. At the facility with the mobile check-in option, drivers still needed to walk from the parking area to the loading docks and into the facility to complete the check-in process. We approached drivers on their way to check-in and on their way back to their trucks, typically walking alongside them and attempting to recruit them. This approach allowed us to engage with drivers without disrupting their workflow or facility operations. Exact counts of drivers were not possible, but we believe we were able to approach and attempt to recruit approximately 700 drivers over the course of 10 days. With 100 drivers agreeing to participate, we had an approximate response rate of about 15 percent. The primary reason drivers gave for not participating was a lack of time. Many of the drivers who refused to take the full survey did spend at least a few minutes talking with the interviewers. Some drivers were concerned they might get called into a dock, others were anxious to get some sleep while they waited. A significant number of drivers indicated lack of fluency in English or Spanish as their reason for not participating. Some drivers expressed concerns about privacy, including immigrant drivers working off the books for cash.

Weather was a significant factor in our ability to recruit drivers. For safety reasons, interviewers were not allowed to get inside trucks to conduct interviews. At the site near Bakersfield in June, car thermometers read as high as 128 degrees in the truck parking area. Many drivers cited the heat as the main reason they did not want to participate in the interview.

There was a modest financial incentive to truckers who were selected and who completed the driver survey during the June surveying period. We began with a \$25 gift card to Target and eventually increased the incentive to \$75 to encourage greater participation. The increased incentive did not appear to increase the yield.

The fastest our in-person survey could be done was about 30 mins including consenting, collecting contact information (for those who agreed), and giving them their gift cards. Most interactions with interview participants lasted between 45 minutes and one hour.

A bilingual team of up to five people would ask the questions and input the answers on an iPad in real time. We encountered difficulties in interviewing Punjabi-speaking drivers due to language barriers. There were also smaller numbers of Asian, African, and European drivers uncomfortable interviewing due to language issues. These immigrant drivers constituted approximately 20 percent of the population we were unable to interview. Our bilingual field researchers conducted all interviews with Spanish-speaking drivers in Spanish and translated their answers into English for the survey.

We also recruited for the online survey in September and October 2022 at a number of sites in the Sacramento and San Joaquin Valleys and the Port of Los Angeles. We distributed 3"x5" cards to outbound drivers, port drivers, and some dispatchers. One side of the card was printed in English, the other in Spanish. Each card had a QR code containing the anonymous survey link (for smart phone users), the actual anonymous survey URL



below it (for non-smart phone users), and a unique six-digit number (generated randomly by an online tool). The background was similar to what we used for our in-person signage. Again, our sample population was anyone who was driving a truck hauling some form of agricultural commodity and could speak and read English or Spanish.

The survey we distributed online contained the same questions as the in-person interviews. The only major differences were how the participants would input data. We changed mobile-friendly slider bars to text entry because they were challenging for unfamiliar users. In addition to those changes, the participant had to read the consent form and click “I Agree” in order to proceed. Following the survey, they were asked if they wanted to receive the gift card for \$75. If they chose no, then the survey would end. If they chose yes, they would select whether they wanted to receive the gift card by mail or email. They were then taken to the separate anonymous survey where they were prompted to enter the unique six-digit number from their card as well as their personal information.

Personal information was not linked in any way to survey answers. In order to prevent long-term storage of personal data, responses were downloaded, gift cards sent, and contact information deleted at the beginning of each week.

About 350 recruitment cards were distributed at approximately a dozen facilities with in-bound drivers in the Sacramento and San Joaquin Valleys and the city of Salinas. Again, the challenge with in-bound drivers was that their work routine rarely gives them more than a few minutes of time in which to talk. Some cards were handed directly to drivers with a brief explanation of the study as the drivers stopped to hook and unhook trailers. Others were dropped with employers. In early October 2022, an additional 500 cards were distributed at a terminal at the Port of Los Angeles by a two-person team with one English speaker and one bilingual Spanish speaker. The team set up at the terminal gates and were able to briefly describe the study to drivers while handing out recruitment cards with unique identifier links. Longer stops at the gate by drivers allowed for many short conversations, but in general, there were few significant lines or waiting at the port terminal.

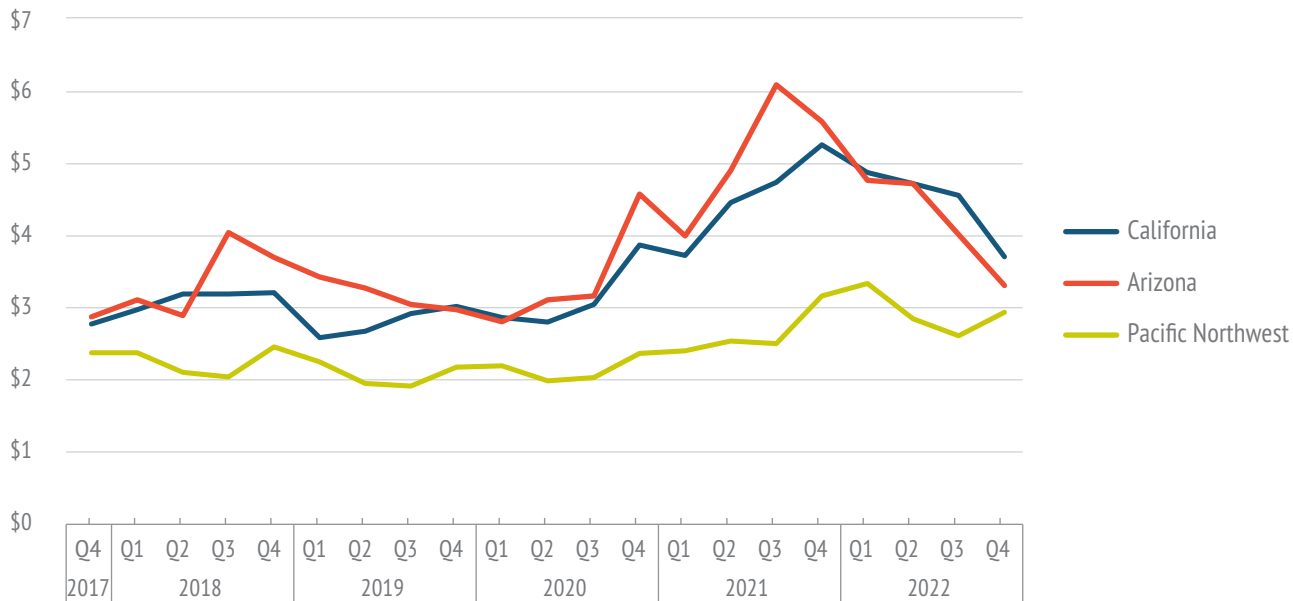
The instrument for recorded interview responses and the online interview was built in Qualtrics on UC Berkeley servers. The survey was run on iPads using anonymous links that were reusable. The iPads were Wi-Fi enabled, and we used a mobile hotspot to connect them to the internet for real-time data entry and storage. On a few occasions, we had issues with the internet and switched to paper copies. The data from the paper copies was ultimately entered into a new survey, and the paper survey was destroyed.

When drivers gave their consent, in addition to the survey we audio recorded responses to questions using a voice recorder with a memory card. The purpose of this recording was to capture the range of answers that went beyond the limited and prescribed responses built into the survey. We knew from previous research that this population would be engaged with the topics that directly concern them and were likely to provide thoughtful and deeper explanations of the issues. It also allowed for a record of answers that followed prompting questions or follow-up questions to answers given. On some occasions, drivers who didn't have their answers audio recorded were approached for a more open-ended interview. This valuable data was transcribed and coded. Memory cards were then deleted. All anonymous quotes in the report were collected this way.

Driver portraits and the associated quotes were collected by James Year, who was working on a separate project under a different IRB protocol focused on the impact of automation. Mr. Year was sometimes working at the same field site as our team but recruited participants and conducted his work with a different process and in a separate area from our interviews. None of the drivers photographed or interviewed by Mr. Year were compensated.

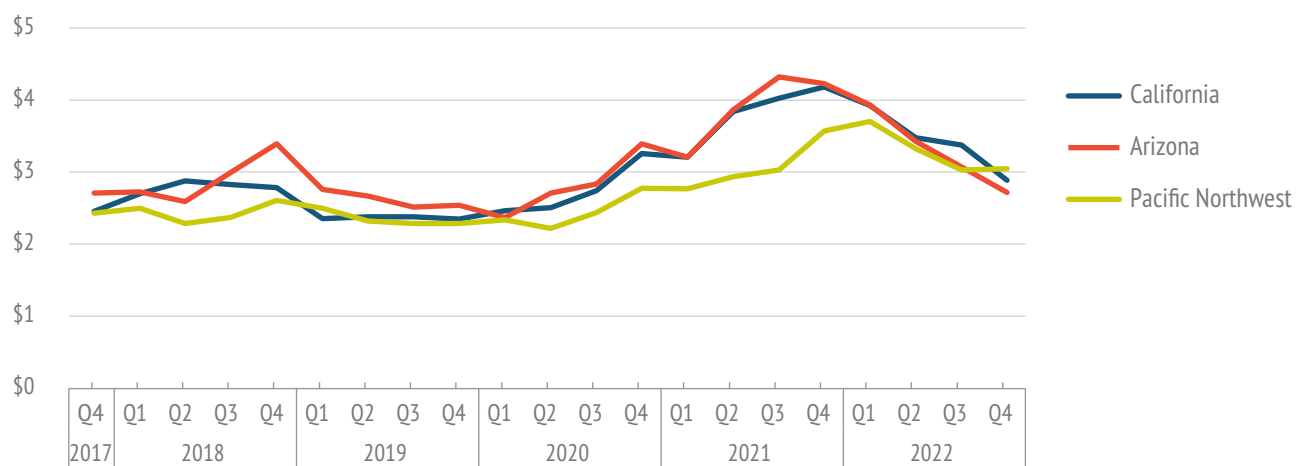
# Appendix B

## Refrigerated Trucking Rates 501-1000 Miles



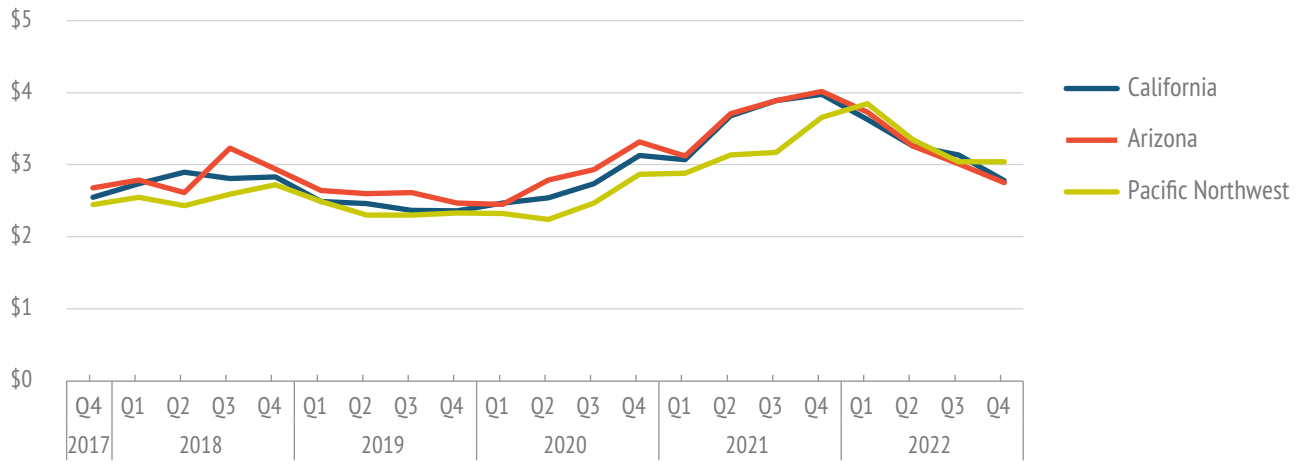
Source: US Department of Agriculture, Agricultural Marketing Service, “Refrigerated Truck Rates and Availability,” last modified August 10, 2023, <https://agtransport.usda.gov/Truck/Refrigerated-Truck-Rates-and-Availability/acar-e3r8>.

## Refrigerated Trucking Rates 1001-2500 Miles



Source: US Department of Agriculture, Agricultural Marketing Service, “Refrigerated Truck Rates and Availability,” last modified August 10, 2023, <https://agtransport.usda.gov/Truck/Refrigerated-Truck-Rates-and-Availability/acar-e3r8>.

## Refrigerated Trucking Rates 2501+ Miles



Source: US Department of Agriculture, Agricultural Marketing Service, "Refrigerated Truck Rates and Availability," last modified August 10, 2023, <https://agtransport.usda.gov/Truck/Refrigerated-Truck-Rates-and-Availability/acar-e3r8>.



# Endnotes

- 1 A number of class action lawsuits have alleged minimum wage violations by large long-haul refrigerated carriers in recent years. Recently the right of drivers to take these cases to court was affirmed by the Supreme Court of the United States in *New Prime Inc. v. Olivera*, [https://www.supremecourt.gov/opinions/18pdf/17-340\\_o7kq.pdf](https://www.supremecourt.gov/opinions/18pdf/17-340_o7kq.pdf).
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- 12 Mark Schremmer, April 28, 2022. “Buttigieg: 300,000 truckers leave industry every year,” <https://landline.media/buttigieg-300000-truckers-leave-industry-every-year/>.

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18 **Appendix B** contains additional data freight rates before and after AB-5 for California compared to other states. Those data also do not suggest any significant effect of AB-5 going into effect.

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