

Rocky Mountain Log Hauling Rates



About the Project

The Bureau of Business and Economic Research is conducting an ongoing log hauling cost study to characterize Region 1 log hauling costs. Additionally, a Biomass Research and Development Initiative-funded project at the University of Montana examining logging and biomass energy harvest is seeking to quantify log hauling in Region 3.

Objectives

This study characterizes Rocky Mountain log hauling costs by:

- Updating haul cost estimates for Region 1
- Comparing a small sample of haul costs in Region 3 to those in Region 1 to see if rates are transferrable

Methods

In 2018, a survey was mailed to 332 independent logging contractors and timber harvesting companies in Region 1 asking for cost estimates for log haulers. A total of 28 usable responses were collected (8% response rate). A similar survey was mailed to 5 contractors in Region 3, and received 3 responses (60% response rate). Responses for Region 3 were benchmarked against responses from Region 1 to assess similarity.

Survey participants were asked about haul rates, employment numbers, volume hauled in the previous year, fuel efficiency, electronic log book use, and how haul rates are determined.

Table 1. The calculated daily cost for a single truck was \$1,120.92 in Region 1 assuming an 11-hour day and \$1,090.35 in Region 3 assuming a 10.7-hour day. This cost includes a 15% rate for overhead and profit. Machine rate assumptions: ^aCost of loan; ^bPercentage of purchase price; ^cRelative to fuel cost (\$); ^dMaintenance is 50% of depreciation.

Labor & General Costs		Fixed Costs		Variable costs	
Hours/year	1,500	Purchase price	\$200,000	Horsepower	550
Fuel cost	\$3.00/gal	Salvage value	15% ^b	Fuel	5.1 MPG
Interest Rate	7.5% ^a	Insurance	\$6,600/year	Lubrication	40% ^c
Utilization	90%	Taxes and permits	\$2,640/year	Maintenance	50% ^d
Labor and benefits	\$28/hour	Machine life	7 years	Tires	\$7,250/year

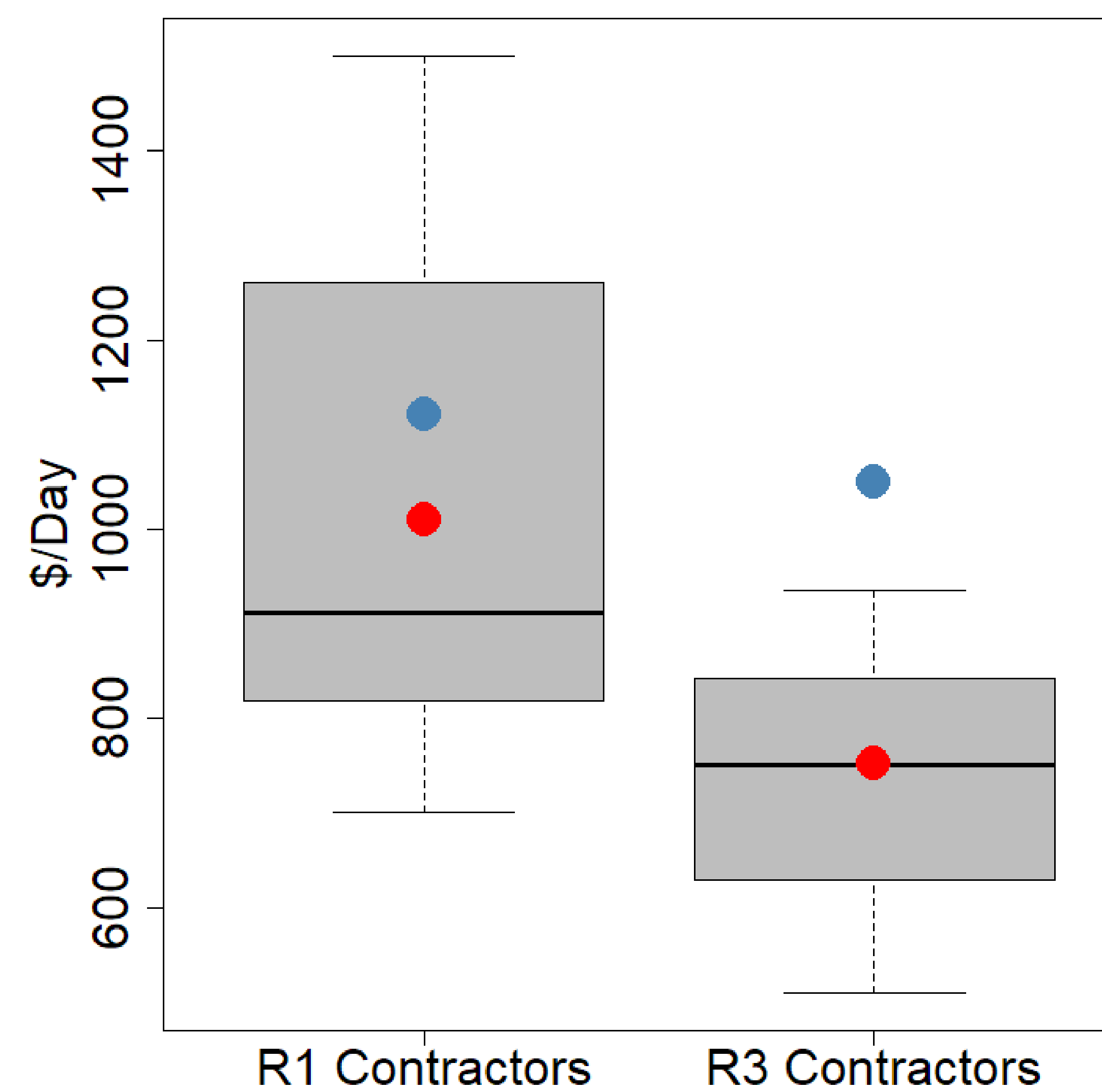


Figure 3. Box plots with the mean (red dots) of the reported daily rate for a single truck for Region 1 (R1) and Region 3 (R3) and our calculated machine rate daily cost based on average reported hours worked (blue dots).

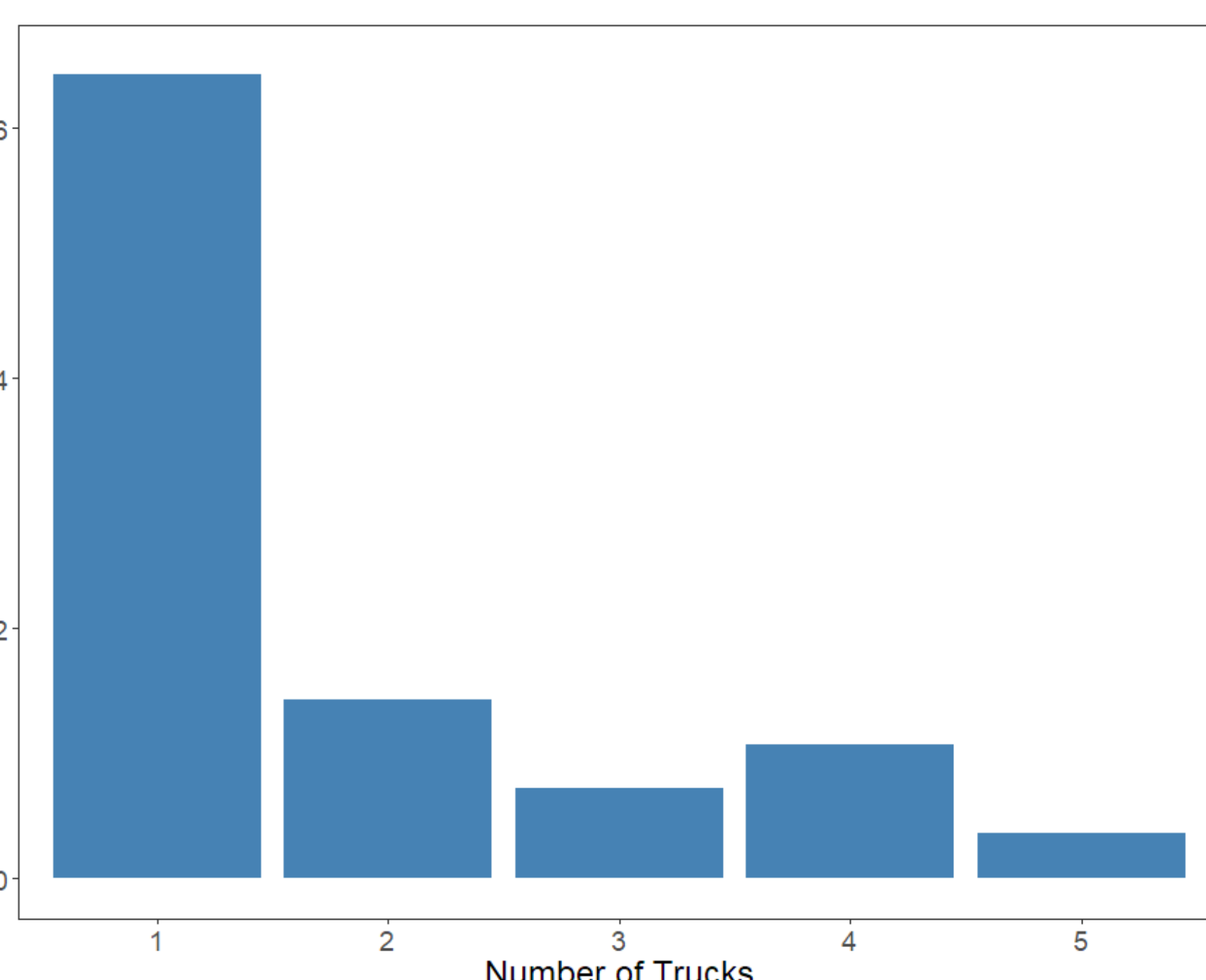


Figure 1. The distribution of the number of trucks each contractor owns for Region 1.

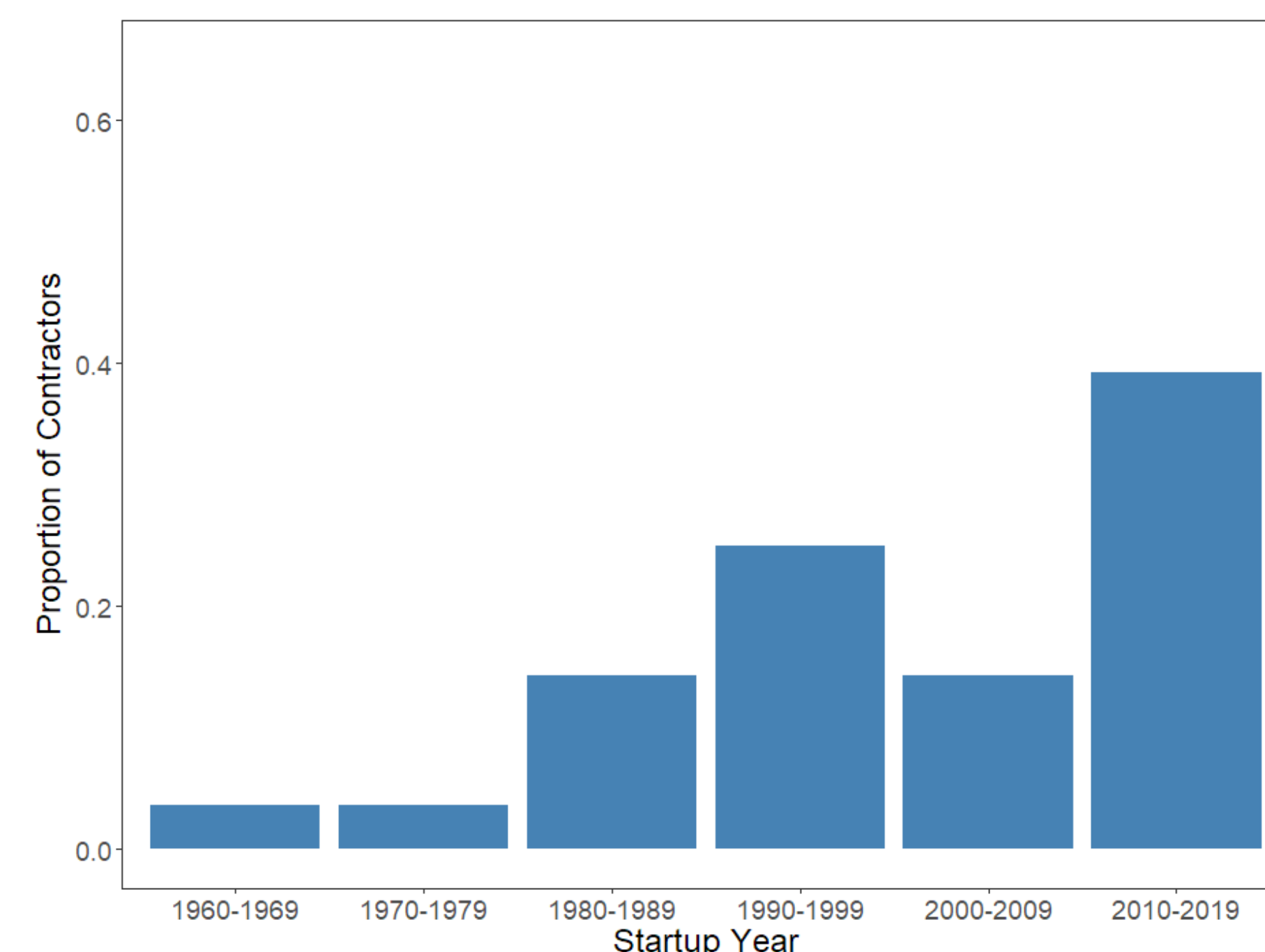


Figure 2. The distribution of the year each contractor started operating in Region 1.

RESULTS

- The majority of contractors in Region 1 (64%) are single truck outfits with one driver (figure 1).
- Nearly 40% of respondents in Region 1 have been in business for less than 10 years (figure 2). This is likely a representation of economic recovery.
- The average reported daily rate for a single truck was \$1,010 in Region 1 given an 11-hour day and \$752 in Region 3 given a 10.7-hour day (figure 3). Hourly rates were \$91.83 and \$70.31 respectively. These two groups were not statistically different from one another ($p=0.20$).
- The average work day lasted 12.9 hours in Region 1 and 10.7 hours in Region 3. Legally, drivers are limited to a maximum of 11 hours of driving time per day.
- The average one-way haul distance was 100 miles in Region 1, and 43 miles in Region 3.
- Electronic log books are unpopular, with only 2 respondents (7%) reporting usage.

SURVEY RESPONSE COMMENTS

Surveys asked contractors an open-ended question regarding the impact of regulations on their business. Below is a selection of typical responses.

- “GVW cost going up, insurance costs going up, fuel costs going up, parts cost going up, cost of living going up...”
- “Shortage of qualified drivers - some drivers have quit driving citing they are tired of dealing with the new regulations, others have been regulated out...”
- “They [regulations] haven't really had an impact on us yet. Fuel is a big problem with it going up and down and our haul rate stays the same.”
- “Hours of service don't work for logging due to off road times [hauls] can be very long-5 miles can take an hour one way sometimes. Logging is part of agriculture and should be treated as agriculture.”