

Hours of Service (HOS)

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Background

Changes to the current Hours of Service (HOS) Rule took effect in July 2013. The new regulation was established to increase transportation safety related to commercial motor vehicles (CMV). As noted by its name, HOS specifies the amount of time a CMV driver can operate this type of vehicle in any given day or week. Over the years, many organizations have debated highway safety, arguing for stricter policies and procedures on the trucking industry. According to the U.S. Department of Transportation (DOT), motor vehicle crashes are the leading cause of death among Americans 1-34 years old. Of these crashes, the DOT estimates that commercial motor vehicles are involved in one out of every eight traffic fatalities (FMCSA, Commercial Motor Vehicle Facts, November 2011). Data from the Advocates for Highway & Auto Safety report that large trucks are involved in fatal multiple-vehicle crashes at twice the rate of passenger vehicles (The Dangers of Large Trucks, 2005). These facts are some of the compelling reasons why the federal government has been engaged in constructing and implementing policy to increase highway safety. One of the outcomes of these efforts was the creation of HOS. The regulation was aimed at decreasing the amount of CMV accidents due to driver fatigue.

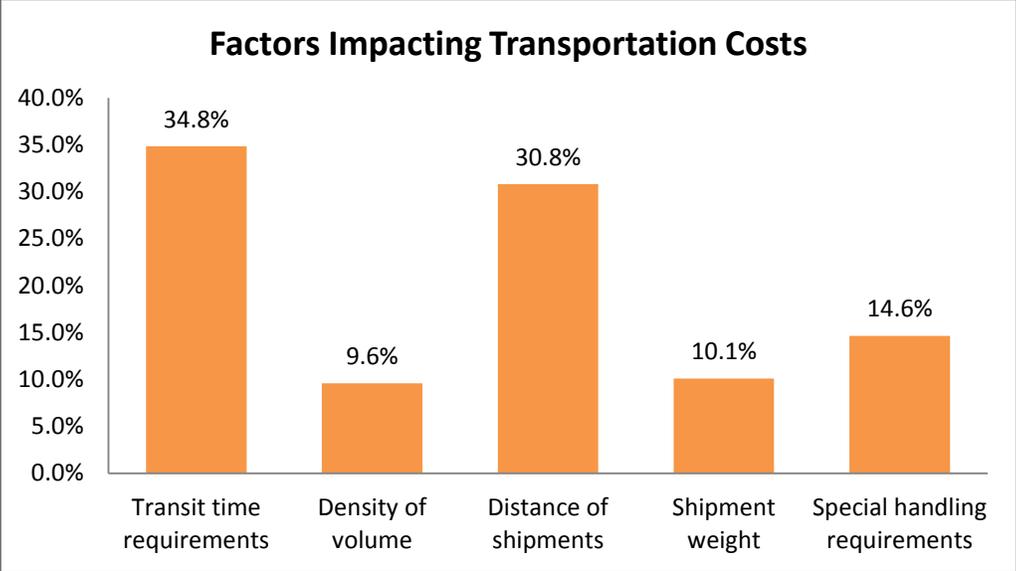
In addition to the benefits that have resulted from the regulation, previous research has shown there have also been some negatives. Primarily, these include increased transportation costs and decreased transportation efficiency resulting from the HOS demands for more driver break time. Because drivers have less hours to accomplish the same amount of work, excess capacity is demanded, which lowers productivity and ultimately leads to higher costs for both the carrier and shipper.

Therefore, when changes to the current HOS Rule were passed shippers and carriers alike anticipated that there would be further negative impact to productivity. However, the affect has primarily been estimated. The purpose of this study is to quantify the impact of the changes to the HOS Rule to date.

The study was conducted in late October, at which time the rule changes have only been in place for approximately 3 months. A short survey was sent to members and affiliates of the University of Tennessee’s Global Supply Chain Institute and to subscribers of *Logistics Management* magazine. A total of 417 companies, primarily representing the manufacturing sector, participated in the survey. The results are presented below.

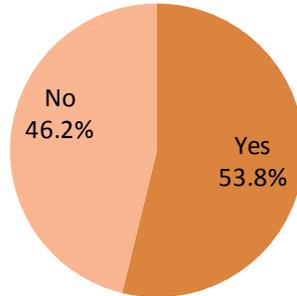
Factors Affecting Transportation Costs

In order to better understand how/why the HOS Rule change will impact transportation productivity, we asked companies to indicate which factors primarily affect transportation costs. As the figure below indicates, transit time requirements and distance of shipments are the two primary cost drivers. Changes to the HOS Rule will affect both of these factors. The biggest change on July 1st of this year was a reduction in the number of hours a driver is allowed to log in a 7-day (168-hour) period, due to changes in the 34-hour “restart” provision. The previous rule allowed a driver to work right up to his/her 60- or 70-hour limit, take a 34-hour restart, and then begin again. This enabled drivers to accumulate up to 82 working hours in a 7-day period. Also, a driver must have a 30 minute rest break at the end of his/her eighth hour before resuming driving. The break must be spent “off duty” (e.g. in a parked vehicle) and/or in a sleeper berth. While all types of transportation moves are sensitive to transit time requirements (e.g. short haul, one-way, dedicated), the results of our survey indicate that the changes to the HOS Rule will be the most impactful to long distance moves.



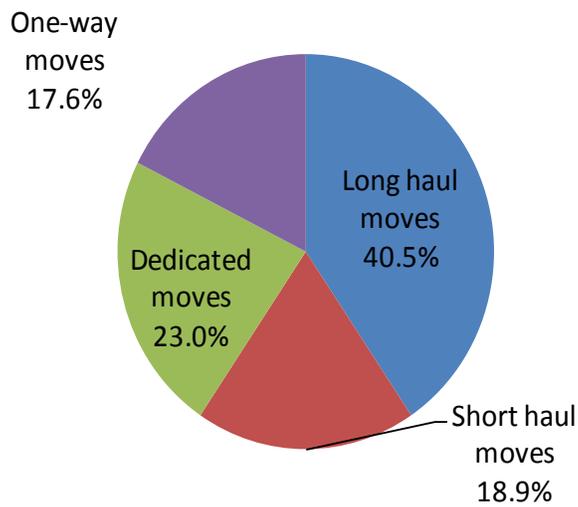
Approximately 54 percent of the companies that participated in the study anticipate making changes to their distribution operations in response to changes in the HOS Rule change.

Anticipating Changes to Distribution Operations

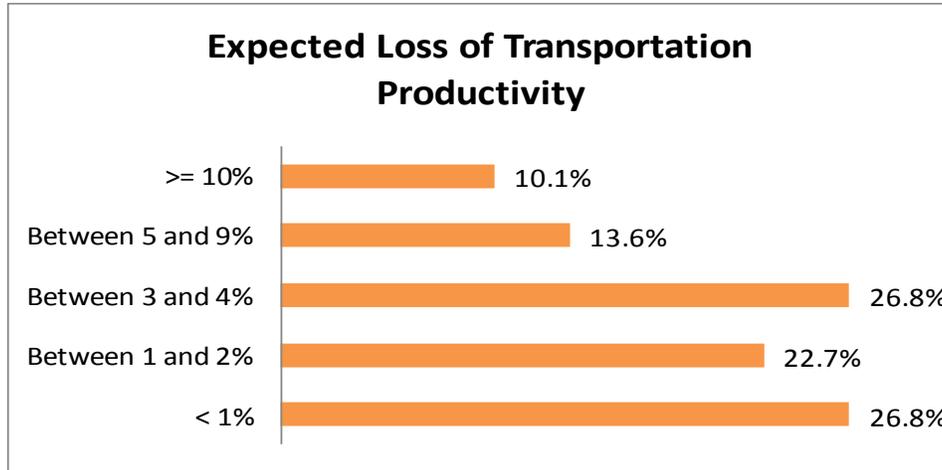


The data from the survey indicate that the type of transportation that has principally been affected by the HOS Rule change is long haul moves (reported by 40.5 percent of respondents). The impact to dedicated, short haul, and one-way moves has been much less.

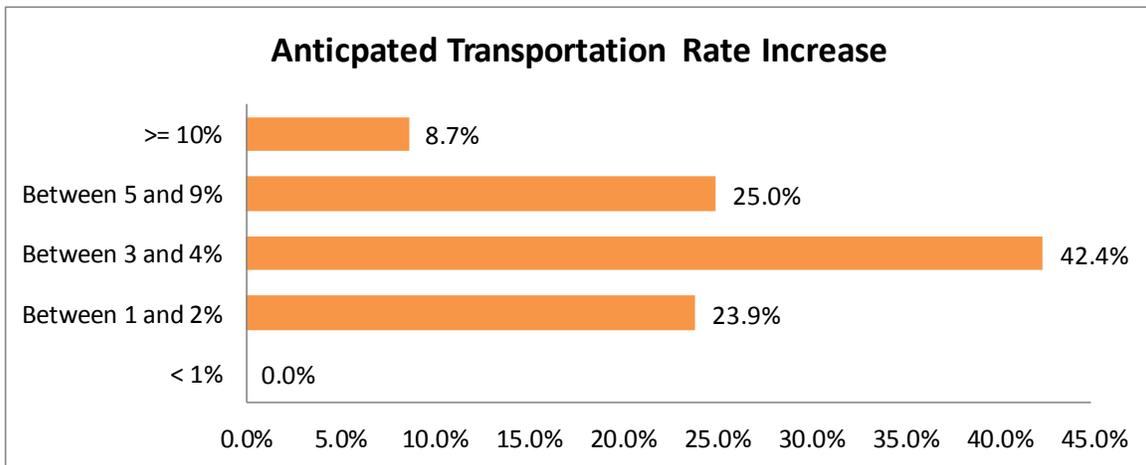
Type of Transportation Impacted by HOS Rule Change



The data indicate a somewhat a “split jury” on the impact of the HOS Rule change on transportation productivity. As the chart below indicates, some 27 percent of respondents anticipate that there will be less than a 1 percent loss of productivity. Almost half of the respondents expect to have between a 1 to 4 percent loss of efficiency.

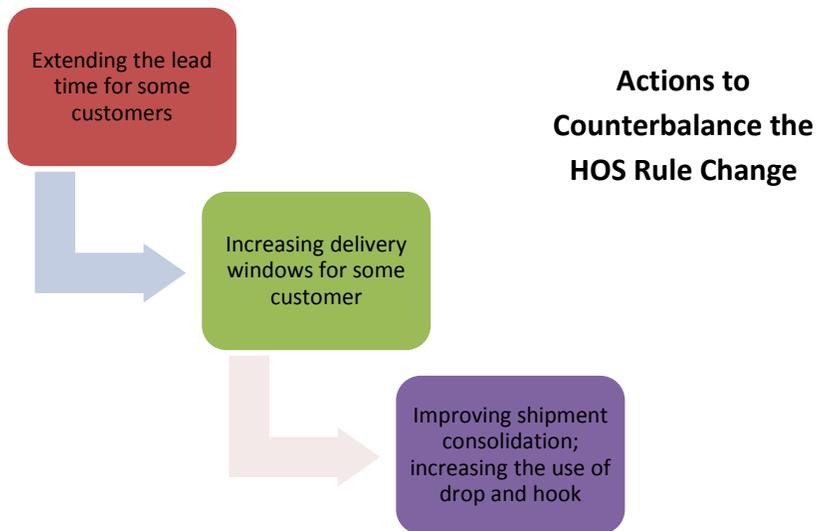


As a result of the HOS Rule change, 47.0 percent of the companies anticipate an increase in carrier rates. Only 10.6 percent do not think this will happen, while the remaining 42.4 percent are not certain about what the future holds in terms of rate increases. It is our belief that the latter group is in denial about what's going to happen. Rate increases will be coming. It's just a matter of how much.



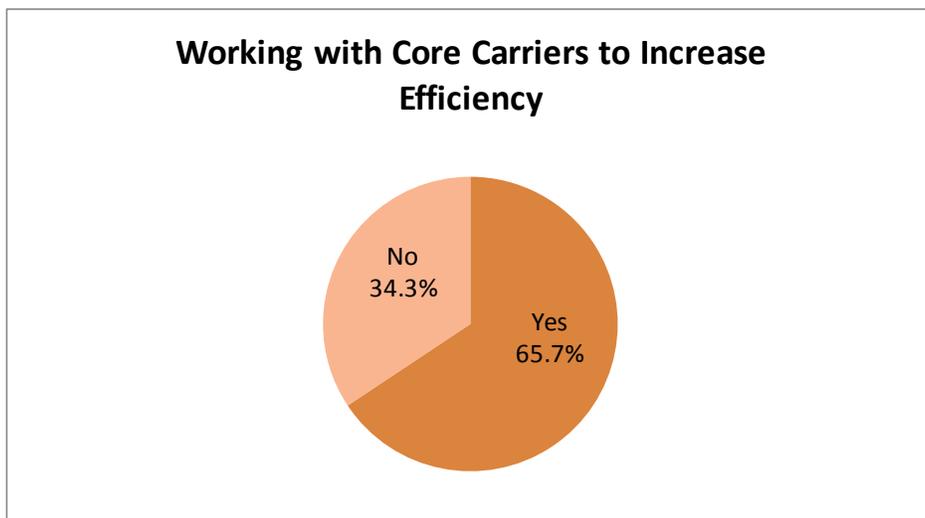
Interestingly enough, 57.7 percent of companies expect to pass the transportation rate increases through to their customers. We feel that this is unrealistic in the current economy. Many companies will work with their core/strategic carriers to "offset" these rate increases to the extent possible, but it is obvious that the loss of productivity cannot be absorbed by the carriers. Shippers will have to improve their operations in order to minimize the HOS Rule change impact.

We asked survey respondents to indicate what actions they were planning to take to improve operating efficiency in response to the HOS Rule change. Respondents were provided a list of 22 items with the ability to check all that were being considered. The results indicate that the number one action planned was extending the lead time for some customers. Some 55.3 percent of the survey respondents indicated that their companies would be pursuing this venue. This is clearly the primary plan as the second through fourth initiatives shown in the chart below rank lower in priority.



Survey respondents indicated that they anticipate that the implementing the first two actions will be “somewhat effective” in countering the productivity loss from the Rule change. Although they were ranked as the third and fourth actions to be implemented, respondents reported that improving shipment consolidation and increasing the use of drop and hook will be more effective in counterbalancing the productivity losses than the first two items. If they are deemed to be more effective, why are they lower on the priority list? Possibly because they are more difficult to implement and they require larger changes to operations than the first two action items.

Just as interesting is what’s not being planned. That would be implementing multi-company collaborative shipping. Only 4.9 percent of companies indicated they would pursue this plan of action. Carriers play a critical role in helping their strategic partners continually improve the efficiency of their transportation operations. The data indicate that a sizeable majority (65.7 percent) are currently working with their core/strategic carriers in this area. Only 51.1 percent believe that these efforts will mitigate the impact of the HOS Rule change.



Recalling the survey results which indicated that long haul moves have been the most impacted, we expected that many firms would seek to move freight volume to intermodal. This is clearly not going to be the case as some 70.1 percent of companies indicated that they will not shift freight to intermodal.

In summary, we believe that the loss of transportation productivity will result in a need to hire more drivers to accomplish the same amount of work. The industry is already experiencing hiring pressure due to an aging driver workforce and the impact of the Compliance, Safety and Accountability regulation of 2010. Taken together, the effect of the regulation will be an increased shortage of drivers available to transport shipments in 2014 and beyond. This shortage will cause higher driver turnover rates, which will ultimately lead to higher costs for both carriers and shippers. The results of this study suggest that indeed will happen.

Future Research

This study was conducted a short time after the implementation of the changes to the HOS Rule. We are planning to conduct a follow up study at the end of June to determine how the new regulation has influenced how carriers and shippers manage transportation.