



Driver Detention Times in Commercial Motor Vehicle Operations

The purpose of this project was to better understand the nature of detention times in the commercial motor vehicle (CMV) industry. Detention time refers to the time that CMV operators may experience at shipping and receiving facilities associated with loading and unloading cargo. Detention times can have safety and operational impacts, including hours-of-service (HOS) violations. The industry commonly defines detention time as any time drivers have to wait beyond 2 hours, which is the average time it takes to load or unload cargo. Two third-party vendors provided data collected on approximately 31 carriers with over 1.3 million stops.

This research conducted a descriptive analysis of detention times by type and size of carrier. The specific research questions addressed during this phase included:

- How often are detention times experienced by drivers?
- What are the average detention times incurred by trucking operation and size and type of cargo?

RESULTS

Results indicate that drivers experienced detention time during approximately 1 in every 10 stops for an average duration of 1.4 hours. This represents the length of time the driver was detained beyond 2 hours; thus, the driver was physically at that delivery location for 3.4 hours in total. Figure 1 displays the distribution of stop times for all drivers who participated in the current study.

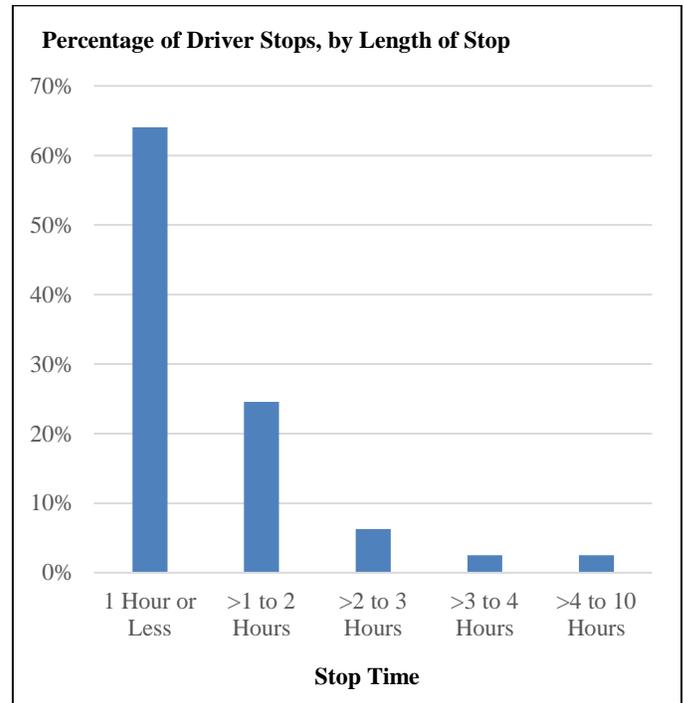


Figure 1. Bar chart. Distribution of all stop times between 30 minutes and 10 hours.

Detention Times and Operation Size

Medium-sized carriers (51–500 power units) had similar average detention times as large carriers (more than 500 power units); however, they experienced driver detention about twice as often as large carriers. For example, 19 percent of stops made by medium-sized carriers were accompanied by detention time as compared to 9 percent of stops made by large carriers. The calculation of odds ratios (ORs) indicated that the odds of a driver being detained were 2.17 times greater for medium-sized carriers than for large carriers. Figure 2 shows the distribution of detention times by operation size.

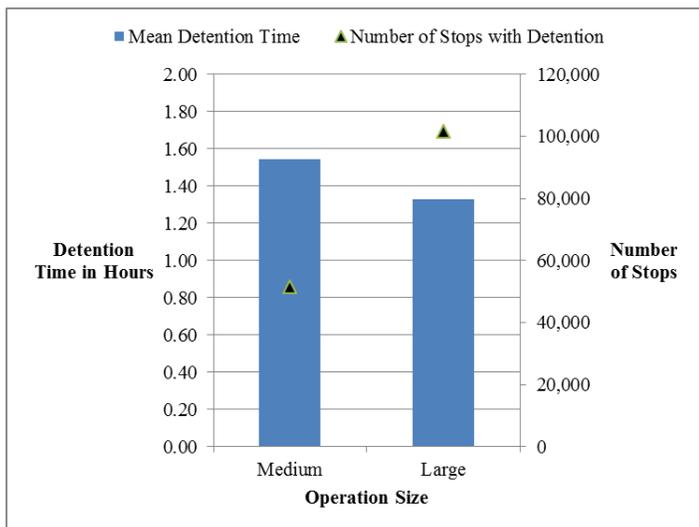


Figure 2. Bar chart. Average detention times and number of stops, by operation size.

Other research suggests that large carriers may experience less frequent driver detention times because they have more leverage to include detention fee clauses in their contracts with shippers. For this study, data was not collected on any existing disincentives for detention time that may have been in place.

Detention Times and Operation Type

Operation type did not have much impact on the average length of detention time, with all three operation types having fairly similar average detention times. However, operation type influenced how frequently drivers were detained, with for-hire truckload (TL) carriers experiencing detention time more than twice as frequently as for-hire less-than-truckload (LTL) carriers and four times more frequently than private carriers. The OR analysis showed that the odds of a driver being detained were nearly 5 times greater for for-hire TL carriers than for private carriers and 2.6 times greater than for for-hire LTL carriers. Private carriers experienced detention time on 5 percent of the stops they made.

Detention Times and Freight Type

Temperature controlled trailer (reefer) drivers experienced longer and more frequent detention times than other freight types. The current study also found that van freight (dry goods) carriers were almost on par with reefer carriers for duration and frequency of detention times. Reefer and van freight types had the longest average detention times at 1.7 hours and 1.6 hours, respectively. Carriers of these freight types

experienced detention time on more than a quarter of the stops they made.

Limitations

Although the data set used in the analyses to assess average detention times was large and provided information for more than one million stops, there were several limitations. First, the third-party vendor data was from a relatively small number of carriers, which may not provide an accurate representation of the entire trucking industry. Second, there was a lack of data from small carriers, with the data set only containing information from two small carriers. The data set contains a large, unidentified number of owner-operators working as contractors for medium and large carriers; however, these do not represent traditional owner-operators, as they are working under the umbrella of the medium or large carriers. The Government Accountability Office (GAO) report suggests that the effects of detention time would be worse for owner-operators for a number of reasons. For instance, owner-operators' pay structure is typically based on actual driving time (i.e., they are paid by the number of miles driven or loads delivered), so these drivers do not get paid for time spent waiting to load and unload. Small carriers and owner-operators may also lack the leverage to charge detention time fees to the shippers when they are detained.

FURTHER RESEARCH

Although the effect of detention time on performance metrics can be calculated, more information is needed in this area. The next phase of this research will assess the safety and operational impacts of driver detention time on work hours, HOS and out-of-service (OOS) violations, and crashes. The project will include focus groups to assess driver, carrier, and shipper opinions and perceptions regarding detention times and potential means that could be used to reduce detention times.

To read the complete report, please visit: <http://ntl.bts.gov/lib/54000/54300/54378/13-060-Detention-508C-Dec14.pdf>.