7. FINANCIAL IMPACTS TO SMALL CARRIERS

This chapter, which constitutes the small business impact analysis, considers firm impacts on long-haul truckload carriers in seven size categories, which are shown below with estimates of the number of independent firms falling into each:[52] [53]

- 1 tractor (32,800 firms)
- 2-9 tractors (9,800 firms)
- 10-19 tractors (3,500 firms)
- 20-50 tractors (3,500 firms)
- 51-145 tractors (1,800 firms)
- 146-550 tractors (600 firms)
- 550+ tractors (150 firms)

Carriers in the first five of these categories generally qualify as small entities under criteria established by the Small Business Administration (i.e., annual revenue of less than $21.5 million) for all North American Industrial Classification System (NAICS) codes falling under the truck transportation sub-sector (NAICS 484). Carriers typically exceed this threshold when they operate about 145 tractors or more.[54] The largest two categories encompass those long-haul carriers that do not qualify as small entities under the SBA criteria. The specific size categories enumerated above are intended to reflect natural groupings or breakpoints in terms of firm behaviors and economies of scale.

For representative carriers in each size category, the study estimated the financial impact of each HOS rule option in terms of the change in net income (in 2004$) to the carrier,[55] as well as a change in their profits as a fraction of operating revenues. The approach used to estimate these impacts, which involved the development of a pro forma financial model of firms of different sizes confronted by changes in productivity, wages, and prices, is presented in detail in Appendix H of the 2003 RIA. The distribution of carriers by size category is summarized in Chapter 3 of that RIA.

This analysis used two industry-specific data sources in developing the firm-level data inputs to the general pro forma model. Annual TTS Blue Book financial data was used as the basis for determining the impact of the change in hours of service regulations on a variety of firm sizes. However, the Blue Book data only includes firms with revenues greater than $3 million per year (approximately 20 tractors). For firm sizes less than this, data from the Risk Management Association (RMA) were used for firms with $0 to 1 million (assumed to represent firms with 2-9 tractors) and $1 to $3 million (assumed to represent firms with 10-19 tractors).

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[52] Impacts on the private fleets are not expected to be significant. In the case of private fleets, firm impacts generally will be relatively small because trucking comprises only a small portion of firm activities. Furthermore, the options have only slight, and positive, effects on SH costs relative to the baseline (2003 rule).

[53] See Chapter 3 and Appendix A of the 2003 RIA for details on the method used to prepare these estimates.

[54] Based on analysis of data from the TTS Blue Book. This implies total revenue (i.e., from trucking plus other value-added services) averaging approximately $145,000 per tractor across all firm sizes.

[55] Representative carriers for the four largest size categories were selected on the basis of having the median value in the category for profitability (as measured by the ratio of net income to total revenue).

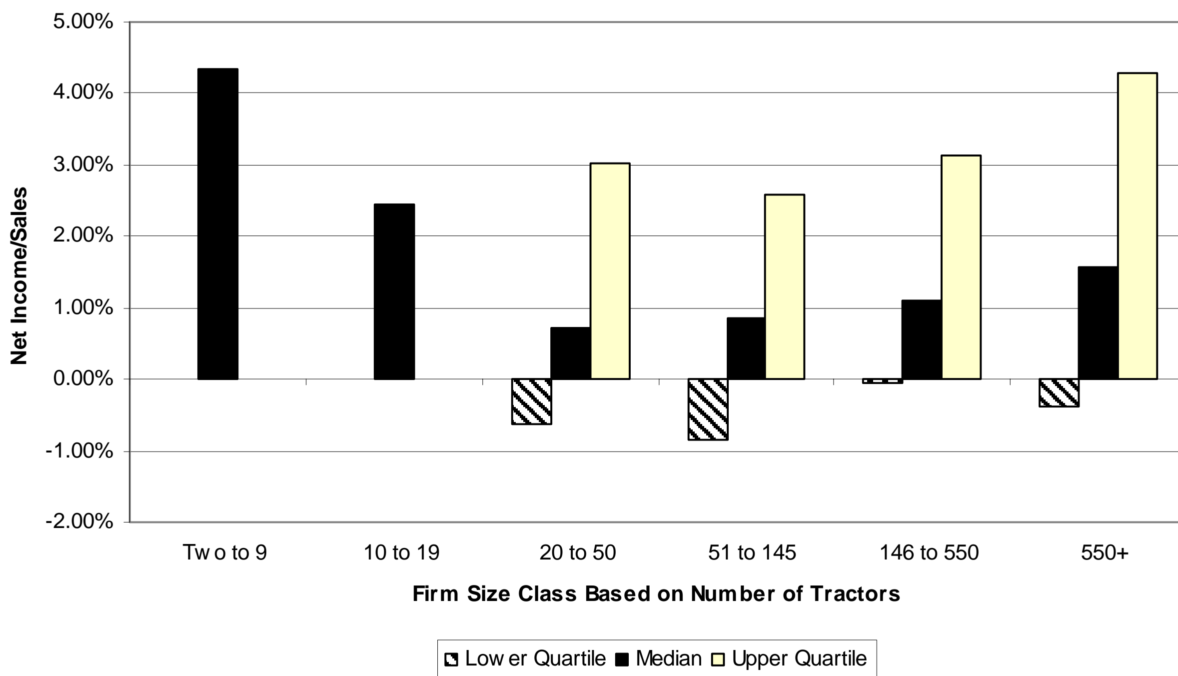
Exhibit 7-1 summarizes the baseline profitability of carriers in the various size categories. Note that Exhibit 7-1 (like many of the remaining exhibits in this chapter) does not address firms in the smallest size category (i.e., owner/operators with a single tractor) because the results for these entities require a slightly different interpretation than the results for other size categories and they are addressed separately in section 7-3.

The remainder of this chapter is divided into three sections. Section 7.1 provides an overview of the results of the impact analysis. Section 7.2 organizes the results by regulatory option. Section 7.3 organizes the results by different carrier size categories.

7.1 Summary of Results

This chapter presents the results of a study of the financial impacts of Options 2, 3, and 4 relative to Option 1, under two assumptions about prices of trucking services: unchanged prices (representing the short run), and prices after industry-wide cost changes have been passed through to consumers. Relative to Option 1, all of the other options result in adverse financial impacts (reduced profits) on most carriers. The severity of the impacts is directly related to the magnitude of the drop in labor productivities considered for the three options. As another point of comparison, however, carrier profitability under each of the options is also shown under the state-of-the-world that existed before the 2003 rule came into effect. This state is referred to as the "Pre-2003 Situation." Comparing the impacts of the new options to this situation provides additional perspective and may be more realistic in some cases since it is unclear if all carriers have had enough time to adjust to the 2003 HOS rule.

Exhibit 7-1
Baseline Profitability of Representative Carriers



Option 2 (with a 0.1 percent drop in labor productivity), shows the least severe adverse impacts.[56] In the period before prices adjust, profitability as a share of revenue is projected to decrease by a tenth of one percent or less, relative to Option 1 These very minor impacts should be reduced slightly as prices adjust. Option 3 (with a 7.12 percent drop in labor productivity) has the most severe impacts on carriers, and could eliminate net income in the short term for some industry size categories. The impacts are less severe, however, when measured in terms of profitability as a share of operating revenue. The biggest impact of 2.6 percent is felt by the 20-50 size class before prices adjust. Option 4 (with a 4.61 drop in productivity) shows impacts that are in-between the two extremes (i.e., Option 2 and Option 3). These findings are consistent with the cost results presented in Chapter 6. (See Section 7.2 for further discussion of the results by option.)

The results, in terms of profit impacts relative to revenues under Option 2, seem to suggest very small impacts for firms across the wide range of size categories examined, including both large and small entities. The threshold for impacts considered to be of moderate size is generally taken to be one percent of revenues, and the average impacts of Option 2 fall far below that magnitude (specifically, one-tenth of one percent or less within all small entity groups). Also, it should also be noted that even though Option 2 would result in slightly lower profitability than Option 1, carriers would generally earn higher net revenues under Option 2 than they were under the pre-2003 rule, only a short time ago.

Variability in impacts within each size category, however, means that the possibility of larger impacts for some small entities are possible. The carriers that are currently taking advantage of the split break periods to an above-average degree, for example, will tend to lose more under the options that do not permit its use. Even for these carriers, however, the average impacts are likely to be well below 1 percent.

7.2 RESULTS BY OPTION

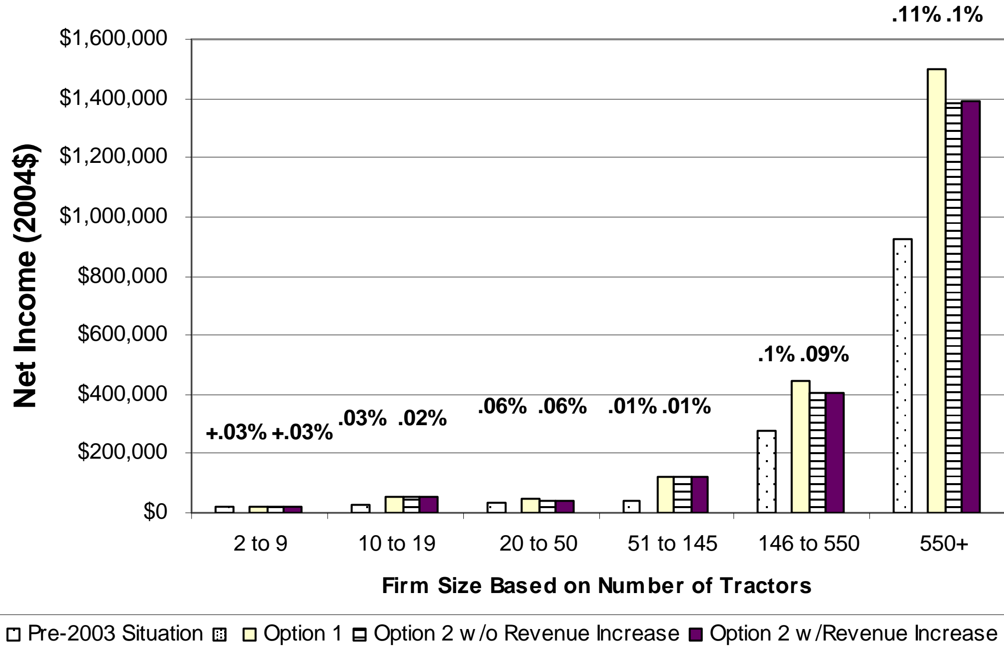
Option 2 adversely impacts the net income earned by carriers in almost every size category (with the exception being a very small improvement for the 2-9 category) as shown in Exhibit 7-2, although these impacts are very small in magnitude. Exhibits 7-2 through 7-4 show the impacts on each size category under two assumptions. “Without Revenue Increase” implies carriers bear the increased costs due to the rule change without being able to pass-through the cost increases to their customers through trucking rate hikes (i.e., zero pass-through). This scenario would be likely to hold only in the very short run. In the longer run, carriers are expected to be able to increase their rates in line with industry-wide increases in costs. This scenario is modeled as “With Revenue Increase” which assumes that the industry as a whole is able to pass through its average cost increase to its customers. These two extremes of the pass-through assumption were modeled in order to provide a range for the level of impacts associated with the new options as well as to distinguish between short- and long-run.

[56] The industry as a whole is expected to experience a smaller 0.042% drop in productivity under Option 2. The analysis presented in Chapter 6 found, however, that this impact would fall disproportionately on the TL for-hire sector that is the focus of this chapter. We have accounted for this circumstance by dividing the industry-wide drop in productivity by the share of VMT accounted for by the TL for-hire sector.

In addition to showing impacts on net income, the exhibits indicate the drop in profit as a percentage of operating revenue for each alternative relative to Option 1. Those relative changes are shown above each bar in all three exhibits.

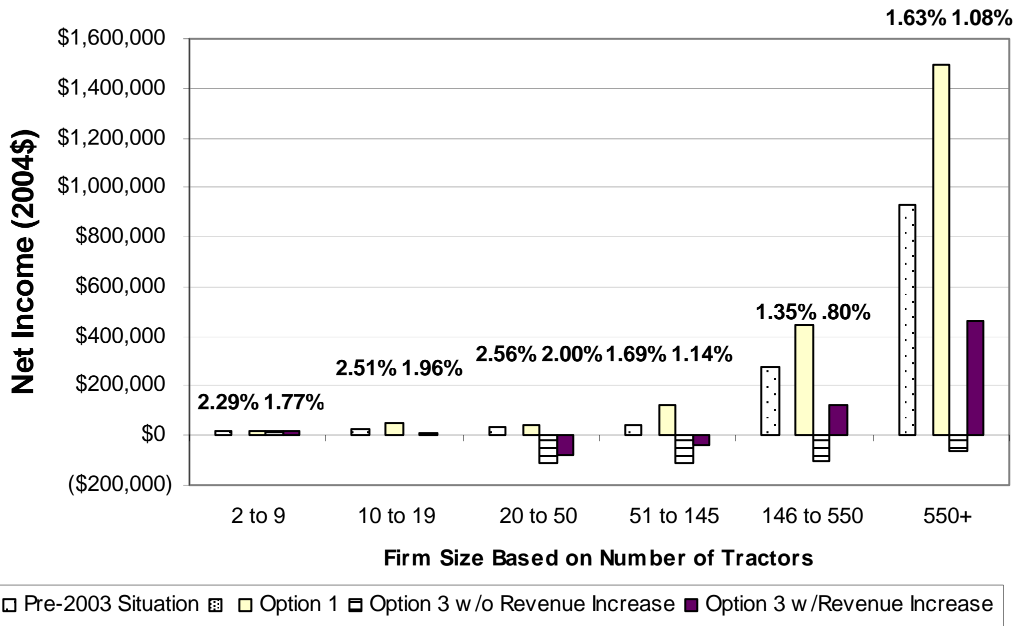
Exhibit 7-3 and Exhibit 7-4 show the impacts for different size categories for Options 3 and 4, respectively. Both options result in significantly lower net incomes than for Options 1 and 2 in all size categories.

Exhibit 7-2: Option 2: Change in Median Firm Net Income Relative to Baseline (Reduction in profit relative to total revenue is indicated over the bars)*



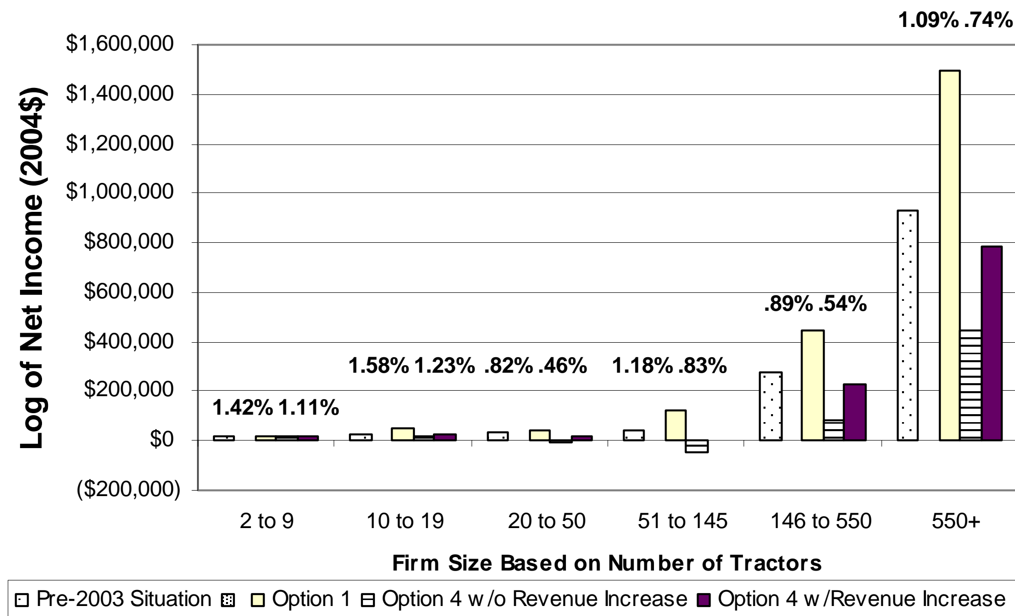
** Profit reduction calculated relative to Option 1 baseline.*

Exhibit 7-3
Option 3: Change in Median Firm Net Income Relative to Baseline
(Reduction in profit relative to total revenue is indicated over the bars)*



** Profit reduction calculated relative to Option 1 baseline.*

Exhibit 7-4
Option 4: Change in Median Firm Net Income Relative to Baseline
(Reduction in profit relative to total revenue is indicated over the bars)*



** Profit reduction calculated relative to Option 1 baseline.*

7.3 DIFFERENTIAL IMPACTS ON SMALL CARRIERS: RESULTS BY SIZE CATEGORIES

This section describes impacts on carriers in seven size categories. The discussion is divided into four parts: one for owner operators; one for firms with 2-9 tractors; one for firms with 10-19 tractors; and the last for the larger size categories.

As expected, the percentage changes in net income indicate that the impacts are less in the longer run when carriers can increase their revenue by passing the industry-wide average cost increases on to their customers.

Impacts on the profitability of certain firm sizes appear to be greater than the impacts on others. This pattern is closely tied to the differences in baseline profitability levels: those size categories with lower rates of profit in the baseline are naturally somewhat more vulnerable to a similar change in productivity.

7.3.1 Owner/Operators with One Tractor

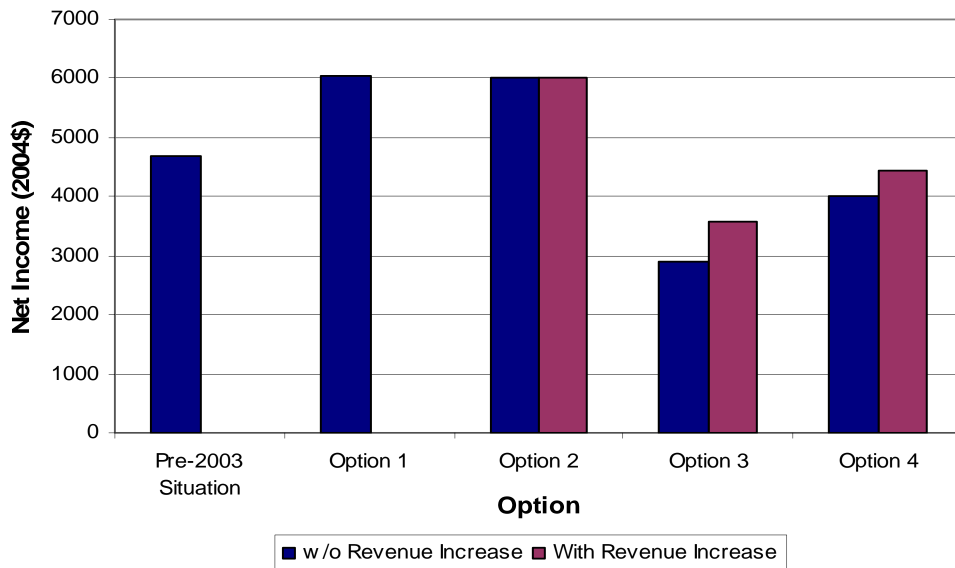
The smallest size category, one tractor, is examined in order to evaluate impacts on individual owner/operators. Exhibit 7-5 shows the change in net income for these owner/operators under each option. These impacts are presented relative to Option 1; the pre-2003 situation is shown as well.

Owner/operators with one tractor would earn virtually the same under Option 2 as Option 1, and less under the other two options. Net income is actually higher under Option 2 than in the pre-

2003 situation. Owner-operators that did not have sufficient time to adjust to the 2003 rule may therefore experience an improvement in their situations.

The "net income" estimated in this study for owner/operators is slightly different in meaning than that for firms in other size categories due to treatment of wages. For owner/operators, net income is the same as take-home pay (analogous to wages). The owner/operator "takes home" any residual after paying all other expenses. In contrast, the net income of larger firms subtracts out wages along with other expenses. Due to this difference, the net income calculated for owner/operators is not directly comparable to that calculated for other firm sizes, and it tends to be higher when stated as a percent of revenue.

Exhibit 7-5: Change in Net Income for Owner Operators (One Tractor/Trailer)



* Net income for owner operators includes wages. See text for details.

7.3.2 Firms with 2-9 Tractors

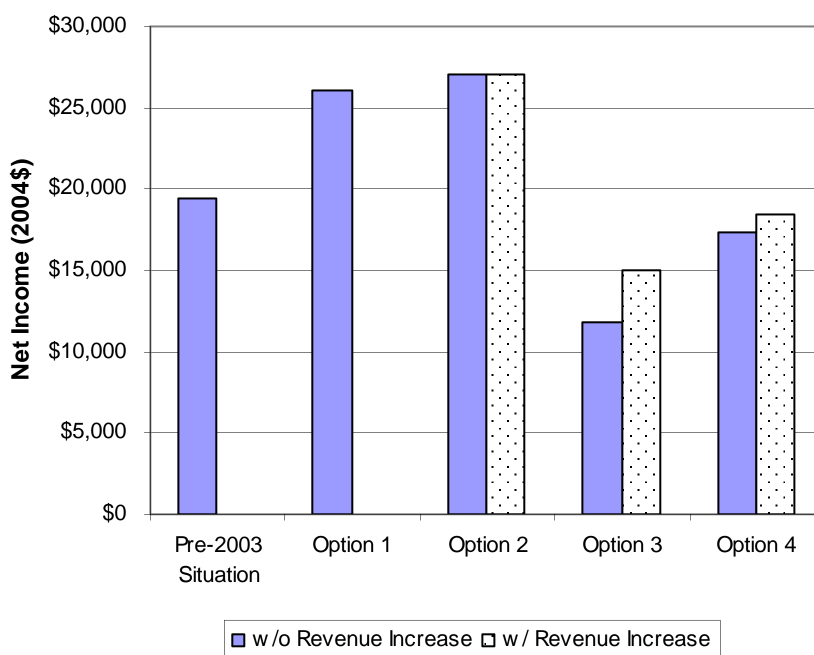
Firms operating 2-9 tractors and others toward the smaller end of the size distribution may have less flexibility to respond to a change in the HOS rules. Whereas larger firms can hire or lay off drivers in order to optimize their operations relative to any of the options, firms with 2-9 tractors are too small to do this in optimal fashion, at least in the near term.[57] As discussed above, firms must hire additional drivers in order to maintain their current business under Options 3 and 4. Firms in the 2-9 tractor category, however, do not have enough current business to justify hiring another full-time driver. They would, optimally, hire a fraction of a driver in response to the new

[57] To a lesser extent this also is true for firms in the 10-19 tractor size category. Firms with 10-19 tractors have enough flexibility, however, that their impacts are similar to (but smaller than) those of firms in larger size categories.

options. Assuming this is not possible, these firms must instead sacrifice some of their business, at least in the near term.[58]

As shown in Exhibit 7-6, carriers in this size category are expected to gain to an insignificant degree under Option 2, most likely due to slight changes in driver wages. They would be adversely impacted under Options 3 and 4 relative to Option 1, because of their inability to meet existing orders and the loss of the corresponding revenues. Near-term impacts ("without revenue increase" – i.e., before prices for trucking services adjust to the cost increases) are higher than the long-run impacts ("with revenue increase").

Exhibit 7-6: Net Income Per Firm: 2-9 Tractors

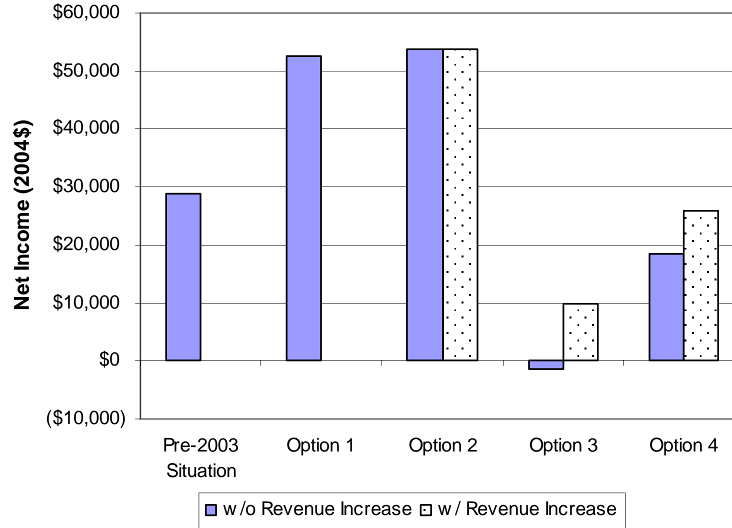


Firms with 10-19 Tractors

Impacts for the 10-19 tractor size category differ somewhat from the 2-9 size category. Again, there is almost no impact under Option 2. Due to their lower baseline profitability (as shown in Exhibit 7-1 above), the percentage drop in net income for this size category under Options 3 and 4 appears to be greater than the 2-9 size category.

[58] In the longer term, firms should be able to adjust their operations to a greater extent in order to fill capacity, so the impacts on these firms should tend to diminish over time.

Exhibit 7-7: Net Income Per Firm: 10-19 Tractors



7.3.3 Larger Size Categories

Exhibits 7-8 through 7-11 summarize the expected change in profitability for firms in the remaining four size categories. These impacts appear less severe if carriers are assumed to have an opportunity to increase their rates to offset the higher costs of the new rules. Moreover, though the carriers are generally less well off under Option 2 than under Option 1 (except carriers in the 51-145 size category, where they are virtually the same), many are likely to earn higher net revenues than they were under the pre-2003 rule.

Exhibit 7-8: Net Income Per Firm: 20-50 Tractors

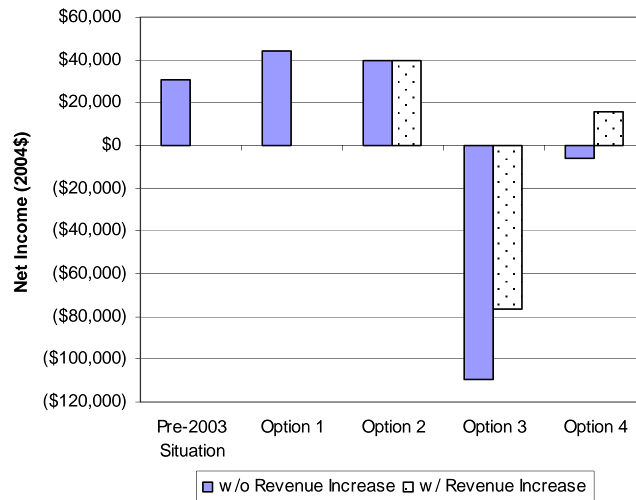


Exhibit 7-9: Net Income Per Firm: 51-145 Tractors

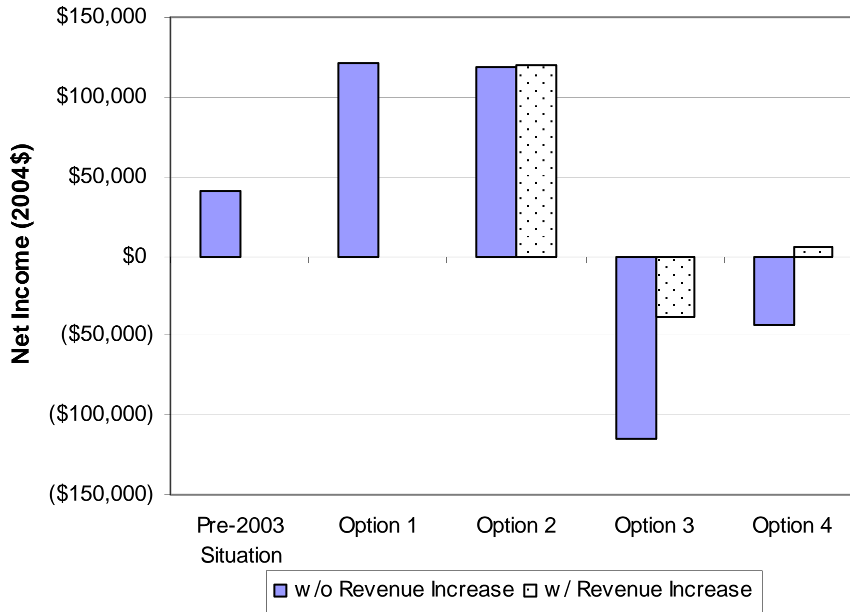


Exhibit 7-10: Net Income Per Firm: 146-550 Tractors

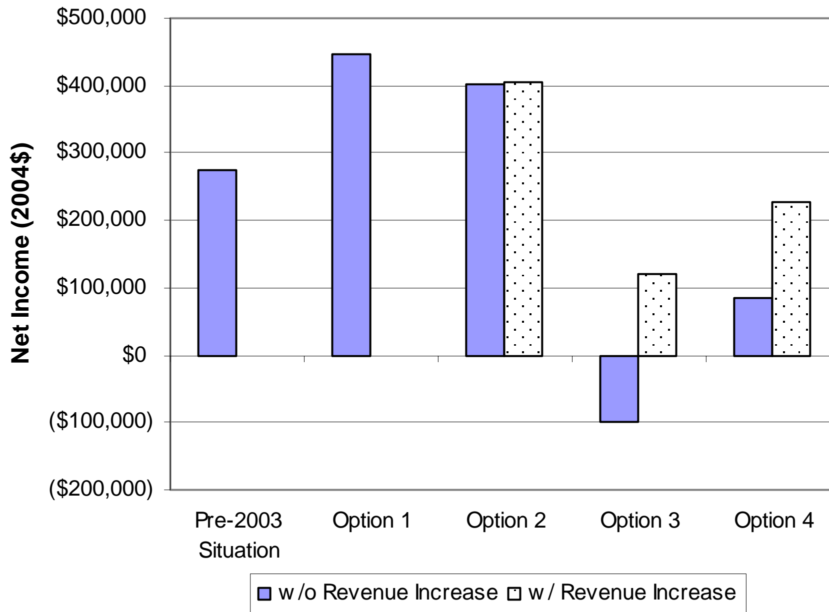
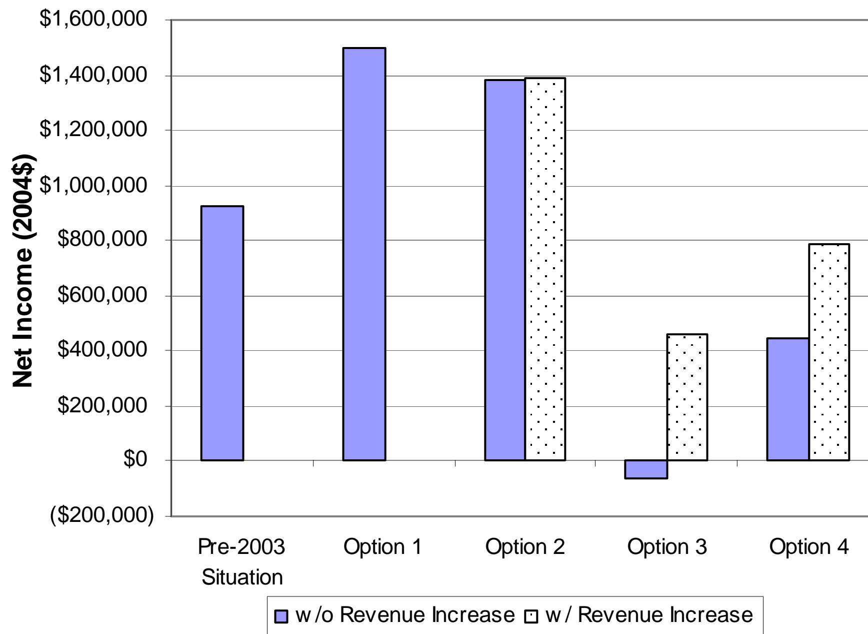


Exhibit 7-11: Net Income Per Firm: 550+ Tractors



7.4 CONCLUSIONS AND FACTUAL BASIS FOR CERTIFICATION

Earlier in this chapter, FMCSA presented estimates which indicate that, as a percentage of total revenues, the financial impact of Option 2 (today's rule) is exceedingly minor across the spectrum of all small firms included in the analysis. Specifically, translating productivity impacts into a reduction in net income of the median firm from each size category, FMCSA found that under Option 2, reductions in net income as a percent of total revenues averaged one-tenth of one percent or less for small firms in all size categories of small entities. In its small business impact analyses, FMCSA has traditionally used one percent of revenues as the threshold for "significant" financial impacts to trucking firms. Since the average impact of Option 2 is only one-tenth of that figure, FMCSA considers the financial effect of today's rule to be minor for the median firm in each size category. Additionally, small entities in all size categories are expected to have higher net income under Option 2 than under the pre-2003 environment.

Adverse financial impacts will vary by individual firm, and there might be some firms in each size category that make extensive use of the split sleeper berth provision. To determine whether these firms could experience significant adverse financial impacts as a result of today's rule, FMCSA has combined its estimates of the total impact of Option 2 as a percentage of revenues with data on the distribution of the use of the sleeper-berth exception among owner-operators. FMCSA has focused on the use of the sleeper-berth exception because this provision is the only area in which Option 2 differs from the baseline (the 2003 rule) in a way that could cause adverse impacts. Thus, the total cost of Option 2 is likely to fall on the carriers that make use of the opportunity to split rest periods. Furthermore, the distribution of these costs are likely to

parallel the distribution of the use of the provision: carriers whose drivers use the provision twice as often as the industry average, for example, can be assumed to bear twice the industry average impacts. If a given carrier has a large number of drivers, it is likely that some will use the provisions more than average and others will use it less, leading to an average impact for larger carriers that is relatively close to the industry average. This phenomenon would not apply to owner-operators, however, because they do not employ many drivers whose average behavior can be assumed to resemble the average across the industry. For this reason, FMCSA has used data relating specifically to this relatively more vulnerable sector in order to measure the degree of variability in the impacts of Option 2.

A summary of the data from an Owner-Operator Independent Drivers Association (OOIDA) survey is shown in Exhibit 7-12. Most respondents did not use the provision at all in the month referenced in the survey (June 2004), and almost 80 percent used it five times or less. On average, it was used just under four times in the month. Some respondents, however, reported using it extensively – up to 25 or even 30 times in the month. Those using the provision the most are assumed to bear the most disproportionate impacts if it is restricted. For example, those splitting their rest periods every day of the month use the provision 30/3.96 or 7.57 times the industry-wide average, and might be expected to bear 7.57 times the industry-wide average impacts. Since it is not possible to use the provision more than 30 times in a 30-day month, it is reasonable to assume that the impacts on any one carrier will not be more than 7.57 times the average.

As noted earlier in this chapter, the industry-wide average impact of Option 2 was 0.042 percent of revenues. Because this impact was expected to fall much more on the 41.7 percent of the industry's operations that consist of for-hire truckload carriage, FMCSA conservatively assumes that the average impact on for-hire truckload carriers is 0.042%/41.7% or just over 0.1 percent of revenues. The right-hand column of Exhibit 7-12 shows the impacts of Option 2 across small carriers if these impacts are distributed in proportion to their baseline use of the split sleeper berth break provision: more than 90 percent would have cost increases of 0.35 percent or less, less than 5 percent would have costs increases of 0.6 to 0.7 percent, and only one percent would bear the highest costs of 0.76 percent of revenues. It is likely that even these impacts would be reduced if more than one month were considered, because some of the operators with the highest use in one month could show more typical patterns in other months.

Exhibit 7-12: Owner-Operator Costs by Intensity of Sleeper-Berth Use

Times Split Sleeper Berth Provision was Used in June	Number of Owner Operators	Percentage of Responses	Total Days the Provision was used	Multiple of Average Use	Estimated Impacts: Cost as a Percentage of Revenues
0	685	55%	0	0.00	0.00%
1-5	277	22%	758	0.69	0.07%
6-10	108	9%	867	2.03	0.20%
11-15	58	5%	790	3.44	0.35%
16-20	60	5%	1,151	4.84	0.49%
21-25	36	3%	857	6.01	0.61%
26-29	6	0.5%	162	6.82	0.69%
30	11	1%	330	7.57	0.76%
All	1,241	100%	4,915	1.00	0.10%
			Average = 3.96		

Source: Survey of OOIDA members and ICF analysis

Because only a very small fraction of the most affected small businesses would bear the highest costs, and because even those impacts are below the threshold of 1 percent of revenues, FMCSA can reasonably conclude that Option 2 would not have a significant impact on a substantial number of small entities.