MOTOR CARRIER INDUSTRY PROFILE: STRUCTURE, OPERATIONS, AND FINANCIAL PERFORMANCE OF MAJOR SEGMENTS

PROJECT TITLE: MEASURING EXPOSURE IN THE DIVERSE MOTOR CARRIER INDUSTRY

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I. INTRODUCTION

This report is the result of a contract (Measuring Exposure in the Diverse Motor Carrier Industry) between the Federal Highway Administration and the Supply Chain Management Center of the Robert H. Smith School of Business. The report constitutes a profile of the motor-carrier industry and its significant operating segments. It includes information from financial reports filed by the carriers with the US Department of Transportation (DOT) for the calendar year 1997. Two major agencies, The Trucking Information Services of the American Trucking Associations and Transportation Technical Services, Inc., compiled the information that the motor carriers submit to the DOT and produced a computerized file with this information.

Data from a total of 1,804 firms were obtained after combining information from these two source organizations and filtering outlying data in the sample. These firms represent the largest for-hire firms in the industry. It is recognized, however, that there are firms that do not report any data to the DOT. Furthermore, some of the data that is reported to the DOT has inaccuracies, necessitating its exclusion. Unfortunately, these limitations could not be overcome, but must be recognized when assessing the results included in this report.

The report is divided into fourteen sections. The first section presents overview information on the structural, operating, and financial characteristics of the motor-carrier industry and its thirteen segments. This section is followed by a separate section for each of the 13 industry segments.

II. INDUSTRY OVERVIEW

This section is designed to provide an overview of the structure, operation, and financial performance of the industry based on segmentation by dominant carrier activity. Thirteen carrier activity segments are analyzed. These segments are: Refrigerated, Bulk Materials - Non Tank, Tank Carriers, Moving/Household Goods, Heavy Equipment, General Freight Truck-Load (subdivided into small, medium, and large-sized carriers), General Freight Less-Than-Truck-Load, and Other Specialized (subdivided into small, medium, and large-sized carriers). The first of the following three sections presents information regarding the number of firms that participated in each segment, the total revenues per segment, and the revenue concentration among the largest firms in each segment. The second section includes information on carrier operations. This information covers equipment ownership patterns, average vehicle loads, and average lengths of haul. Finally, the third section reports on average financial performance of carriers in each segment. The information in this section includes operating ratios, net profit margins, and returns on equity.

1. Industry Structure

Overall, 1,804 firms are included in this analysis (Table 1). The majority of the firms are in the three size segments in the General Freight Truck Load segment (57.7%). The segments with the smallest number of firms are the Heavy Equipment and Building Materials segments (1.2% and 1.7%, respectively). These 1,804 firms reported total annual revenues of $66.02 Billion. Firms in the General Freight Truck-Load Large group reported $22 Billion in total annual revenues. This constitutes almost 33.3% of all the industry's annual revenues. In addition, firms in the General Freight Less-Than-Truck-Load reported $20.9 Billion in total annual revenues. This constitutes almost 31.7% of all the industry's annual revenues. As these numbers indicate, there is a significant concentration of industry revenues among these two segments. In contrast, the Heavy Equipment and Building Materials segment only account for $306 Million (0.46%) and $737 Million (1.1%). It is important to note that these two segments were also the segments with the fewest number of firms.

The industry's annual revenue concentration for the largest firm in each of the segments averaged 9.14%. Furthermore, the industry's annual revenue concentration across the five largest firms in each of the segments averaged 29.3%. The industry segment with the highest one-firm revenue concentration level is the Building Material segment (39.1%). This segment is also the segment with the highest five-firm revenue concentration ratio in the industry (77.3%). In each of two additional segments, Moving/Household Goods and General Freight LTL, the five firm revenue concentration ratio stood at approximately 50%. Of the remaining segments, excluding the medium and small-sized sub segments of the General Freight Truckload and Other Specialized carrier segments, the five-firm concentration ratios range from 20.9 to 39.8% (Refrigerated, Bulk Materials - Non Tank, Tank Carriers, Heavy Equipment, General Freight Truckload-Large, and Other Specialized-Large).

2. Operations

Table 1 includes information on equipment ownership patterns for each of the segments. Average truck ownership rates range from a high of 98% (Heavy Equipment) to a low of 48% (Building Materials). In 8 of the13 segments, average truck ownership rates are 70% or above. Average tractor ownership rates range from a high of 83% (Heavy Equipment) to a low of 47% (Refrigerated). Although there is evidence of variations of equipment ownership patterns among carriers, the data indicate that there is a tendency for the majority of equipment to be owned by the carriers. Low levels of equipment ownership frequently reflect a carrier's commitment to the use of owner operators under a leasing arrangement.

Table 1 also includes information on average truckloads and lengths of haul. The segments with the highest average load are the Building Materials (18.7 Tons) and the Bulk Materials - Non Tank (17.5 Tons). The segments with the smallest average load are the Moving/Household Goods (5.96 Tons) and the General Freight LTL (10.60 Tons). These latter two segments carry freight with lower density and higher demands on volume. The Moving/Household Goods and the General Freight LTL segments also have high average lengths of haul (884 and 529 Miles, respectively). These averages are exceeded only by the Refrigerated carriers, who achieved an average length of haul of 927 Miles. In contrast, three segments, Bulk Materials - Non Tank, Tank Carriers, and Heavy Equipment, had average lengths of haul below 200 Miles.

3. Financial Performance

Operating ratio, defined as the ratio of operating expenses to operating revenues, is a basic parameter used to evaluate carrier performance in their fundamental transportation operations. As Table 1 indicates, overall, across all industry segments, the average operating ratio is 96.37. Seven industry segments reported better operating performance than this average. These segments are: Tank Carriers (95.58), General Freight Truckload-Medium (95.86), General Freight Truckload Large (95.20), General Freight LTL (95.14), Bulk Materials - Non Tank (95.94), Other Specialized Carriers-Medium (95.95), and Other Specialized-Large (94.78). The industry segment with worst average operating performance was the Heavy Equipment Segment (100.17).

Net profit margins, defined as the difference between firm revenues and expenses as a percentage of firm revenues, provide a comprehensive measure of firm profitability by incorporating all the revenues and expenses of the firm, including revenues and expenses from non-transportation activities. Many firms have insignificant non-transportation revenues and expenses. For these firms, Table 1 provides no additional information beyond the operating ratio. As Table 1 shows, the 13 segments have an average firm profit margin of 2.23%. Ten of these 13 segments reported profit margins above that average. The three segments with a below-average net profit margin are Refrigerated (2.19%), General Freight Truckload-Medium (1.87%), and Building Materials (0.97%). Overall, as the segments' data illustrate, carriers are on average, profitable firms.

The final measure of firm performance is return on equity. This performance measures the level of returns to the investors of the firm. As Table 1 illustrates, on average, the return on equity ratio across the 13 segments is 20.58. The segment with the highest return on equity ratio was General Freight-LTL (34.94). Three segments (Refrigerated, Bulk Materials - Non Tank, and Building Materials) had the lowest average return on equity with a value of approximately 15%, respectively. These numbers suggest that firms in the industry are, on average, able to generate positive returns to their shareholders and investors.

Table 1: Profile of Industry Segments: Structure, Operations, and Financial Performance

Variable	Refrigerated	Tank Carriers	Moving/Household Goods	Heavy Equipment
Number of Firms	126	123	96	22
Total Revenue	$4,590,125,446	$3,661,449,825	$4,943,727,767	$305,945,584
Revenue Share of the Largest Firm	$345,422,841 (7.5%)	$262,135,130 (7.2%)	$730,261,166 (14.8%)	$28,692,593 (9.4%)
Revenue Share of 5 Largest Firms	$1,447,280,228 (31.5%)	$1,035,785,681 (28.3%)	$2,539,757,759 (51.4%)	$111,917,000 (36.6%)
Average Truck Ownership (%)	69	73	82	98
Average Tractor Ownership (%)	47	55	62	83
Average Load (Tons)	16.47	14.63	5.96	13.44
Average Length of Haul (Miles)	927	172	884	197
Operating Ratio (%)	96.95	95.58	96.51	100.17
Net Profit Margin (%)	2.19	2.73	3.26	3.98
Return on Equity (%)	15.27	24.77	19.02	20.37

Variable	General Freight—Small	General Freight—Medium-Sized	General Freight—Large
Number of Firms	341	348	351
Total Revenue	$1,443,310,537	$2,866,092,039	$21,950,000,000
Revenue Share of the Largest Firm	$6,087,446 (0.4%)	$10,975,558 (0.4%)	$1,351,007,445 (6.2%)
Revenue Share of 5 Largest Firms	$30,343,894 (2.1%)	$54,549,060 (1.9%)	$4,591,469,364 (20.9%)
Average Truck Ownership (%)	73	67	69
Average Tractor Ownership (%)	60	54	54
Average Load (Tons)	14.43	14.09	13.83
Average Length of Haul (Miles)	464	476	577
Operating Ratio (%)	96.70	95.86	95.20
Net Profit Margin (%)	2.52	1.87	2.95
Return on Equity (%)	19.90	16.44	21.88

Variable	General Freight—LTL	Bulk Materials - Non Tank	Building Materials
Number of Firms	56	75	31
Total Revenue	$20,870,000,000	$1,272,262,509	$737,258,651
Revenue Share of the Largest Firm	$2,577,328,172 (12.3%)	$113,334,545 (8.9%)	$288,145,000 (39.1%)
Revenue Share of 5 Largest Firms	$10,215,970,040 (49%)	$373,497,567 (29.4%)	$569,425,220 (77.3%)
Average Truck Ownership (%)	81	71	48
Average Tractor Ownership (%)	74	68	58
Average Load (Tons)	10.6	17.5	18.7
Average Length of Haul (Miles)	529	183.4	443.5
Operating Ratio (%)	95.14	95.94	97.15
Net Profit Margin (%)	2.75	3.26	0.97
Return on Equity (%)	34.94	15.05	15.21

Table 1 (continued): Profile of Industry Segments: Structure, Operations, and Financial Performance

Variable	**Other Small-Sized**	**Other Medium-Sized**	**Other Large-Sized**
Number of Firms	76	82	77
Total Revenue	$318,128,966	$638,069,008	$3,387,804,017
Revenue Share of the Largest Firm	$5,593,547 (1.8%)	$10,856,667 (1.7%)	$309,880,265 (9.1%)
Revenue Share of 5 Largest Firms	$27,648,631 (8.7%)	$52,635,790 (8.2%)	$1,204,976,952 (35.6%)
Average Truck Ownership (%)	83	87	60
Average Tractor Ownership (%)	62	56	52
Average Load (Tons)	13.80	13.92	11.48
Average Length of Haul (Miles)	344	251	330
Operating Ratio (%)	96.83	95.95	94.78
Net Profit Margin (%)	3.26	2.86	3.68
Return on Equity (%)	20.65	19.87	24.11

III. GENERAL FREIGHT – LTL CARRIERS

Overview of Carriers

General Freight includes non-specialized commodities hauled by truckers such as boxed, bagged, or containerized items suitable for haulage in covered trailers. A total of 56 firms in the industry segment of General Freight (Less-than-Truckload) carriers reported $20.9 Billion in annual revenues for 1997 (Table 2). The revenues for the five largest firms account for 49% of all the segment's revenues. The largest firm in the industry, Roadway Express, generated 12.3% of the segment's total revenue. Four of the five largest firms in the industry account for 39.2% of the segment's total assets and three of the five largest firms in this industry segment account for 35% of the total units in the segment's fleet (Table 6). One of the largest firms in this segment did not report total assets in 1997 and two did not report total number of units in their fleet.

The information summarized above suggests that there is moderate concentration of the segment's total business among the segment's five largest carriers. However, three of the five largest firms experienced profit margins below the levels achieved by this segment's carriers on average (Table 7). Furthermore, four of the five largest carriers experienced returns on equity that were below the average achieved by all carriers in the segment.

Overall, the average net profit margin for firms in the industry was 2.8%. In addition, the average return on equity was 34.9% (Table 3). The five firms with the highest return on equity ratios had an average of 148.6% (Table 5). This indicates that these firms were about 4 times more effective in returning value to their shareholders with respect to the average firm in the industry. Two firms, Quast Transfer and Dixie Trucking Co. had average returns on equity in excess of 270%. Furthermore, the five most profitable firms are more than 22 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the industry is $10.2 Billion (Table 6), while the total revenue of the 5 most profitable firms is $458.4 Million (Table 4). Thus, carriers in this industry segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this segment handled on average 2.76 Million shipments and 1.76 Million tons of freight and produced 1.54 Billion ton-miles on average. Their average load was 10.6 tons and their average length of haul was 529 miles (Tables 2 and 3). Among the five largest carriers, Roadway Express, generated approximately four and a half times the average tons carried by firms in the segment as well as more than six times the average ton-miles (Table 4).

On average, carriers in this segment owned 81% of their trucks; 74% of their tractors; and 100% of their trailers (Table 2). Among the five largest carriers in this segment, three (Roadway Express, Yellow Freight System, and Consolidated Freightways) relied almost exclusively on company-owned equipment operated by company drivers. In contrast, Roadway Package System (although it did not report specific data) depends exclusively on owner-operators for its package delivery operation. (Table 6).

Among the five most profitable firms in the segment, average tons and ton-miles for reporting firms are substantially below segment averages. This again confirms the finding that firm profitability and size are not strongly related in this segment. With respect to average length of haul, among the most profitable firms reporting, one, Oliver Trucking, had an average almost double the average for all firms in the segment. However, another of the five most profitable firms, Dixie Trucking Company, had an average length of haul of only 29 miles, substantially below the average for all firms in the segment. Thus, segment profitability does not appear to be related directly to average length of haul, firms with well above average and well below average haul lengths are included in the group of most profitable segment carriers (Table 4).

Three of the five most profitable firms (Quast Transfer, Dixie Trucking Company, and New Penn Motor Express) depended almost exclusively on company drivers to handle their tractor operations. (Table 4). Only one of the most profitable companies, Oliver Transport, owned only a small portion of its tractors (12%). Thus, tractor ownership patterns does not appear to provide a strong explanation for profitability in this industry segment. There is much greater dispersion in tractor ownership strategies among the smallest carriers in this industry segment than there is among the most profitable and largest firms. Indeed, among the five smallest firms in the segment, tractor ownership ranges from a low of zero (Widener Motor Lines) to a high of 85% (New Day Motor Freight). Two firms (Lewis Truck Lines and Ace Trucking) achieved tractor ownership levels of 43% and 48%, respectively (Table 8).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this segment, the average operating ratio is 95.1 (Table 3). Among the five most profitable firms (Table 5), based on return on equity, operating ratio ranged from a low of 79.4% (New Penn Motor Express) to a high of 94.2% (Quast Transfer). Another carrier, Pitt-Ohio Express, achieved an operating ratio of 86.4%, indeed, a very low operating ratio for this type of carrier to achieve. Among the five largest carriers (Table 7), the largest, Roadway Express, had an operating ratio of 97.8. Among this group of carriers, the one with the lowest operating ratio (Con-Way Transportation Services) had a ratio of 88.6. Among the five smallest carriers (Table 9), three had operating ratios in excess of 100 and the firm with the lowest operating ratio still had a ratio of 97.8 percent. Clearly, neither the smallest nor the largest carriers in this industry segment had the best operating ratios.

Table 2--General Freight (LTL) Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	56	$20,870,000,000
Units in Fleet	47	331,326
Assets	49	$8,442,554,280
Tons Carried	46	81,150,222
Ton-Miles	38	58,626,871,675
Shipments	46	126,543,679
		Average
Size of Load (Tons)	37	10.6
Length of Haul (Miles)	38	529
		Average
Revenue Per Mile	47	$3.61
Revenue Per Ton	45	$166.37
Revenue Per Ton-Mile	38	$0.48
		Average
% of Trucks Owned	47	81%
% of Tractors Owned	47	74%
% of Trailers Owned	47	100%
Outside Vehicle Maintenance per Truck/Tractor	42	$2,371

Table 3--General Freight (LTL) Carriers' Average Financial Performance

Operating Income	$19,000,000
Net Income	$11,000,000
Operating Ratio	95.14
Net Profit Margin	2.75%
Return on Equity	34.94%

Table 4--General Freight (LTL) Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
Quast Transfer	Winsted, MN	$43,685,198	649	$13,901,438	267,382	N/A
Dixie Trucking Co.	Charlotte, NC	$21,967,796	588	$6,454,047	29,806	8,633,626
Oliver Trucking	Indianapolis, IN	$50,704,000	669	$12,105,000	423,753	414,617,428
Pitt Ohio Express	Pittsburgh, PA	$138,693,770	N/A	$44,375,218	N/A	N/A
New Penn Motor Express	Lebanon, PA	$203,298,681	2,266	$135,159,930	1,081,334	232,781,012

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Quast Transfer	471,055	N/A	N/A	$92.74	$2.42	$163.38	N/A
Dixie Trucking Co.	250,789	N/A	29	$87.59	$2.52	$73.70	$2.54
Oliver Trucking	176,233	13.7	978	$287.71	$1.67	$119.65	$0.12
Pitt Ohio Express	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Penn Motor Express	1,931,946	7.9	215	$105.23	$6.87	$188.01	$0.87

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Quast Transfer	N/A	100%	100%	$3,834
Dixie Trucking Co.	100%	91%	100%	$1,277
Oliver Trucking	0%	12%	100%	$7,058
Pitt Ohio Express	N/A	N/A	N/A	N/A
New Penn Motor Express	100%	100%	100%	$1,212

Table 5--General Freight (LTL) Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Quast Transfer	$2,544,497	$1,013,557	94.18	2.32%	292.04%
Dixie Trucking Co.	$1,784,736	$1,009,786	91.88	4.60%	272.99%
Oliver Trucking	$3,379,000	$3,569,000	93.34	7.04%	66.35%
Pitt Ohio Express	$18,916,748	$17,507,894	86.36	12.62%	65.34%
New Penn Motor Express	$41,980,903	$25,225,338	79.35	12.41%	46.40%

Table 6--General Freight (LTL) Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles (in millions)
Roadway Express	Akron, OH	$2,577,328,172	51,440	$758,137,595	7,964,230	10,407
Yellow Freight System	Overland Park, KS	$2,509,537,231	36,931	$957,295,861	8,610,393	10,821
Consolidated Freightways	Portland, OR	$2,187,801,128	N/A	$873,282,570	6,944,170	8,814
Roadway Package System	Pittsburgh, PA	$1,581,754,000	N/A	N/A	N/A	N/A
Con-Way Transportation Svcs.	Portland, OR	$1,359,549,513	27,670	$721,134,178	6,017,052	2,992

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Roadway Express	15,294,805	21.50	1,307	$168.51	$5.32	$323.61	$0.25
Yellow Freight System	14,840,108	19.54	1,257	$169.11	$4.53	$291.45	$0.23
Consolidated Freightways	12,668,499	20.73	1,269	$172.70	$5.15	$315.06	$0.25
Roadway Package System	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Con-Way Transportation Svcs.	10,981,572	9.54	497	$123.80	$4.33	$225.95	$0.45

Table 6--General Freight (LTL) Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Roadway Express	100%	100%	100%	$4,863
Yellow Freight System	100%	95%	100%	$3,429
Consolidated Freightways	100%	89%	100%	$1,269
Roadway Package System	N/A	N/A	N/A	N/A
Con-Way Transportation Services	N/A	N/A	N/A	$497

Table 7--General Freight (LTL) Carriers' Average Financial Performance: Five Largest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Roadway Express	$56,111,358	$34,516,254	97.82	1.34%	13.78%
Yellow Freight System	$76,415,477	$36,944,625	96.95	1.47%	8.85%
Consolidated Freightways	$50,836,624	$29,841,855	97.68	1.36%	15.58%
Roadway Package System	N/A	N/A	89.50	N/A	N/A
Con-Way Transportation Svcs.	$154,448,671	$71,874,104	88.64	5.29%	23.45%

Table 8--General Freight (LTL) Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Lewis Truck Lines	Fargo, ND	$10,831,342	429	$3,636,072	65,167	16,833,043
Widener (Roy) Motor Lines	Morristown, TN	$13,663,361	455	$2,057,376	230,384	142,432,070
Brennan Trans. Svc.	Burlington, NJ	$15,015,958	486	$6,182,914	416,180	N/A
Ace Trucking	Jackson, TN	$15,380,763	288	$4,586,963	N/A	N/A
Next Day Motor Freight	St. Louis, MO	$18,680,540	340	$7,442,772	105,832	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Lewis Truck Lines	115,515	3.7	258	$93.77	$2.36	$166.21	$0.64
Widener (Roy) Motor Lines	23,973	10.4	618	N/A	$1.00	$59.31	$0.10
Brennan Trans. Svc.	115,590	N/A	N/A	$129.91	$2.45	$36.08	N/A
Ace Trucking	N/A	N/A	N/A	N/A	$0.98	N/A	N/A
Next Day Motor Freight	183,648	N/A	N/A	$101.72	$2.97	$176.51	N/A

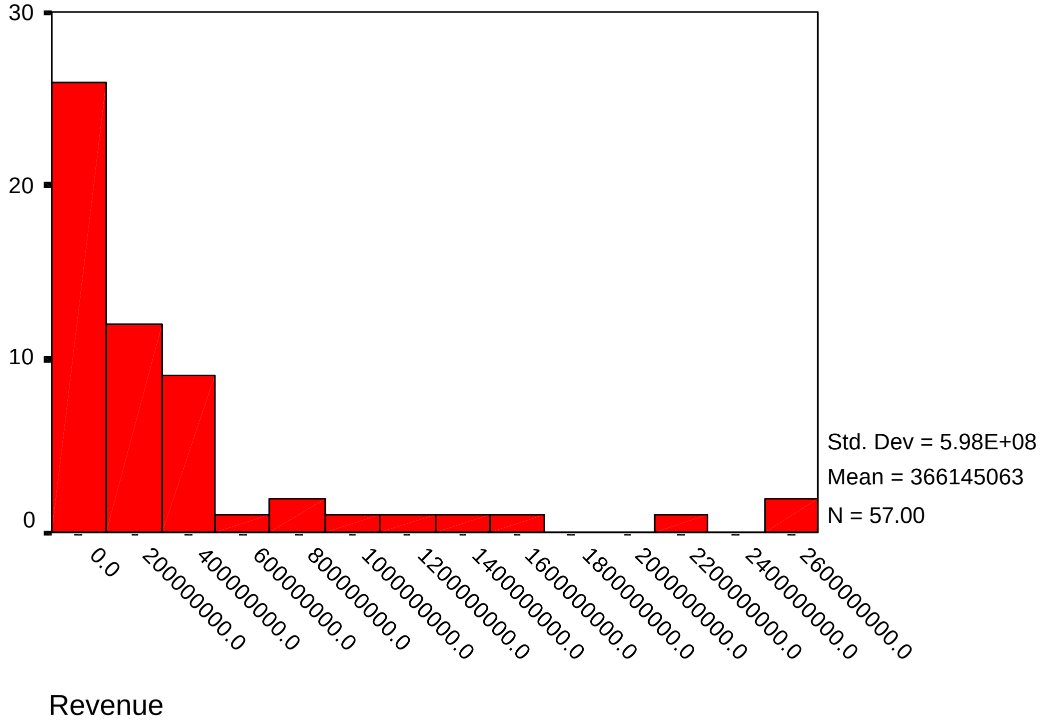
Table 8--General Freight (LTL) Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

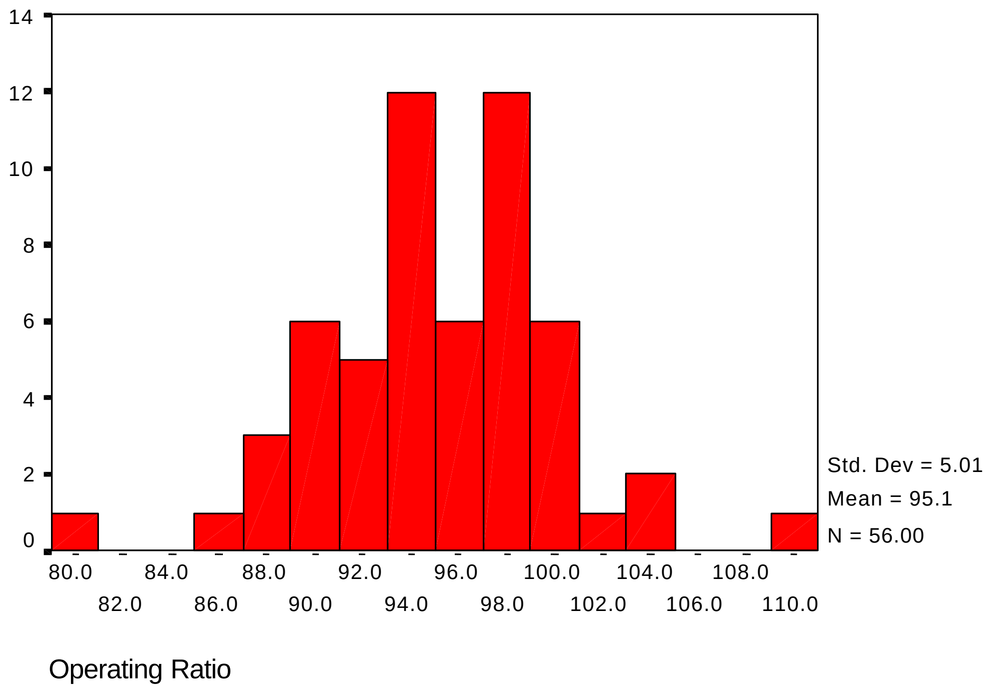
Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Lewis Truck Lines	100%	43%	100%	$5,564
Widener (Roy) Motor Lines	N/A	0%	100%	N/A
Brennan Trans. Svc.	82%	70%	100%	$821
Ace Trucking	N/A	48%	100%	$393
Next Day Motor Freight	100%	85%	100%	$2,904

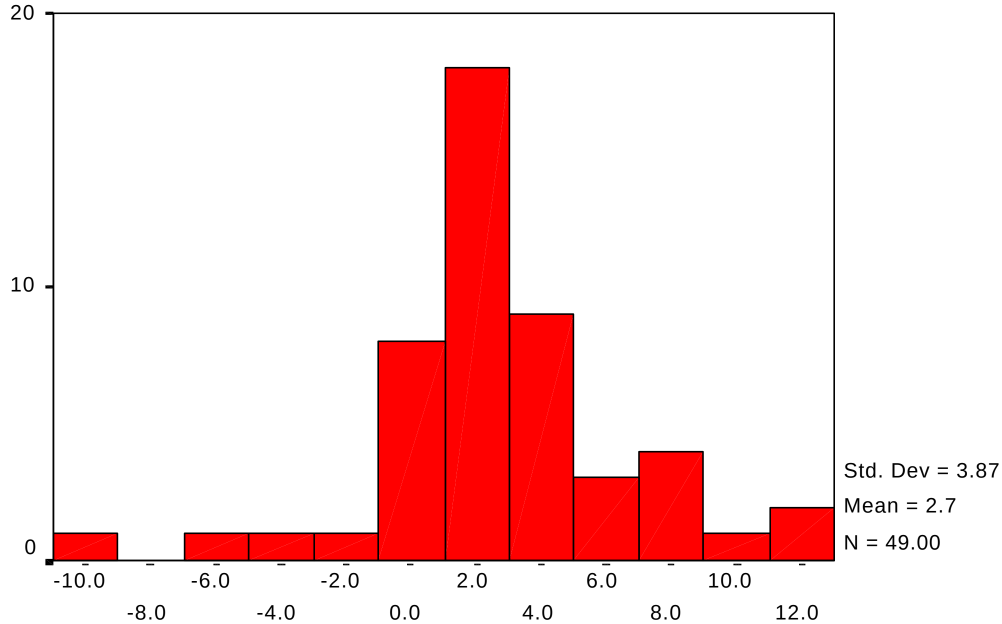
Table 9--General Freight (LTL) Carriers' Average Financial Performance: Five Smallest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Lewis Truck Lines	-$293,695	-$361,236	102.71	-3.34%	18.82%
Widener (Roy) Motor Lines	-$553,442	-$740,025	104.05	-5.42%	N/A
Brennan Trans. Svc.	$176,231	-$152,824	98.83	-1.02%	-22.45%
Ace Trucking	-$123,707	-$70,030	100.80	-0.46%	-12.07%
Next Day Motor Freight	$405,490	$326,350	97.83	1.75%	6.21%

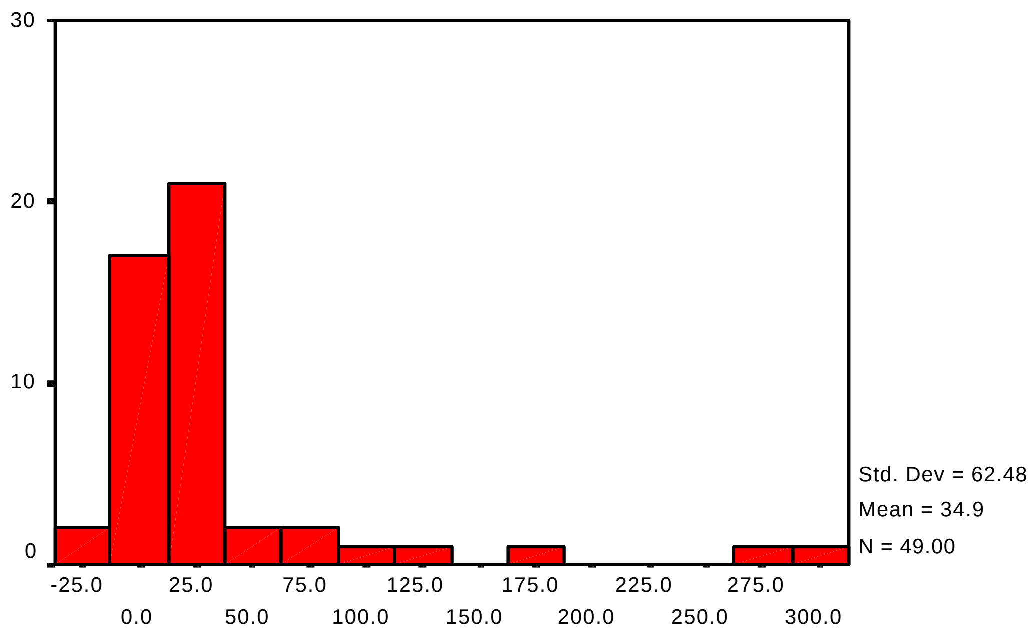
Summary Charts and Graphs for General Freight – LTL Carriers



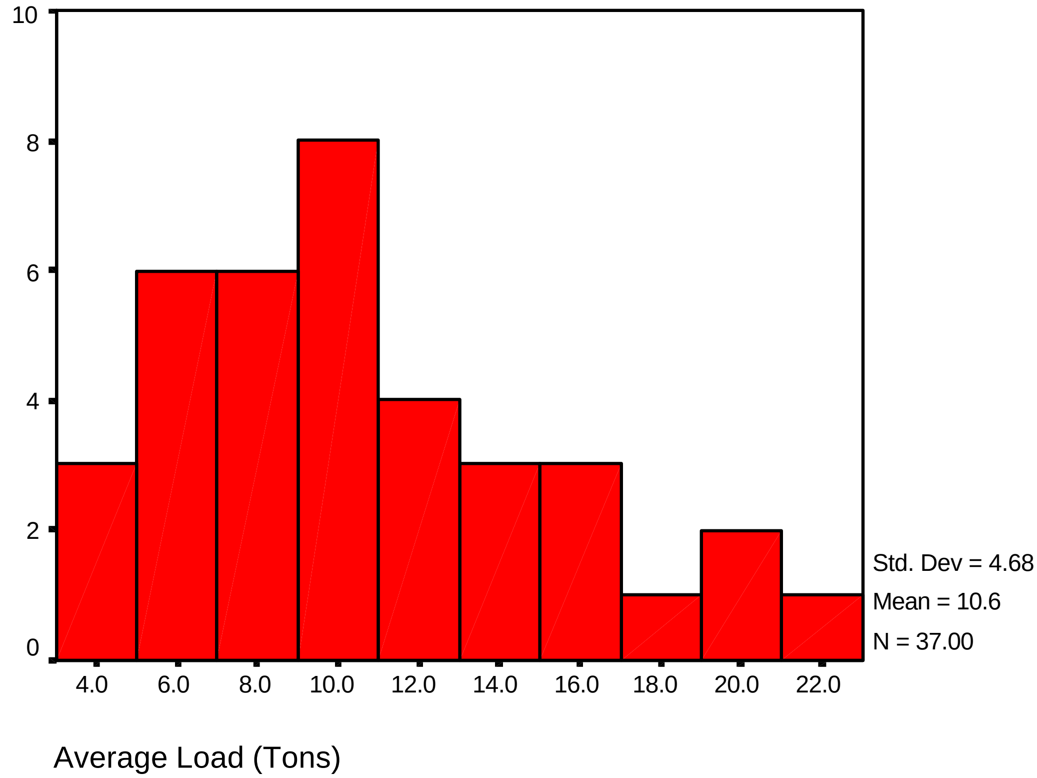




Net Profit Margin



Return on Equity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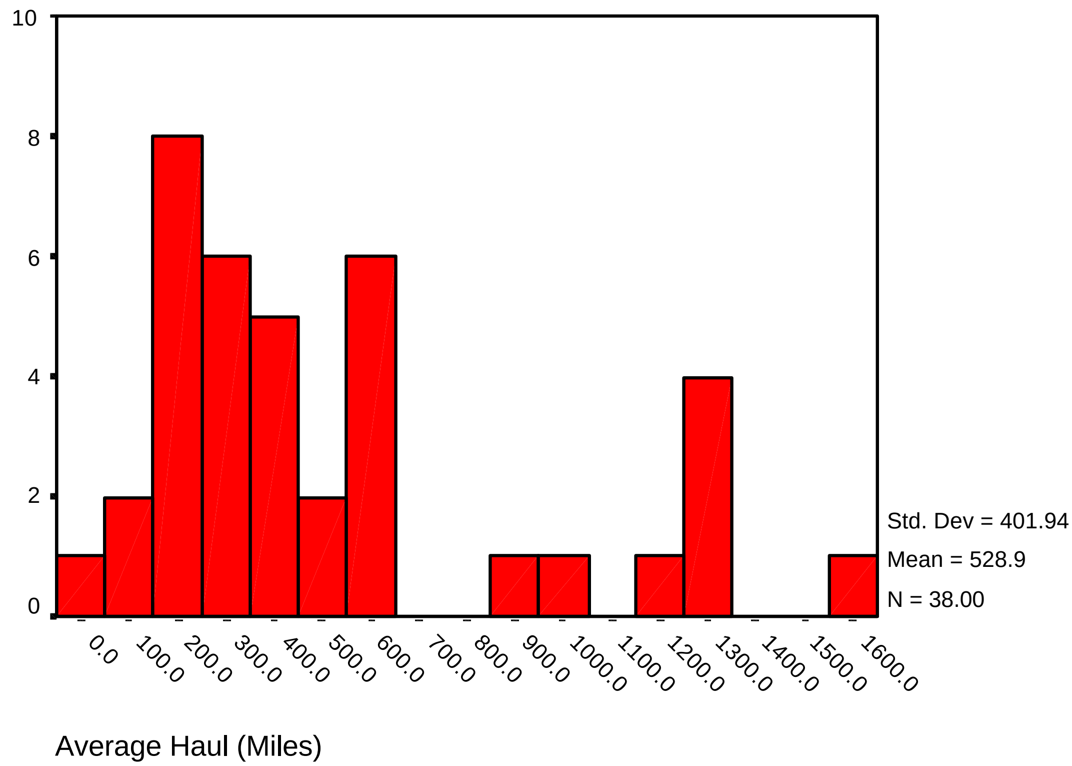
Std. Dev = 4.68
Mean = 10.6
N = 37.00
Average Load (Tons)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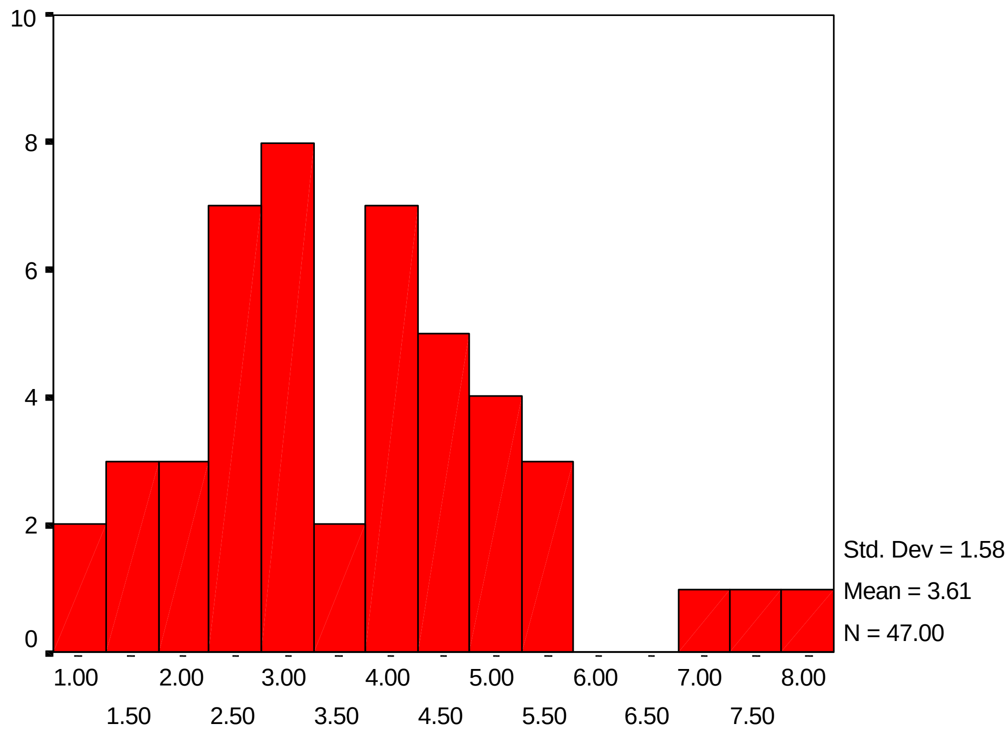
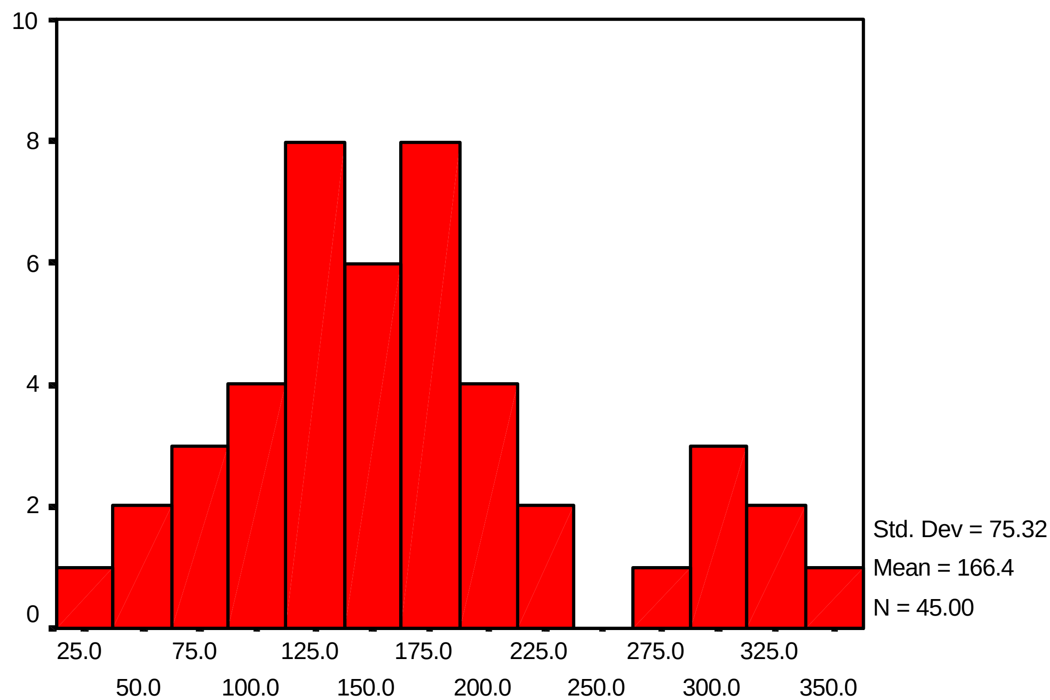
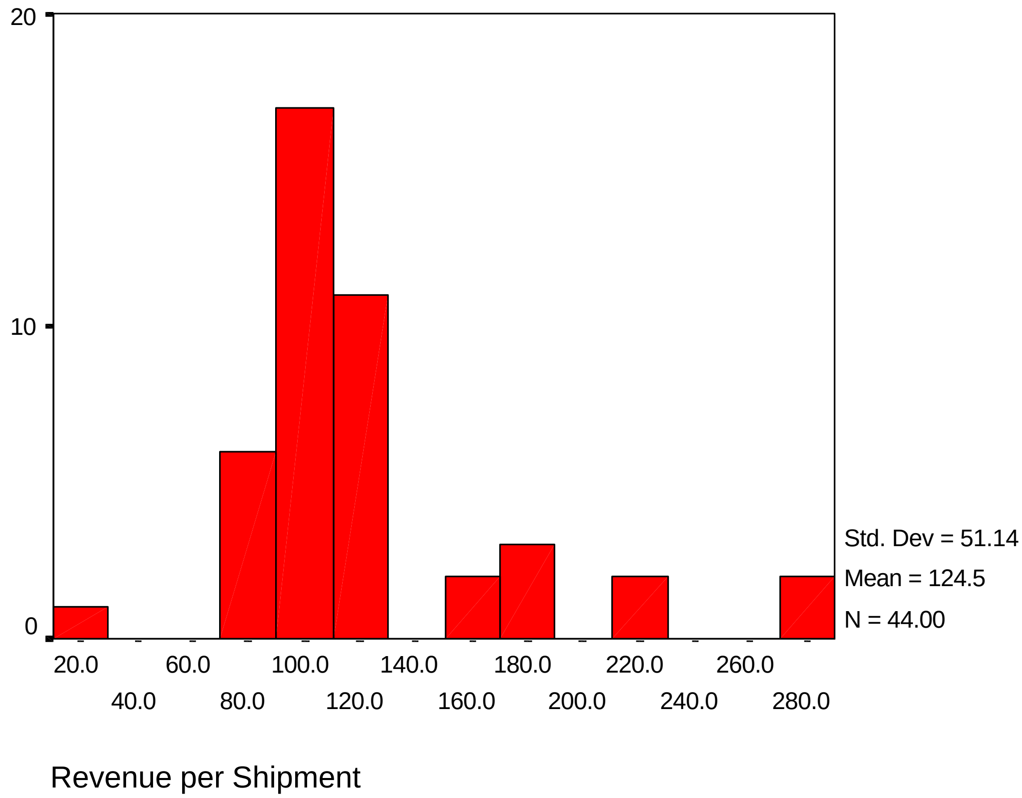
8
6
4
2
0
0.0
100.0
200.0
300.0
400.0
500.0
600.0
700.0
800.0
900.0
1000.0
1100.0
1200.0
1300.0
1400.0
1500.0
1600.0
Std. Dev = 401.94
Mean = 528.9
N = 38.00
Average Haul (Miles)



Revenue per Mile



Revenue per Ton


20
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0
Std. Dev = 51.14
Mean = 124.5
N = 44.00
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
200.0
220.0
240.0
260.0
280.0
Revenue per Shipment

Summary Data for General Freight – LTL Carriers

General Freight - LTL Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	57	11,000,000	2,600,000,000	370,000,000	600,000,000
Expenses	56	11,000,000	2,500,000,000	340,000,000	580,000,000
Operating Income	49	(2,247,360)	150,000,000	19,000,000	29,000,000
Net Income	49	(4,224,750)	71,874,104	11,000,000	15,000,000
Total Assets	49	2,057,376	1,500,000,000	170,000,000	300,000,000
Total Liabilities	49	1,805,561	680,000,000	91,000,000	160,000,000
Total Equity	49	(3,073,985)	1,100,000,000	81,000,000	180,000,000
Operating Ratio	56	79	109	95	5
Net Profit Margin	49	-9%	13%	3%	4%
Return on Equity	49	-22%	292%	35%	62%
Individual Expense Items					
Drivers and Helpers Wages	15	6,156,639	550,000,000	160,000,000	190,000,000
Insurance	49	4,089	61,786,791	8,978,771	15,000,000
Outside Vehicle Maintenance	49	-	46,014,640	4,242,370	8,876,739
Purchased Transportation	57	-	130,000,000	8,584,005	21,000,000
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	47	0%	100%	81%	38%
Trucks Leased	47	0%	100%	19%	38%
Tractors Owned	47	0%	100%	74%	34%
Tractors Leased	47	0%	100%	26%	34%
Trailers Owned	47	100%	100%	100%	0%
Trailers Leased	47	0%	0%	0%	0%
Operating Statistics					
Total Units in Fleet	47	134	51,440	7,049	11,639
Total Highway Miles	48	4,593,280	550,000,000	92,000,000	130,000,000
Total Tons Carried	46	65,167	8,610,393	1,764,135	2,200,220
Total Ton-Miles	38	8,633,626	11,000,000,000	1,500,000,000	2,700,000,000
Total Shipments	46	23,973	15,000,000	2,750,950	3,936,616
Revenue per Mile	47	$0.98	$7.99	$3.61	$1.58
Revenue per Ton	45	$36.08	$359.60	$166.37	$75.32
Revenue per Shipment	44	$28.49	$287.71	$124.51	$51.14
Revenue per Ton-Mile	38	$0.10	$2.54	$0.48	$0.41
Average Load (Tons)	37	4	22	11	5
Average Haul (Miles)	38	29	1,551	529	402
Outside Vehicle Maintenance per Truck/Tractor	42	-	7,058	2,371	1,818
Valid N (listwise)	13				

IV. GENERAL FREIGHT – SMALL CARRIERS

Overview of Carriers

A total of 1040 firms in the General Freight (Truckload) industry segment reported $26.26 Billion in annual revenues for 1997 (Table 10). Dividing this segment into three groups, based on total revenues, we find that the small-sized tier of the carriers generates $1.4 Billion in revenues. This subtotal accounts for 5.5% of the total revenues in the General Freight industry segment. The remainder of this section focuses on the small-sized General Freight firm tier.

The revenues for the five largest firms in this sub segment account for 2.1% of the sub segment's total revenue. The largest firm in this sub segment, Howes & Howes, generated 0.4% of the segment's total revenue. The five largest firms in this industry sub segment account for 2.7% of the sub segment's total assets and 1.8% of the sub segment's total units in the fleet (Table 14).

The information summarized above suggests that there is a low level of concentration in this industry segment. This high level of disaggregation is reflected in the negative net incomes reported by three of the five largest firms in the sub segment. Despite this, the average net income among the five largest firms in the sub segment is $182,685, resulting in an average net profit margin of 3% (Table 15). Three of the five smallest carriers in the sub segment reported positive net incomes (Table 17). This is a further indication that despite the high level of competition that firms can generate positive net incomes that might be caused by certain managerial practices.

Overall, the average net profit margin for firms in this sub segment was 2.5%. In addition, the average return on equity was 19.9% (Table 11). The five firms with the highest return on equity ratios had an average of 308.1% (Table 13). This indicates that these firms were about 16 times more effective in returning value to their shareholders with respect to the average firm in this industry sub segment. These firms are 1.4 times smaller than the five largest firms in the sub segment. Indeed, the total revenue of the 5 largest firms in the sub segment is $30.3 Million (Table 14), while the total revenue of the 5 most profitable firms is $21.5 Million (Table 12). Thus, carriers in this industry sub segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this sub segment handled on average 25,360 shipments and 155,649 tons of freight and produced 13.3 Million ton-miles on average. Their average load was14.4 tons and 63 firms reported an average length of haul of 464 miles (Tables 10 and 11). Three of the five largest carriers in the sub segment reported information about the amount of tons produced. On average, these carriers generated 1.2 times the average number of tons carried in this industry sub segment (Table 12).

On average, carriers in this sub segment owned 73% of their trucks; 60% of their tractors; and 74% of their trailers (Table 10). All of the five largest carriers in this sub segment reported tractor ownership information. Four of the five carriers owned a substantial portion of their tractors (between 68 and 88%). On the other hand, one carrier, G.&R.G, owned only 45% of its tractors (Table 14).

Four of five most profitable firms in the sub segment reported information about their tractor ownership. One firm owned 100% of its tractors (B&H Freight Line), while the other three firms owned only between 10 and 17% of their tractors. This suggests a bipolar strategy with an emphasis either on company drivers or owner operators (Table 12). Furthermore, there is variation among four of the five smallest companies in the sub segment in their truck-tractor ownership patterns. Two of the firms in the sub segment reporting tractor ownership relied on their own company drivers (Table 16), while the other two firms relied exclusively on owner operators. Again, this suggests that small firms in this sub segment are pursuing a bipolar strategy in their truck-tractor ownership patterns.

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this sub segment, the average operating ratio is 96.7% (Table 11). Among the five most profitable firms in the sub segment (Table 13), based on return on equity, operating ratio ranged from a low of 62.7% (B&H Freight Line) to a high of 127% (Birdsall). On average, the five most profitable firms in the sub segment reported an operating ratio of 93.4%.

Among the five largest carriers (Table 15), the largest, Howes & Howes, had an operating ratio of 76.4%, the lowest among all the largest firms in this sub segment. On average, the five largest firms in the sub segment reported an operating ratio of 90.6%. On the other hand, two of the four smallest carriers reporting operating ratios (Table 17) had operating ratios below 100. The other two firms had operating rations above 100. The firm with the lowest operating ratio, Recktenwald, had a ratio of 78.3 percent. On average, four of the five smallest firms in the sub segment reported an average operating ratio of 102.3%. Firms in the small-sized segment of the General-Freight Carrier industry seem to have poorer operating performance in comparison with the largest and the medium-sized firms in that segment. The operating ratios within the small-sized sub segment in the industry also appear to indicate that firm size is an important factor in achieving high operating performance.

Table 10-- General Freight (Truckload) Small-Sized Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	341	$1,443,310,537
Units in Fleet	334	35,487
Assets	339	$639,066,835
Tons Carried	193	30,040,331
Ton-Miles	215	2,864,936,308
Shipments	207	5,249,632
		Average
Size of Load (Tons)	68	14.43
Length of Haul (Miles)	63	464
		Average
Revenue Per Mile	258	$1.75
Revenue Per Ton	159	$54.39
Revenue Per Ton-Mile	67	$0.23
		Average
% of Trucks Owned	116	73%
% of Tractors Owned	307	60%
% of Trailers Owned	313	74%
Outside Vehicle Maintenance per Truck/Tractor	279	$5,447

Table 11-- General Freight (Truckload) Small-Sized Carriers' Average Financial Performance

Operating Income	$148,023
Net Income	$158,282
Operating Ratio	96.70
Net Profit Margin	2.52%
Return on Equity	19.90%

Table 12-- General Freight (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
T.H. Transport	Berne, MO	$5,012,859	17	$609,380	51,875	N/A
Birdsall	Riviera Beach, FL	$5,949,528	70	$51,327,779	546,744	N/A
B & H Freight Line	Harrisonville, MO	$4,322,601	128	$776,735	N/A	N/A
K S & D Rentals	Woodward, OK	$2,555,003	N/A	$1,024,830	N/A	N/A
Hydra Trucking	Sacramento, CA	$3,670,486	113	$1,391,903	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
T.H. Transport	2,500	N/A	N/A	$2,005.14	$1.16	$96.33	N/A
Birdsall	36,400	N/A	N/A	$163.45	N/A	$10.88	N/A
B & H Freight Line	57,936	N/A	N/A	$74.61	$5.76	N/A	N/A
K S & D Rentals	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydra Trucking	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 12-- General Freight (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
T.H. Transport	N/A	13%	0%	$31,439
Birdsall	N/A	10%	N/A	$948
B & H Freight Line	N/A	100%	100%	$2,946
K S & D Rentals	N/A	N/A	N/A	N/A
Hydra Trucking	N/A	17%	10%	$54,174

Table 13-- General Freight (Truckload) Small-Sized Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
T.H. Transport	$371,851	$982,730	92.58	19.60%	349.50%
Birdsall	-$1,611,011	$15,630,892	127.08	N/A	333.23%
B & H Freight Line	$1,609,876	$1,752,179	62.76	40.54%	321.42%
K S & D Rentals	$331,527	$270,106	87.02	10.57%	289.96%
Hydra Trucking	$95,482	$936,033	97.40	25.50%	246.22%

Table 14-- General Freight (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Howes & Howes Trucking	Mesick, MI	$6,087,446	153	$2,354,176	N/A	N/A
United Express Service	N. Dartmouth, MA	$6,074,862	80	$2,461,442	N/A	N/A
East-West Motor Freight	Selmer, TN	$6,069,000	152	$6,185,000	79,000	94,245,000
G. & R.G.	Odessa, TX	$6,061,316	104	$3,519,622	250,657	63,709,760
Garner Transportation	Milton, WA	$6,051,270	157	$2,495,000	214,287	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Howes & Howes Trucking	N/A	N/A	N/A	N/A	N/A	N/A	N/A
United Express Service	N/A	N/A	N/A	N/A	$1.73	N/A	N/A
East-West Motor Freight	3,000	22.50	1,200	$2,232.72	$1.45	$77.27	$0.06
G. & R.G.	11,487	9.55	254	$527.67	$0.91	$24.18	$0.10
Garner Transportation	8,050	N/A	N/A	$751.71	$1.38	$28.24	N/A

Table 14-- General Freight (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Howes & Howes Trucking	100%	68%	98%	N/A
United Express Service	N/A	69%	90%	$9,920
East-West Motor Freight	N/A	88%	100%	$4,276
G. & R.G.	N/A	45%	69%	$1,446
Garner Transportation	N/A	70%	85%	$8,263

Table 15-- General Freight (Truckload) Small-Sized Carriers' Average Financial Performance: Five Largest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Howes & Howes Trucking	$1,434,490	$963,089	76.44	15.82%	99.23%
United Express Service	$18,373	-$121,039	99.70	-1.99%	-19.79%
East-West Motor Freight	$146,000	-$3,000	97.60	-0.05%	-0.05%
G. & R.G.	$1,236,701	$214,248	79.60	3.53%	24.92%
Garner Transportation	$24,004	-$139,871	99.60	-2.31%	-73.91%

Table 16-- General Freight (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Recktenwald (Richard C.)	Buffalo, NY	$76,500	2	$415,769	N/A	N/A
Pam Oil	Sioux Falls, SD	$137,999	124	$32,736	68,041	N/A
H&H Bulk Transport	Indianapolis, IN	$427,368	106	$2,397,978	N/A	N/A
Hawkey Transportation	Redding, CA	$466,512	51	$1,545,285	9,334	1,676,753
Beaver Express Service	Woodward, OK	$668,957	N/A	$3,008,070	2,533	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Recktenwald (Richard C.)	125	N/A	N/A	$612.00	$3.06	N/A	$612.00
Pam Oil	4,316	N/A	N/A	$31.97	$0.04	$2.03	$31.97
H&H Bulk Transport	N/A	N/A	N/A	N/A	$0.13	N/A	N/A
Hawkey Transportation	383	24.37	179.64	$1,218.05	$6.78	$49.98	$1,218.05
Beaver Express Service	25,260	N/A	N/A	$26.48	$3.54	$264.10	$26.48

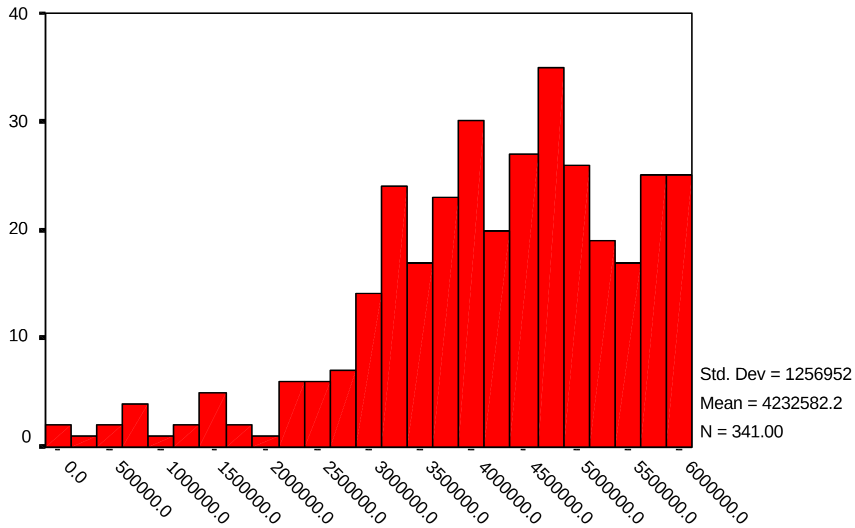
Table 16-- General Freight (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Recktenwald (Richard C.)	N/A	N/A	0%	N/A
Pam Oil	0%	0%	100%	$6,979
H&H Bulk Transport	100%	0%	100%	$285
Hawkey Transportation	100%	94%	0%	$740
Beaver Express Service	N/A	N/A	N/A	N/A

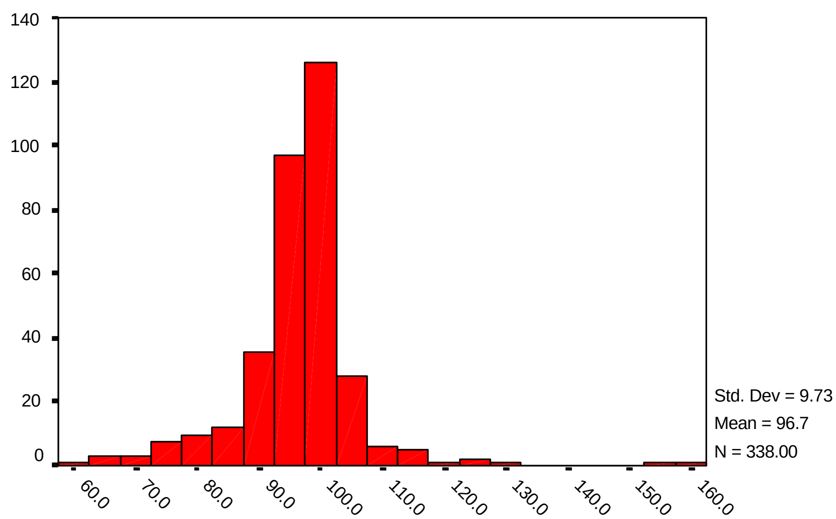
Table 17-- General Freight (Truckload) Small-Sized Carriers' Average Financial Performance: Five Smallest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Recktenwald (Richard C.)	$16,604	$134,453	78.30	N/A	48.46%
Pam Oil	-$4,547,661	-$4,547,661	N/A	N/A	N/A
H&H Bulk Transport	-$33,392	-$39,114	107.81	-9.15%	-4.74%
Hawkey Transportation	$16,047	$16,824	96.56	3.61%	1.40%
Beaver Express Service	-$190,133	$2,911,973	128.42	N/A	116.75%

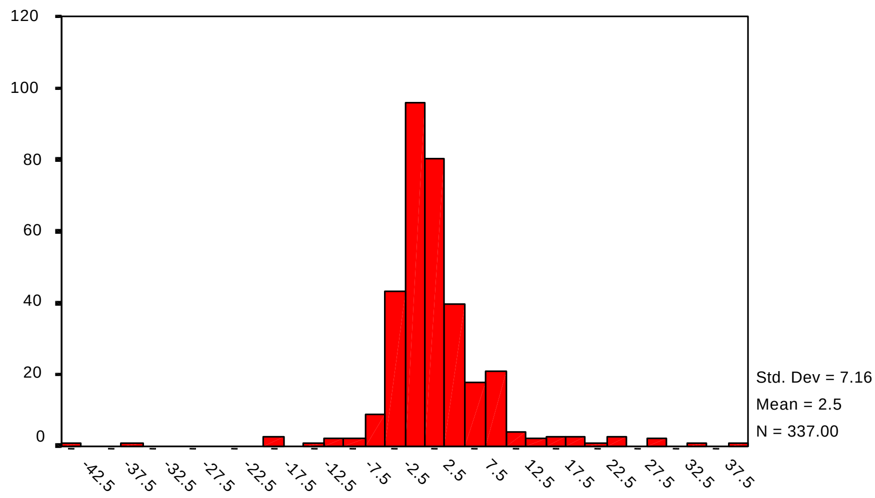
Summary Charts and Graphs for General Freight – Small Carriers



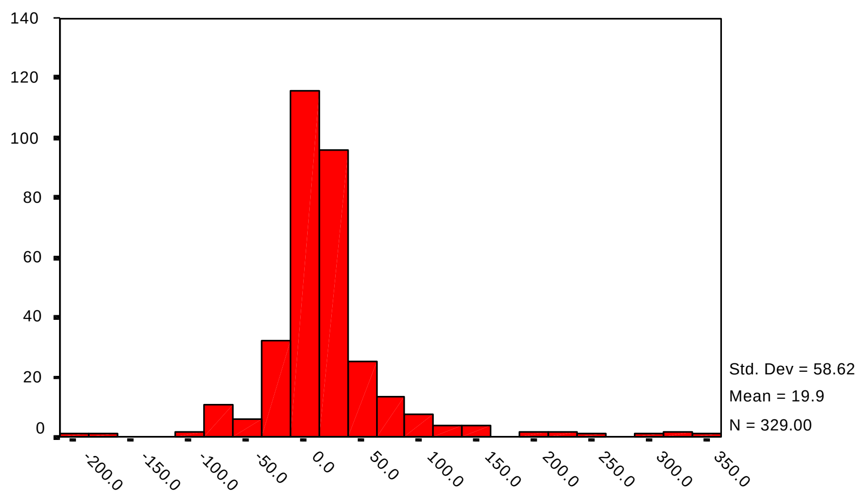
Revenue



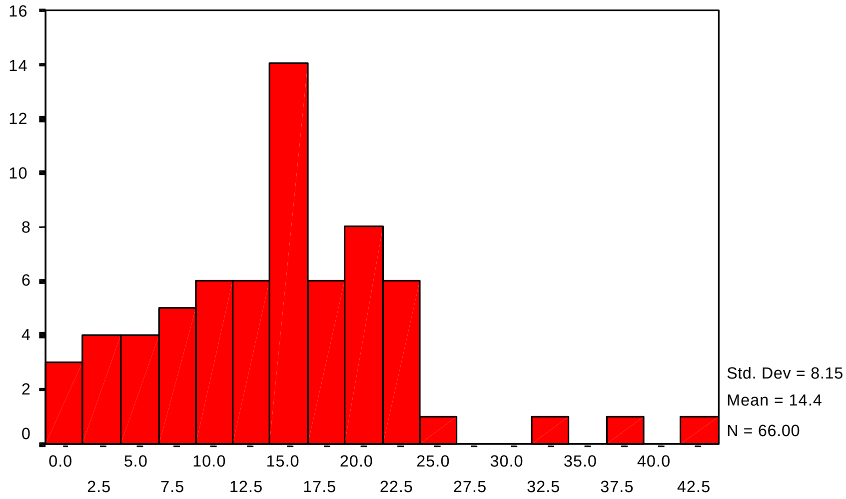
Operating Ratio



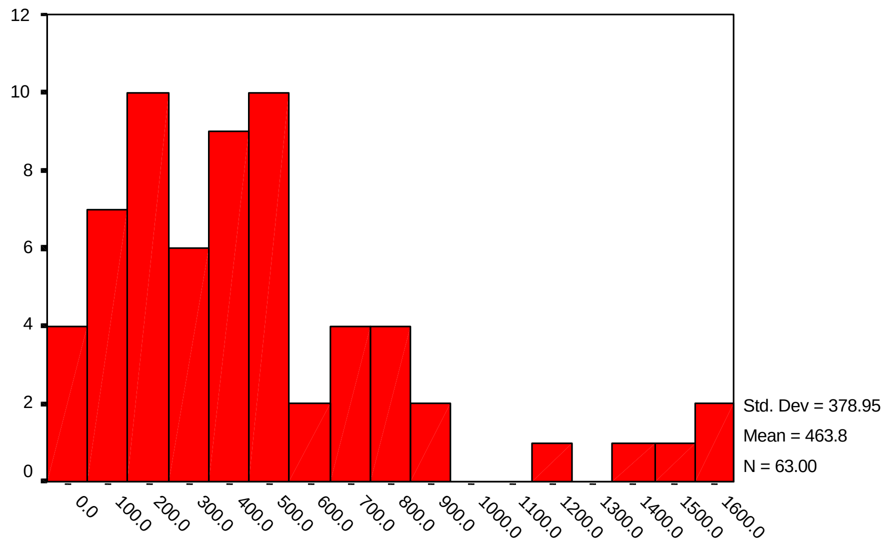
Net Profit Margin



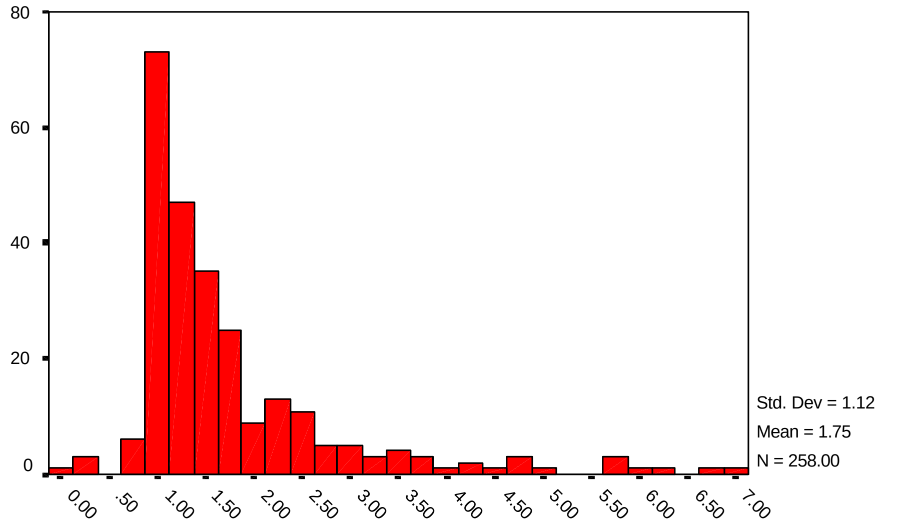
Return on Equity



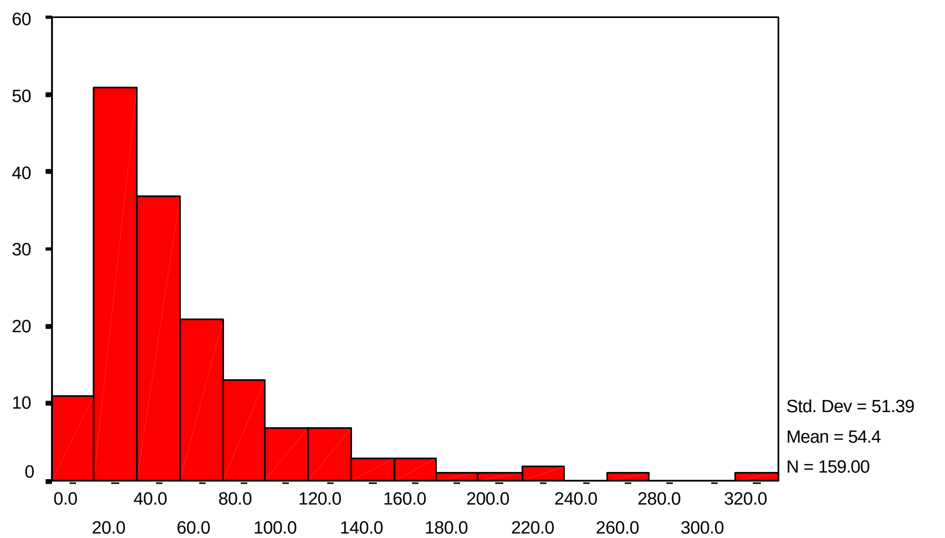
Average Load (Tons)



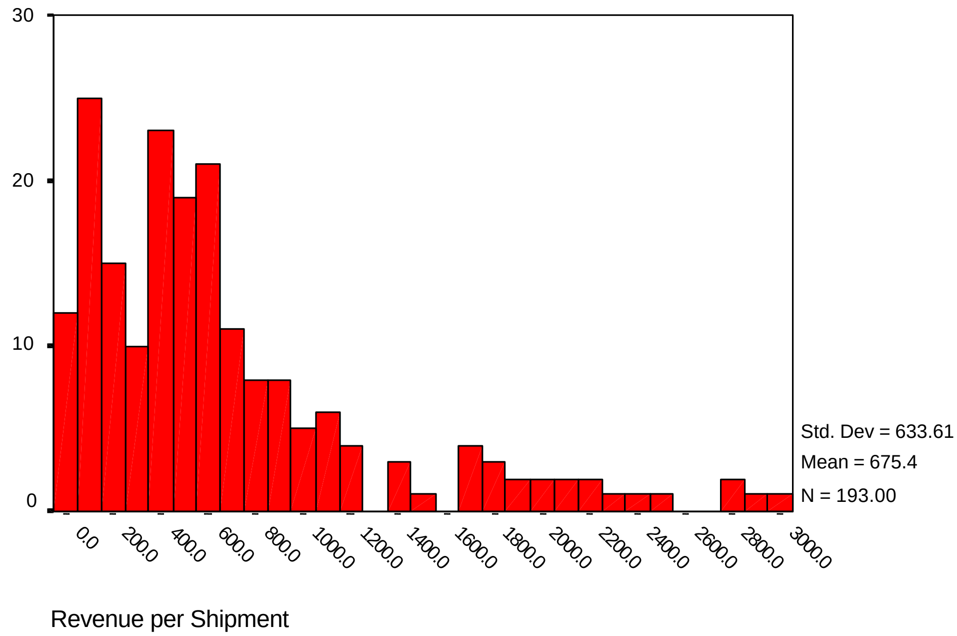
Average Haul (Miles)



Revenue per Mile



Revenue per Ton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2000.0
2200.0
2400.0
2600.0
2800.0
3000.0
Std. Dev = 633.61
Mean = 675.4
N = 193.00
Revenue per Shipment

Summary Data for General Freight – Small Carriers

General Small TL Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	341	1,631	6,087,446	4,232,582	1,256,952
Expenses	342	801	7,560,539	4,072,183	1,240,404
Operating Income	342	(4,547,661)	2,502,314	148,023	462,310
Net Income	342	(4,547,661)	15,630,892	158,282	925,234
Total Assets	339	(50,890)	51,327,779	1,885,153	3,694,119
Total Liabilities	338	(1,237,661)	46,636,989	1,101,209	2,684,054
Total Equity	337	(3,399,407)	33,428,492	7,896,679	2,027,486
Operating Ratio	338	58	158	97	10
Net Profit Margin	337	-43%	41%	3%	7%
Return on Equity	329	-190%	350%	20%	59%
Individual Expense Items					
Drivers and Helpers Wages	344	-	99,198,034	960,776	5,341,825
Insurance	324	4,915	561,000	169,808	93,004
Outside Vehicle Maintenance	289	-	1,126,000	164,687	161,736
Purchased Transportation	344	(224,861)	6,727,805	990,137	1,212,141
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	116	0%	100%	73%	41%
Trucks Leased	116	0%	100%	27%	41%
Tractors Owned	307	0%	100%	60%	40%
Tractors Leased	307	0%	100%	40%	40%
Trailers Owned	313	0%	100%	74%	37%
Trailers Leased	313	0%	100%	26%	37%
Operating Statistics					
Total Units in Fleet	334	-	556	106	71
Total Highway Miles	291	-	6,878,925	2,709,334	1,631,989
Total Tons Carried	193	-	3,008,500	155,649	318,159
Total Ton-Miles	215	-	134,918,784	13,325,285	26,265,680
Total Shipments	207	-	875,500	25,361	75,062
Revenue per Mile	258	$0.04	$7.10	$1.75	$1.12
Revenue per Ton	159	$1.43	$323.46	$54.39	$51.39
Revenue per Shipment	193	$3.34	$3,039.15	$675.40	$633.61
Revenue per Ton-Mile	67	$0.03	$2.82	$0.23	$0.41
Average Load (Tons)	66	1	44	14	8
Average Haul (Miles)	63	13	1,600	464	379
Outside Vehicle Maintenance per Truck/Tractor	279	-	54,174	5,447	6,284
Valid N (listwise)	11				

V. GENERAL FREIGHT – MEDIUM-SIZED CARRIERS

Overview of Carriers

A total of 1040 firms in the General Freight (Truckload) industry segment reported $26.26 Billion in annual revenues for 1997 (Table 18). Dividing this segment into three groups, based on total revenues, we find that the mid-sized tier of the carriers generates $2.9 Billion in revenues. This subtotal accounts for 10.9% of the total revenues in the General Freight industry segment. The remainder of this section focuses on the medium-sized General Freight firm tier.

The revenues for the five largest firms in this sub segment account for 1.9% of the sub segment's total revenue. The largest firm in this sub segment, B&T Mail Service, generated 0.4% of the segment's total revenue. The five largest firms in this industry sub segment account for 1.9% of the sub segment's total assets and 2.5% of the total units in the segment's fleet (Table 22).

The information summarized above suggests that there is a low level of concentration in this industry segment. In fact, across all firms in this sub segment, revenues varied from a minimum of $6.1 Million to $11 Million. Despite this high level of disaggregation, four of the five largest firms in the sub segment reported positive net incomes. The average net income among these four firms is $177,535, resulting in an average net profit margin of 1.6% (Table 23). In addition, four of the five smallest carriers in the sub segment reported positive net profit margins. The highest profit margin among the five smallest firms in the sub segment was 7.6% (Table 25).

Overall, the average net profit margin for firms in this sub segment was 1.9%. In addition, the average return on equity was 16.4% (Table 19). The five firms with the highest return on equity ratios had an average of 118.2% (Table 21). This indicates that these firms were about 7 times more effective in returning value to their shareholders with respect to the average firm in this industry sub segment. These firms are 1.3 times smaller than the five largest firms in the sub segment. Indeed, the total revenue of the 5 largest firms in the sub segment is $54.5 Million (Table 22), while the total revenue of the 5 most profitable firms is $40.4 Million (Table 20). Thus, carriers in this industry sub segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this sub segment handled on average 25,415 shipments and 244,000 tons of freight and produced 31.6 Million ton-miles on average. Their average load was 14.1 tons and 87 firms reported an average length of haul of 476 miles (Tables 18 and 19). Among the five largest carriers in the sub segment, B&T Mail Service, generated approximately two times the average tons carried by firms in the sub segment but only 63% of the average ton-miles (Table 20) as a consequence of the firm's short average length of haul (38 miles).

On average, carriers in this sub segment owned 67% of their trucks; 54% of their tractors; and 67% of their trailers (Table 18). All of the five largest carriers in this sub segment reported tractor ownership information. One carrier, Circle City Transport, owned 100% of its tractors, while another carrier, T.B.&P., owned none of its tractors (Table 22). The other three firms owned between 55 and 80% of their tractors.

The five most profitable firms in the sub segment varied widely in their tractor ownership patterns. One firm owned 100% of its tractors (Mount Vernon Mills), while the other four firms owned between 30 and 93% of their tractors. This suggests that a wide variety of tractor ownership strategies are being employed successfully in this sub segment. (Table 20). Furthermore, there is variation among the five smallest companies in the sub segment in their truck-tractor ownership patterns. Two of the five smallest firms in the sub segment reporting tractor ownership relied on their own company drivers (Table 24).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this sub segment, the average operating ratio is 95.9% (Table 19). Among the five most profitable firms in the sub segment (Table 21), based on return on equity, operating ratio ranged from a low of 83% (First-Class Service) to a high of 93% (WNK Express). Among the five largest carriers (Table 23), the largest, B&T Mail Services, had an operating ratio of 97.3%. Among this group of carriers, the one with the lowest operating ratio (Circle City Transport) had a ratio of 92.9%. Four of the five smallest carriers (Table 25) had operating ratios below 100% and the firm with the lowest operating ratio had a ratio of 86.1% (Super Van Service Company). Clearly, firms in the mid-sized segment of the General-Freight Carrier industry had poorer operating performance in comparison with the largest firms in that segment.

Table 18—General Freight (Truckload) Medium Sized Carriers' Average Size and Operating Performance

	Number of Companies Reporting	Total
Revenue	348	$2,866,092,039
Units in Fleet	337	62,017
Assets	344	$1,146,514,554
Tons Carried	216	52,705,456
Ton-Miles	248	7,828,047,072
Shipments	236	5,998,033
		Average
Size of Load (Tons)	92	14.09
Length of Haul (Miles)	87	476
		Average
Revenue Per Mile	293	$2.22
Revenue Per Ton	186	$61.32
Revenue Per Ton-Mile	93	$716.44
		Average
% of Trucks Owned	122	67%
% of Tractors Owned	311	54%
% of Trailers Owned	322	67%
Outside Vehicle Maintenance per Truck/Tractor	299	$5,760

Table 19—General Freight (Truckload) Medium-Sized Carriers' Average Financial Performance

Operating Income	$353,754
Net Income	$181,323
Operating Ratio	95.86
Net Profit Margin	1.87%
Return on Equity	16.44%

Table 20—General Freight (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
W&K Express	River Grove, IL	$7,430,835	129	$1,338,070	N/A	9,143,456
Mount Vernon Mills	Ware Shoals, SC	$6,273,880	154	$1,437,918	N/A	N/A
Five Star Trucking	Willoughby, OH	$8,721,235	102	$2,587,262	166,000	N/A
First Class Services	Lewisport, KY	$8,693,109	155	$3,492,717	674,035	N/A
Hoffman Transport	Hagerstown, MD	$9,298,941	177	$5,221,578	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
W&K Express	N/A	N/A	N/A	N/A	N/A	N/A	$0.87
Mount Vernon Mills	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five Star Trucking	4,150	N/A	N/A	$2,101.50	$2.08	$52.54	N/A
First Class Services	30,638	N/A	N/A	$283.74	$2.08	$12.90	N/A
Hoffman Transport	9,069	N/A	N/A	$1,025.35	$1.09	N/A	N/A

Table 20—General Freight (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
W&K Express	N/A	30%	38%	$3,085
Mount Vernon Mills	100%	100%	100%	$1,103
Five Star Trucking	0%	52%	95%	$1,184
First Class Services	N/A	88%	95%	$24,169
Hoffman Transport	N/A	93%	66%	$13,503

Table 21—General Freight (Truckload) Medium-Sized Carriers' Average Financial Performance: Five Most Profitable Firms

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
W&K Express	$541,827	$217,625	93.20	2.73%	151.92%
Mount Vernon Mills	$782,186	$469,312	87.53	7.48%	117.60%
Five Star Trucking	$732,462	$616,648	91.60	7.07%	107.75%
First Class Services	$1,475,201	$1,017,889	83.03	11.71%	107.33%
Hoffman Transport	$960,936	$600,218	89.67	6.45%	106.45%

Table 22—General Freight (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
B & T Mail Service	New Berlin, WI	$10,975,558	244	$1,642,202	527,440	19,921,409
Celebrity Freight Systems	Paducah, KY	$10,959,204	363	$3,754,741	N/A	N/A
T. B. & P. Express	Daleville, IN	$10,893,533	199	$1,939,073	115,437	171,430,172
L & H Trucking Co.	Hanover, PA	$10,864,041	520	$4,016,930	447,534	N/A
Circle City Transport	Dothan, AL	$10,856,724	229	$10,721,887	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
B & T Mail Service	26,372	2.33	38	$416.18	$1.28	$20.81	$0.55
Celebrity Freight Systems	N/A	N/A	N/A	N/A	$1.09	N/A	N/A
T. B. & P. Express	6,548	17.25	1,485	$1,663.64	$1.10	$94.37	$0.06
L & H Trucking Co	24,863	N/A	N/A	$436.96	$1.61	$24.28	N/A
Circle City Transport	7,762	N/A	N/A	$1,398.70	$1.10	N/A	N/A

Table 22—General Freight (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
B & T Mail Service	100%	55%	88%	$1,080
Celebrity Freight Systems	N/A	80%	0%	$6,354
T. B. & P. Express	0%	0%	0%	$345
L & H Trucking Co.	100%	58%	54%	$1,429
Circle City Transport	N/A	100%	100%	$2,056

Table 23—General Freight (Truckload) Medium-Sized Carriers' Average Financial Performance: Five Largest Firms

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
B & T Mail Service	$295,919	$243,166	97.30	2.22%	34.76%
Celebrity Freight Systems	$299,323	-$42,597	97.27	-0.39%	-14.95%
T. B. & P. Express	$355,755	$156,136	96.73	1.43%	34.35%
L & H Trucking Co.	$99,709	$63,109	99.08	0.58%	5.53%
Circle City Transport	$769,141	$247,730	92.92	2.28%	20.34%

Table 24—General Freight (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
B & K Transportation	Oak Creek, WI	$6,121,789	195	$3,744,046	46,783	N/A
Richers Trucking	Wever, IA	$6,132,762	68	$1,881,993	N/A	N/A
Martin Trucking	Hugoton, KS	$6,133,096	102	$1,814,776	364,438	N/A
Super Van Service Co.	St. Louis, MO	$6,144,612	86	$1,897,156	41,639	13,532,536
Kindsvater	Dodge City, KS	$6,152,731	120	$3,346,150	N/A	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
B & K Transportation	5,057	N/A	N/A	$1,210.56	$1.78	$130.85	N/A
Richers Trucking	2,688	N/A	N/A	$2,281.53	$1.15	N/A	N/A
Martin Trucking	14,874	N/A	N/A	$412.34	$1.46	$16.83	N/A
Super Van Service Co.	63,476	8.29	325	$96.80	$3.76	$147.57	$0.45
Kindsvater	N/A	N/A	N/A	N/A	$1.39	N/A	N/A

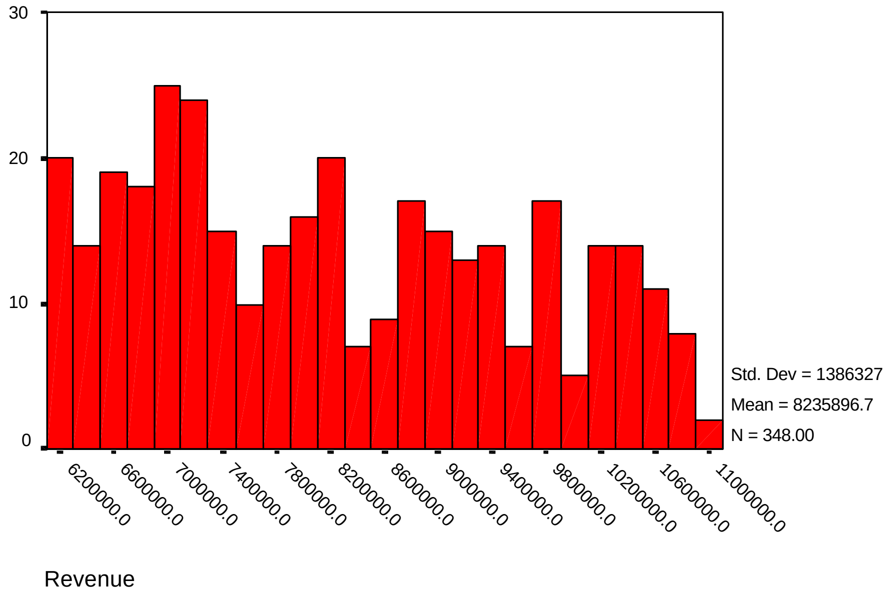
Table 24—General Freight (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

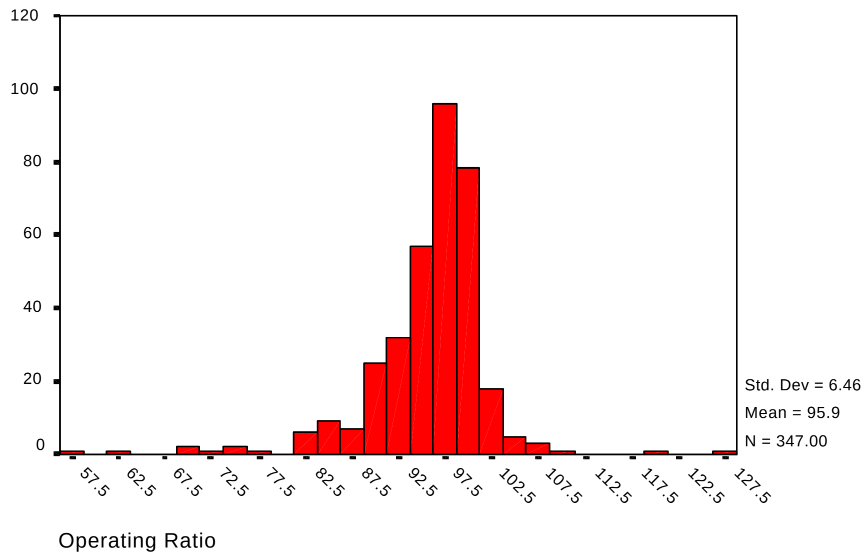
Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
B & K Transpor-tation	N/A	100%	100%	$7,757
Richers Trucking	N/A	100%	100%	$12,578
Martin Trucking	N/A	39%	89%	$7,168
Super Van Service Co.	0%	14%	100%	$2,955
Kindsvater	100%	N/A	100%	$26,038

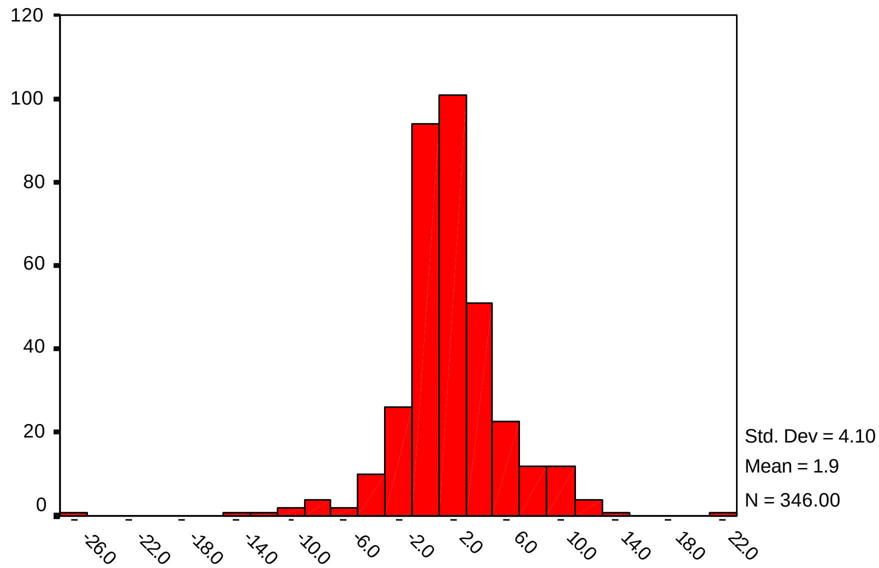
Table 25—General Freight (Truckload) Medium-Sized Carriers' Average Financial Performance: Five Smallest Firms

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
B & K Transpor-tation	$401,834	$277,435	93.44	4.53%	11.14%
Richers Trucking	$299,119	$59,263	95.12	0.97%	18.44%
Martin Trucking	$128,718	$105,548	97.90	1.72%	8.60%
Super Van Service Co.	$854,242	$468,851	86.10	7.63%	72.92%
Kindsvater	-$40,973	-$90,231	100.67	-1.47%	-17.79%

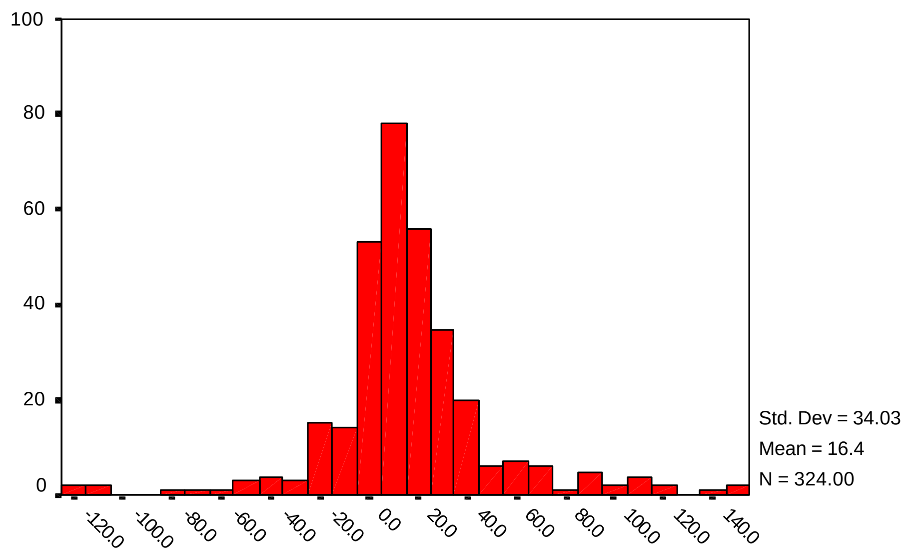
Summary Charts and Graphs for General Freight – Medium-Sized Carriers



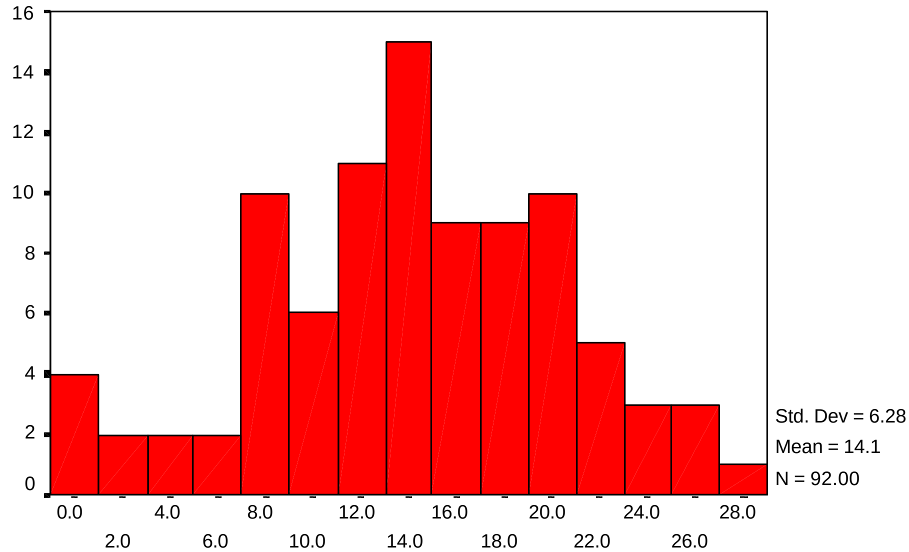




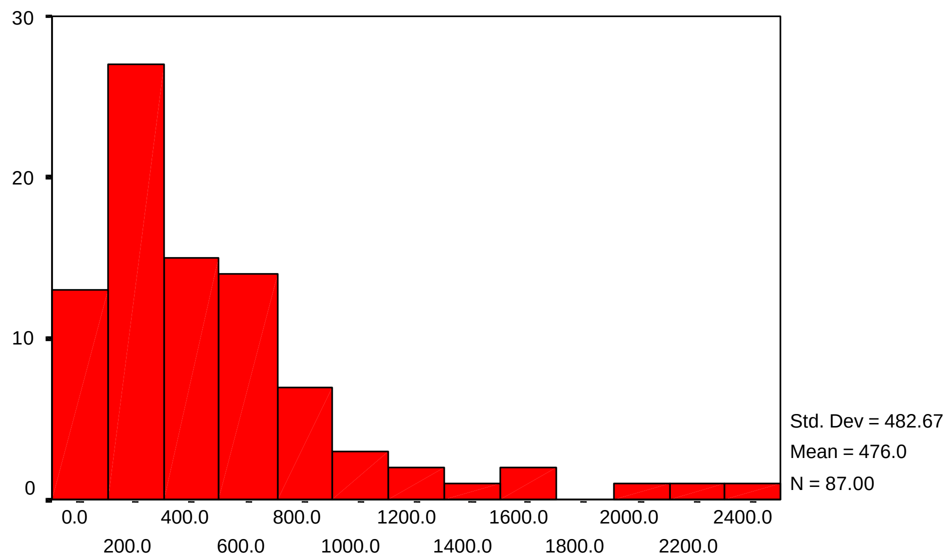
Net Profit Margin



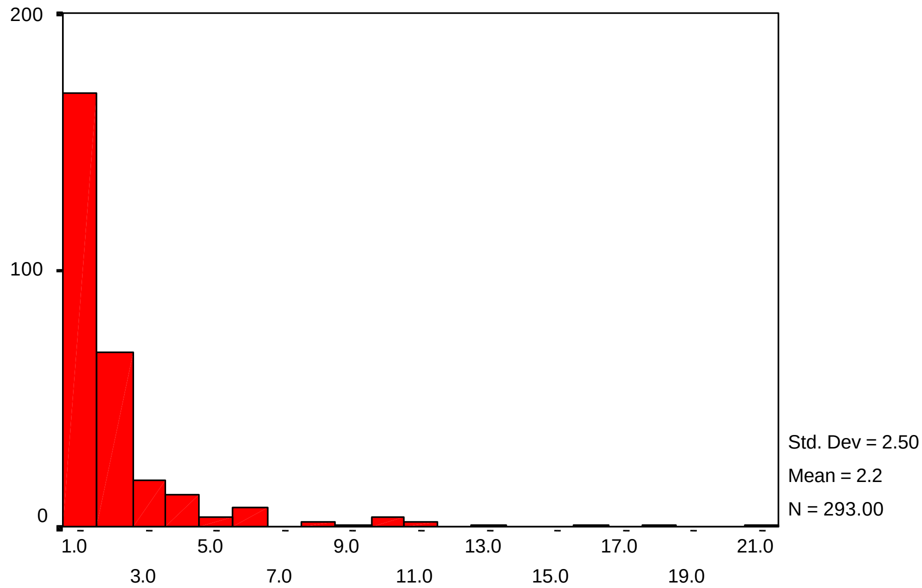
Return on Equity



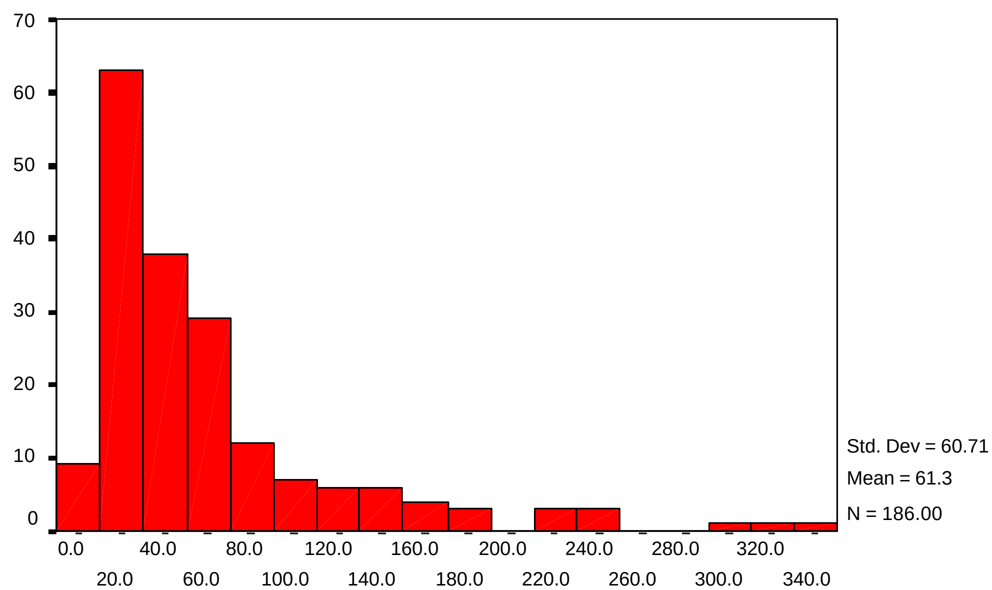
Average Load (Tons)



Average Haul (Miles)



Revenue per Mile



Revenue per Ton

Summary Data for General Freight – Medium-Sized Carriers

General Mid Size TL Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	348	6,121,789	10,975,558	8,236,897	1,386,327
Expenses	348	4,156,939	10,834,950	7,882,149	1,436,008
Operating Income	348	(1,877,074)	5,415,038	353,754	579,969
Net Income	348	(1,624,135)	7,384,000	181,323	515,770
Total Assets	344	138,536	69,080,444	3,332,891	5,200,228
Total Liabilities	344	(1,011,359)	61,319,409	2,057,747	3,659,634
Total Equity	344	(3,191,282)	46,433,393	12,755,147	2,895,507
Operating Ratio	347	58	126	96	6
Net Profit Margin	346	-26%	21%	2%	4%
Return on Equity	324	-123%	152%	16%	34%
Individual Expense Items					
Drivers and Helpers Wages	341	-	17,770,773	1,345,258	1,390,076
Insurance	335	(206,121)	935,886	264,821	145,022
Outside Vehicle Maintenance	311	(93,089)	2,176,690	287,608	275,084
Purchased Transportation	341	-	8,859,000	2,022,112	2,015,249
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	122	0%	100%	67%	45%
Trucks Leased	122	0%	100%	33%	45%
Tractors Owned	311	0%	100%	54%	40%
Tractors Leased	311	0%	100%	46%	40%
Trailers Owned	322	0%	100%	67%	39%
Trailers Leased	322	0%	100%	33%	39%
Operating Statistics					
Total Units in Fleet	337	-	725	184	105
Total Highway Miles	322	-	11,200,000	4,997,208	2,812,144
Total Tons Carried	216	-	2,772,052	244,007	298,930
Total Ton-Miles	248	-	243,197,577	31,564,706	52,390,667
Total Shipments	236	-	614,400	25,415	48,368
Revenue per Mile	293	$0.81	$21.38	$2.22	$2.50
Revenue per Ton	186	$3.33	$345.50	$61.32	$60.71
Revenue per Shipment	223	$16.71	$3,296.38	$716.44	$580.87
Revenue per Ton-Mile	93	$0.03	$2.12	$0.23	$0.36
Average Load (Tons)	92	1	28	14	62,823
Average Haul (Miles)	87	6	2,440	476	483
Outside Vehicle Maintenance per Truck/Tractor	299	(1,501)	70,089	5,760	6,745
Valid N (listwise)	17				

VI. GENERAL FREIGHT – LARGE CARRIERS

Overview of Carriers

A total of 1040 firms in the General Freight (Truckload) industry segment reported $26.26 Billion in annual revenues for 1997 (Table 26). Dividing this segment into three groups, based on total revenues, we find that the largest third of the carriers generates $21.95 Billion in revenues. This subtotal accounts for 83.6% of the total revenues in the General Freight industry segment. The remainder of this section focuses on the largest General Freight firm tier.

The revenues for the five largest firms in this sub segment account for 20.9% of the sub segment's total revenue. The largest firm in this sub segment, JB Hunt Transport, generated 6.2% of the segment's total revenue. Three of the five largest firms in this industry sub segment account for 27.3% of the sub segment's total assets and 21.9% of the total units in the segment's fleet (Table 30).

The information summarized above suggests that there is a low level of dominance by the largest carriers in this industry sub segment. However, two of the five largest firms experienced positive profit margins with the largest of the two firms having a net income gain of $48.4 Million, resulting in a net profit margin of 6.3% (Table 31). In addition, all of the five smallest carriers in the sub segment reported positive net profit margins. The highest profit margin among the five smallest firms in the sub segment was 14.2% (Table 33).

Overall, the average net profit margin for firms in this sub segment was 3%. In addition, the average return on equity was 21.9% (Table 27). The five firms with the highest return on equity ratios had an average of 199.5% (Table 29). This indicates that these firms were about 9 times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are almost 20 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the sub segment is $4.59 Billion (Table 30), while the total revenue of the 5 most profitable firms is $233 Million (Table 28). Thus, carriers in this industry sub segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this sub segment handled on average 41,116 shipments and 3.9 Million tons of freight and produced 351.4 Million ton-miles on average. The average load was 13.8 tons and 124 firms reported an average length of haul of 577 miles (Tables 26 and 27). Among the five largest carriers, JB Hunt Transport, generated approximately five times the average tons carried by firms in the sub segment as well as 52 times the average ton-miles (Table 28).

On average, carriers in this sub segment owned 69% of their trucks; 54% of their tractors; and 91% of their trailers (Table 26). Only two of the five largest carriers in this sub segment reported tractor ownership information. One carrier, JB Hunt Transport, owned 100% of its tractors, while the other carrier, Ryder Integrated Logistics, owned none of its tractors (Table 30).

The five most profitable firms in the sub segment varied widely in their tractor ownership patterns. Three of them (PBX, Trailwood Transportation, and Ace Transportation) relied almost exclusively on owner-operators. On the other hand, two companies (Store-Wide Delivery and Consolidated Cargo Carrier) owned a significant share of their tractors. This suggests that neither an all owner-operator or an all company driver strategy is a key factor in devising a profitable business approach (Table 28). Furthermore, there is variation among the five smallest companies in the sub segment in their reliance on company drivers and owner-operators, although only four of the five smallest firms in the sub segment reported tractor ownership information. Among these four firms, only one (Budway Enterprises) relied exclusively on company drivers. The other three carriers in the group relied on company drivers to operate between 56 and 88% of their tractors (Table 32).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this sub segment, the average operating ratio is 95.2% (Table 27). Among the five most profitable firms in the sub segment (Table 29), based on return on equity, operating ratio ranged from a low of 87.6% (Store-Wide Delivery) to a high of 96.8% (Trailwood Transportation.) Among the five largest carriers (Table 31), the largest, JB Hunt Transport, had an operating ratio of 97.3%. Among this group of carriers, the one with the lowest operating ratio (Swift Transportation) had a ratio of 89.6%. Among the five smallest carriers (Table 33), all had operating ratios below 100% and the firm with the lowest operating ratio had a ratio of 90.1%. Clearly, firms in this sub segment of general-freight carriers had a strong operating performance regardless of their operating size.

Table 26-- General Freight (Truckload) Large Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	351	$21,950,000,000
Units in Fleet	321	309,320
Assets	324	$7,587,506,076
Tons Carried	277	1,076,739,835
Ton-Miles	281	98,732,277,145
Shipments	278	11,430,294
		Average
Size of Load (Tons)	144	13.83
Length of Haul (Miles)	124	577
		Average
Revenue Per Mile	274	$1.54
Revenue Per Ton	177	$57.54
Revenue Per Ton-Mile	177	$0.37
		Average
% of Trucks Owned	99	69%
% of Tractors Owned	283	54%
% of Trailers Owned	281	91%
Outside Vehicle Maintenance per Truck/Tractor	298	$3,463

Table 27-- General Freight (Truckload) Large Carriers' Average Financial Performance

Operating Income	$2,205,977
Net Income	$1,141,330
Operating Ratio	95.20
Net Profit Margin	2.95%
Return on Equity	21.88%

Table 28-- General Freight (Truckload) Large Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
PBX	Dakota City, NE	$63,200,600	719	$9,494,496	1,629,136	1,465,965,483
Store-Wide Delivery	Secaucus, NJ	$12,474,113	99	$3,204,726	N/A	N/A
Trailwood Transportation	St. Paul, MN	$15,107,374	314	$610,487	N/A	N/A
Consolidated Cargo Carrier	Columbia, SC	$18,878,219	178	$2,124,992	N/A	N/A
Ace Transportation	Lafayette, LA	$123,311,993	1,899	$24,986,811	3,402,120	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
PBX	75,514	N/A	900	$836.94	$1.37	$38.79	$0.04
Store-Wide Delivery	N/A	N/A	N/A	N/A	$3.31	N/A	N/A
Trailwood Transportation	N/A	N/A	N/A	N/A	$1.57	N/A	N/A
Consolidated Cargo Carrier	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ace Transportation	340,223	N/A	N/A	$366.44	$1.29	$36.25	N/A

Table 28-- General Freight (Truckload) Large Carriers' Average Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
PBX	N/A	0%	100%	$691
Store-Wide Delivery	N/A	100%	100%	$1,526
Trailwood Transportation	N/A	4%	0%	$7,610
Consolidated Cargo Carrier	N/A	28%	100%	$3,619
Ace Transportation	0%	0%	N/A	$70

Table 29-- General Freight (Truckload) Large Carriers' Average Financial Performance: Five Most Profitable Firms

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
PBX	$7,236,020	$10,172,625	88.55	16.10%	286.16%
Store-Wide Delivery	$1,551,622	$1,659,259	87.56	13.30%	224.38%
Trailwood Transportation	$486,662	$467,080	96.78	3.09%	177.11%
Consolidated Cargo Carrier	$1,573,284	$933,945	91.67	4.95%	156.94%
Ace Transportation	$11,184,110	$11,184,110	90.93	9.07%	152.97%

Table 30-- General Freight (Truckload) Large Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets (in thousands)**	**Tons carried**	**Ton-miles (in thousands)**
Hunt (J.B.) Transport	Lowell, AR	$1,351,007,445	33,404	$1,020,011	19,506,864	18,302,184
Ryder Integrated Logistics	Miami, FL	$1,298,407,390	14,205	$380,091	11,401,852	N/A
Werner Enterprises	Omaha, NE	$772,094,529	20,050	$667,637	N/A	7,447,910
Swift Transportation	Phoenix, AZ	$713,638,000	N/A	N/A	N/A	N/A
Landstar Ranger	Jacksonville, FL	$456,322,000	N/A	N/A	N/A	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Hunt (J.B.) Transport	1,500,528	23.55	938	$900.35	$1.74	$69.26	$0.07
Ryder Integrated Logistics	N/A	N/A	N/A	N/A	$3.63	$113.88	N/A
Werner Enterprises	N/A	11.65	N/A	N/A	$1.21	N/A	$0.10
Swift Transportation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Landstar Ranger	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 30-- General Freight (Truckload) Large Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Hunt (J.B.) Transport	N/A	100%	100%	$3,447
Ryder Integrated Logistics	0%	0%	100%	$495
Werner Enterprises	84%	N/A	100%	$1,171
Swift Transportation	N/A	N/A	N/A	N/A
Landstar Ranger	N/A	N/A	N/A	N/A

Table 31-- General Freight (Truckload) Large Carriers' Average Financial Performance: Five Largest Firms

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Hunt (J.B.) Transport	$36,333,310	-$18,361,292	97.31	-1.36%	-13.91%
Ryder Integrated Logistics	$31,325,080	$17,324,750	97.59	1.33%	20.68%
Werner Enterprises	$77,647,130	$48,377,802	89.94	6.27%	12.24%
Swift Transportation	N/A	N/A	89.60	N/A	N/A
Landstar Ranger	N/A	N/A	95.60	N/A	N/A

Table 32-- General Freight (Truckload) Large Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
Bonded Carriers	Martinsburg, WV	$11,006,513	292	$3,743,439	243,000,000	N/A
Jonsen (D.E.)	Grove City, OH	$11,028,356	281	$5,240,490	N/A	N/A
Klink Trucking	Ashley, IN	$11,030,758	N/A	$10,079,494	N/A	N/A
Gateway Transfer Co.	Laredo, TX	$11,031,891	174	$7,559,333	64,000	N/A
Budway Enterprises	Pico Revera, CA	$11,039,069	151	$4,962,369	N/A	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Bonded Carriers	16,500	N/A	N/A	$667.06	$1.36	N/A	N/A
Jonsen (D.E.)	N/A	N/A	N/A	N/A	$1.09	N/A	N/A
Klink Trucking	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gateway Transfer Co.	3,200	N/A	N/A	N/A	$3.47	$172.37	N/A
Budway Enterprises	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 32-- General Freight (Truckload) Large Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Bonded Carriers	100%	88%	100%	N/A
Jonsen (D.E.)	N/A	61%	7%	$2,301
Klink Trucking	N/A	N/A	N/A	N/A
Gateway Transfer Co.	100%	56%	100%	$301
Budway Enterprises	N/A	100%	100%	$5,683

Table 33-- General Freight (Truckload) Large Carriers Average Financial Performance: Five Smallest Firms

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Bonded Carriers	$429,927	$1,559,160	96.09	14.17%	108.77%
Jonsen (D.E.)	$738,441	$202,476	93.30	1.84%	29.10%
Klink Trucking	$187,413	$187,413	98.30	1.70%	6.17%
Gateway Transfer Co.	$1,097,772	$905,549	90.05	8.21%	12.17%
Budway Enterprises	$549,658	$237,688	95.02	2.15%	19.06%

Summary Data for General Freight – Large Carriers

General Large TL Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	351	11,006,513	2,512,100,000	62,545,658	182,592,387
Expenses	351	-	1,314,674,135	51,774,549	121,369,531
Operating Income	326	(35,043,937)	77,647,130	2,205,977	6,518,995
Net Income	326	(50,511,831)	48,377,802	1,141,330	5,086,376
Total Assets	324	535,721	1,020,011,700	23,418,229	75,496,812
Total Liabilities	324	(7,176,512)	887,984,442	15,197,181	57,839,724
Total Equity	324	(43,533,129)	395,117,507	8,212,843	27,076,914
Operating Ratio	347	70	112	95	5
Net Profit Margin	325	-18%	25%	3%	4%
Return on Equity	309	-68%	286%	22%	35%
Individual Expense Items					
Drivers and Helpers Wages	253	-	63,274,000	1,266,408	4,278,934
Insurance	323	(176,931)	37,506,499	1,454,780	3,455,024
Outside Vehicle Maintenance	210	(177,805)	24,793,632	644,282	1,796,920
Purchased Transportation	253	-	291,711,462	9,427,252	26,032,658
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	99	0%	100%	69%	42%
Trucks Leased	99	0%	100%	31%	42%
Tractors Owned	283	0%	100%	54%	40%
Tractors Leased	283	0%	100%	46%	40%
Trailers Owned	281	0%	100%	91%	24%
Trailers Leased	281	0%	100%	9%	24%
Operating Statistics					
Total Units in Fleet	321	-	33,404	964	2,548
Total Highway Miles	310	-	777,034,411	31,163,998	71,708,872
Total Tons Carried	277	-	624,000,000	3,887,147	40,159,652
Total Ton-Miles	281	-	18,302,184,862	351,360,417	1,318,625,197
Total Shipments	278	-	1,500,528	41,116	107,902
Revenue per Mile	274	$0.72	$6.23	$1.54	$0.76
Revenue per Ton	177	$1.62	$225.82	$57.54	$42.78
Revenue per Shipment	155	$31.13	$2,568.63	$746.95	$488.87
Revenue per Ton-Mile	177	$0.00	$35.41	$0.37	$2.67
Average Load (Tons)	144	1	28	14	6
Average Haul (Miles)	124	9	2,542	577	441
Outside Vehicle Maintenance per Truck/Tractor	298	(1,218)	108,126	3,463	7,906
Valid N (listwise)	8				

VII. MOVING/HOUSEHOLD GOODS CARRIERS

Overview of Carriers

The Moving/Household Goods segment is composed of carriers whose primary business is the moving of personal property from one location to another, usually in conjunction with a relocation by the customer. A total of 96 firms in the Moving/Household Goods industry segment reported $4.9 Billion in annual revenues for 1997 (Table 34). The revenues for the five largest firms account for 51.4% of all the segment's revenues. The largest firm in this segment, United Van Lines, generated 14.8% of the segment's total revenue. Four of the five largest firms in this industry segment account for 51.8% of the segment's total assets (Table 38).

The information summarized above suggests that there is a moderate level of dominance by the largest carriers in this industry segment. However, the three largest carriers reporting net profit margins experienced margins below the average achieved by all firms in this industry segment. Furthermore, two of the largest firms reporting returns on equity were below the average return for all firms in the segment, while the third was only slightly higher than the average—20.3% for United Van Lines versus 19.0% for all firms in the segment (Table 39).

Overall, the average net profit margin for firms in the industry was 3.3%. In addition, the average return on equity was 19.0% (Table 35). The five firms with the highest return on equity ratios had an average of 103.8% (Table 37). This indicates that these firms were about 5-and-a-half times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are more than 27 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the industry is $2.5 Billion (Table 38), while the total revenue of the 5 most profitable firms is $93.1 Million (Table 36). Thus, carriers in this industry segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this segment handled on average 62,982 shipments and 60.5 Million tons of freight and produced 97.4 Million ton-miles on average. Their average load was 5.96 tons and their average length of haul was 884 miles (Tables 34 and 35). It should be noted, however, that this latter figure represents data from only four of the 96 firms in the sector. Among the five largest carriers, United Van Lines, generated approximately fourteen times the average tons carried by firms in the segment as well as seven times the average ton-miles (Table 36).

On average, carriers in this segment owned 82% of their trucks; 62% of their tractors; and 89% of their trailers (Table 34). Three of the five largest carriers in this segment reported information on their equipment ownership. Wherever reported, the data indicated 100% company ownership of equipment. It should be noted, however, that this segment of the trucking industry has a complex corporate structure. Many of the individual firms are agents to the parent van lines. As a consequence, these independent agents operate under the authority of the parent van lines. Thus, United Van Lines reports that there are only

164 vehicle units in its fleet. This number, however, does not reflect the equipment owned by the agents who use the operating authority of the parent company (Table 38).

The five most profitable firms varied widely in their equipment ownership strategies. Two firms (Reliable Carriers and Parks Moving & Storage) owned none of their tractors, while a third Anderson Consulting owned only 9%. In contrast, Pilot Transport owned 59% of its tractors and 100% of its trailers. (Table 36). There is less variation among the five smallest companies in their equipment ownership strategies. Among the five smallest companies, two (Dealers Auto Transport and Red Line) own 100% of their tractors, while a third (Morgan & Brother Manhatttan) own 67% of their tractors. The other two carriers did not report information on their tractor ownership, although one, Parkway Auto Transport, indicated that it owned 100% of its trucks (Table 40).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this segment, the average operating ratio is 96.5 (Table 35). Among the five most profitable firms (Table 37), based on return on equity, operating ratio ranged from a low of 84.4% (Pilot Transport) to a high of 111.5% (Parks Moving & Storage). Among the five largest carriers (Table 39), the largest, United Van Lines, had an operating ratio of 97.8. Among this group of carriers, the one with the lowest operating ratio (North American Van Lines) still had a ratio of 95.5. Among the five smallest carriers (Table 41), the firm with the lowest operating ratio had a ratio of 77.2, while the highest operating ratio was 98.8. Clearly, the smallest group of carriers on average had better operating performances than did the largest carriers in this industry segment.

Table 34—Moving/Household Goods Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	96	$4,943,727,767
Units in Fleet	87	21,918
Assets	91	$1,369,837,317
Tons Carried	46	2,783,772,528
Ton-Miles	52	5,063,725,315
Shipments	41	2,582,285
		Average
Size of Load (Tons)	25	5.96
Length of Haul (Miles)	4	884
		Average
Revenue Per Mile	44	$4.49
Revenue Per Ton	19	$1.77
Revenue Per Ton-Mile	26	$8.40
		Average
% of Trucks Owned	54	82
% of Tractors Owned	74	62
% of Trailers Owned	76	89
Outside Vehicle Maintenance per Truck/Tractor	35	$3,025

Table 35—Moving/Household Goods Carriers' Average Financial Performance

Operating Income	$1,404,293
Net Income	$1,003,818
Operating Ratio	96.51
Net Profit Margin	3.26%
Return on Equity	19.02%

Table 36—Moving/Household Goods Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Pilot Transport	Brighton, MI	$17,116,484	120	$3,807,237	N/A	N/A
Tri Star Freight System	Houston, TX	$9,117,991	N/A	$619,438	N/A	N/A
Reliable Carriers	Canton, MI	$56,266,572	332	$7,899,465	157,248	141,890,157
Parks Moving & Storage	Warrendale, PA	$5,308,678	120	$3,243,903	N/A	N/A
Anderson Consulting	Oklahoma, OK	$5,315,486	45	$2,201,877	196,159	15,812,360

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Pilot Transport	N/A	N/A	N/A	N/A	$2.53	N/A	N/A
Tri Star Freight System	N/A	N/A	N/A	N/A	$3.88	N/A	N/A
Reliable Carriers	17,472	9.00	902	$3,220.39	$3.57	N/A	$0.40
Parks Moving & Storage	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Anderson Consulting	12,499	9.73	N/A	$425.27	$3.27	N/A	$0.34

Table 36—Moving/Household Goods Carriers' Average Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Pilot Transport	N/A	59%	100%	$11,418
Tri Star Freight System	N/A	N/A	N/A	N/A
Reliable Carriers	N/A	0%	100%	$8,838
Parks Moving & Storage	16%	0%	6%	N/A
Anderson Consulting	N/A	9%	9%	$1,669

Table 37—Moving/Household Goods Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Pilot Transport	$2,662,610	$3,125,208	84.44	18.26%	127.71%
Tri Star Freight System	$132,493	$512,887	98.55	5.63%	118.66%
Reliable Carriers	$7,152,026	$7,950,299	87.29	14.13%	103.93%
Parks Moving & Storage	-$608,839	$841,438	111.47	15.85%	92.98%
Anderson Consulting	$519,737	$420,531	90.22	7.91%	75.52%

Table 38—Moving/Household Goods Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
United Van Lines	Fenton, MO	$730,261,166	164	$254,898,650	842,919,490	684,010,272
North American Van Lines	Fort Wayne, IN	$642,052,000	3,011	$288,812,000	772,432,000	1,561,811,496
Commercial Carriers	Troy, MI	$481,762,000	N/A	N/A	N/A	N/A
Atlas Van Lines	Evansville, IN	$348,409,593	420	$166,429,269	364,998,242	466,855,757
Mayflower Transit	Fenton, MO	$337,273,000	N/A	N/A	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
United Van Lines	805,727	3.33	N/A	$906.34	$3.56	$0.87	$1.07
North American Van Lines	390,132	7.55	N/A	$1,645.73	$3.11	$0.83	$0.41
Commercial Carriers	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Atlas Van Lines	385,560	4.53	N/A	$903.65	$3.38	$0.95	$0.75
Mayflower Transit	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 38—Moving/Household Goods Carriers' Average Size and Operating Performance: Five Most Largest Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
United Van Lines	N/A	N/A	100%	N/A
North American Van Lines	100%	100%	100%	N/A
Commercial Carriers	N/A	N/A	N/A	N/A
Atlas Van Lines	N/A	100%	100%	N/A
Mayflower Transit	N/A	N/A	N/A	N/A

Table 39—Moving/Household Goods Carriers' Average Financial Performance: Five Largest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
United Van Lines	$16,133,742	$8,850,009	97.79	1.21%	20.26%
North American Van Lines	$28,710,000	$20,214,000	95.53	3.15%	18.79%
Commercial Carriers	N/A	N/A	98.90	N/A	N/A
Atlas Van Lines	$10,196,228	$5,241,876	97.07	1.50%	16.43%
Mayflower Transit	N/A	N/A	98.90	N/A	N/A

Table 40—Moving/Household Goods Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Nittsu New York	Closter, NJ	$1,812,558	9	$116,369	N/A	N/A
Morgan & Brother Manhattan	Greenwich, CT	$2,126,729	26	$9,050,822	N/A	N/A
Parkway Auto Transport	Clearwater, MN	$2,670,758	35	$876,307	8,365	N/A
Dealers Auto Transport	Porterville, CA	$2,722,251	15	$3,755,436	N/A	N/A
Red Line	Emporia, KS	$3,174,376	72	$2,672,608	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Nittsu New York	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Morgan & Brother Manhattan	N/A	N/A	N/A	N/A	N/A	N/A	**N/A**
Parkway Auto Transport	478	N/A	N/A	$5,587.36	$1.64	N/A	N/A
Dealers Auto Transport	N/A	N/A	N/A	N/A	$1.96	N/A	N/A
Red Line	N/A	N/A	N/A	N/A	N/A	N/A	N/A

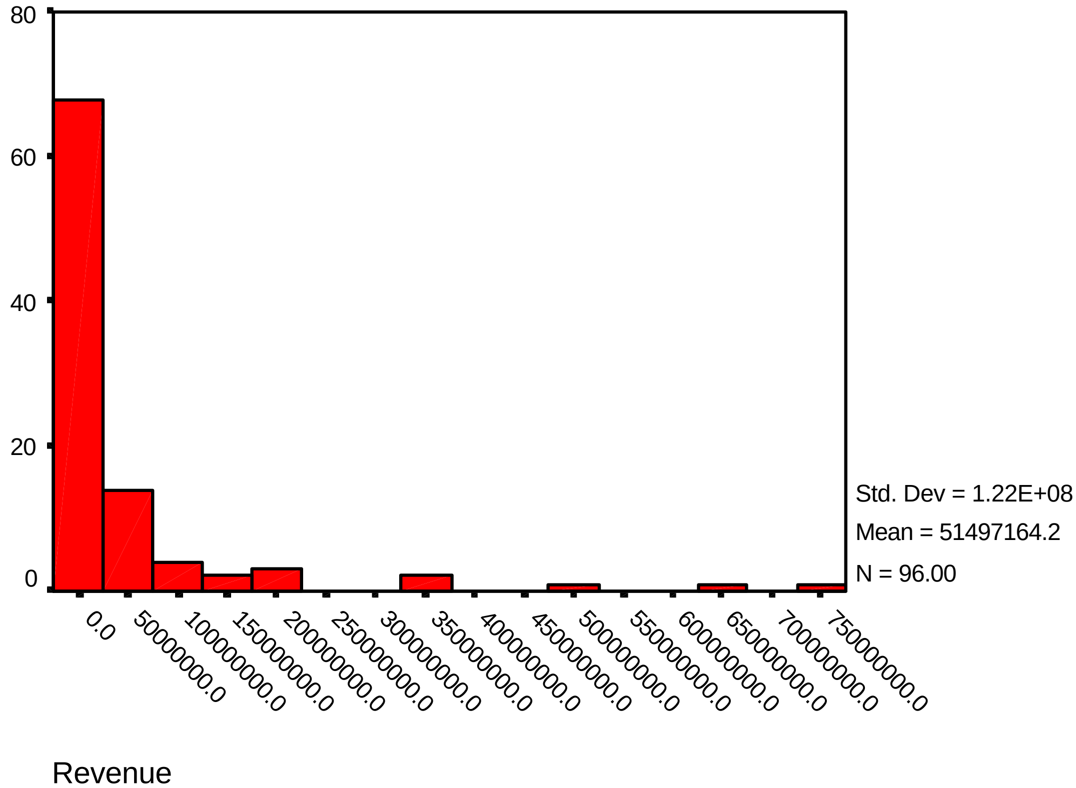
Table 40—Moving/Household Goods Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

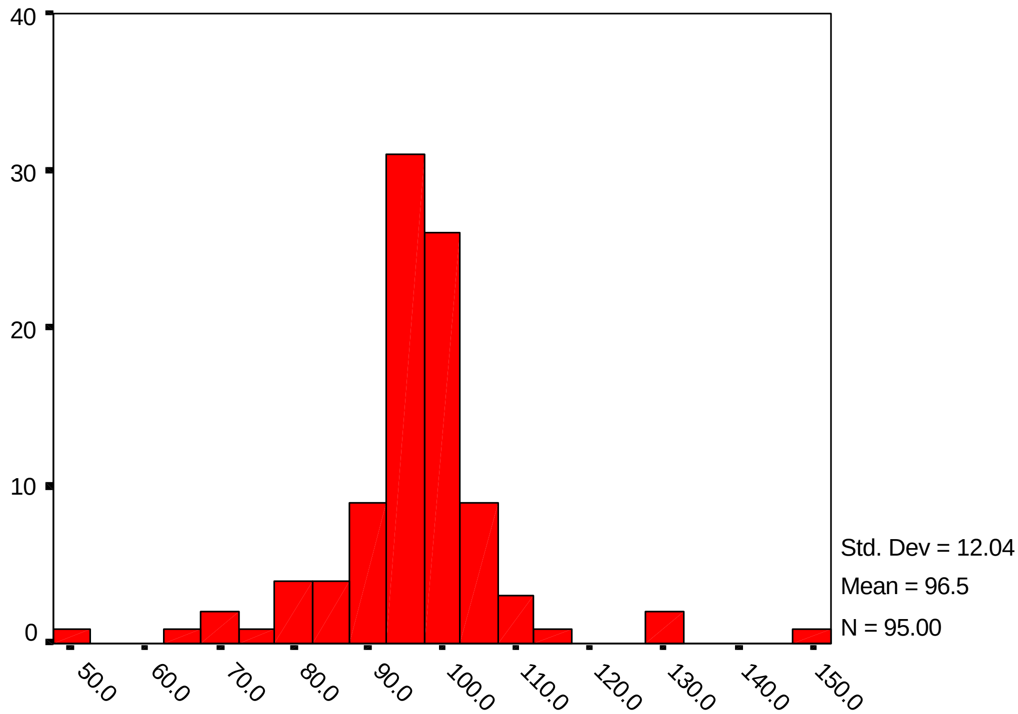
Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Nittsu New York	0%	N/A	N/A	N/A
Morgan & Brother Manhattan	100%	67%	78%	N/A
Parkway Auto Transport	100%	N/A	100%	$2,611
Dealers Auto Transport	N/A	100%	N/A	$12,871
Red Line	N/A	100%	96%	N/A

Table 41—Moving/Household Goods Carriers' Average Financial Performance: Five Smallest Carriers

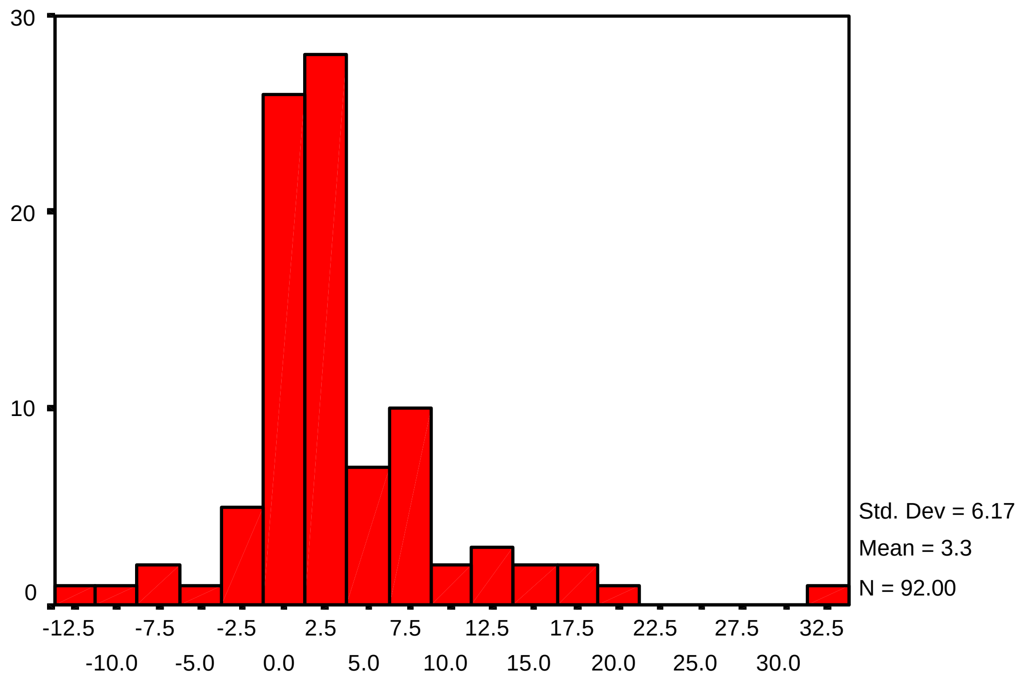
Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Nittsu New York	$22,168	$8,591	98.78	0.47%	7.38%
Morgan & Brother Manhattan	$108,139	$244,198	94.92	11.48%	25.51%
Parkway Auto Transport	$608,901	$144,781	77.20	5.42%	37.67%
Dealers Auto Transport	$375,879	$372,092	86.19	13.67%	10.54%
Red Line	$173,402	$64,851	94.54	2.04%	5.07%

Summary Charts and Graphs for Moving/Household Goods Carriers

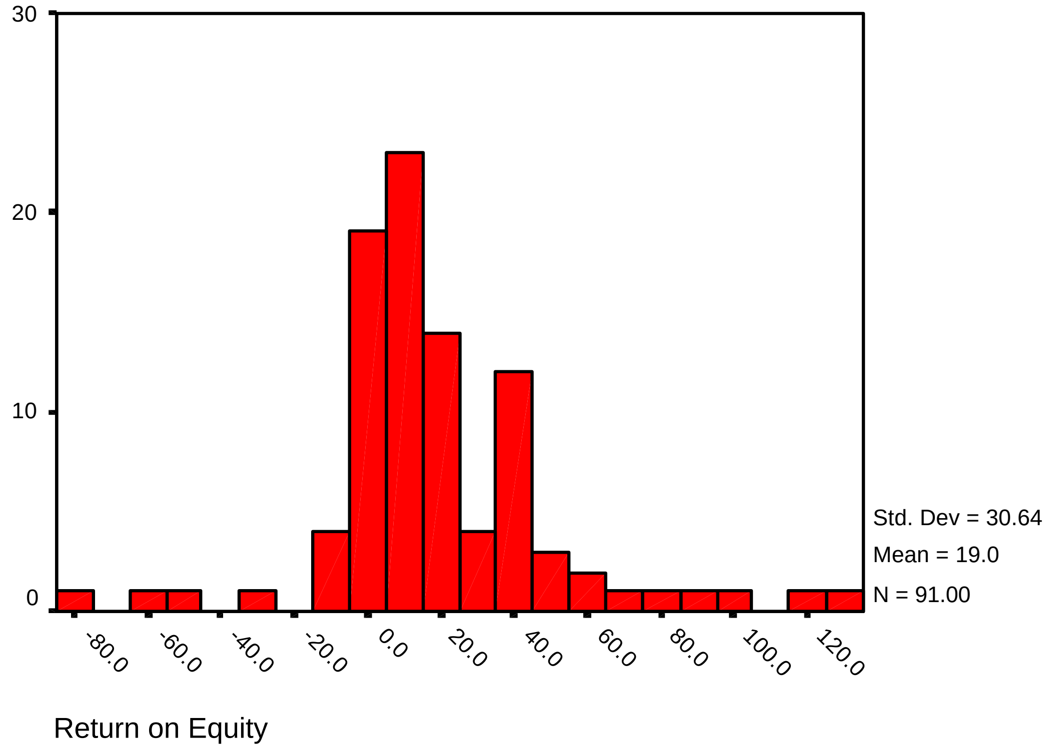




Operating Ratio



Net Profit Margin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10
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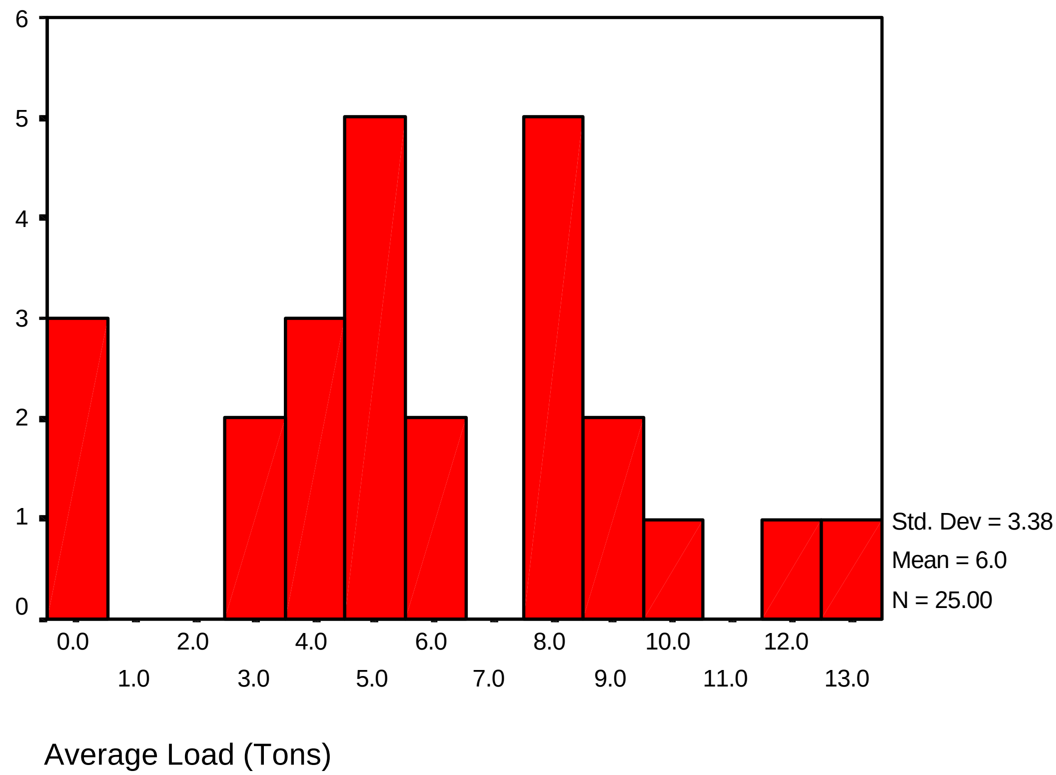
-60.0
-40.0
-20.0
0.0
20.0
40.0
60.0
80.0
100.0
120.0
Std. Dev = 30.64
Mean = 19.0
N = 91.00
Return on Equity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2
1
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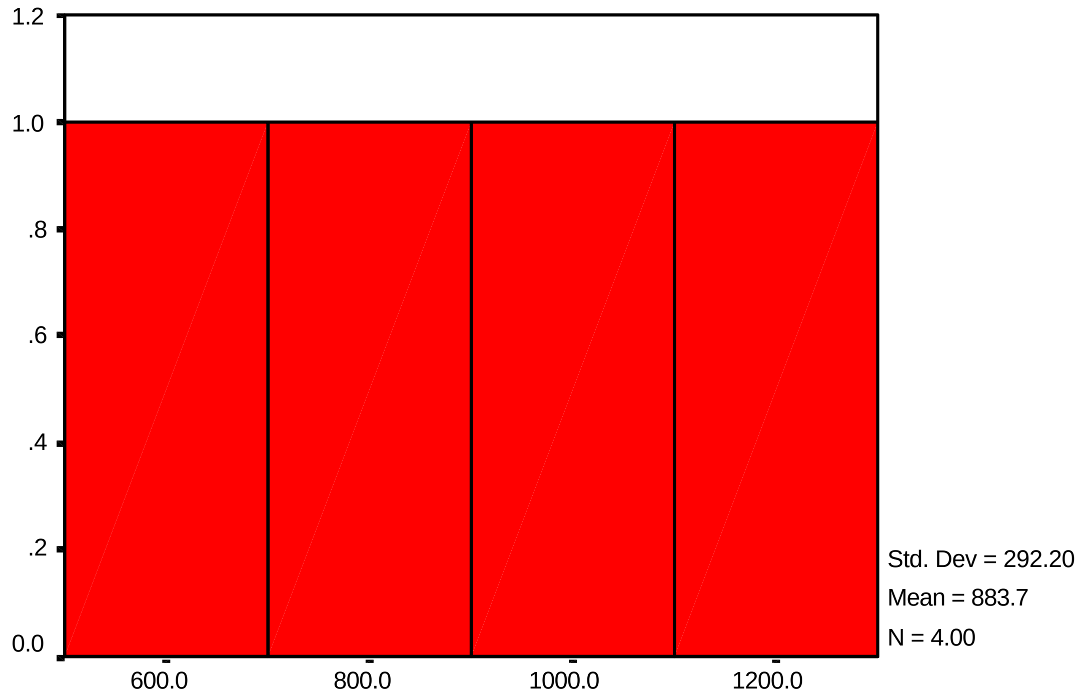
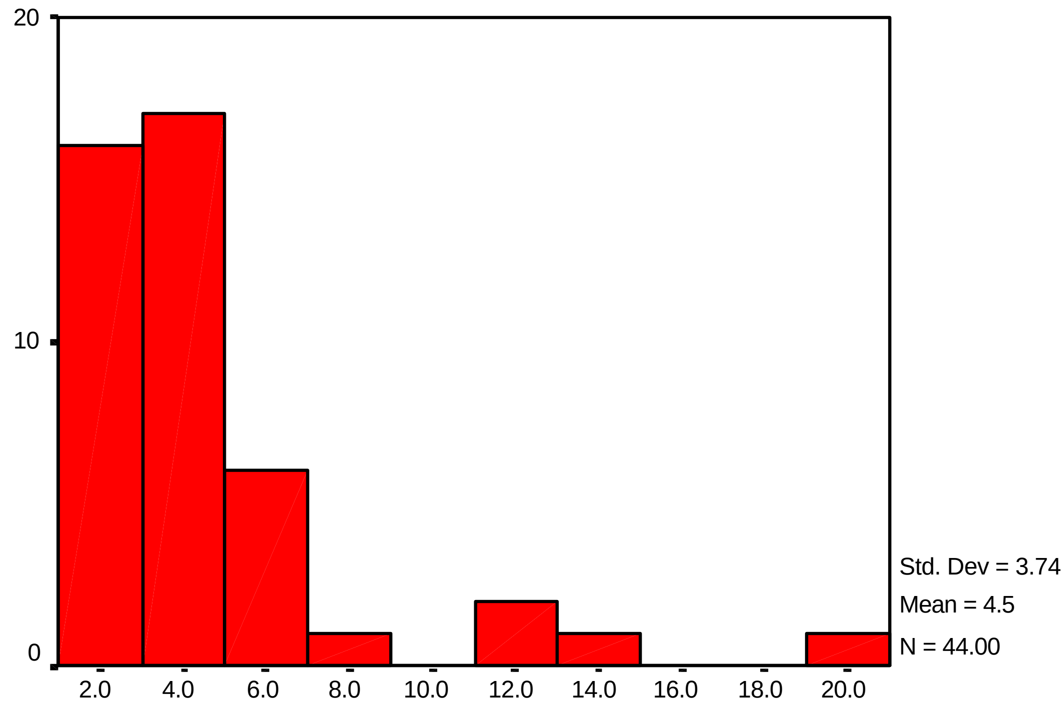
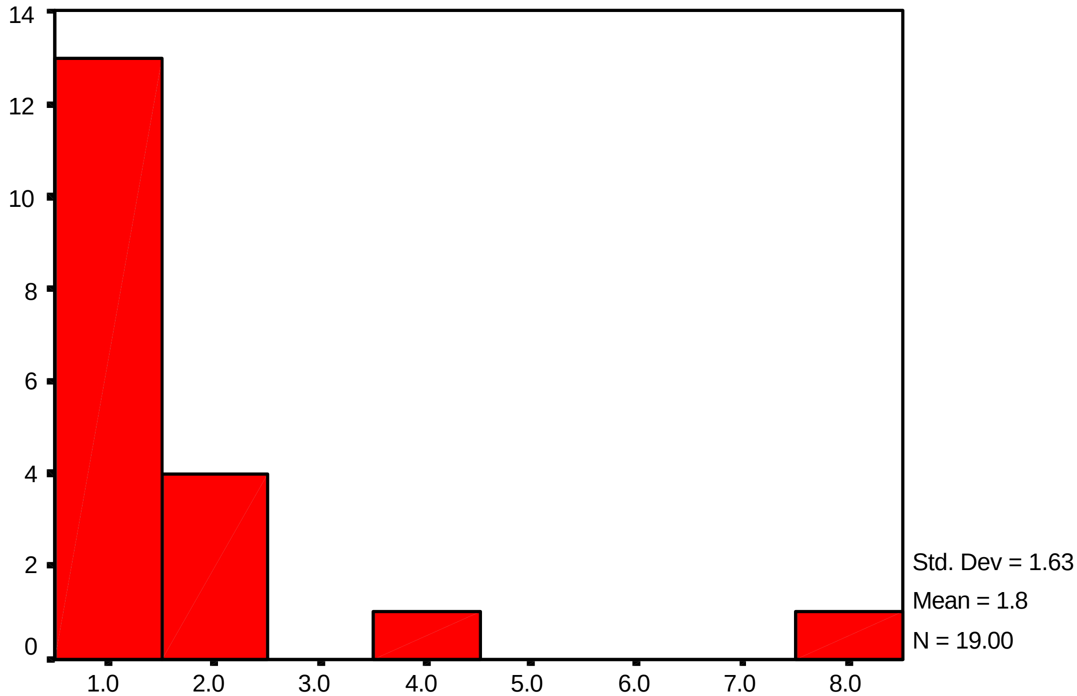
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
Std. Dev = 3.38
Mean = 6.0
N = 25.00
Average Load (Tons)



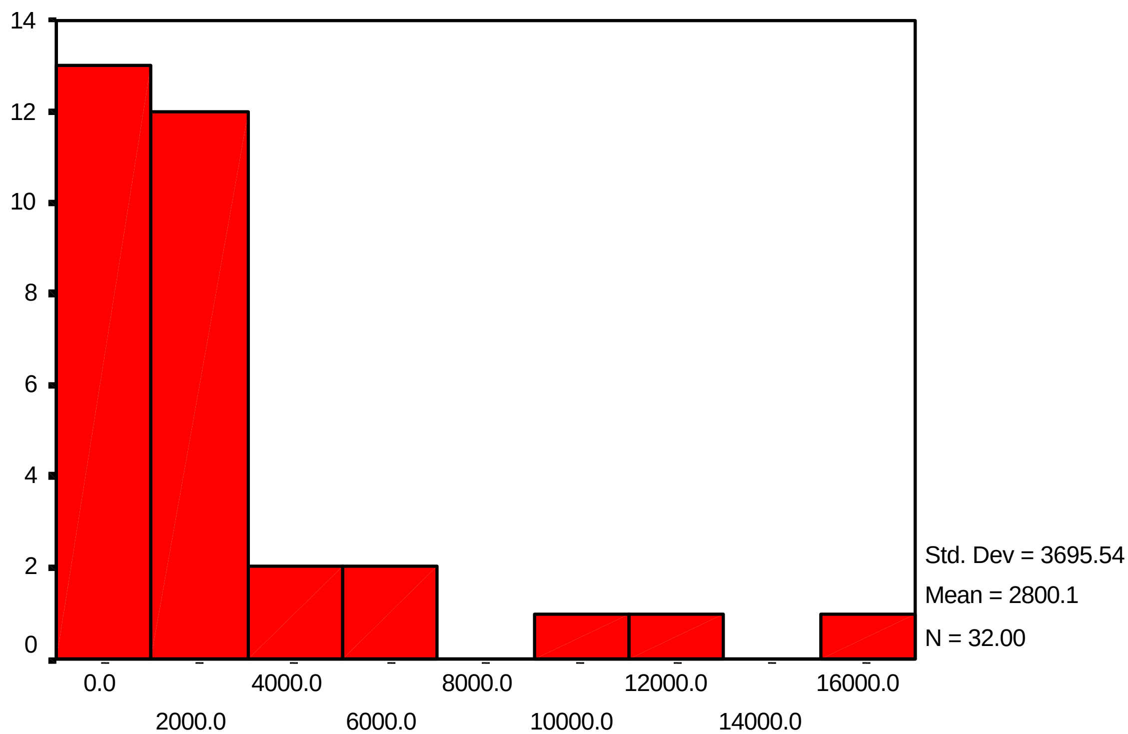
Average Haul (Miles)



Revenue per Mile



Revenue per Ton



Revenue per Shipment

Summary Data for Moving/Household Goods Carriers

Moving - HHG Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	96	18,112,558	730,261,166	51,497,164	121,528,141
Expenses	96	1,790,390	714,127,424	49,876,946	118,093,097
Operating Income	92	(4,416,308)	28,710,000	1,404,293	4,040,268
Net Income	93	(1,247,853)	20,214,000	1,003,818	2,636,581
Total Assets	91	116,369	288,812,000	15,053,157	43,322,696
Total Liabilities	90	181,928	211,223,618	10,123,297	32,070,582
Total Equity	91	(3,525,817)	107,569,000	5,041,106	12,716,956
Operating Ratio	95	51	150	97	12
Net Profit Margin	92	-12%	32%	3%	6%
Return on Equity	91	-77%	128%	19%	31%
Individual Expense Items					
Drivers and Helpers Wages	85	-	3,265,868	258,449	640,255
Insurance	58	(138,097)	10,703,000	624,603	1,834,973
Outside Vehicle Maintenance	54	-	347,222,000	9,290,965	47,096,859
Purchased Transportation	60	-	4,026,535	311,454	904,969
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	54	0%	100%	82%	32%
Trucks Leased	54	0%	100%	18%	32%
Tractors Owned	74	0%	100%	62%	40%
Tractors Leased	74	0%	100%	38%	40%
Trailers Owned	76	0%	100%	89%	28%
Trailers Leased	76	0%	100%	11%	28%
Operating Statistics					
Total Units in Fleet	87	-	3,011	252	479
Total Highway Miles	64	-	2,067,495	16,257,635	40,155,991
Total Tons Carried	46	-	842,919,490	60,516,794	174,842,593
Total Ton-Miles	52	-	1,561,811,496	97,379,333	256,182,639
Total Shipments	41	-	805,727	62,983	148,890
Revenue per Mile	44	$1.07	$20.05	$4.49	$3.74
Revenue per Ton	19	$0.77	$7.85	$1.77	$1.63
Revenue per Shipment	32	$274.78	$15,910.03	$2,800.11	$3,695.54
Revenue per Ton-Mile	26	$0.12	$99.09	$8.40	$23.73
Average Load (Tons)	25	0	13	6	3
Average Haul (Miles)	4	619	1,286	884	292
Outside Vehicle Maintenance per Truck/Tractor	35	-	12,871	3,025	4,126
Valid N (listwise)	-				

VIII. TANKER CARRIERS

Overview of Carriers

Tanker carriers constitute a specialized type of operations using special equipment designed for handling a variety of commodities in bulk. The majority of bulk products carried by tankers are liquids, however some dry bulk goods, such as flower and sugar are also carried by Tank Carriers. A total of 123 firms in the Tanker Carrier segment reported $3.7 Billion in annual revenues for 1997 (Table 42). The revenues for the five largest firms account for 28.3% of all the segment's revenues. The largest firm in this segment, Chemical Leaman Tank Lines, generated 7.2% of the segment's total revenue. Three of the five largest firms in this industry segment account for 23.2% of the segment's total assets and 20.2% of the total units in the segment's fleet (Table 46).

The information summarized above suggests that there is a low level of dominance by the largest carriers in this industry segment. However, this has not prevented three of the five largest firms that reported profit margin data to realize positive performance levels. Indeed, these three firms reported net incomes fluctuating between $6.9 and $13.7 million. These net income figures correspond to profit margins between 4.4 and 5.2%, respectively (Table 47). In contrast, four of the five smallest carriers reported positive net profit margins. The highest profit margin among the five smallest carriers was almost 10% (Table 49).

Overall, the average net profit margin for firms in the industry was 2.7%. In addition, the average return on equity was 24.8% (Table 43). The five firms with the highest return on equity ratios had an average of 105% (Table 45). This indicates that these firms were about 4 times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are more than 6 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the industry is $1 Billion (Table 46), while the total revenue of the 5 most profitable firms is $169.1 Million (Table 44). Thus, carriers in this industry segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this segment handled on average 27,900 shipments and 614,800 tons of freight and produced 190 Million ton-miles on average. Their average load was 14.6 tons and their average length of haul was 172 miles (Tables 42 and 43). Among the five largest carriers, Chemical Leaman, generated approximately 6 times the average tons carried by firms in the segment as well as 6 times the average ton-miles (Table 44).

On average, carriers in this segment owned 73% of their trucks; 55% of their tractors; and 90% of their trailers (Table 42). Operating strategies among the largest reporting carriers in this segment are quite similar. Each carrier owns approximately one third of its tractors and all of its trailers (Table 46).

The five most profitable firms varied significantly with respect to their tractor-ownership patterns. Two of the firms owned less than 12% of their tractors, while the remaining three owned at least 75% of their tractors. All five firms owned their entire trailer fleet.

This suggests that various tractor ownership strategies can be equally effective in achieving profitability (Table 44). Furthermore, there is variation among the five smallest companies in their tractor ownership preferences. Among the five smallest companies, only two rely on full tractor and trailer ownership The other carriers in the group of smallest carriers rely on tractor ownership levels ranging from 27% to 59% (Table 48).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this segment, the average operating ratio is 95.6% (Table 43). Among the five most profitable firms (Table 45), based on return on equity, operating ratio ranged from a low of 80.5% (Independent Diversified Transportation) to a high of 99.7% (Transport South). Among the five largest carriers (Table 47), the largest, Chemical Leaman, had an operating ratio of 94.6%. Among this group of carriers, the one with the lowest operating ratio (Montgomery Tank Lines) still had a ratio of 92.1%. Among the five smallest carriers (Table 49), one had operating ratios in excess of 100% and the firm with the lowest operating ratio had a ratio of 85.1%. Clearly, both the smallest and the largest carriers in this industry segment had strong operating ratios.

Table 42—Tanker Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	123	$3,661,449,825
Units in Fleet	116	54,739
Assets	118	$1,685,771,972
Tons Carried	103	63,322,443
Ton-Miles	94	17,844,153,667
Shipments	99	2,762,118
		Average
Size of Load (Tons)	69	14.63
Length of Haul (Miles)	34	172
		Average
Revenue Per Mile	110	$1.87
Revenue Per Ton	56	$19.62
Revenue Per Ton-Mile	69	$0.16
		Average
% of Trucks Owned	29	73%
% of Tractors Owned	109	55%
% of Trailers Owned	111	90%
Outside Vehicle Maintenance per Truck/Tractor	112	$6,574

Table 43—Tank Carriers' Average Financial Performance

Operating Income	$1,359,527
Net Income	$891,537
Operating Ratio	95.58
Net Profit Margin	2.73%
Return on Equity	24.77%

Table 44-- Tank Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
Independent Diversified Trptn.	Bloominton, MN	$7,463,339	37	$1,096,157	770,354	68,003,145
Transport South	Smyrna, GA	$39,752,870	157	$22,625,538	7,751,880	N/A
Enterprise Products	Houston, TX	$82,799,546	1,156	$17,703,944	N/A	N/A
Central Transport	High Point, NC	$35,711,984	1,170	$45,802,781	N/A	235,736,201
Burnett (George W.)	Buffalo, NY	$3,415,549	74	$1,876,866	352,186	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Independent Diversified Trptn.	30,210	25.50	88.28	$247.05	$2.80	$9.69	$0.11
Transport South	280,967	N/A	N/A	$141.49	$1.62	$5.13	N/A
Enterprise Products	N/A	N/A	N/A	N/A	$1.70	N/A	N/A
Central Transport	N/A	12.12	N/A	N/A	$1.84	N/A	$0.15
Burnett (George W.)	14,239	N/A	N/A	$239.87	$2.01	$9.70	N/A

Table 44-- Tank Carriers' Average Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Independent Diversified Trptn.	N/A	6%	100%	$13,646
Transport South	N/A	80%	100%	$37,728
Enterprise Products	N/A	11%	100%	$2,430
Central Transport	N/A	75%	100%	$904
Burnett (George W.)	N/A	100%	100%	N/A

Table 45—Tank Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Independent Diversified Transportation	$1,458,349	$1,486,699	80.46	19.92%	177.76%
Transport South	$122,413	$8,642,371	99.69	21.74%	107.30%
Enterprise Products	$2,148,546	$2,125,546	97.41	2.57%	100.02%
Central Transport	$3,290,158	$551,043	90.79	1.54%	100.00%
Burnett (George W.)	$249,565	$1,051,126	92.69	30.77%	99.84%

Table 46-- Tank Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles (in Thousands)**
Chemical Leaman Tank Lines	Exton, PA	$262,135,130	4,420	$135,297,039	3,655,166	1,140,289
Montgomery Tank Lines	Plant City, FL	$252,942,603	4,376	$178,347,165	N/A	1,552,667
Matlack	Wilmington, DE	$231,709,000	N/A	N/A	N/A	N/A
DSI Transports	Houston, TX	$159,211,948	2,240	$77,020,000	N/A	N/A
Superior Carriers	Oak Brook, IL	$129,787,000	N/A	N/A	N/A	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Chemical Leaman Tank Lines	216,282	9.97	312	$1,212.01	$2.29	$71.72	$0.23
Montgomery Tank Lines	N/A	10.86	N/A	N/A	$1.77	N/A	$0.16
Matlack	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DSI Transports	N/A	N/A	N/A	N/A	$1.58	N/A	N/A
Superior Carriers	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 46-- Tank Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Chemical Leaman Tank Lines	N/A	29%	100%	$2,123
Montgomery Tank Lines	N/A	34%	100%	$2,973
Matlack	N/A	N/A	N/A	N/A
DSI Transports	N/A	37%	100%	$2,759
Superior Carriers	N/A	N/A	N/A	N/A

Table 47—Tank Carriers' Average Financial Performance: Five Largest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Chemical Leaman Tank Lines	$14,071,333	$13,740,238	94.63	5.24%	18.37%
Montgomery Tank Lines	$19,977,128	$10,224,947	92.10	4.04%	12.89%
Matlack	N/A	N/A	97.00	N/A	N/A
DSI Transports	$9,275,880	$6,932,321	94.17	4.35%	22.82%
Superior Carriers	N/A	N/A	93.20	N/A	N/A

Table 48-- Tank Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Hazen Petroleum	Ellwood City, PA	$1,176,214	12	$1,524,568	N/A	N/A
Sunbelt Chemicals	Atmore, AL	$1,934,650	N/A	$6,561,693	N/A	N/A
M.P.C. Trucking	Kimberton, PA	$2,369,379	80	$1,659,639	70,125	N/A
CBW Transport Service	Wood River, IL	$2,702,935	84	$1,032,388	187,047	12,865,229
System Transport	Signal Hill, CA	$3,063,217	57	$1,335,398	N/A	N/A

Carrier	Total Ship-ments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Hazen Petroleum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sunbelt Chemicals	N/A	N/A	N/A	N/A	$0.95	N/A	N/A
M.P.C. Trucking	2,505	N/A	N/A	$945.86	$1.92	$33.79	N/A
CBW Transport Service	8,168	11.34	68.78	$330.92	$2.38	$14.45	$0.21
System Transport	2,520	N/A	N/A	$1,215.56	$4.64	N/A	N/A

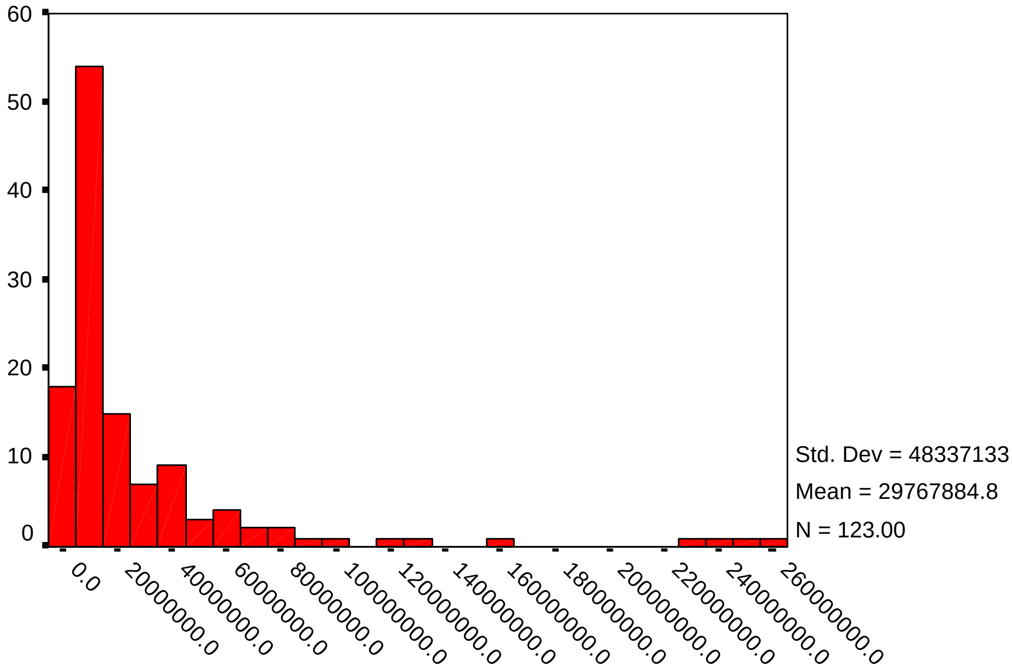
Table 48-- Tank Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Hazen Petroleum	100%	100%	100%	$6,691
Sunbelt Chemicals	N/A	N/A	N/A	N/A
M.P.C. Trucking	N/A	100%	100%	$10,240
CBW Transport Service	N/A	59%	100%	$2,983
System Transport	0%	27%	94%	$4,984

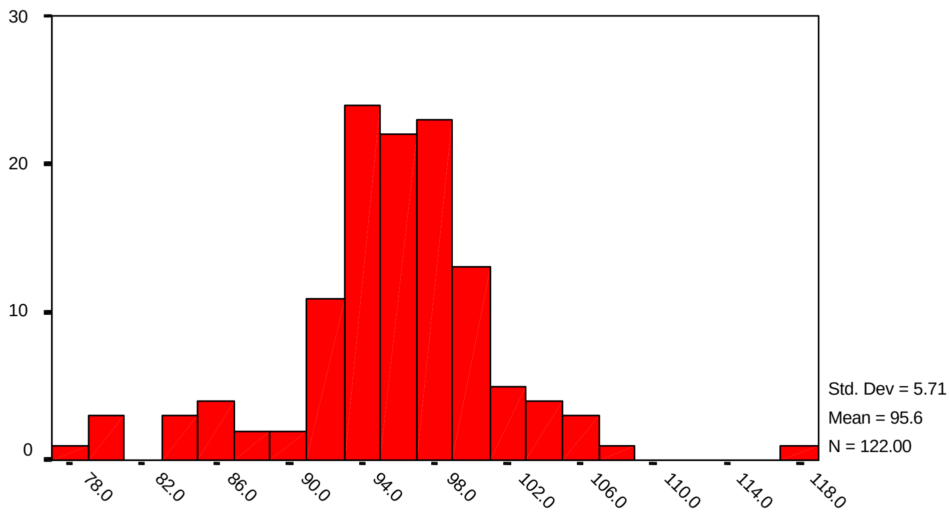
Table 49—Tank Carriers' Average Financial Performance: Five Smallest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Hazen Petroleum	-$19,948	$33,087	101.70	2.81%	10.12%
Sunbelt Chemicals	$287,426	-$566,765	85.14	-29.30%	N/A
M.P.C. Trucking	$339,840	$235,973	85.66	9.96%	16.08%
CBW Transport Service	$13,978	$174,206	99.48	6.45%	33.27%
System Transport	$164,765	$137,363	94.62	4.48%	14.73%

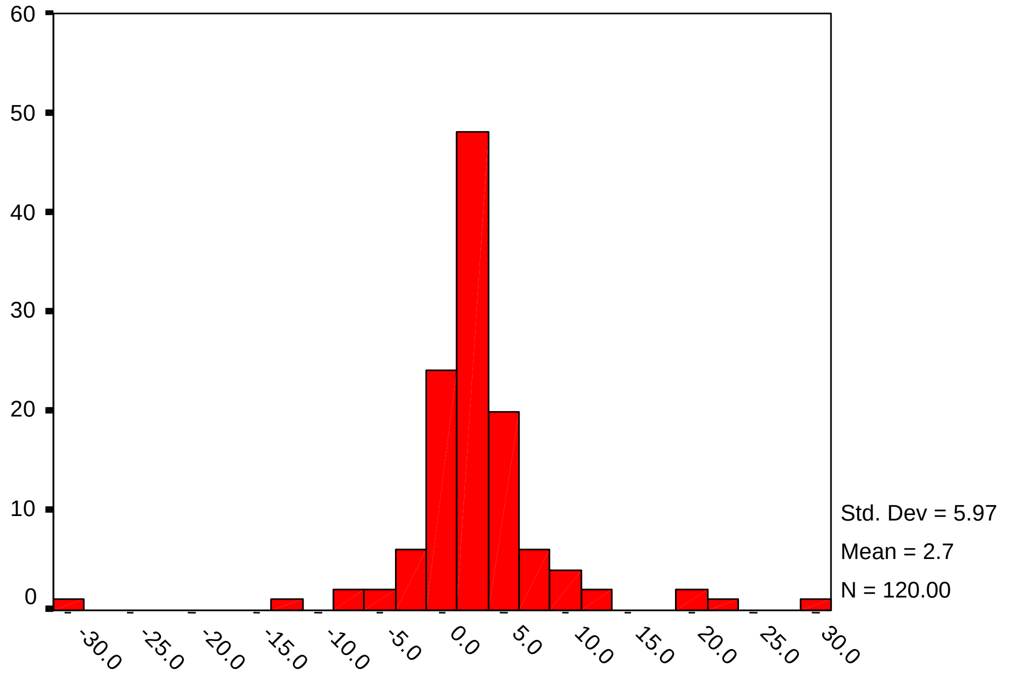
Summary Charts and Graphs for Tanker Carriers



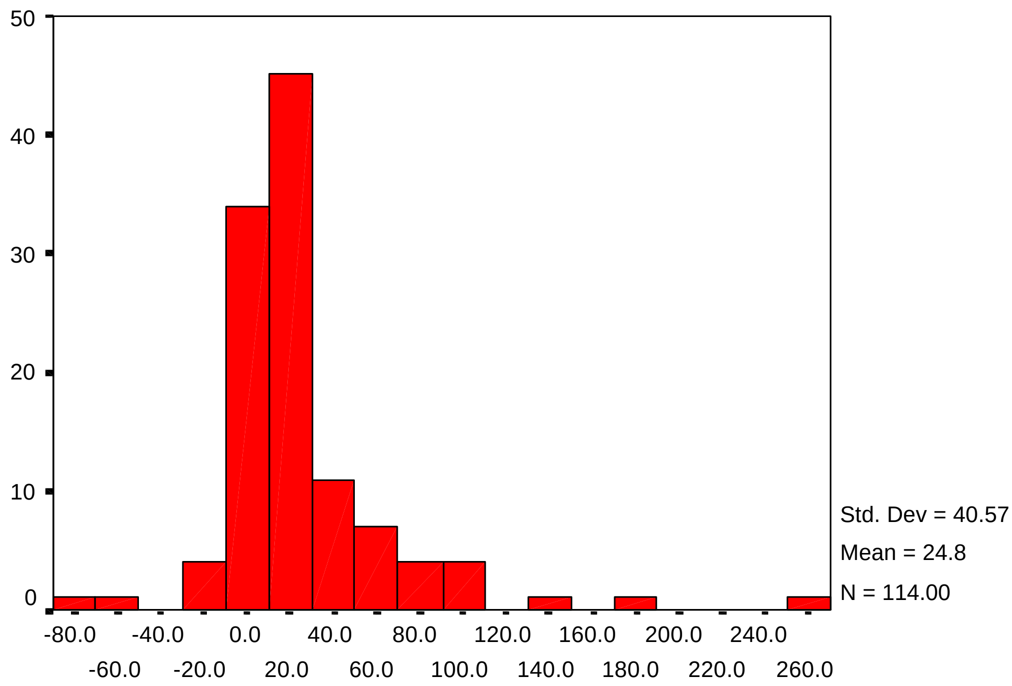
Revenue



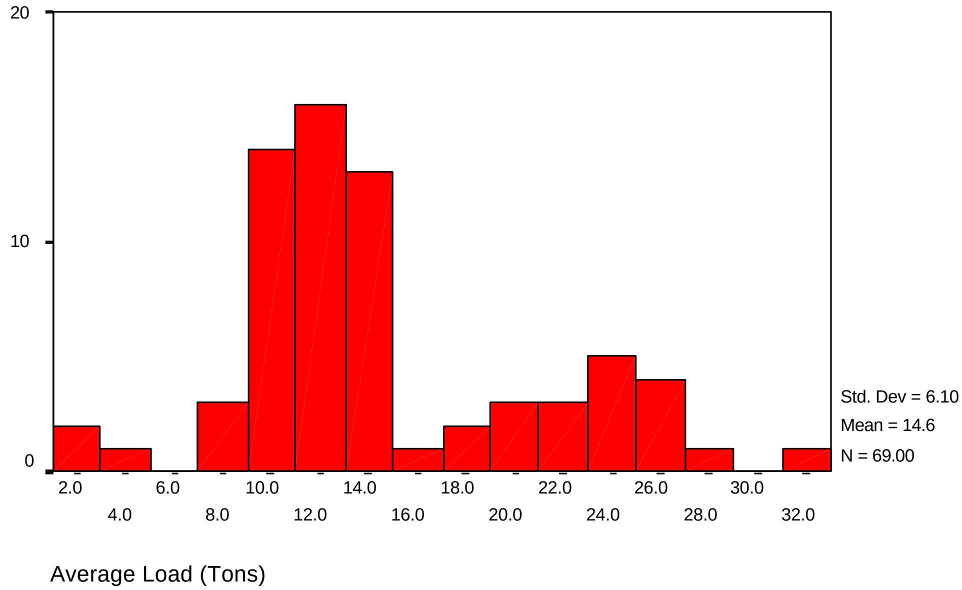
Operating Ratio

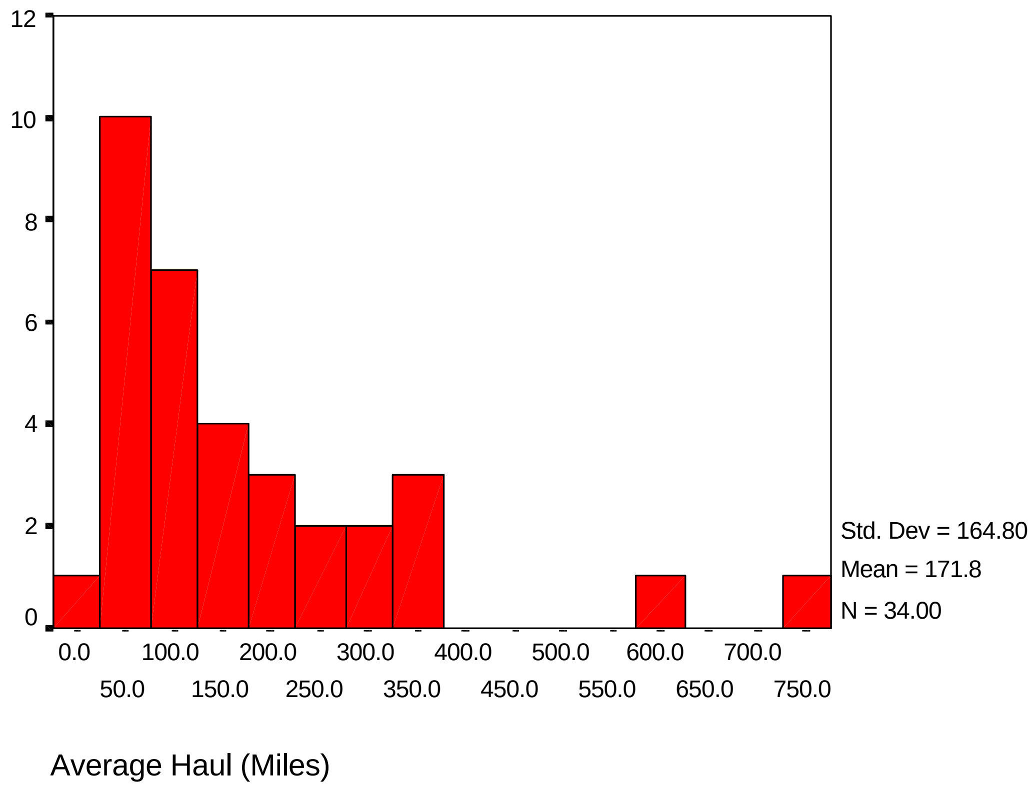


Net Profit Margin



Return on Equity


20
10
0
Std. Dev = 6.10
Mean = 14.6
N = 69.00
2.0 6.0 10.0 14.0 18.0 22.0 26.0 30.0
4.0 8.0 12.0 16.0 20.0 24.0 28.0 32.0
Average Load (Tons)


12
10
8
6
4
2
0
Std. Dev = 164.80
Mean = 171.8
N = 34.00
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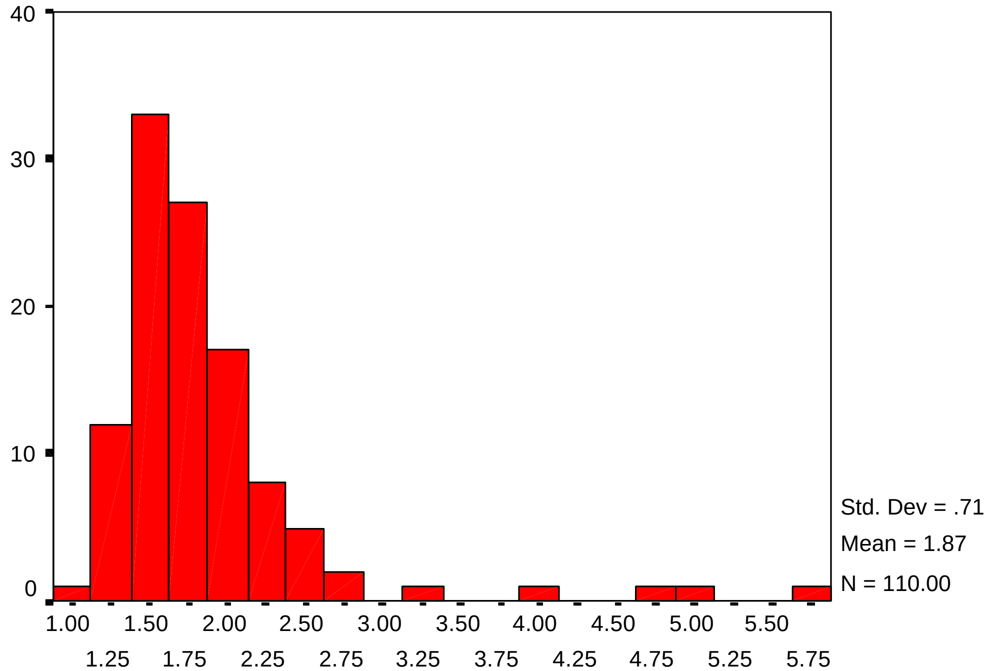
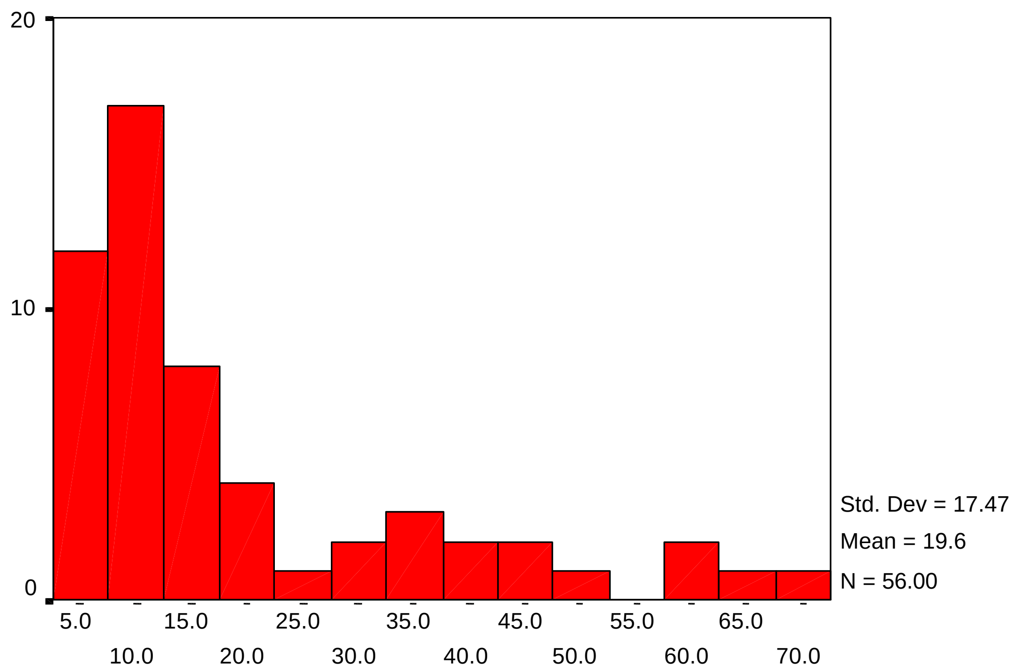
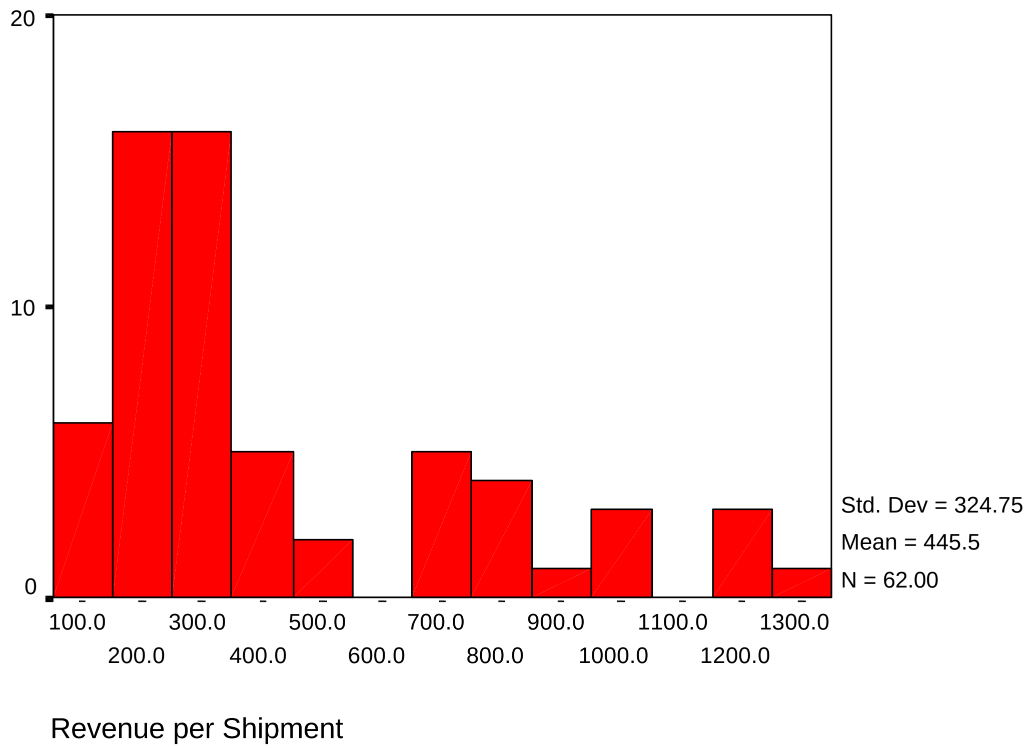
50.0 150.0 250.0 350.0 450.0 550.0 650.0 750.0
Average Haul (Miles)



Revenue per Mile



Revenue per Ton


20
10
0
100.0
200.0
300.0
400.0
500.0
600.0
700.0
800.0
900.0
1000.0
1100.0
1200.0
1300.0
Std. Dev = 324.75
Mean = 445.5
N = 62.00
Revenue per Shipment

Summary Data for Tanker Carriers

Tanker Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	123	1,176,214	262,135,130	29,767,885	48,337,133
Expenses	123	-	248,063,797	26,362,029	41,952,349
Operating Income	120	(809,818)	19,977,128	1,359,527	2,682,039
Net Income	120	(1,083,777)	13,740,238	891,537	2,002,832
Total Assets	118	-	178,347,165	14,286,203	24,973,864
Total Liabilities	118	-	99,026,947	8,145,496	13,950,249
Total Equity	118	(1,738,689)	79,320,218	6,140,699	12,340,364
Operating Ratio	122	79	118	96	6
Net Profit Margin	120	-29%	31%	3%	6%
Return on Equity	114	-88%	260%	25%	40%
Individual Expense Items					
Drivers and Helpers Wages	65	-	4,998,427	1,374,222	1,080,151
Insurance	115	-	6,275,709	765,615	1,100,060
Outside Vehicle Maintenance	115	-	3,849,831	667,628	847,076
Purchased Transportation	65	(28,696)	12,181,174	1,720,624	1,934,390
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	29	0%	100%	73%	39%
Trucks Leased	29	0%	100%	27%	39%
Tractors Owned	109	0%	100%	55%	37%
Tractors Leased	109	0%	100%	45%	37%
Trailers Owned	111	0%	100%	90%	26%
Trailers Leased	111	0%	100%	10%	26%
Operating Statistics					
Total Units in Fleet	116	12	4,420	472	694
Total Highway Miles	116	-	142,942,631	14,623,035	22,229,918
Total Tons Carried	103	-	7,751,880	614,781	1,182,683
Total Ton-Miles	94	-	1,552,667,425	189,831,422	300,556,951
Total Shipments	99	-	280,967	27,900	47,125
Revenue per Mile	110	$0.95	$5.71	$1.87	$0.71
Revenue per Ton	56	$3.13	$71.72	$19.62	$17.47
Revenue per Shipment	62	$125.09	$1,347.29	$445.49	$324.75
Revenue per Ton-Mile	69	$0.05	$1.30	$0.16	$0.16
Average Load (Tons)	69	3	32	15	6
Average Haul (Miles)	34	19	757	172	165
Outside Vehicle Maintenance per Truck/Tractor	112	-	123,029	6,574	12,618
Valid N (listwise)	2				

IX. REFRIGERATED CARRIERS

Overview of Carriers

Refrigerated carriers transport perishable products that require special refrigeration or temperature-controlled equipment. A total of 126 firms in the industry segment of refrigerated carriers reported $4.6 Billion in annual revenues for 1997 (Table 50). The revenues for the five largest firms account for 31.5% of all the segment's revenues. The largest firm in this segment, New Prime, generated 7.5% of the segment's total revenue. Only two of the five largest firms in this industry segment reported data on their assets and fleet size. Together, these two firms account for 6.4% of the segment's total assets and 13.5% of the total units in the segment's fleet (Table 54).

The information summarized above suggests that there is a high level of competition in this industry segment. However, this has not prevented carriers from generating positive profit margins. Two of the five largest firms reported net incomes of $39.3 and $8.7 million, respectively. These net incomes resulted in a net profit margin of 11.4% and 3.6%, respectively. In addition, the five smallest carriers in the segment reported positive net profit margins. Indeed, profit margins among the five smallest firms ranged from 0.5% to 15.5% (Table 57).

Overall, the average net profit margin for firms in the industry was 2.2%. In addition, the average return on equity was 15.3% (Table 51). The five firms with the highest return on equity ratios had an average of 148.3% (Table 53). This indicates that these firms were almost 10 times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are almost 25 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the industry is $1.4 Billion (Table 54), while the total revenue of the 5 most profitable firms is $58.1 Million (Table 52). Thus, carriers in this industry segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this segment handled on average 19,848 shipments and 297,000 tons of freight and produced 289 Million ton-miles on average. Their average load was 16.5 tons and their average length of haul was 927 miles (Tables 50 and 51). Among the five largest carriers, New Prime, generated approximately 17 times the average tons carried by firms in the segment (Table 52).

On average, carriers in this segment owned 69% of their trucks; 47% of their tractors; and 84% of their trailers (Table 50). Two of the 5 largest carriers in the segment reported information about their fleet ownership. Among these 2 firms, one owned none of their tractors and all of their trailers, while the other owned all of its tractors and trailers (Table 54).

Four of the five most profitable firms owned less than 10% of their tractors with three owning none of their tractors. Only one firm in the group relied exclusively on owned equipment (Western Refrigerated Freight Services). This suggests that neither an all owner-operator nor an all-company driver strategy is a key factor in devising a profitable business approach in this industry (Table 52). There is, however, a tendency among these three firms to favor owner operator fleets.

The fleet ownership information reported by three of the five smallest carriers also indicates a lack of uniformity with regards to fleet ownership strategies. Two of the three reporting firms indicated that they exclusively use owner operators for their tractors. The third firm, in contrast, owns 69% of its tractors (Table 56).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this segment, the average operating ratio is 97.0% (Table 51). Among the five most profitable firms (Table 52), based on return on equity, operating ratio ranged from a low of 73.8% (Western Refrigerated Freight Services) to a high of 97% (Hames Trucking). Among the five largest carriers (Table 55), the largest, New Prime, had an operating ratio of 86.9. This ratio was the smallest (most profitable) of any of the five largest carriers. Indeed the five largest carriers in the segment reported operating ratios that ranged from 86.9% (the best) to 98.8% (the worst). All of these ratios are above the breakeven point.

On the other hand, among the five smallest carriers (Table 57), three had operating ratios in excess of 100 and the firm with the lowest operating ratio still had a ratio of 97.8%. Clearly, the largest carriers in this industry segment had better operating ratios than the smallest firms in the industry.

Table 50—Refrigerated Carriers' Average Size and Operating Performance

	Number of Companies Reporting	Total
Revenue	126	$4,590,125,446
Units in Fleet	121	56,218
Assets	122	$1,855,410,304
Tons Carried	97	28,840,042
Ton-Miles	104	30,052,117,704
Shipments	97	1,925,317
		Average
Size of Load (Tons)	55	16.47
Length of Haul (Miles)	32	927
		Average
Revenue Per Mile	105	$1.39
Revenue Per Ton	49	$65.76
Revenue Per Ton-Mile	58	$0.14
		Average
% of Trucks Owned	34	69%
% of Tractors Owned	106	47%
% of Trailers Owned	114	84%
Outside Vehicle Maintenance per Truck/Tractor	108	$4,291

Table 51—Refrigerated Carriers' Average Financial Performance

Operating Income	$963,545
Net Income	$475,005
Operating Ratio	96.95
Net Profit Margin	2.19%
Return on Equity	15.27%

Table 52—Refrigerated Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
Western Refrigerated Freight Svcs	Phoenix, AZ	$3,813,321	44	$877,051	48,056	N/A
Hames Trucking	East Point, GA	$5,608,960	20	$635,268	N/A	N/A
Am Can Transport Service	Anderson, SC	$20,499,905	83	$3,406,214	109,537	N/A
National Food Express	Grand Rapids, MI	$3,586,091	205	$1,376,188	49,647	N/A
Excel Transportation	Wichita, KS	$24,548,598	313	$2,714,459	N/A	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Western Refrigerated Freight Svcs	2,574	N/A	N/A	$1,481.48	N/A	$79.35	N/A
Hames Trucking	N/A	N/A	N/A	N/A	$2.50	N/A	N/A
Am Can Transport Service	31,863	N/A	N/A	$643.38	$1.80	$187.15	N/A
National Food Express	2,613	N/A	N/A	$1,372.40	$1.95	$72.23	N/A
Excel Transportation	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 52—Refrigerated Carriers' Average Size and Operating Performance:
Five Most Profitable Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Western Refrigerated Freight Svcs	N/A	100%	100%	$4,884
Hames Trucking	N/A	0%	N/A	N/A
Am Can Transport Service	N/A	9%	100%	$2,843
National Food Express	N/A	0%	52%	$7,601
Excel Transportation	N/A	0%	100%	$726

Table 53—Refrigerated Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Western Refrigerated Freight Svcs	$999,092	$994,608	73.80	26.08%	178.26%
Hames Trucking	$169,327	$169,327	96.98	3.02%	167.16%
Am Can Transport Service	$3,871,807	$3,871,807	81.08	18.89%	166.42%
National Food Express	$623,252	$623,252	88.07	17.38%	115.05%
Excel Transportation	$879,034	$879,034	94.34	3.58%	114.34%

Table 54—Refrigerated Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
New Prime	Springfield, MO	$345,422,841	4,329	$26,857,423	5,116,703	N/A
C R England & Sons	Salt Lake City, UT	$315,555,000	N/A	N/A	N/A	N/A
Ameritruck Distribution	Fort Worth, TX	$291,552,000	N/A	N/A	N/A	N/A
Rocor International	Oklahoma City, OK	$253,577,000	N/A	N/A	N/A	N/A
F.F.E. Transporta-tion Service	Dallas, TX	$241,173,387	3,283	$92,076,193	2,733,455	2,894,895,127

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
New Prime	227,409	N/A	N/A	$1,518.95	$1.11	$67.51	N/A
C R England & Sons	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ameritruck Distribution	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rocor International	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F.F.E. Transporta-tion Service	419,642	19.38	1,059	$574.71	$1.61	$88.23	$0.08

Table 54—Refrigerated Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
New Prime	N/A	100%	100%	N/A
C R England & Sons	N/A	N/A	N/A	$1,882
Ameritruck Distribution	N/A	N/A	N/A	N/A
Rocor International	N/A	N/A	N/A	N/A
F.F.E. Transporta-tion Service	N/A	0%	100%	$11,358

Table 55—Refrigerated Carriers' Average Financial Performance: Five Largest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
New Prime	$45,293,662	$39,323,180	86.89	11.38%	29.43%
C R England & Sons	N/A	N/A	94.10	N/A	N/A
Ameritruck Distribution	N/A	N/A	98.60	N/A	N/A
Rocor International	N/A	N/A	98.80	N/A	N/A
F.F.E. Transporta-tion Service	$12,711,043	$8,656,822	94.73	3.59%	10.34%

Table 56—Refrigerated Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Conte Transportation	Ocoee, FL	$2,173,279	N/A	$106,726	N/A	N/A
Greenstein Trucking	Pompano Beach, FL	$2,279,154	22	$406,215	54,912	24,668,490
Altman (William B.)	Fenelton, PA	$2,954,297	66	$894,202	N/A	N/A
Vitalis Truck Lines	Des Moines, IA	$2,975,740	160	$4,287,338	63,235	24,169,777
Minnesota Valley Transport	New Ulm, MN	$3,149,776	62	$45,324	46,905	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Conte Transportation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Greenstein Trucking	3,328	16.84	449	$684.84	$1.56	$41.51	$0.09
Altman (William B.)	N/A	N/A	N/A	N/A	$1.39	N/A	N/A
Vitalis Truck Lines	4,074	12.26	382	$730.42	$1.51	$47.06	$0.12
Minnesota Valley Transport	2,893	N/A	N/A	N/A	$1.06	$67.15	N/A

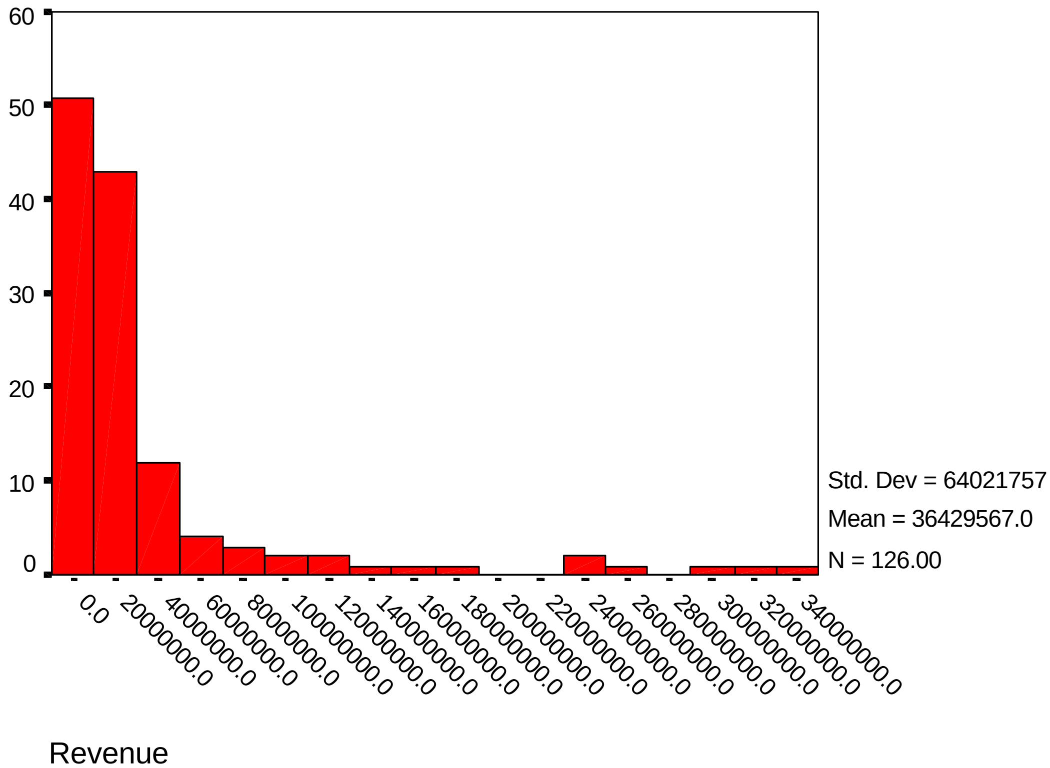
Table 56—Refrigerated Carriers' Average Size and Operating Performance: Five Smallest Carriers

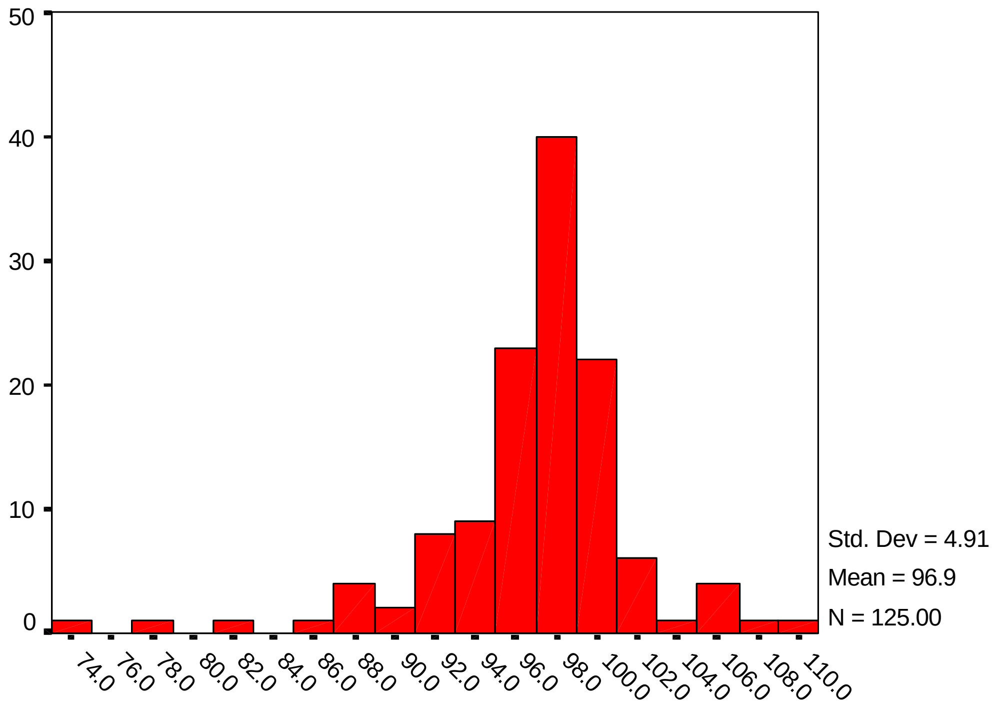
Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Conte Transportation	N/A	N/A	N/A	N/A
Greenstein Trucking	N/A	N/A	100%	N/A
Altman (William B.)	0%	0%	0%	$4,768
Vitalis Truck Lines	100%	69%	87%	$1,167
Minnesota Valley Transport	N/A	0%	0%	$7,324

Table 57—Refrigerated Carriers' Average Financial Performance: Five Largest Carriers

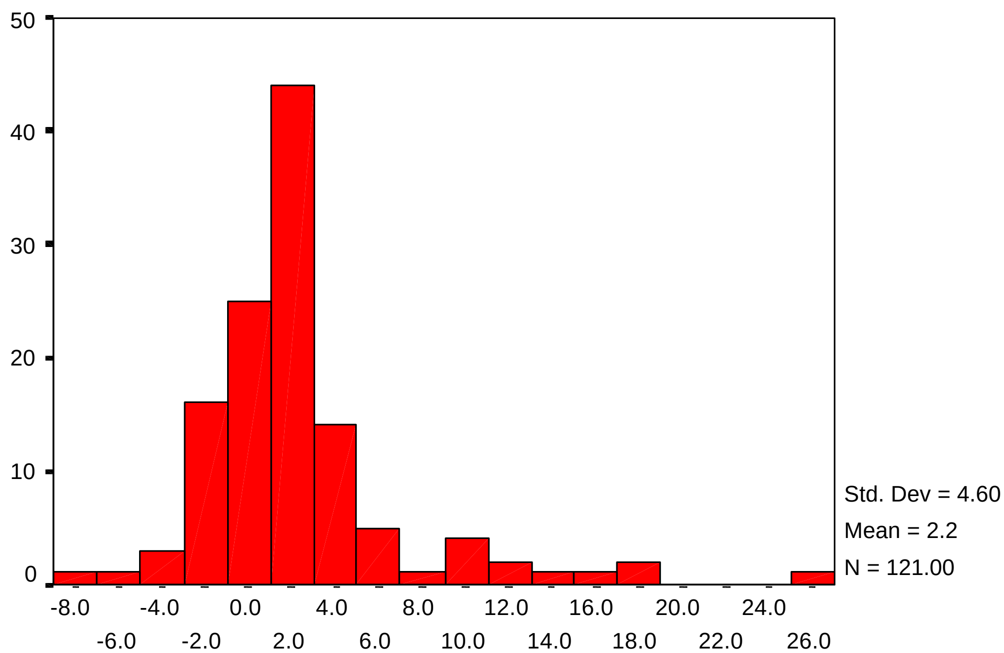
Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Conte Transportation	-$2,085	$200,780	100.10	9.24%	N/A
Greenstein Trucking	$50,220	$49,266	97.80	2.16%	49.81%
Altman (William B.)	-$87,915	$16,814	102.98	0.57%	2.41%
Vitalis Truck Lines	-$109,029	$461,703	103.66	15.52%	12.61%
Minnesota Valley Transport	$28,370	$29,906	99.10	0.95%	100.52%

Summary Charts and Graphs for Refrigerated Carriers

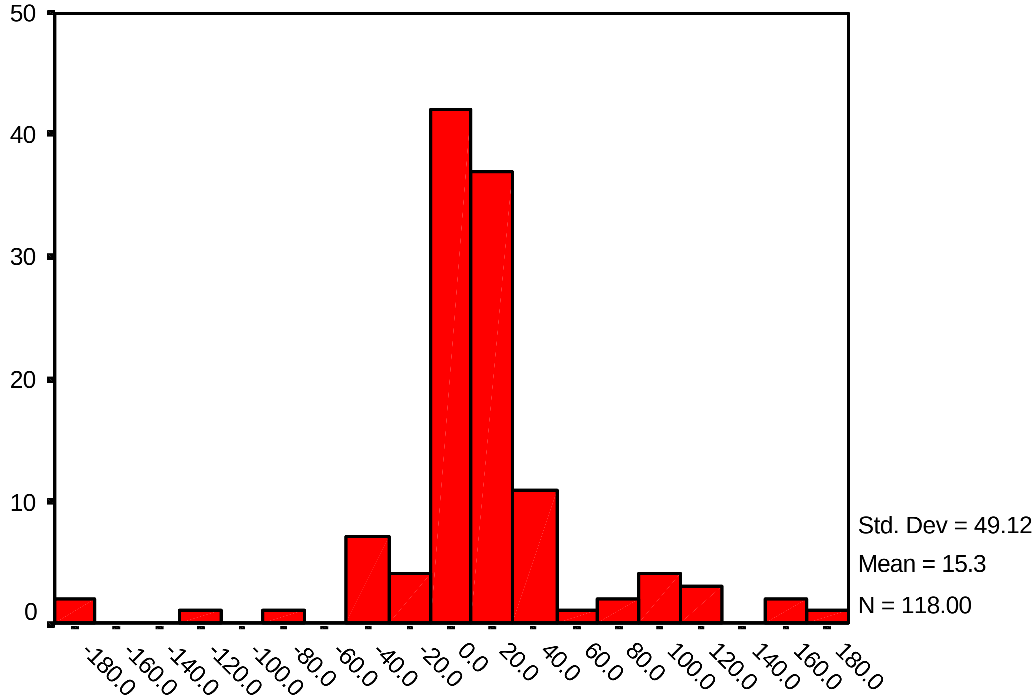




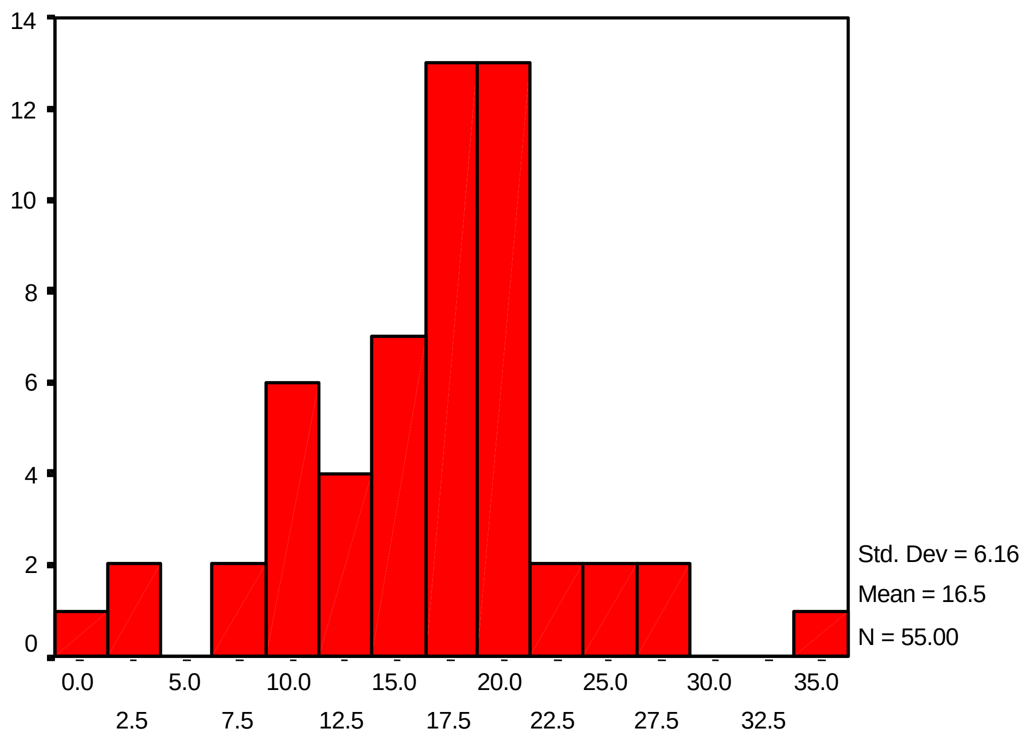
Operating Ratio



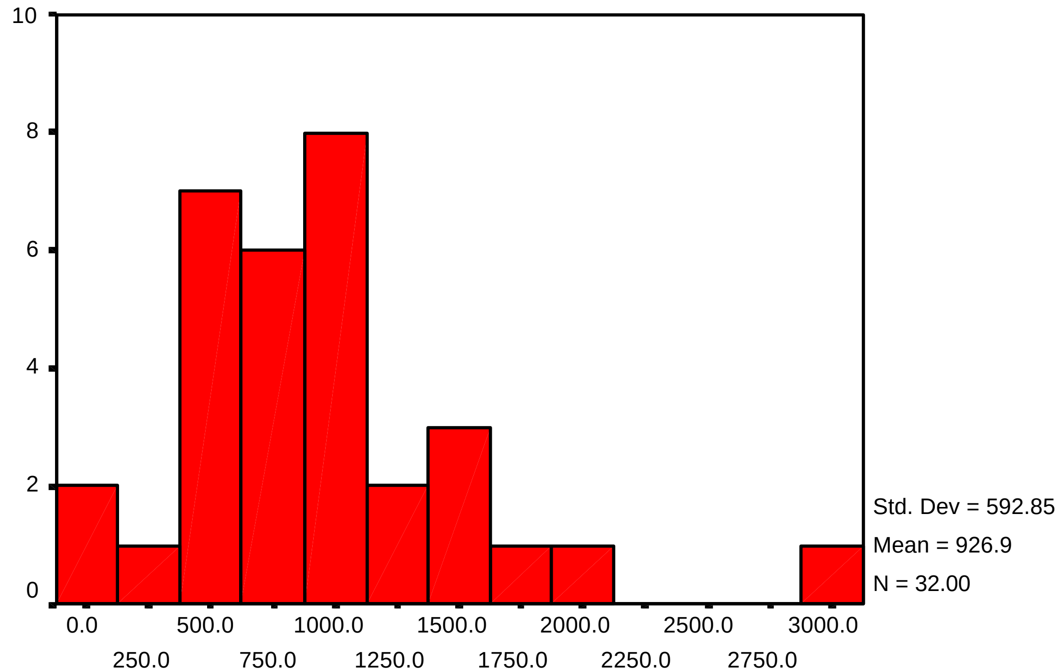
Net Profit Margin



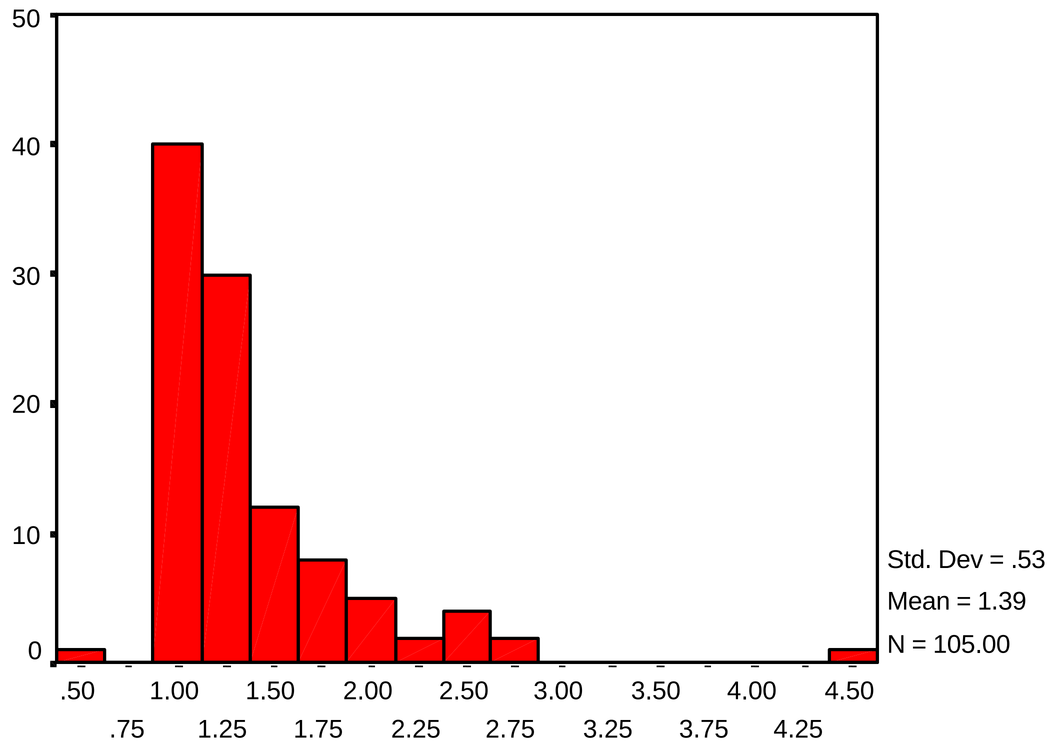
Return on Equity



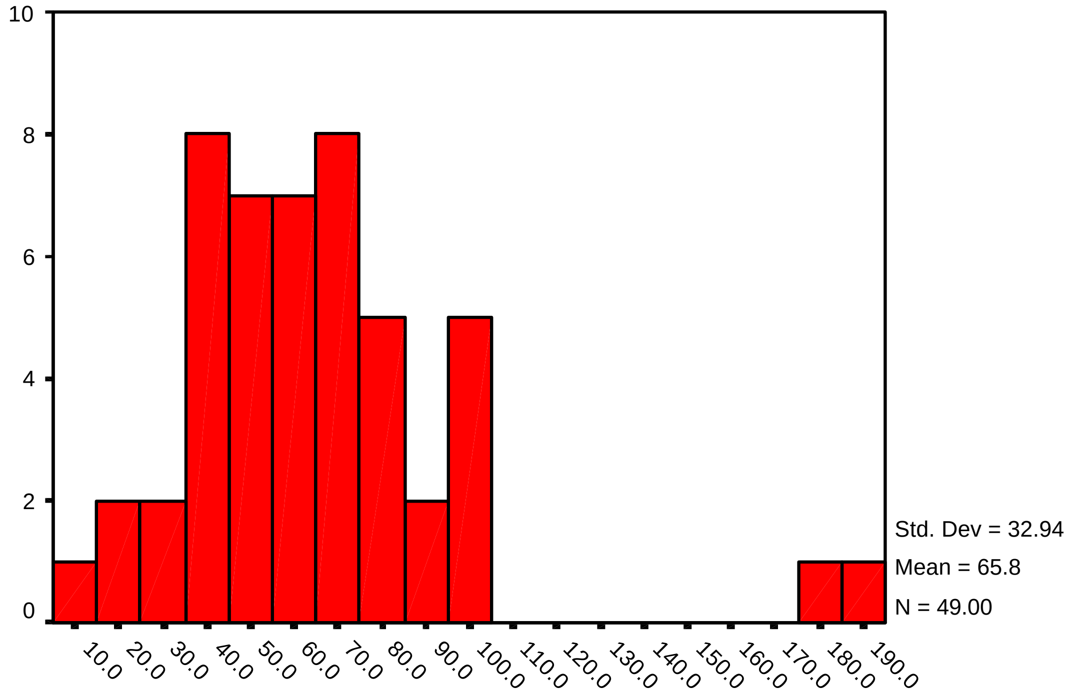
Average Load (Tons)



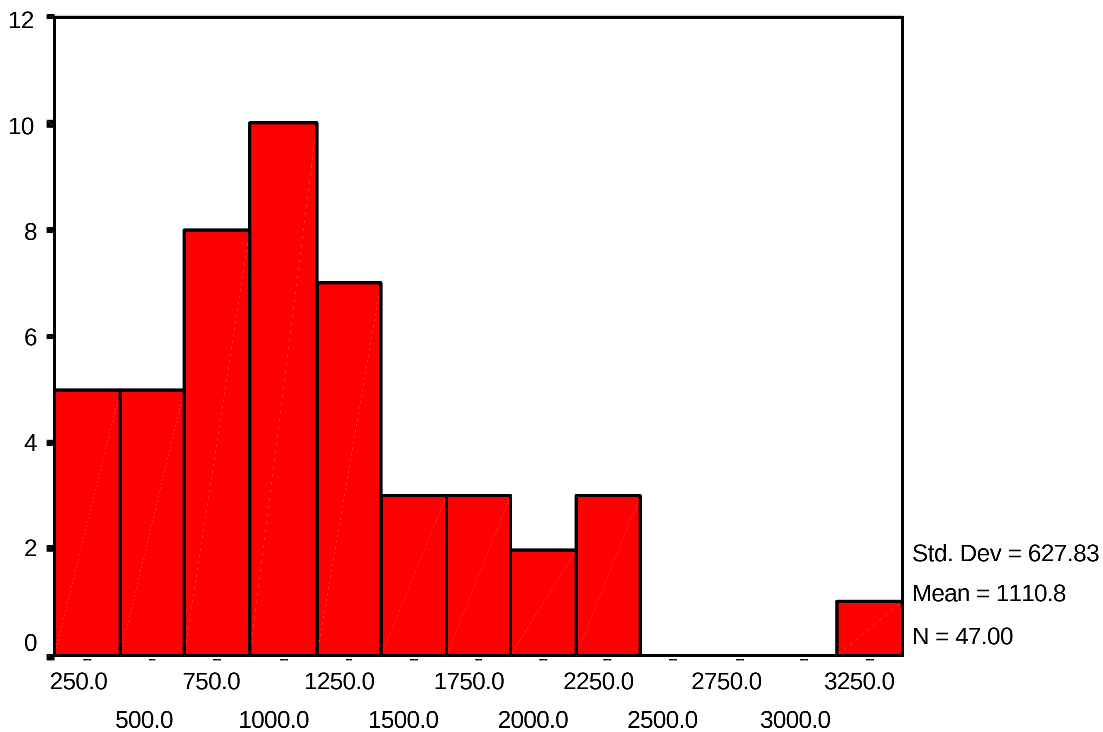
Average Haul (Miles)



Revenue per Mile



Revenue per Ton



Revenue per Shipment

Summary Data for Refrigerated Carriers

Refrigerated Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	126	2,173,279	345,422,841	36,429,567	64,021,757
Expenses	126	2,175,364	300,129,179	35,416,508	60,913,252
Operating Income	122	(58,815,021)	45,293,662	963,545	7,242,044
Net Income	122	(58,815,021)	39,323,180	475,005	6,737,732
Total Assets	122	45,324	268,575,423	15,208,281	33,257,741
Total Liabilities	122	(752,857)	134,979,718	8,144,146	17,660,897
Total Equity	122	(1,736,859)	133,595,705	7,064,135	18,128,421
Operating Ratio	125	74	109	97	5
Net Profit Margin	121	-9%	26%	2%	5%
Return on Equity	118	-180%	178%	15%	49%
Individual Expense Items					
Drivers and Helpers Wages	61	-	11,038,000	1,138,417	1,858,639
Insurance	121	43,699	10,192,276	878,256	1,413,343
Outside Vehicle Maintenance	113	-	10,449,079	526,067	1,138,093
Purchased Transportation	61	-	37,099,366	2,400,707	5,023,934
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	34	0%	100%	69%	44%
Trucks Leased	34	0%	100%	31%	44%
Tractors Owned	106	0%	100%	47%	40%
Tractors Leased	106	0%	100%	53%	40%
Trailers Owned	114	0%	100%	84%	32%
Trailers Leased	114	0%	100%	16%	32%
Operating Statistics					
Total Units in Fleet	121	-	4,329	465	755
Total Highway Miles	115	-	311,103,340	23,119,160	41,711,688
Total Tons Carried	97	-	5,116,703	297,321	780,396
Total Ton-Miles	104	-	3,251,699,778	288,962,670	592,023,105
Total Shipments	97	-	419,642	19,849	61,761
Revenue per Mile	105	$0.61	$4.52	$1.39	$0.53
Revenue per Ton	49	$7.17	$187.15	$65.76	$32.94
Revenue per Shipment	47	$168.95	$3,137.00	$1,110.81	$627.83
Revenue per Ton-Mile	58	$0.02	$1.66	$0.14	$0.27
Average Load (Tons)	55	1	34	16	6
Average Haul (Miles)	32	46	3,023	927	593
Outside Vehicle Maintenance per Truck/Tractor	108	-	85,904	4,291	8,573
Valid N (listwise)	2				

X. BULK MATERIALS - NON TANK CARRIERS

Overview of Carriers

The Bulk Materials - Non Tank segment includes all bulk commodities not transported by tankers. This segment includes carriers, which transport items such as sand, gravel, grain and mine ore. A total of 75 firms in the Bulk Materials - Non Tank industry segment reported $1.27 Billion in annual revenues for 1997 (Table 58). The revenues for the five largest firms account for 29.4% of all the segment's revenues. The largest firm in the industry, Bulkmatic Transport, generated 8.9% of the segment's total revenue. The five largest firms in the industry account for 29.4% of the segment's total assets and 29.8% of the total units in the segment's fleet (Table 62).

The information summarized above suggests that there is a high level of competition in this industry segment. However, this has not prevented the carriers from generating positive profit margins. The largest firm in the industry segment reported net income of $4.7 Million, resulting in a net profit margin of 4.2% (Table 63). In addition, the five smallest firms in the industry segment have obtained positive levels of profitability. On average these firms reported a net profit margin of 4.2% (Table 65).

Overall, the average net profit margin for firms in the industry was 3.3%. In addition, the average return on equity was 15.1% (Table 59). The five firms with the highest return on equity ratios had an average of 76.1% (Table 61). This indicates that these firms were about 5 times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are more than 8 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the industry is $373.5 Million (Table 62), while the total revenue of the 5 most profitable firms is $45.0 Million (Table 60). Thus, carriers in this industry segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this segment handled on average 38,495 shipments and 1.08 Million tons of freight and produced 319.4 Million ton-miles on average. Their average load was 17.5 tons and their average length of haul was 183.4 miles (Tables 58 and 59). Among the five largest carriers, Bulkmatic Transport, generated more than 4 times the average ton-miles (Table 60).

On average, carriers in this segment owned 71% of their trucks; 68% of their tractors; and 50% of their trailers (Table 58). Among the five largest carriers in this segment, operating strategies were very similar. All of the five largest carriers own at least 82% of their tractors and all of their trailers (Table 62).

The five most profitable firms relied almost exclusively on company drivers. Only one firm, Food Express, relied more heavily on owner operators. This might suggests that, in this segment, reliance on company drivers is a profitable approach (Table 60). Furthermore, three of the five smallest companies rely heavily on company drivers. Among the five smallest companies, only one, Earl Martin, owns less than a 100% of its tractors. The other carriers in the group of smallest carriers rely exclusively on company drivers to operate their tractors (Table 64).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this segment, the average operating ratio is 95.9 (Table 59). Among the five most profitable firms (Table 61), based on return on equity, operating ratio ranged from a low of 82 (Riverton Trucker) to a high of 94.7 (Food Express). Among the five largest carriers (Table 63), the largest, Bulkmatic Transport, had an operating ratio of 92.5. Among this group of carriers, the one with the lowest (best) operating ratio (A&R Transport) had a ratio of 87.4. Among the five smallest carriers (Table 65), three had operating ratios in excess of 100 and the firm with the lowest (best) operating ratio had a ratio of 95.5%. It appears that the largest carriers in the segment have a better operating performance than do the smallest.

In conclusion, the information collected on this industry segment indicates that among the largest and most profitable firms there is a heavy reliance on their own human resources and equipment. This fact, along with the short average lengths of haul reported, suggest that there is an emphasis in this industry segment on customer service, in the form of regular, fixed, and time-sensitive deliveries. The good performance indicators reported by carriers in this segment could be the result of the combination of these factors.

Table 58--Bulk Materials - Non Tank Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	75	$1,272,262,509
Units in Fleet	73	20,322
Assets	75	$707,667,811
Tons Carried	25	26,897,400
Ton-Miles	22	7,026,641,088
Shipments	28	1,077,872
		Average
Size of Load	21	17.5 Tons
Length of Haul	11	183.4 Miles
		Average
Revenue Per Mile	56	$1.96
Revenue Per Ton	23	$17.92
Revenue Per Ton-Mile	22	$0.11
		Average
% of Trucks Owned	73	71%
% of Tractors Owned	73	68%
% of Trailers Owned	73	50%
Outside Vehicle Maintenance per Truck/Tractor	68	$5,354

Table 59-- Bulk Materials - Non Tank Carriers' Average Financial Performance

Operating Income	$845,484
Net Income	$583,651
Operating Ratio	95.94
Net Profit Margin	3.26%
Return on Equity	15.05%

Table 60-- Bulk Materials - Non Tank Carriers' Size and Operating Performance: Five Most Profitable Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Eagle Valley	Shawneetown, IL	$5,586,280	39	$727,644	N/A	N/A
Bagshaw Trucking	Memphis, IN	$8,261,395	88	$2,514,252	N/A	N/A
Riverton Trucker	Clarksville, IN	$8,692,800	142	$3,925,877	N/A	N/A
Food Express	Arcadia, CA	$16,186,727	220	$4,768,425	N/A	N/A
Threet's Trucking	Sturtevant, WI	$6,258,353	30	$1.382,336	196,720	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Eagle Valley	579	N/A	N/A	$9,648	$4.04	N/A	N/A
Bagshaw Trucking	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Riverton Trucker	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Food Express	N/A	N/A	N/A	N/A	$4.00	N/A	N/A
Threet's Trucking	7,580	N/A	N/A	$826	N/A	$31.81	N/A

Table 60-- Bulk Materials - Non Tank Carriers' Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Eagle Valley	N/A	100%	100%	$4,227
Bagshaw Trucking	63%	100%	100%	$2,925
Riverton Trucker	75%	100%	100%	$5,087
Food Express	N/A	41%	100%	$2,381
Threet’s Trucking	100%	100%	100%	$16,601

Table 61-- Bulk Materials - Non Tank Carriers' Financial Performance: Five Most Profitable Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Eagle Valley	$412,505	$226,037	92.62	4.05%	132.49%
Bagshaw Trucking	$763,155	$820,604	90.76	9.93%	95.61%
Riverton Trucker	$1,566,914	$821,958	81.97	9.46%	54.70%
Food Express	$860,362	$600,727	94.68	3.71%	51.62%
Threet's Trucking	$485,933	$469,329	92.24	7.50%	46.22%

Table 62-- Bulk Materials - Non Tank Carriers' Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Bulkmatic Transport	Griffith, IN	$113,334,545	1,906	$94,783,819	N/A	1,413,981,558
Gray (Jack) Transport	Gary, IN	$76,742,021	713	$52,625,908	N/A	N/A
A & R Transport	Joliet, IL	$70,256,272	944	$76,018,682	1,469,600	369,032,892
Schwerman Trucking	Milwaukee, WI	$62,119,213	1,819	$33,427,301	4,107,223	466,998,629
Beelman Truck	St. Libory, IL	$51,045,516	674	$24,759,971	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Bulkmatic Transport	N/A	22.85	N/A	N/A	$1.83	N/A	$0.08
Gray (Jack) Transport	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A & R Transport	66,800	12.00	251	$1,052	$2.28	$47.81	$0.19
Schwerman Trucking	159,325	12.47	114	$390	$1.66	$15.12	$0.13
Beelman Truck	N/A	N/A	N/A	N/A	$1.48	N/A	N/A

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Bulkmatic Transport	N/A	85%	100%	$4,446
Gray (Jack) Transport	N/A	100%	100%	$9,557
A & R Transport	N/A	100%	100%	$4,710
Schwerman Trucking	N/A	82%	100%	$1,540
Beelman Truck	N/A	100%	100%	$1,381

Table 63-- Bulk Materials - Non Tank Carriers' Financial Performance: Five Largest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Bulkmatic Transport	$8,518,787	$4,705,858	92.48	4.15	19.01
Gray (Jack) Transport	$3,550,963	$3,550,963	95.37	4.63%	16.68%
A & R Transport	$8,839,985	$3,466,145	87.42	4.93%	23.44%
Schwerman Trucking	$3,113,265	$1,150,003	94.99	1.85%	13.07%
Bellman Truck	$3,479,777	$2,640,703	93.18	5.17%	13.01%

Table 64-- Bulk Materials - Non Tank Carriers' Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Pritchett Trucking Co.	Pryor, OK	$2,010,570	43	$1,203,959	16,088	N/A
Hribar Trucking	Caledonia, WI	$2,054,784	63	$1,315,003	487,338	N/A
Hazel Trucking Co.	Macon, GA	$3,349,885	28	$1,085,675	N/A	N/A
Martin, (Earl R.)	East Earl, PA	$3,420,306	68	$2,172,155	184,632	N/A
Wanatah Trucking	West Lafayette, IN	$3,792,766	29	$2,821,911	529,508	27,472,566

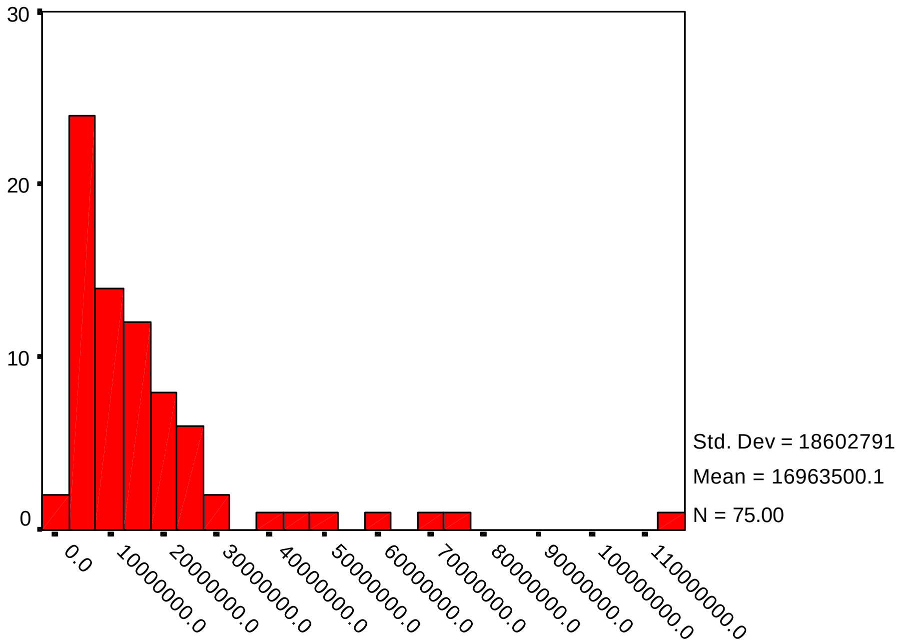
Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Pritchett Trucking Co.	653	N/A	N/A	3,079	$3.62	N/A	N/A
Hribar Trucking	20,175	N/A	N/A	$102	$1.60	$4.22	N/A
Hazel Trucking Co.	N/A	N/A	N/A	N/A	$1.48	N/A	N/A
Martin, (Earl R.)	7,693	N/A	N/A	$445	$1.12	$18.52	N/A
Wanatah Trucking	24,628	16.13	52	$154	$2.23	$7.16	$0.14

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Pritchett Trucking Co.	100%	N/A	100%	$11,814
Hribar Trucking	93%	N/A	94%	$6,045
Hazel Trucking Co.	100%	100%	100%	$12,553
Martin, (Earl R.)	N/A	73%	80%	$11,852
Wanatah Trucking	100%	100%	100%	$8,229

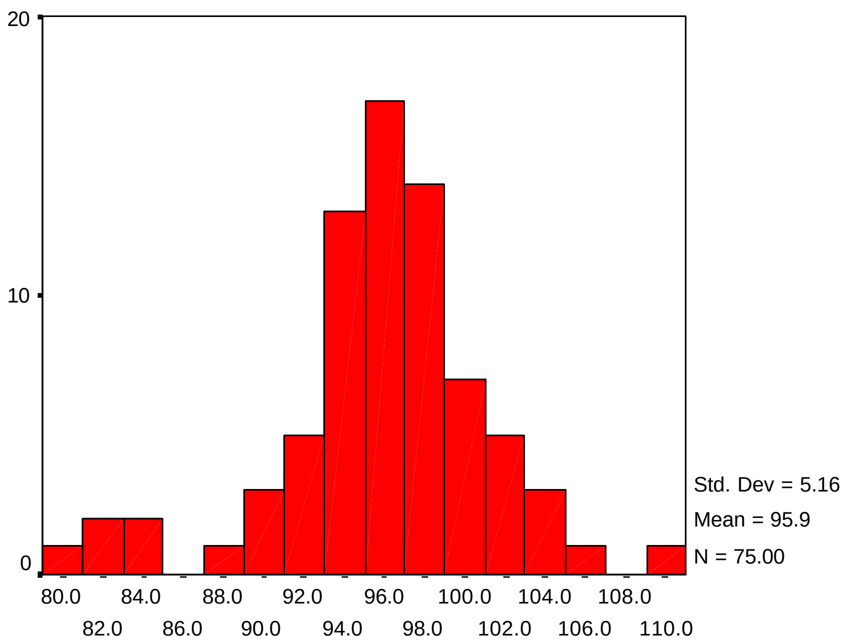
Table 65-- Bulk Materials - Non Tank Carriers' Financial Performance: Five Smallest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Pritchett Trucking Co.	-$72,285	-$60,912	103.60	-3.03%	-14.13%
Hribar Trucking	-$62,173	$171,386	103.03	8.34%	16.82%
Hazel Trucking Co.	$177,743	$176,711	94.69	5.28%	36.14%
Martin, (Earl R.)	-$201,292	$190,182	105.89	5.56%	10.54%
Wanatah Trucking	$169,310	$185,400	95.54	4.89%	7.75%

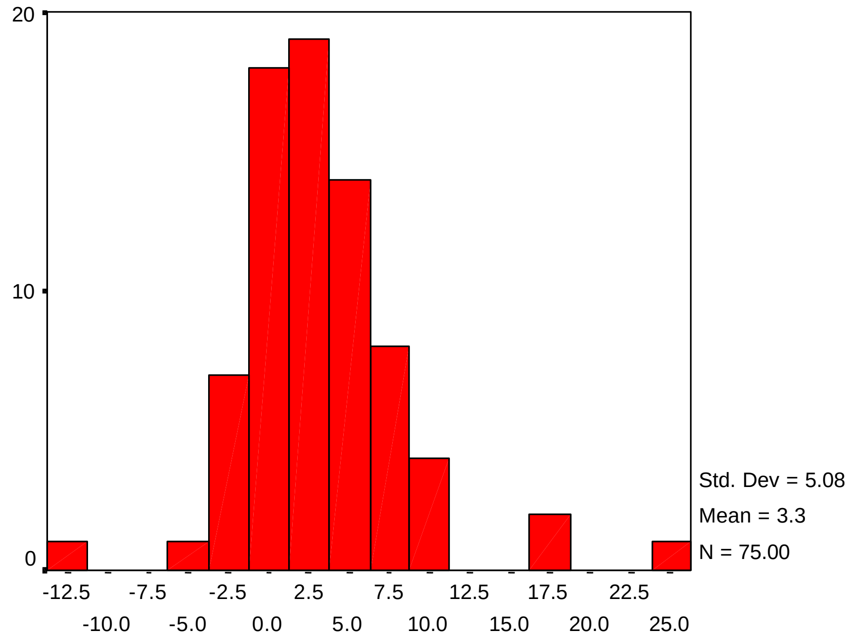
Charts and Graphs for Bulk Materials - Non Tank Carriers



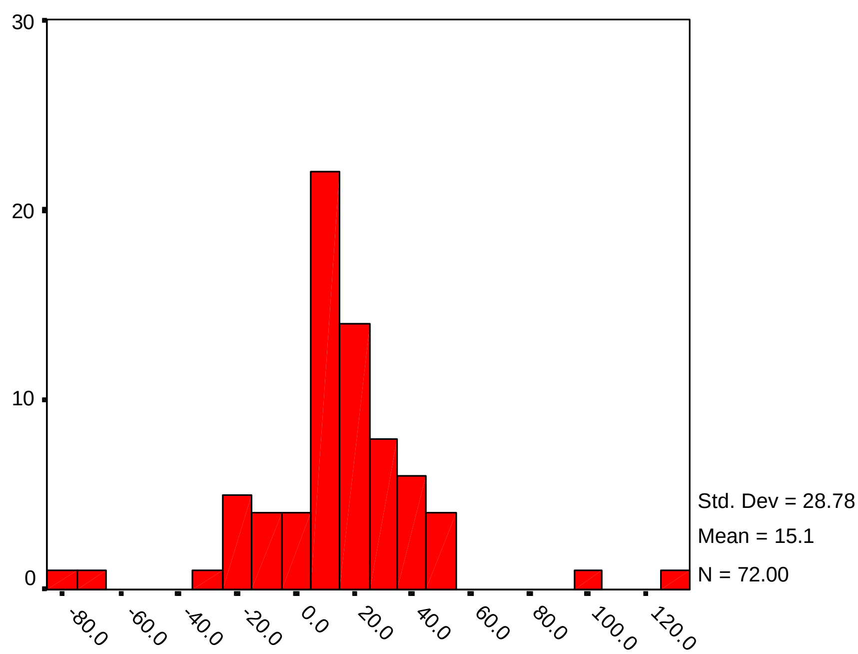
Gross Revenue



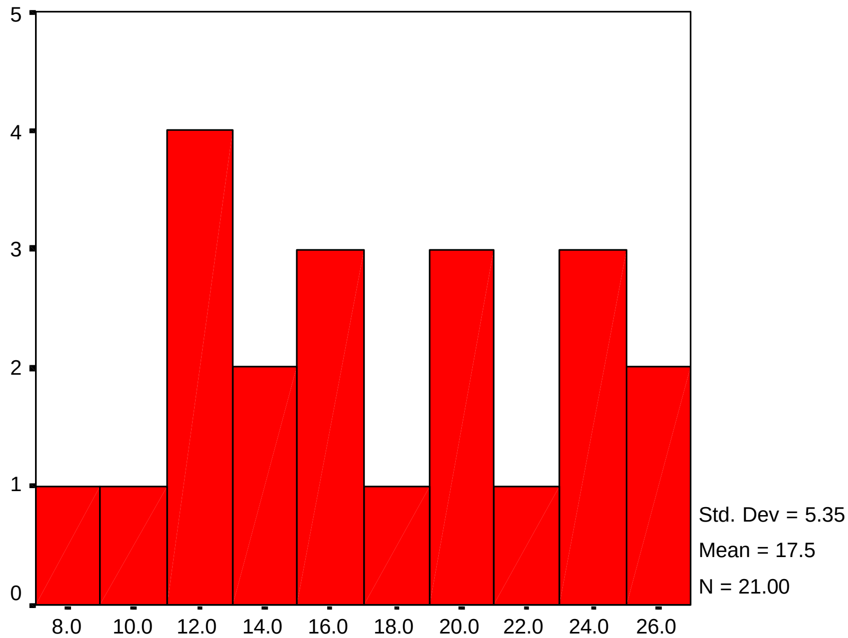
Operating Ratio



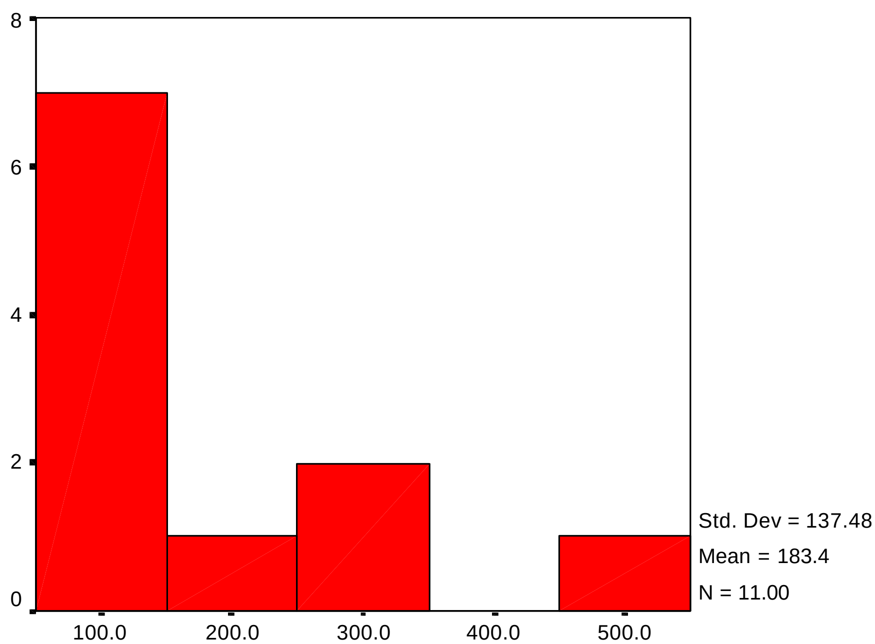
Net Profit Margin



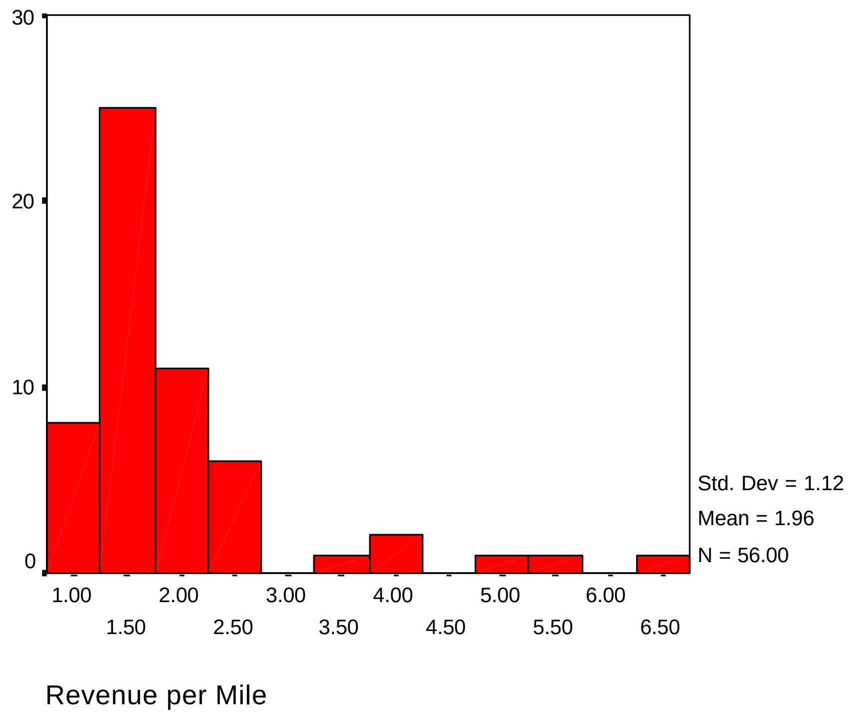
Return on Equity



Average Load (Tons)



Average Haul (Miles)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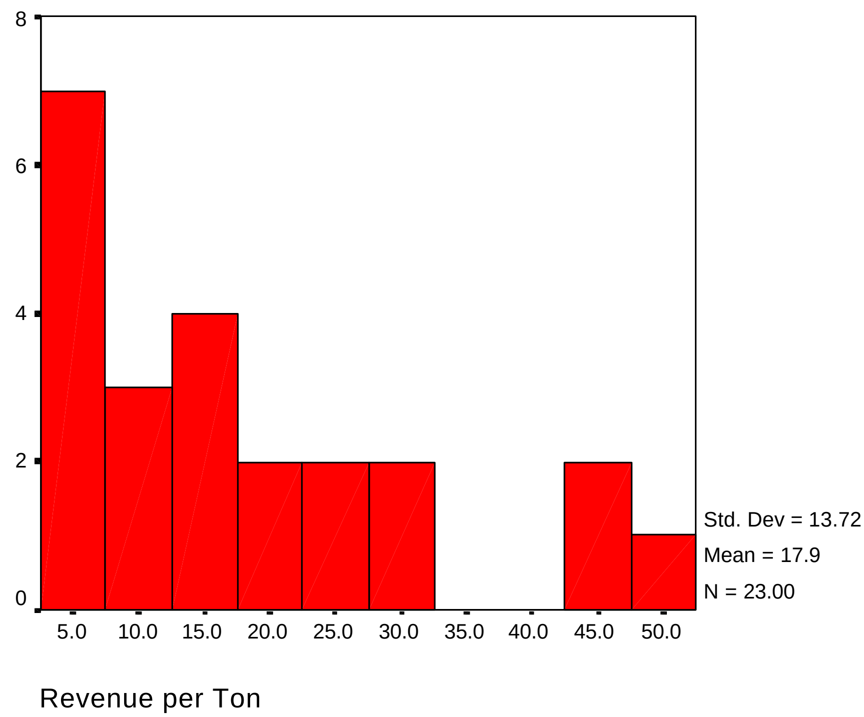
2.50
3.50
4.50
5.50
6.50
Revenue per Mile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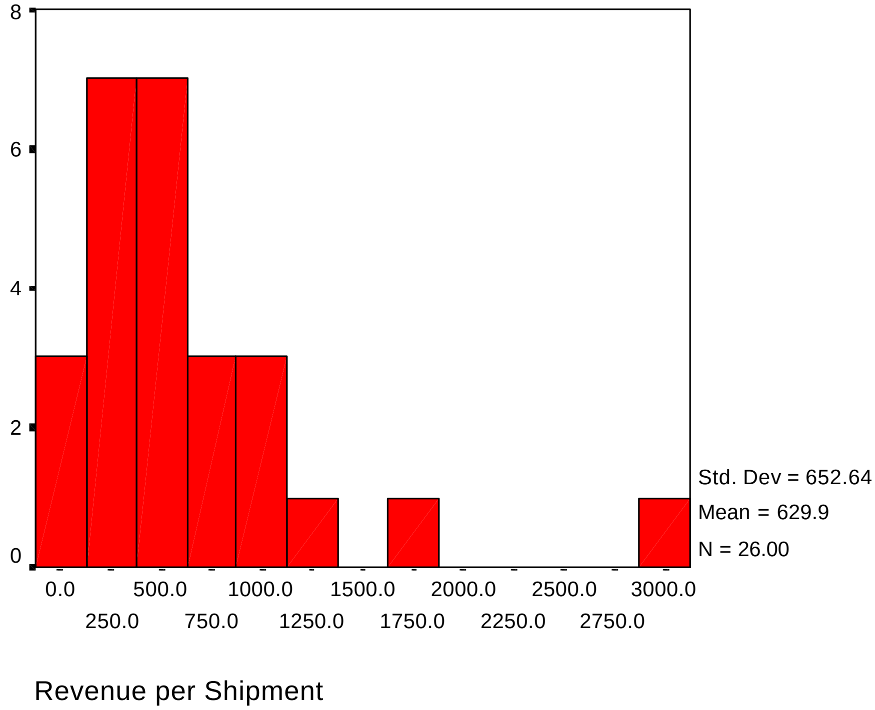
35.0
40.0
45.0
50.0
Revenue per Ton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2500.0
2750.0
3000.0
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Revenue per Shipment

Summary Data for Bulk Materials - Non Tank Carriers

Bulk Materials - Non Tank Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	75	2,010,570	110,000,000	17,000,000	19,000,000
Expenses	75	2,082,855	100,000,000	16,000,000	17,000,000
Operating Income	75	(913,354)	8,839,985	845,484	1,603,251
Net Income	75	(1,888,678)	4,705,858	583,651	1,050,607
Total Assets	75	507,478	94,783,819	9,435,571	16,000,000
Total Liabilities	75	60,859	70,000,000	5,653,642	12,000,000
Total Equity	75	(772,542)	25,000,000	3,724,813	5,177,977
Operating Ratio	75	80	110	96	5
Net Profit Margin	75	-14%	25%	3%	5%
Return on Equity	72	-76%	132%	15%	29%
Individual Expense Items					
Drivers and Helpers Wages	36	54,953	2,381,743	1,135,608	648,875
Insurance	75	(269,907)	3,425,681	442,245	578,167
Outside Vehicle Maintenance	70	-	3,196,608	429,692	571,898
Purchased Transportation	75	-	8,895,012	1,307,661	2,025,177
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	73	0%	100%	79%	39%
Trucks Leased	73	0%	100%	21%	39%
Tractors Owned	73	0%	100%	72%	34%
Tractors Leased	73	0%	100%	28%	34%
Trailers Owned	73	0%	100%	89%	27%
Trailers Leased	73	0%	100%	11%	27%
Operating Statistics					
Total Units in Fleet	73	28	1,906	278	338
Total Highway Miles	60	25,000	61,881,031	10,000,000	11,000,000
Total Tons Carried	25	16,088	4,107,223	1,075,896	1,117,598
Total Ton-Miles	22	27,472,566	1,400,000,000	320,000,000	330,000,000
Total Shipments	28	300	159,325	38,495	44,302
Revenue per Mile	56	$0.80	$6.71	$1.96	$1.12
Revenue per Ton	23	$3.75	$47.81	$17.92	$13.72
Revenue per Shipment	26	$71.24	$3,078.97	$629.86	$652.64
Revenue per Ton-Mile	22	$0.03	$0.24	$0.11	$0.06
Average Load (Tons)	21	9	25	18	5
Average Haul (Miles)	11	52	538	183	137
Outside Vehicle Maintenance per Truck/Tractor	68	-	43,241	5,354	6,492
Valid N (listwise)	3				

XI. BUILDING MATERIALS CARRIERS

Overview of Carriers

Building Materials include lumber, cut stone, cement, sheet rock and other building products normally carried on flatbed trucks. This category does not include dry bulk products such as sand, gravel, crushed stone or other products usually transported by dump trucks. A total of 31 firms in the Building Materials industry segment reported $737.3 Million in annual revenues for 1997 (Table 66). The revenues for the five largest firms account for 77.25% of all the segment's revenues. The largest firm in this segment, Builders' Transport, generated 39.1% of the segment's total revenue. Four of the five largest firms in this industry segment account for 80.4% of the segment's total assets and 70.0% of the total units in the segment's fleet (Table 70).

The information summarized above suggests that there is a high level of dominance by the largest carriers in this industry segment. However, two of the five largest firms experienced negative profit margins with the largest having a net income loss of $50.5 Million, resulting in a net profit margin of -17.5% (Table 71). In contrast, four of the five smallest carriers reported positive net profit margins, although the highest profit margin reported was only 5.6% (Table 73).

Overall, the average net profit margin for firms in the industry was 1%. In addition, the average return on equity was 15.2% (Table 67). The five firms with the highest return on equity ratios had an average of 59.8% (Table 69). This indicates that these firms were about 4 times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are more than 10 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the industry is $569.4 Million (Table 70), while the total revenue of the 5 most profitable firms is $48.8 Million (Table 68). Thus, carriers in this industry segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this segment handled on average 19,551 shipments and 1.1 Million tons of freight and produced 335.7 Million ton-miles on average. Their average load was 18.7 tons and their average length of haul was 443.5 miles (Tables 66 and 67). Among the five largest carriers, Builders Transport generated approximately nine times the average tons carried by firms in the segment as well as ten times the average ton-miles (Table 68).

On average, carriers in this segment owned 48% of their trucks; 58% of their tractors; and 77% of their trailers (Table 66). Among the five largest carriers in this segment, operating strategies differed. While Builders Transport owns 88% of its tractors, Kennedy Trucking owns only 57% of its tractors and Great American Lines depends exclusively on owner-operators for its tractors (Table 70).

Among the five most profitable firms in the segment, average tons and ton-miles for reporting firms are substantially below segment averages. This again confirms the finding that firm profitability and size are not strongly related in this segment. With respect to average length of haul, among the most profitable firms reporting, one, Ameri-Co Carriers, Inc., had an average four times the average for all firms in the segment, while another of the five most profitable firms, Alger Company, had an average length of haul of only 145 miles, substantially below the average for all firms in the segment. Thus, segment profitability does not appear to be related directly to average length of haul, firms with well above average and well below average haul lengths are included in the group of most profitable segment carriers (Table 68).

The five most profitable firms relied either exclusively on owner-operators (Southwest Express, Ameri-Co Carriers, and Alger Company) or company drivers (Hartwick & Hand, Inc. and Sylvester Material Company) to handle their tractor operations. This suggests that neither an all owner-operator or an all company driver strategy is a key factor in devising a profitable business approach (Table 68). Furthermore, there is variation among the five smallest companies in their reliance on company drivers and owner-operators. Among the five smallest companies, only one, Northwood Transport, relies exclusively on either company drivers or owner-operators (they rely on company drivers exclusively). The other carriers in the group of smallest carriers rely on company drivers to operate from 13% to 84% of their tractors (Table 72).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this segment, the average operating ratio is 97.2 (Table 67). Among the five most profitable firms (Table 69), based on return on equity, operating ratio ranged from a low of 87.6% (Sylvester Material Company) to a high of 98.1% (Ameri-Co Carriers, Inc.). Among the five largest carriers (Table 71), the largest, Builders Transport, had an operating ratio of 112.2. Among this group of carriers, the one with the lowest operating ratio (Kelly truck Lines) still had a ratio of 94.1. Among the five smallest carriers (Table 73), three had operating ratios in excess of 100 and the firm with the lowest operating ratio still had a ratio of 94.1%. Clearly, neither the smallest nor the largest carriers in this industry segment had the best operating ratios.

Table 66--Building Materials Carriers' Average Size and Operating Performance

	Number of Companies Reporting	Total
Revenue	31	$737,258,651
Units in Fleet	30	13,005
Assets	29	$309,513,018
Tons Carried	20	21,114,924
Ton-Miles	17	5,706,839,150
Shipments	19	371,466
		Average
Size of Load	16	18.7 Tons
Length of Haul	15	443.5 Miles
		Average
Revenue Per Mile	23	$1.33
Revenue Per Ton	18	$28.18
Revenue Per Ton-Mile	17	$0.11
		Average
% of Trucks Owned	29	48%
% of Tractors Owned	29	58%
% of Trailers Owned	29	77%
Outside Vehicle Maintenance per Truck/Tractor	29	$5,359

Table 67-- Building Materials Carriers' Average Financial Performance

Operating Income	($846,565)
Net Income	($1,531,805)
Operating Ratio	97.15
Net Profit Margin	0.97%
Return on Equity	15.21%

Table 68-- Building Materials Carriers' Size and Operating Performance: Five Most Profitable Carriers

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
Southwest Express	Glendale, AZ	$4,277,800	39	$435,100	N/A	N/A
Ameri-Co Carriers, Inc.	Scottsbluff, NE	$10,313,000	183	$834,000	131,000	237,233,000
Hartwick & Hand, Inc.	Victorville, CA	$7,675,055	198	$3,931,626	N/A	N/A
Alger (Geo. F.), Company	Romulus, MI	$9,382,943	135	$1,353,647	308,370	44,584,877
Sylvester Material Company	Sylvania, OH	$17,120,633	163	$9,316,400	N/A	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Southwest Express	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ameri-Co Carriers, Inc.	11,000	24	1,807	$944	$1.04	N/A	$0.04
Hartwick & Hand, Inc.	N/A	N/A	N/A	N/A	$1.42	N/A	N/A
Alger (Geo. F.), Company	12,081	26	145	$777	N/A	$30.43	$0.21
Sylvester Material Company	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Southwest Express	0%	0%	N/A	$900
Ameri-Co Carriers, Inc.	N/A	0%	100%	$5,047
Hartwick & Hand, Inc.	100%	100%	100%	$7,139
Alger (Geo. F.), Company	N/A	0%	100%	$636
Sylvester Material Company	45%	100%	100%	$4,524

Table 69-- Building Materials Carriers' Financial Performance: Five Most Profitable Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Southwest Express	$96,100	$96,100	97.75	2.25%	113%
Ameri-Co Carriers, Inc.	$201,000	$63,000	98.05	0.61%	56%
Hartwick & Hand, Inc.	$443,835	$309,064	94.22	4.03%	56%
Alger (Geo. F.), Company	$303,664	$193,847	96.76	2.07%	43%
Sylvester Material Company	$2,127,706	$749,599	87.58	4.38%	31%

Table 70-- Building Materials Carriers' Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Builders Transport	Camden, SC	$288,145,000	7,144	$208,895,000	9,491,000	4,059,314,000
Mercer Transportation	Louisville, KY	$164,206,000	N/A	N/A	N/A	N/A
Great American Lines	Murrysville, PA	$71,887,133	882	$10,044,427	3,158,071	N/A
Kennedy (Louis J.) Trucking	Kearny, NJ	$23,254,145	532	$9,565,332	761,952	115,830,480
Kelly Truck Line	Pittsburg, KS	$21,933,942	551	$20,267,768	N/A	349,048,302

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Builders Transport	N/A	16	428	N/A	$1.13	$30.33	$0.07
Mercer Transportation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Great American Lines	117,083	N/A	N/A	$614	$2.05	$22.76	N/A
Kennedy (Louis J.) Trucking	42,092	11	152	$552	$2.27	$30.52	$0.20
Kelly Truck Line	N/A	18	N/A	N/A	$1.16	N/A	$0.06

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Builders Transport	N/A	88%	100%	$3,132
Mercer Transportation	N/A	N/A	N/A	N/A
Great American Lines	N/A	0%	100%	$29,591
Kennedy (Louis J.) Trucking	N/A	57%	100%	$767
Kelly Truck Line	N/A	100%	100%	$2,915

Table 71-- Building Materials Carriers' Financial Performance: Five Largest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Builders Transport	($35,044,000)	($50,512,000)	112.16	(17.53%)	0%
Mercer Transportation	N/A	N/A	94.60	N/A	N/A
Great American Lines	$853,358	$369,300	98.81	0.51%	18%
Kennedy (Louis J.) Trucking	$254,319	$1,200,658	98.91	5.16%	15%
Kelly Truck Line	$1,293,750	($216,094)	94.10	(0.99%)	(12%)

Table 72-- Building Materials Carriers' Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Seltex	Pflugerville, TX	$2,540,878	49	$515,199	131,560	49,795,000
Northwood Transport	Kalkaska, MI	$3,075,148	117	$3,514,245	49,300	7,395,000
Decato Bros.	Lebanon, NH	$3,424,725	78	$1,489,233	89,700	44,850,000
Jones (Dick) Trucking	Powell, WY	$3,850,269	110	$1,878,299	148,512	N/A
Welch Trucking	Portales, NM	$3,898,582	51	$1,711,816	81,972	75,716,993

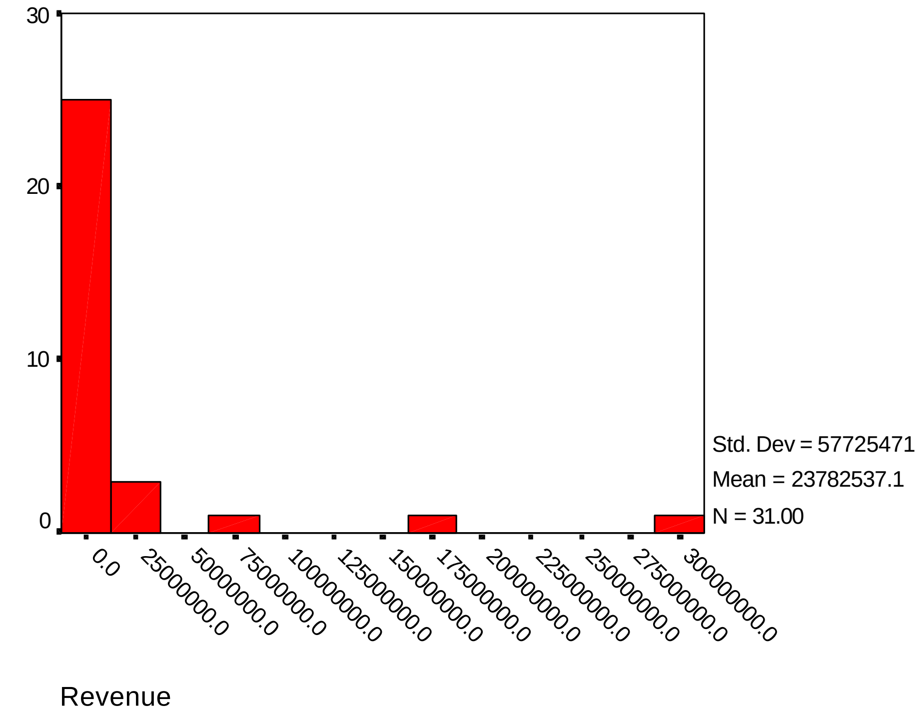
Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Seltex	5,720	23	379	$444	$1.17	$19.31	$0.05
Northwood Transport	986	N/A	150	N/A	N/A	$62.38	$0.42
Decato Bros.	4,485	15	500	$764	$1.15	$38.18	$0.08
Jones (Dick) Trucking	5,712	N/A	N/A	$674	$1.34	$25.93	N/A
Welch Trucking	3,224	24	924	N/A	$1.22	$47.56	$0.05

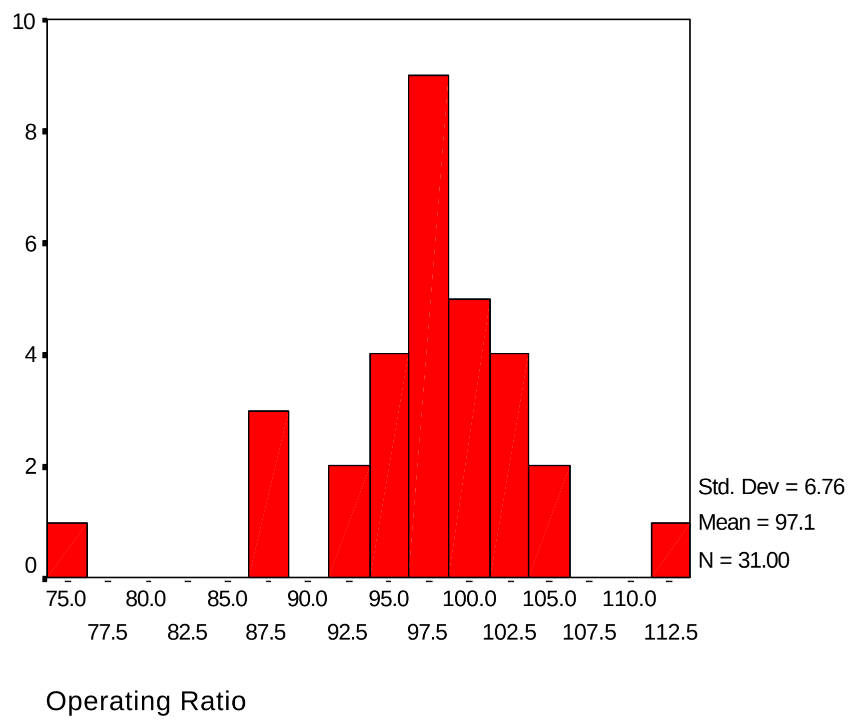
Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Seltex	N/A	13%	15%	$1,600
Northwood Transport	67%	100%	100%	$1,405
Decato Bros.	N/A	44%	48%	$514
Jones (Dick) Trucking	N/A	84%	93%	$3,126
Welch Trucking	N/A	83%	89%	N/A

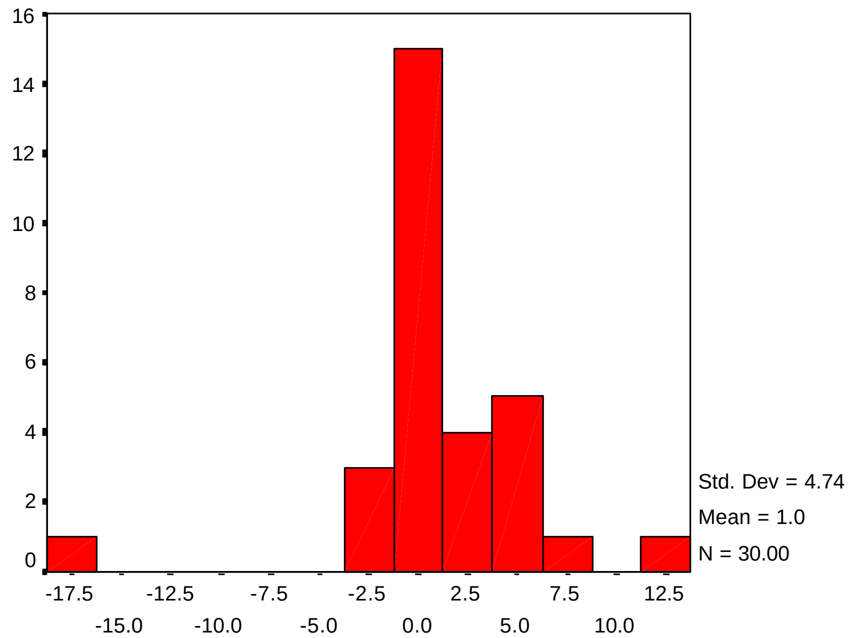
Table 73-- Building Materials Carriers' Financial Performance: Five Smallest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Seltex	($100,497)	($92,316)	103.96	(3.63%)	N/A
Northwood Transport	($106,593)	$27,246	103.47	0.89%	0.82%
Decato Bros.	$91,547	$70,631	97.33	2.06%	N/A
Jones (Dick) Trucking	($92,101)	$15,765	102.39	0.41%	0.90%
Welch Trucking	$229,058	$217,632	94.12	5.58%	14.65%

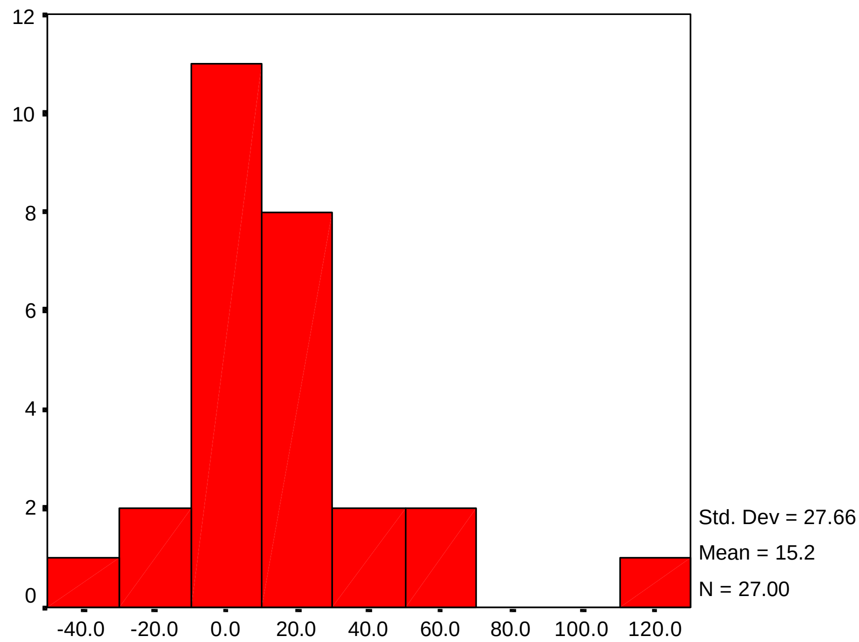
Summary Charts and Graphs for Building Materials Carriers



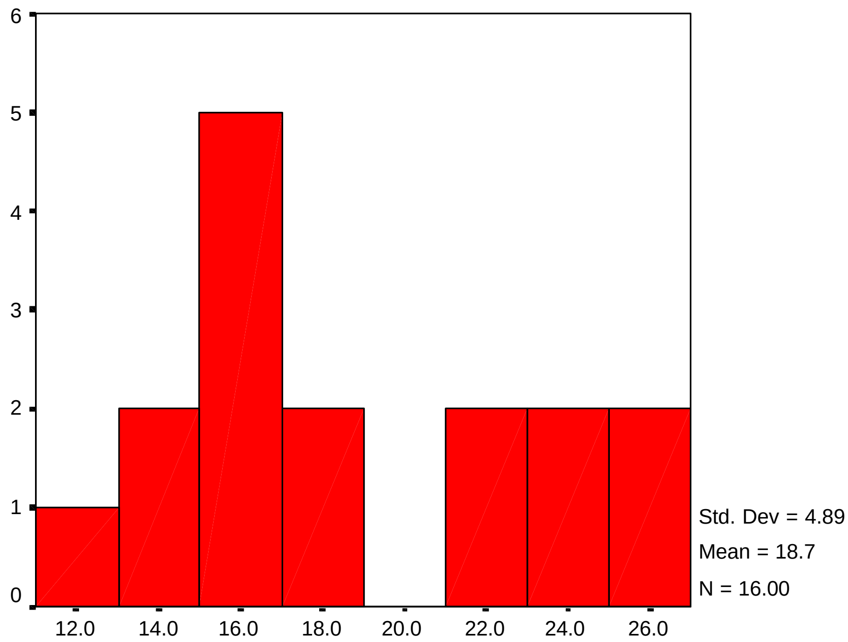




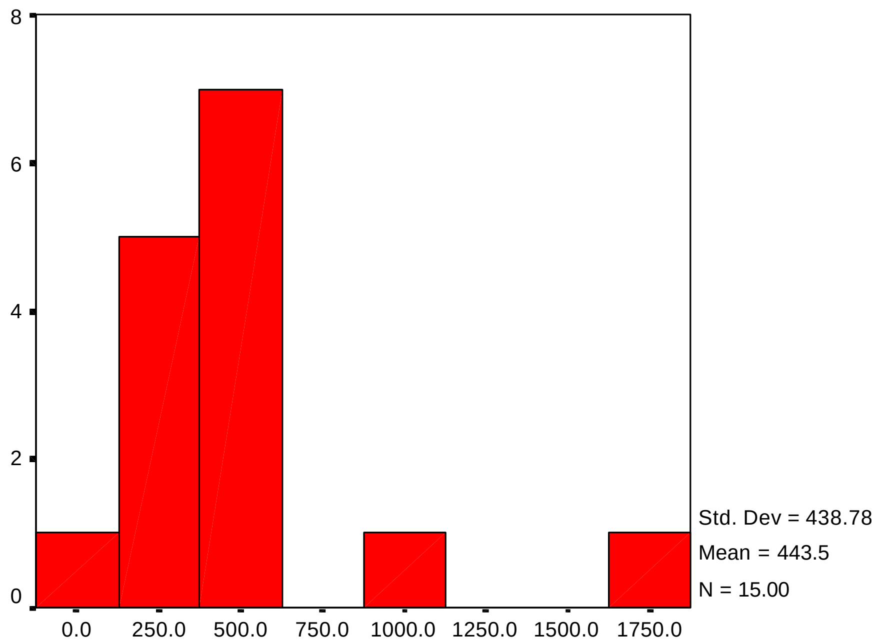
Net Profit Margin



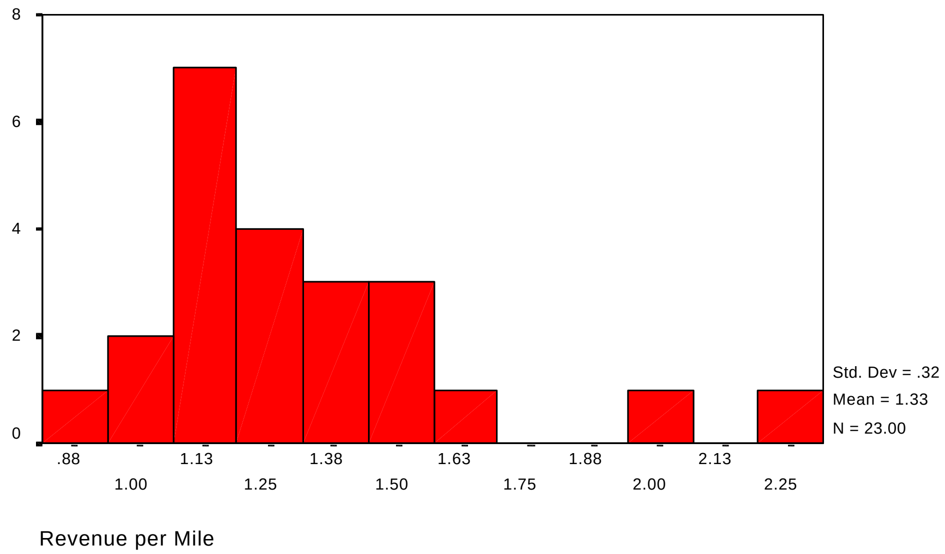
Return on Equity



Average Load (Tons)



Average Haul (Miles)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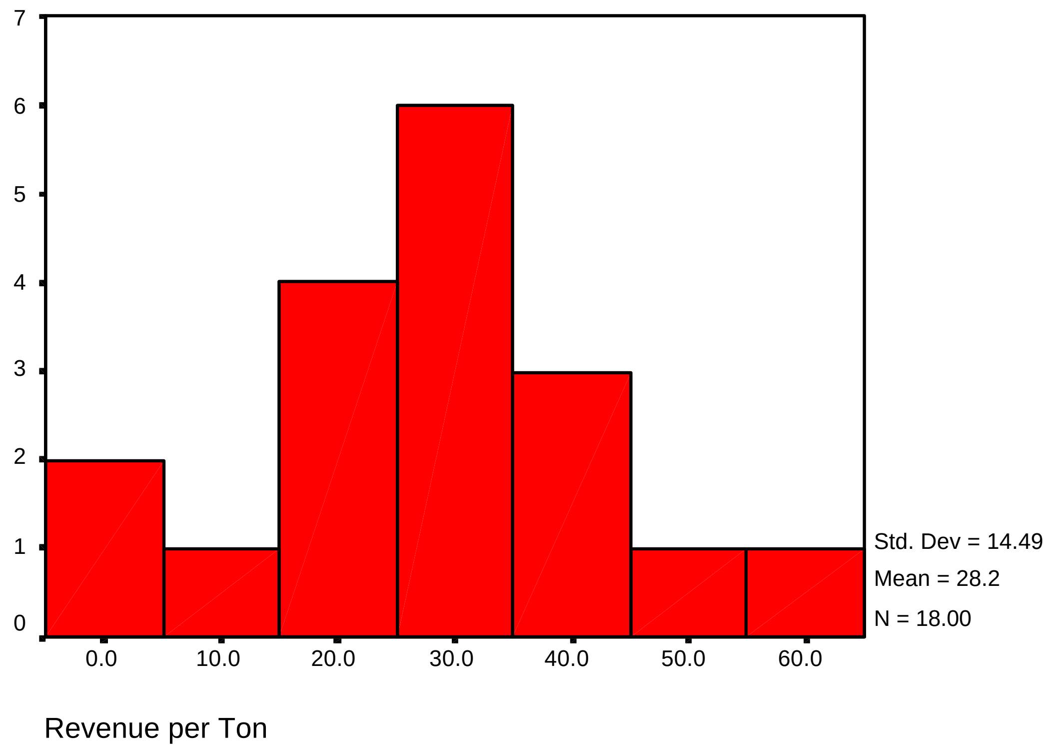
2.00
2.25
Revenue per Mile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30.0
40.0
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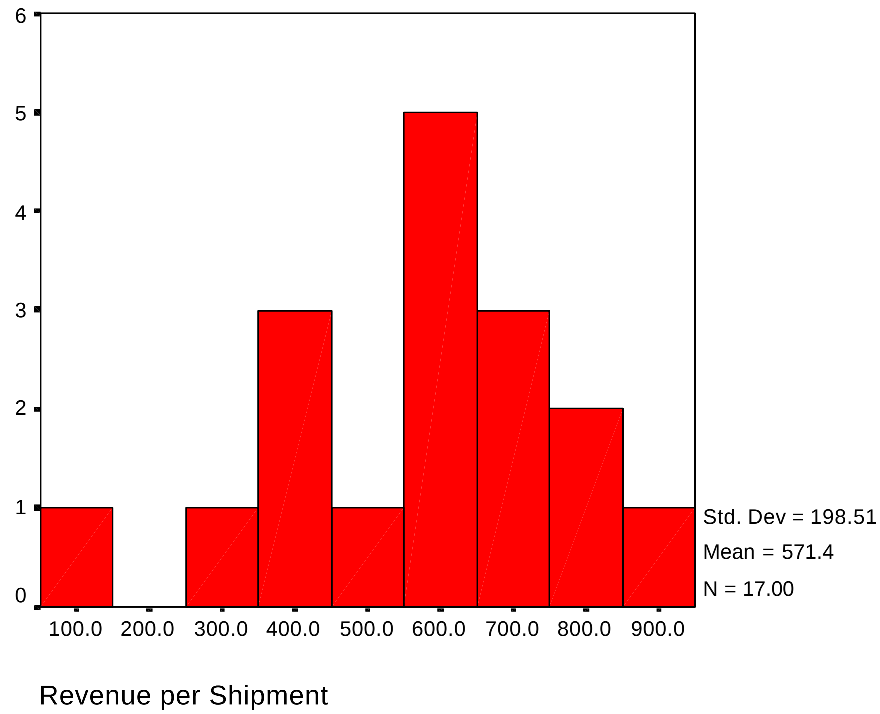
60.0
Revenue per Ton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800.0
900.0
Std. Dev = 198.51
Mean = 571.4
N = 17.00
Revenue per Shipment

Summary Data for Building Materials Carriers

Building Materials Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	31	2,540,878	290,000,000	24,000,000	58,000,000
Expenses	31	2,641,375	320,000,000	24,000,000	63,000,000
Operating Income	30	(35,000,000)	2,127,206	(846,565)	6,483,578
Net Income	30	(51,000,000)	1,201,000	(1,531,805)	9,255,851
Total Assets	29	435,100	210,000,000	11,000,000	38,000,000
Total Liabilities	29	133,127	250,000,000	11,000,000	47,000,000
Total Equity	29	(44,000,000)	7,969,000	(106,186)	8,536,171
Operating Ratio	31	74	112	97	7
Net Profit Margin	30	-18%	12%	97%	5%
Return on Equity	27	-30%	113%	15%	28%
Individual Expense Items					
Drivers and Helpers Wages	21	89,200	77,000,000	4,860,657	16,000,000
Insurance	29	13,200	24,506,000	1,167,167	4,503,385
Outside Vehicle Maintenance	25	16,448	13,138,307	1,147,593	3,025,780
Purchased Transportation	31	-	24,000,000	2,001,665	4,484,556
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	29	0%	100%	48%	44%
Trucks Leased	29	0%	100%	52%	44%
Tractors Owned	29	0%	100%	58%	43%
Tractors Leased	29	0%	100%	42%	43%
Trailers Owned	29	0%	100%	77%	37%
Trailers Leased	29	0%	100%	23%	37%
Operating Statistics					
Total Units in Fleet	30	39	7,144	434	1,279
Total Highway Miles	25	147,900	250,000,000	17,000,000	50,000,000
Total Tons Carried	20	37,934	9,491,000	1,055,746	2,221,393
Total Ton-Miles	17	7,395,000	4,100,000,000	340,000,000	960,000,000
Total Shipments	19	986	117,083	19,551	27,272
Revenue per Mile	23	$0.94	$2.27	$1.33	$0.32
Revenue per Ton	18	$1.68	$62.38	$28.18	$14.49
Revenue per Shipment	17	$104.35	$943.86	$571.36	$198.51
Revenue per Ton-Mile	17	$0.04	$0.42	$0.11	$0.09
Average Load (Tons)	16	11	27	19	5
Average Haul (Miles)	15	20	1,807	443	439
Outside Vehicle Maintenance per Truck/Tractor	25	514	29,591	5,359	5,883
Valid N (listwise)	1				

XII. HEAVY EQUIPMENT CARRIERS

Overview of Carriers

Heavy equipment carriers transport commodities, which because of size, shape, form or weight require use of special equipment. A total of 22 firms in the Heavy Equipment industry segment reported $305.9 Million in annual revenues for 1997 (Table 74). The revenues for the five largest firms account for 36.6% of all the segment's revenues. The largest firm in this segment, Belger Cartage Service, generated 9.4% of the segment's total revenue. The five largest firms in this industry segment account for 31.6% of the segment's total assets and 39.6% of the total units in the segment's fleet (Table 78).

The information summarized above suggests that there is a high level of competition in this industry segment. However, this has not been an obstacle to carriers' generating positive profit margins. The largest firm in the industry segment reported a net income of $1.1 Million, resulting in a net profit margin of 3.9%. (Table 79). In addition, two of the five smallest firms in the industry segment obtained a positive profit margin, with one, Wilhelm Warehouse, reaching a net profit margin of 14.6% (Table 81).

Overall, the average net profit margin for firms in the industry was 4%. In addition, the average return on equity was 20.4% (Table 75). The five firms with the highest return on equity ratios had an average of 43% (Table 77). This indicates that these firms were about 2 times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are more than 2 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the industry is $111.9 Million (Table 78), while the total revenue of the 5 most profitable firms is $51.9 Million (Table 76). Thus, carriers in this industry segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this segment handled on average 9,650 shipments and 240.3 Thousand tons of freight and produced 7.9 Million ton-miles on average. Their average load was 13.4 tons and their average length of haul was 197 miles (Tables 74 and 75). Among the five largest carriers, Ace-Doran Hauling & Rigging, generated approximately five times the average tons carried by firms in the segment (Table 76).

On average, carriers in this segment owned 98% of their trucks; 83% of their tractors; and 99% of their trailers (Table 74). Among the five largest carriers in this segment, operating strategy favored company ownership of equipment. Four of the five largest companies owned no less than 95% of their trucks, tractors, and trailers, respectively. Only Davenport Mammoet Heavy Transportation selected an alternative strategy with only 55% of its tractors being company-owned. (Table 78).

Among the five most profitable firms in the segment, there is a scarcity of reported information about tons carried, ton-miles generated, shipments handled, average loads, and average lengths of haul. The available information shows that several of the most profitable firms, Dawn trucking and Pelican Transportation, handled significantly less tons of freight than the reported average tons for firms in this segment. In fact, Pelican Transportation handled only 13,252 tons of freight, which is 18 times below the average for firms in this segment. This again confirms the finding that firm profitability and size are not strongly related in this segment. (Table 76).

Four of the five most profitable firms relied almost exclusively on company-owned equipment to handle their truck, tractor, and trailer operations. Only one firm, Pelican Transportation, reported that it did not own any of its tractors (Table 76). There is variation among the five smallest companies in their reliance on company drivers with company-owned equipment and owner-operators. Among the five smallest companies, three rely exclusively on company drivers. Two carriers, Argee Transport and Terrell Trucking, use a mixed strategy, with a 63% and 60% level of tractor ownership achieved, respectively. (Table 80).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this segment, the average operating ratio is 100.17 (Table 75). This indicates that on average firms in this segment spend more on their transportation operations than they accumulate in revenues from transportation operations. Among the five most profitable firms (Table 77), based on return on equity, operating ratio ranged from a low of 72% (Swifty Transportation) to a high of 104.9% (Pradon Construction & Trucking). Among the five largest carriers (Table 79), the largest, Belger Cartage Service, had an operating ratio of 91.3 - the lowest operating ratio achieved by any of the largest firms. The four remaining firms in the group of the segment's largest carriers had operating ratios ranging from 92.7 to 98.8. Among the five smallest carriers (Table 81), four had operating ratios in excess of 100 and the firm with the lowest operating ratio still had a ratio of 97.2%. Clearly, the smallest carriers in this segment achieved very poor operating performance. In fact, their negative operating performance indicates the marginal nature of their transportation operations. This contrasts sharply with the far better performance achieved by both the largest and most profitable firms in this segment.

Table 74--Heavy Equipment Carriers' Average Size and Operating Performance

	Number of Companies Reporting	Total
Revenue	22	$305,945,584
Units in Fleet	21	3,797
Assets	20	$196,496,395
Tons Carried	13	3,124,219
Ton-Miles	12	94,927,216
Shipments	13	125,456
		Average
Size of Load (Tons)	4	13.44
Length of Haul (Miles)	2	197
		Average
Revenue Per Mile	18	$2.97
Revenue Per Ton	9	$154.79
Revenue Per Ton-Mile	4	$3.27
		Average
% of Trucks Owned	9	98%
% of Tractors Owned	21	83%
% of Trailers Owned	20	99%
Outside Vehicle Maintenance per Truck/Tractor	20	$10,086

Table 75--Heavy Equipment Carriers' Average Financial Performance

Operating Income	$343,988
Net Income	$361,758
Operating Ratio	100.17
Net Profit Margin	3.98%
Return on Equity	20.37%

Table 76: Heavy Equipment Carriers' Size and Operating Performance: Five Most Profitable Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Swifty Transportation	Seymour, IN	$3,729,649	24	$1,449,976	N/A	N/A
Dawn Trucking	Farmington, NM	$11,900,088	207	$5,802,011	124,530	N/A
Pelican Transportation	Lafayette, LA	$3,870,603	44	$996,308	13,252	N/A
Pradon Construction & Trucking	Odessa, TX	$7,214,488	176	$4,847,862	N/A	N/A
Robbins Motor Transportation	Essington, PA	$25,221,865	483	$7,015,496	N/A	N/A

Carrier	Total Ship-ments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Swifty Transportation	N/A	N/A	N/A	N/A	$1.83	N/A	N/A
Dawn Trucking	7,938	N/A	N/A	N/A	$3.99	N/A	N/A
Pelican Transportation	N/A	N/A	N/A	$487.60	$2.16	$31.08	N/A
Pradon Construction & Trucking	N/A	N/A	N/A	N/A	$2.22	$544.41	N/A
Robbins Motor Transportation	N/A	N/A	N/A	N/A	$3.37	N/A	N/A

Table 76: Heavy Equipment Carriers' Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Swifty Transportation	N/A	100%	100%	$26,573
Dawn Trucking	83%	92%	100%	$17,227
Pelican Transportation	N/A	0%	N/A	N/A
Pradon Construction & Trucking	N/A	100%	100%	$15,411
Robbins Motor Transportation	N/A	100%	100%	$1,985

Table 77--Heavy Equipment Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Swifty Transportation	$1,042,796	$1,017,835	72.04	27.29%	120.24%
Dawn Trucking	$1,143,241	$1,143,241	90.39	9.61%	41.68%
Pelican Transportation	$271,075	$175,244	93.00	4.53%	20.99%
Pradon Construction & Trucking	-$355,054	$658,982	104.92	9.13%	17.12%
Robbins Motor Transportation	$683,009	$636,386	97.29	2.52%	15.26%

Table 78: Heavy Equipment Carriers' Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Belger Cartage Service	Kansas City, MO	$28,692,593	465	$25,230,850	N/A	2,342,909
Ace-Doran Hauling & Rigging	Cincinnati, OH	$26,919,453	188	$8,270,912	1,194,707	N/A
Robbins Motor Transportation	Essington, PA	$25,221,865	483	$7,015,496	N/A	N/A
Keep on Trucking Co.	Rancho Cucamonga, CA	$16,690,559	279	$6,959,154	N/A	69,544,000
Davenport Mammoet Hvy Transportation	Rosharon, TX	$14,395,784	90	$14,526,727	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Belger Cartage Service	N/A	4.24	N/A	N/A	N/A	N/A	$12.25
Ace-Doran Hauling & Rigging	44,457	N/A	N/A	$605.52	$1.27	$22.53	N/A
Robbins Motor Transportn.	N/A	N/A	N/A	N/A	$3.37	N/A	N/A
Keep on Trucking Co.	N/A	13.46	N/A	N/A	$3.23	N/A	$0.24
Davenport Mammoet Hvy Transportn.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 78: Heavy Equipment Carriers' Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Belger Cartage Service	100%	95%	100%	$2,071
Ace-Doran Hauling & Rigging	100%	100%	100%	$7,225
Robbins Motor Transportation	N/A	100%	100%	$1,985
Keep on Trucking Co.	N/A	100%	100%	$2,681
Davenport Mammoet Hvy Transportation	N/A	55%	100%	$4,557

Table 79--Heavy Equipment Carriers' Average Financial Performance: Five Largest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Belger Cartage Service	$2,491,292	$1,119,816	91.32	3.90%	11.43%
Ace-Doran Hauling & Rigging	$333,271	$250,713	98.76	0.93%	4.37%
Robbins Motor Transportation	$683,009	$636,386	97.29	2.52%	15.26%
Keep on Trucking Co.	$216,852	$65,461	98.70	0.39%	2.15%
Davenport Mammoet Hvy Transportation	$1,050,660	$913,600	92.70	6.35%	12.89%

Table 80: Heavy Equipment Carriers' Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Argee Transport	Audubon, IA	$2,879,797	89	$1,519,934	N/A	N/A
Terrell (Dan), Trucking	Mooresville, IN	$3,077,043	78	N/A	N/A	N/A
Wilhelm (Rudie) Warehouse	Portland, OR	$3,257,731	221	$13,132,228	39,844	8,469,711
Bragg Investment Co.	Long Beach, CA	$3,278,270	264	$76,332,652	7,800	N/A
Interstate Heavy Hauling	Portland, OR	$3,325,274	137	$2,939,584	79,923	14,570,596

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Argee Transport	30	N/A	N/A	N/A	$0.19	N/A	N/A
Terrell (Dan), Trucking	N/A	N/A	N/A	N/A	$1.33	N/A	N/A
Wilhelm (Rudie) Warehouse	N/A	14.88	213	N/A	$5.72	$81.76	$0.38
Bragg Investment Co.	300	N/A	N/A	N/A	$7.76	$420.29	N/A
Interstate Heavy Hauling	3,447	21.17	182	$964.69	$4.83	$41.61	$0.23

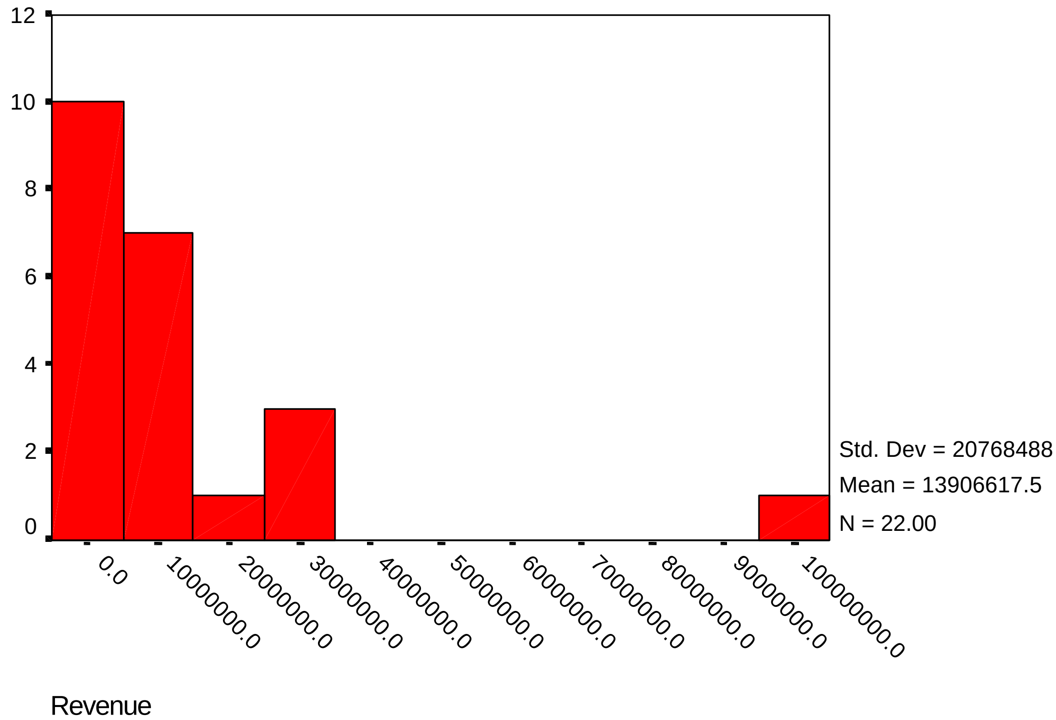
Table 80: Heavy Equipment Carriers' Size and Operating Performance: Five Smallest Carriers (Continued)

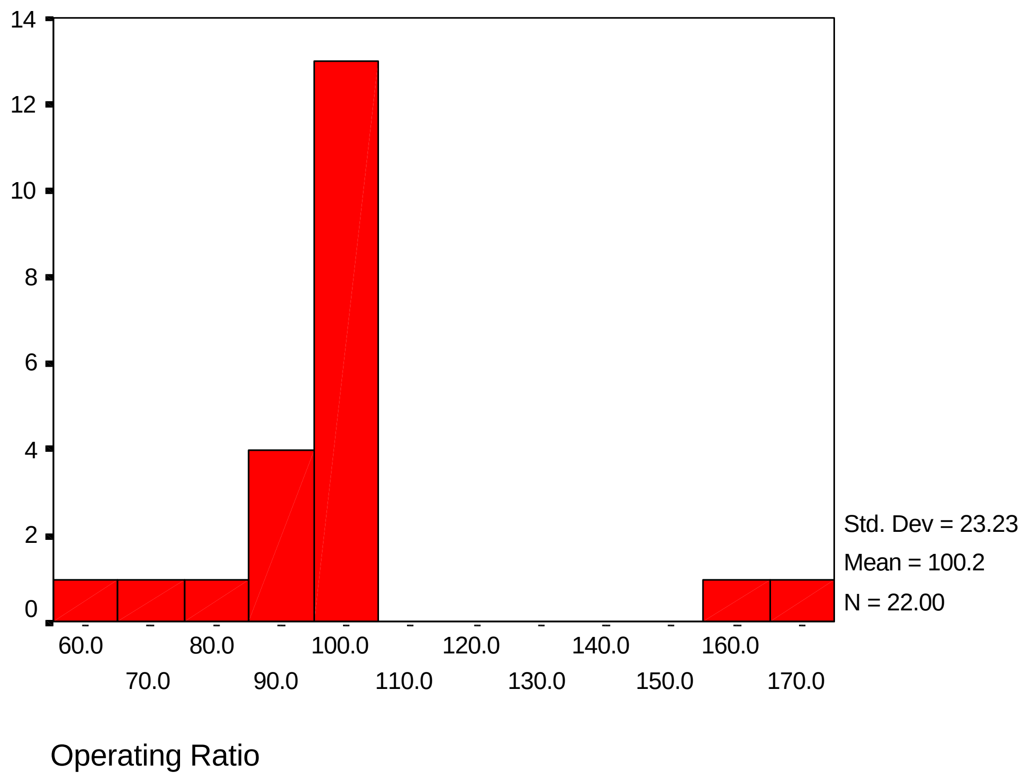
Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Argee Transport	N/A	63%	87%	$7,976
Terrell (Dan), Trucking	100%	60%	100%	$4,999
Wilhelm (Rudie) Warehouse	100%	100%	100%	$4,092
Bragg Investment Co.	100%	100%	100%	$6,204
Interstate Heavy Hauling	100%	100%	100%	$6,211

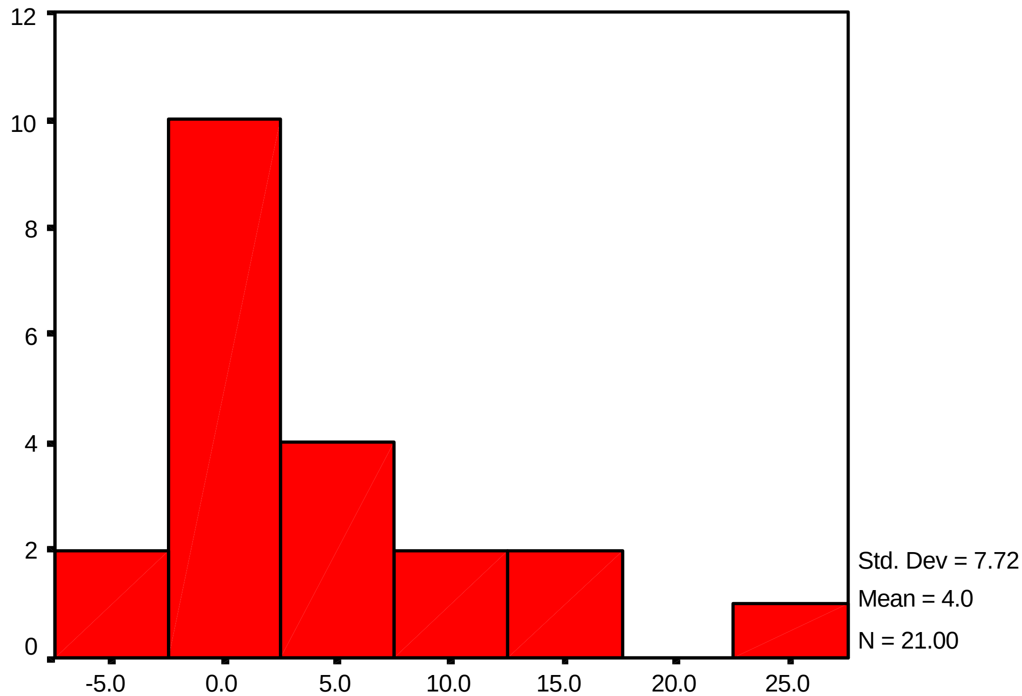
Table 81--Heavy Equipment Carriers' Average Financial Performance: Five Smallest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Argee Transport	$79,375	-$206,934	97.24	-7.19%	-26.50%
Terrell (Dan), Trucking	-$43,143	-$43,143	101.40	-1.40%	N/A
Wilhelm (Rudie) Warehouse	-$119,473	$476,046	103.67	14.61%	4.16%
Bragg Investment Co.	-$2,299,091	$31,747	170.13	0.97%	0.08%
Interstate Heavy Hauling	-$41,394	$3	101.24	0%	0%

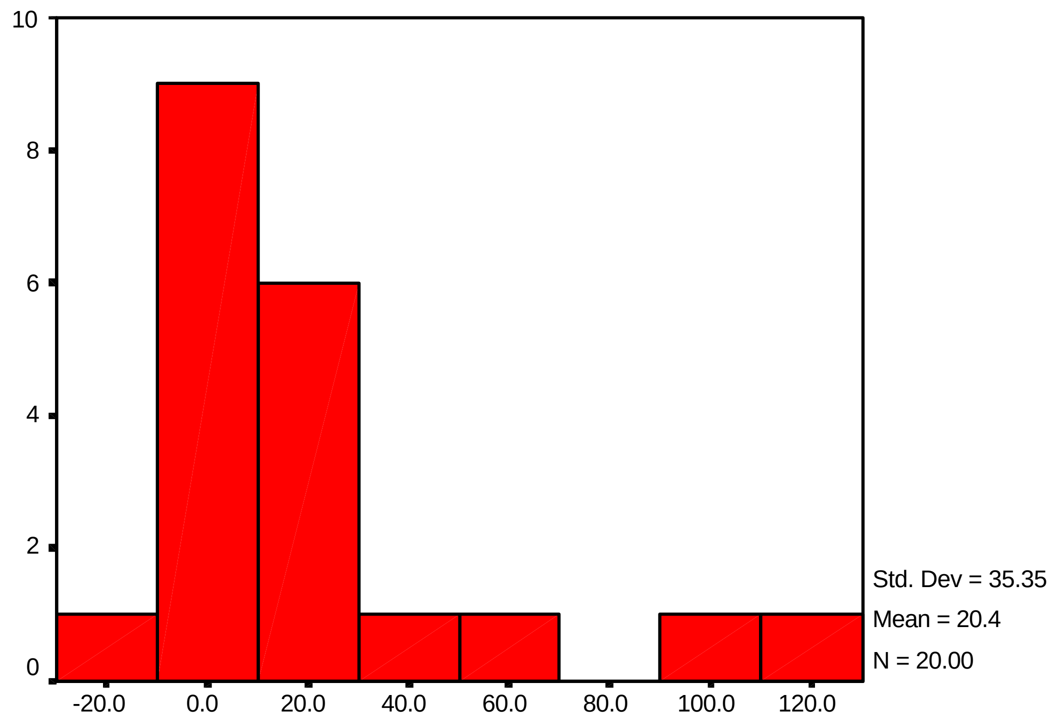
Summary Charts and Graphs for Heavy Equipment Carriers



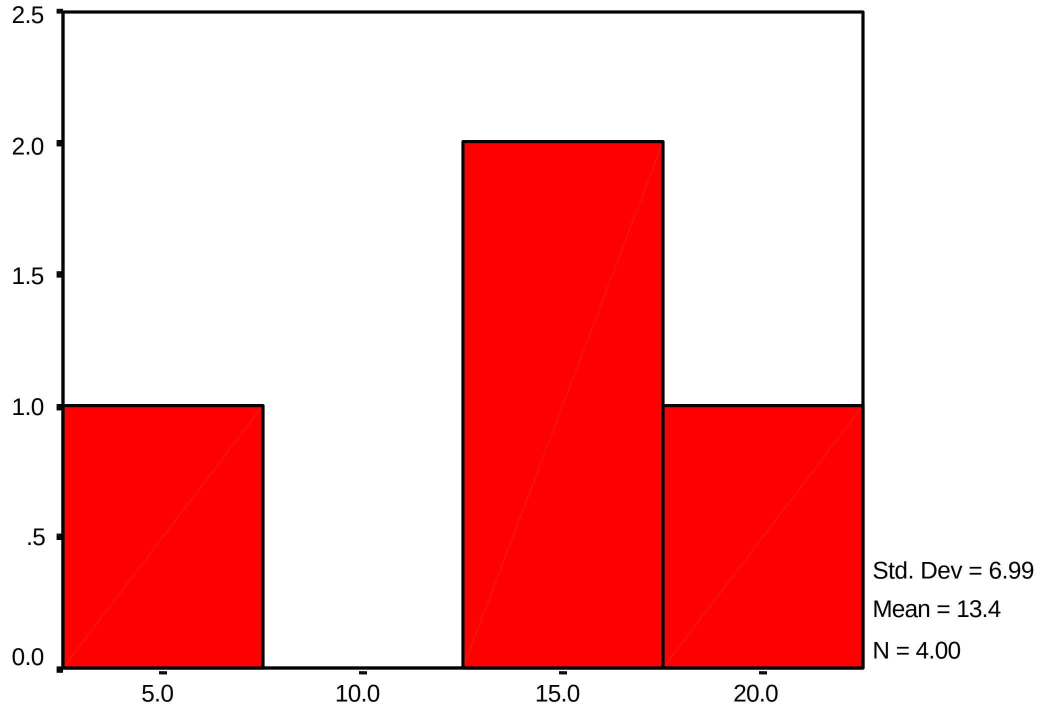




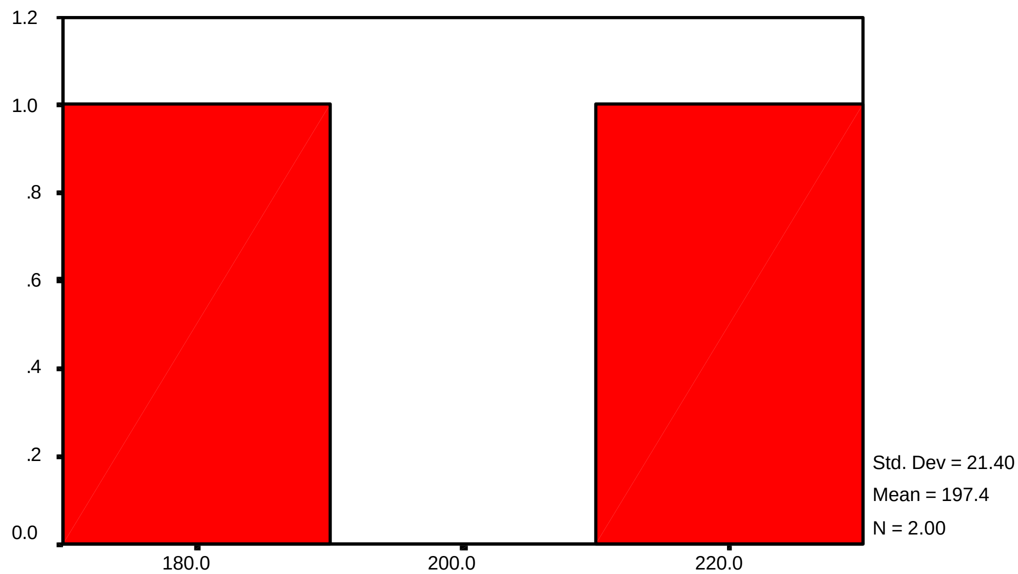
Net Profit Margin



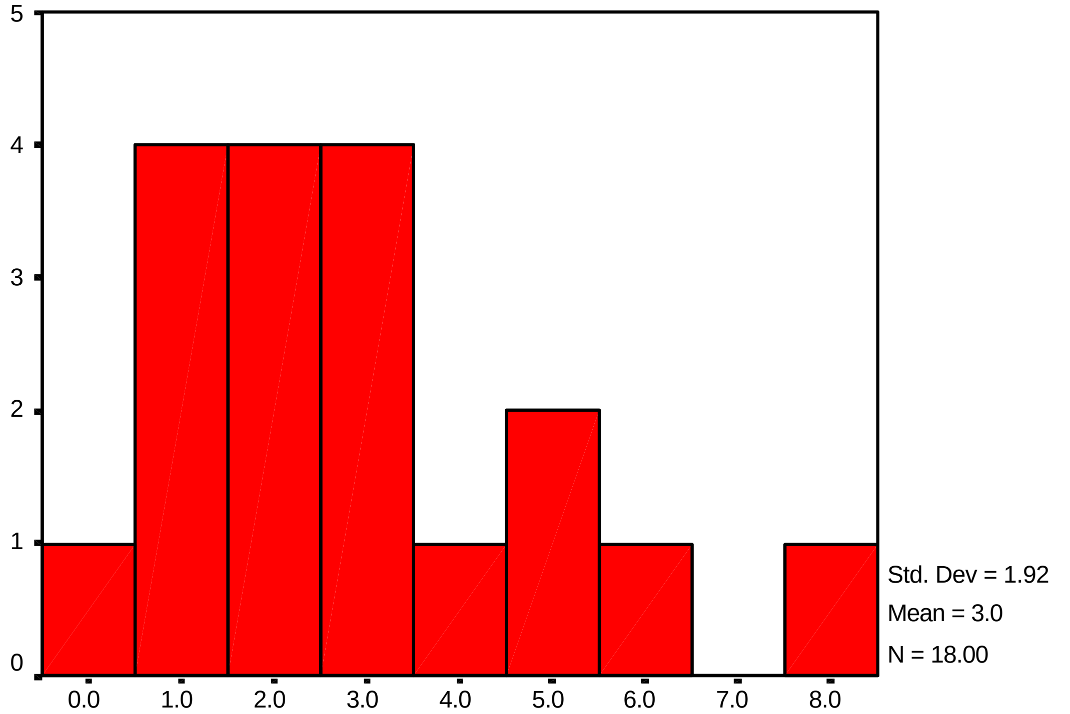
Return on Equity



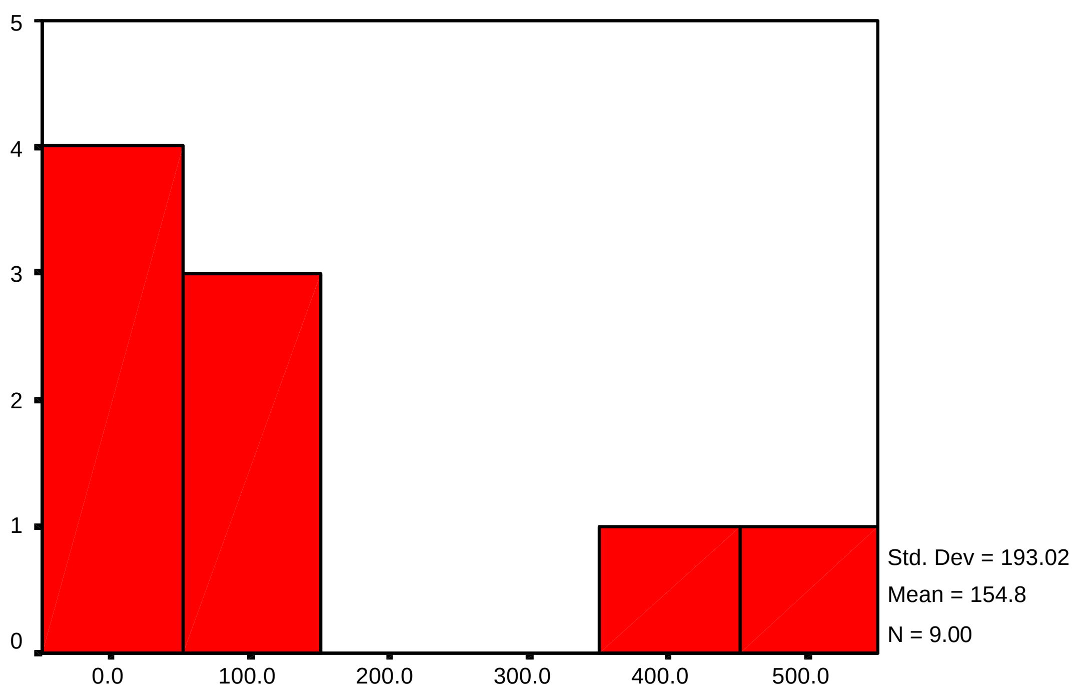
Average Load (Tons)



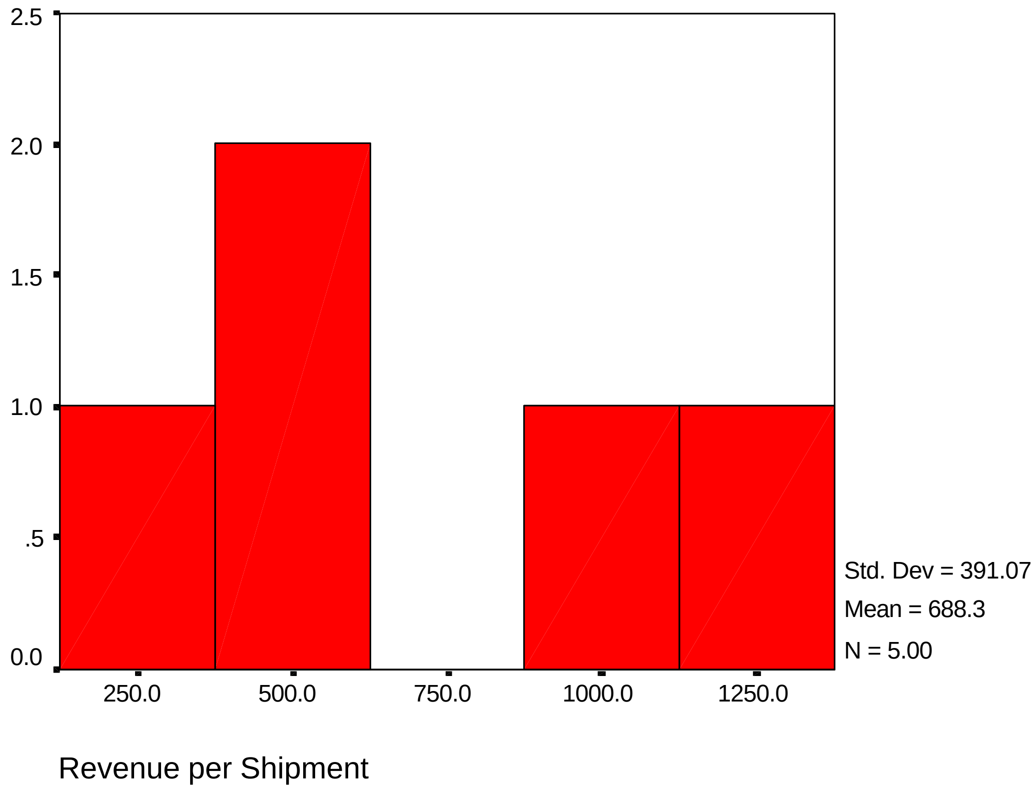
Average Haul (Miles)



Revenue per Mile



Revenue per Ton


2.5
2.0
1.5
1.0
.5
0.0
250.0
500.0
750.0
1000.0
1250.0
Std. Dev = 391.07
Mean = 688.3
N = 5.00
Revenue per Shipment

Summary Data for Heavy Equipment Carriers

Heavy Equipment Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	22	2,879,797	99,598,000	13,906,617	21,000,000
Expenses	22	2,686,853	98,303,000	13,519,402	20,000,000
Operating Income	21	(2,299,091)	2,630,629	343,988	1,180,078
Net Income	21	(535,242)	1,585,655	361,758	535,451
Total Assets	20	996,308	76,332,652	9,824,820	17,000,000
Total Liabilities	20	161,339	36,523,974	4,723,204	8,317,163
Total Equity	20	(530,242)	39,808,678	5,101,615	8,740,920
Operating Ratio	22	61	170	100	23
Net Profit Margin	21	-7%	27%	4%	8%
Return on Equity	20	-27%	120%	20%	35%
Individual Expense Items					
Drivers and Helpers Wages	16	-	3,191,796	1,036,382	1,055,455
Insurance	21	-	895,959	293,540	222,357
Outside Vehicle Maintenance	20	58,289	1,515,959	430,888	419,423
Purchased Transportation	16	(191,467)	5,118,299	940,107	1,400,764
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	9	83%	100%	98%	6%
Trucks Leased	9	0%	17%	2%	6%
Tractors Owned	21	0%	100%	83%	31%
Tractors Leased	21	0%	100%	17%	31%
Trailers Owned	20	87%	100%	99%	3%
Trailers Leased	20	0%	13%	1%	3%
Operating Statistics					
Total Units in Fleet	21	24	483	181	124
Total Highway Miles	21	-	21,267,411	4,119,469	5,360,984
Total Tons Carried	13	-	1,517,850	240,325	501,291
Total Ton-Miles	12	-	69,544,000	7,910,601	20,000,000
Total Shipments	13	-	56,321	9,650	18,462
Revenue per Mile	18	$0.19	$7.76	$2.97	$1.92
Revenue per Ton	9	$7.34	$544.41	$154.79	$193.02
Revenue per Shipment	5	$197.79	$1,185.90	$688.30	$391.07
Revenue per Ton-Mile	4	$0.23	$12.25	$3.27	$5.98
Average Load (Tons)	4	4	21	13	7
Average Haul (Miles)	2	182	213	197	21
Outside Vehicle Maintenance per Truck/Tractor	20	1,575	34,913	10,086	9,293
Valid N (listwise)	1				

XIII. OTHER SMALL CARRIERS

Overview of Carriers

The Other Specialize Commodity segment includes carriers, which transport products not included in the other categories mentioned earlier. Some products which fit into this category include automobile haulers, livestock haulers and armored truck service. A total of 235 firms in the Other Specialized Commodities (Truckload) industry segment reported $4.35 Billion in annual revenues for 1997 (Table 82). This segment includes firms handling a wide variety of different types of commodities in non-van trailers. Dividing this segment into three groups, based on total revenues, we find that the small-sized tier of the carriers generates $318 Million in revenues. This subtotal accounts for 7.3% of the total revenues in the Other Specialized Commodities industry segment. The remainder of this section focuses on the small-sized Other Specialized Commodities firm tier.

The revenues for the five largest firms in this sub segment account for 8.7% of the sub segment's total revenue. The largest firm in this sub segment, Tripp Brothers Trucking, generated 1.8% of the segment's total revenue. The five largest firms in this industry sub segment account for 5.1% of the sub segment's total assets and 10.2% of the sub segment's total units in the fleet (Table 86).

The information summarized above suggests that there is a low level of concentration in this industry segment. Despite this high level of disaggregation, four of the five largest firms in the sub segment reported positive net incomes. The average net income among the five largest firms is $101,000, resulting in an average net profit margin of 1.8% (Table 87). In contrast only one of the five smallest carriers in the sub segment reported positive net profit margins. This information is in line with the highly competitive conditions outlined above (Table 89).

Overall, the average net profit margin for firms in this sub segment was 3.3%. In addition, the average return on equity was 20.7% (Table 83). The five firms with the highest return on equity ratios had an average of 110.1% (Table 85). This indicates that these firms were about 5 times more effective in returning value to their shareholders with respect to the average firm in this industry sub segment. These firms are 1.3 times smaller than the five largest firms in the sub segment. Indeed, the total revenue of the 5 largest firms in the sub segment is $27.6 Million (Table 86), while the total revenue of the 5 most profitable firms is $21.2 Million (Table 84). Thus, carriers in this industry sub segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this sub segment handled on average 74,462 shipments and 230,700 tons of freight and produced 12.3 Million ton-miles on average. Their average load was13.8 tons and 20 firms reported an average length of haul of 344 miles (Tables 82 and 84). Four of the five largest carriers in the sub segment reported information about the amount of tons produced. On average, these carriers generated more than 6 times the average number of tons carried in this industry sub segment (Table 84).

On average, carriers in this sub segment owned 83% of their trucks; 62% of their tractors; and 78% of their trailers (Table 82). Four of the five largest carriers in this sub segment reported tractor ownership information. Three of the four carriers owned a substantial portion of their tractors (between 73 and 100%). On the other hand, one carrier, Alpha Cargo Motor Express, owned none of its tractors (Table 86).

The five most profitable firms in the sub segment reported information about their tractor ownership. No firm owned 100% of its tractors, although two firms owned a substantial amount of their tractors (52 and 73%, respectively). On the other hand, the other three firms owned only up to 48% of their tractors. This suggests a mixed strategy with an emphasis on neither company drivers nor owner operators, with Alpha Cargo Motor Express being the exception with none of its tractors or trailers being company-owned (Table 84). There is no variation among the smallest companies in the sub segment in their vehicle ownership patterns. All the firms in this sub segment report total vehicle ownership (Table 88).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this sub segment, the average operating ratio is 96.8% (Table 83). Among the five most profitable firms in the sub segment (Table 85), based on return on equity, operating ratio ranged from a low of 78.1% (Best Way Transportation) to a high of 194.1% (Alpha Cargo Motor Express). On average, the five most profitable firms in the sub segment reported an operating ratio of 85.4%.

Among the five largest carriers (Table 87), the largest, Tripp Brothers Trucking, had an operating ratio of 82.6%, the lowest among all the largest firms in this sub segment. On average, the five largest firms in the sub segment reported an operating ratio of 95%. On the other hand, three of the five smallest carriers reporting operating ratios (Table 89) had operating ratios above 100. The other two firms had operating rations below 100. The firm with the lowest operating ratio, Musslewhite Trucking, had a ratio of 93.8 percent. On average, the five smallest firms in the sub segment reported an average operating ratio of 114.5%. The smallest firms in the small-sized segment of the Other Specialized Commodities industry seem to have poorer operating performance in comparison with the other firms in the industry.

Table 82--Other Specialized (Truckload) Small-Sized Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	76	$318,128,966
Units in Fleet	76	7,346
Assets	75	$162,536,033
Tons Carried	50	11,534,123
Ton-Miles	52	640,920,839
Shipments	53	3,946,499
		Average
Size of Load (Tons)	21	13.80
Length of Haul (Miles)	20	344
		Average
Revenue Per Mile	60	$2.55
Revenue Per Ton	39	$64.53
Revenue Per Ton-Mile	20	$0.25
		Average
% of Trucks Owned	32	83%
% of Tractors Owned	65	62%
% of Trailers Owned	68	78%
Outside Vehicle Maintenance per Truck/Tractor	63	$6,010

Table 83--Other Specialized (Truckload) Small-Sized Carriers' Average Financial Performance

Operating Income	$180,620
Net Income	$108,598
Operating Ratio	96.83
Net Profit Margin	3.26%
Return on Equity	20.65%

Table 84--Other Specialized (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Firms

Carrier	**Location**	**Revenue**	**Units in Fleet**	**Assets**	**Tons carried**	**Ton-miles**
Alpha Cargo Motor Express	Fort Worth, TX	$5,589,731	96	$329,023	378,597	50,484,023
D.W. Trucking	Ellinwood, KS	$3,840,435	95	$3,822,632	191,100	N/A
West Express Trucking Co.	Owensboro, KY	$2,916,953	66	$907,472	240,000	N/A
Admiral Transport Corp.	Worland, WY	$4,468,951	99	$1,424,907	306,658	N/A
Best Way Transportation	Palmer, TX	$4,409,847	91	$874,856	N/A	N/A

Carrier	**Total Shipments**	**Average Load (Tons)**	**Average Haul (Miles)**	**Revenue Per Shipment**	**Revenue Per Mile**	**Revenue Per Ton**	**Revenue Per Ton-Mile**
Alpha Cargo Motor Express	17,517	14.01	133	$319.10	$1.55	$14.76	$0.11
D.W. Trucking	7,644	N/A	N/A	$502.41	$1.32	$20.10	N/A
West Express Trucking Co.	5,621	N/A	N/A	$518.94	$1.41	$12.15	N/A
Admiral Transport Corp.	10,336	N/A	N/A	$432.37	$1.69	$14.57	N/A
Best Way Transportn.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 84--Other Specialized (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Firms (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Alpha Cargo Motor Express	N/A	0%	0%	N/A
D.W. Trucking	0%	73%	90%	$1,765
West Express Trucking Co.	N/A	52%	65%	$340
Admiral Transport Corp.	N/A	48%	96%	$7,220
Best Way Transportation	N/A	17%	60%	$12,296

Table 85--Other Specialized (Truckload) Small-Sized Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Alpha Cargo Motor Express	$331,079	$205,419	94.08	3.67%	269.38%
D.W. Trucking	$531,172	$479,035	86.17	12.47%	82.73%
West Express Trucking Co.	$355,459	$307,358	87.81	10.54%	72.32%
Admiral Transport Corp.	$860,934	$853,151	80.74	19.09%	69.02%
Best Way Transportation	$966,478	$448,122	78.08	10.16%	57.34%

Table 86--Other Specialized (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Tripp Brothers Trucking	Missoula, MT	$5,593,547	98	$3,675,286	72,716	N/A
Alpha Cargo Motor Express	Fort Worth, TX	$5,589,731	96	$329,023	378,597	50,484,023
Rollin Johnson Trucking	Stockertown, PA	$5,568,424	131	$2,173,888	388,596	N/A
Hoagland Transport Svcs.	Modesto, CA	$5,448,972	360	$1,028,024	N/A	N/A
N & N Trucking	Belk, AL	$5,447,957	63	$1,107,691	4,987,276	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Tripp Brothers Trucking	3,636	N/A	N/A	$1,538.38	$1.01	$76.92	N/A
Alpha Cargo Motor Express	17,517	14.01	133	$319.10	$1.55	$14.76	$0.11
Rollin Johnson Trucking	14,946	N/A	N/A	$372.57	$1.57	$14.33	N/A
Hoagland Transport Svcs.	21,762	N/A	N/A	$250.39	$1.88	N/A	N/A
N & N Trucking	21,552	N/A	N/A	$252.78	$1.11	$1.09	N/A

Table 86--Other Specialized (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Tripp Brothers Trucking	N/A	100%	100%	$5,627
Alpha Cargo Motor Express	N/A	0%	0%	N/A
Rollin Johnson Trucking	N/A	87%	99%	$6,126
Hoagland Transport Svcs.	100%	N/A	100%	$193
N & N Trucking	N/A	73%	76%	$3,109

Table 87--Other Specialized (Truckload) Small-Sized Carriers' Average Financial Performance: Five Largest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Tripp Brothers Trucking	$971,613	$270,361	82.63	4.83%	49.61%
Alpha Cargo Motor Express	$331,079	$205,419	94.08	3.67%	269.38%
Rollin Johnson Trucking	$127,219	$69,774	97.72	1.25%	9.38%
Hoagland Transport Svcs.	-$25,037	$8,383	100.46	0.15%	0.88%
N & N Trucking	$2,198	-$48,836	99.96	-0.90%	N/A

Table 88--Other Specialized (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
McWaters Trucking	Cleveland, TX	$703,632	8	$268,027	51,935	N/A
Musslewhite Trucking	Levelland, TX	$1,742,226	110	$4,316,548	18,100	2,901,000
Coolidge Grain & Produce	Houston, TX	$2,173,927	50	$1,488,919	36,000	N/A
Asphalt Products Transportation	Tucson, AZ	$2,743,686	69	$698,880	63,914	7,460,369
Dillard Trucking	Byron, CA	$2,869,799	43	$668,229	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
McWaters Trucking	2,350	N/A	N/A	$299.42	$1.99	$13.55	N/A
Musslewhite Trucking	1,300	2.54	160	$1,340.17	$1.53	$96.26	$0.60
Coolidge Grain & Produce	800	N/A	N/A	N/A	$0.91	$60.39	N/A
Asphalt Products Transportation	3,364	9.96	117	$815.60	$3.66	$42.93	$0.37
Dillard Trucking	N/A	N/A	N/A	N/A	$3.66	N/A	N/A

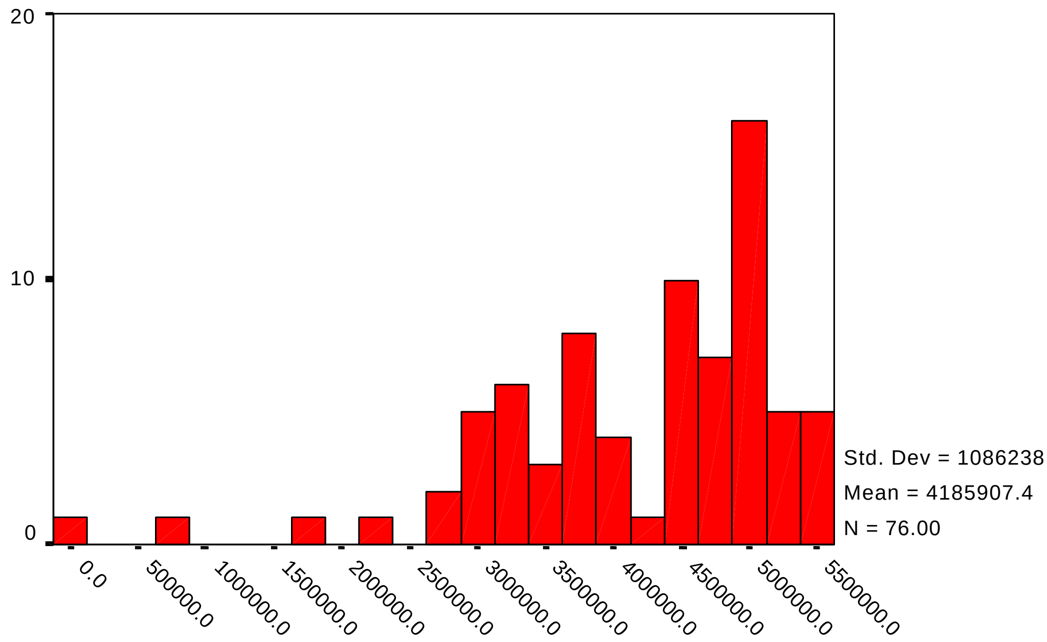
Table 88--Other Specialized (Truckload) Small-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
McWaters Trucking	100%	N/A	100%	$26,782
Musslewhite Trucking	100%	N/A	100%	$866
Coolidge Grain & Produce	N/A	100%	100%	$2,899
Asphalt Products Transportation	100%	100%	100%	$1,056
Dillard Trucking	100%	100%	100%	$11,116

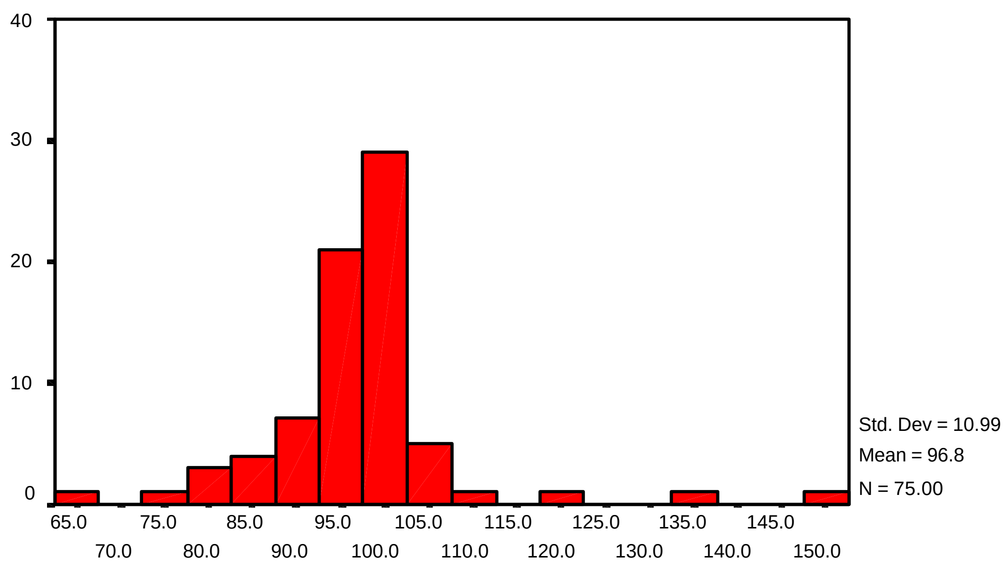
Table 89--Other Specialized (Truckload) Small-Sized Carriers' Average Financial Performance: Five Smallest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
McWaters Trucking	-$368,152	-$1,703,050	152.32	N/A	N/A
Musslewhite Trucking	$108,176	$678,362	93.79	38.94%	16.02%
Coolidge Grain & Produce	-$405,675	-$48,305	118.66	-2.22%	-3.53%
Asphalt Products Transportation	$45,027	-$103,380	98.36	-3.77%	-30.04%
Dillard Trucking	-$266,244	-$120,009	109.28	-4.18%	-38.92%

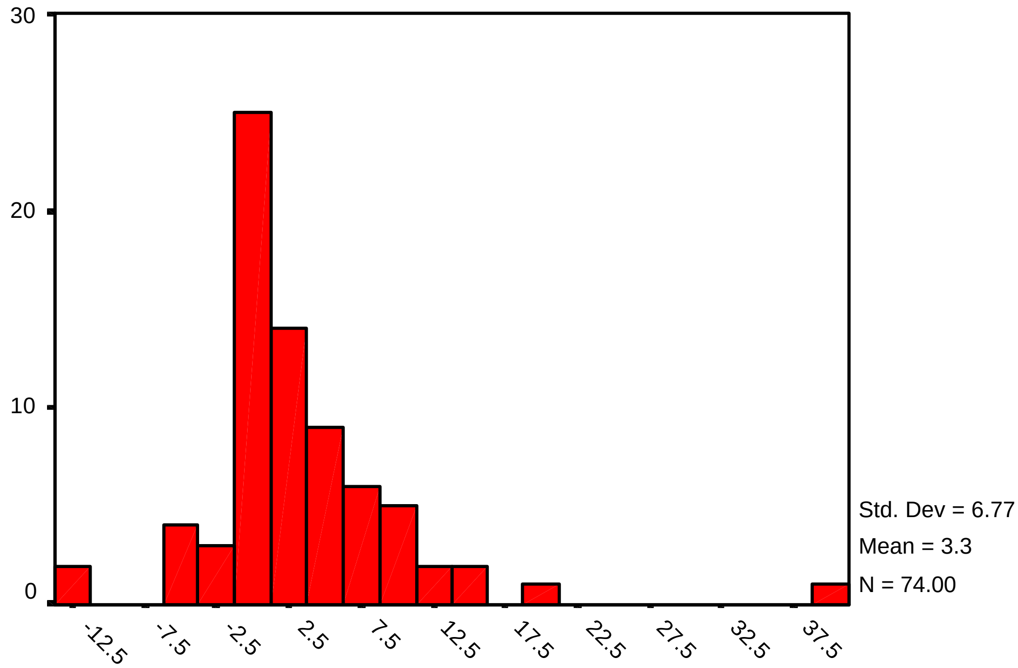
Summary Charts and Graphs for Other Small Carriers



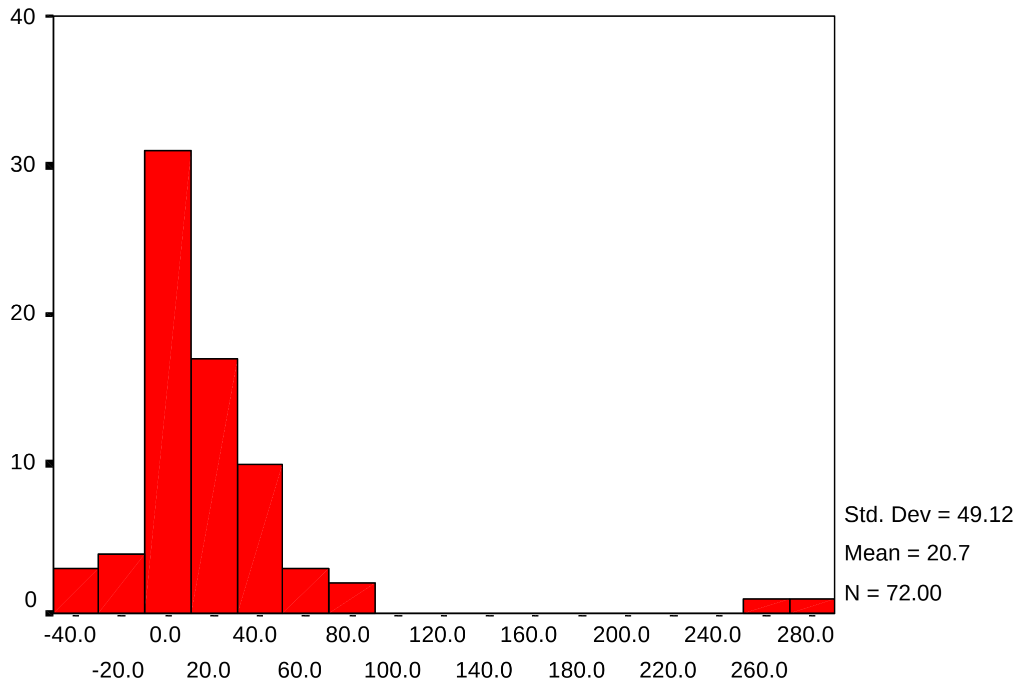
Revenue



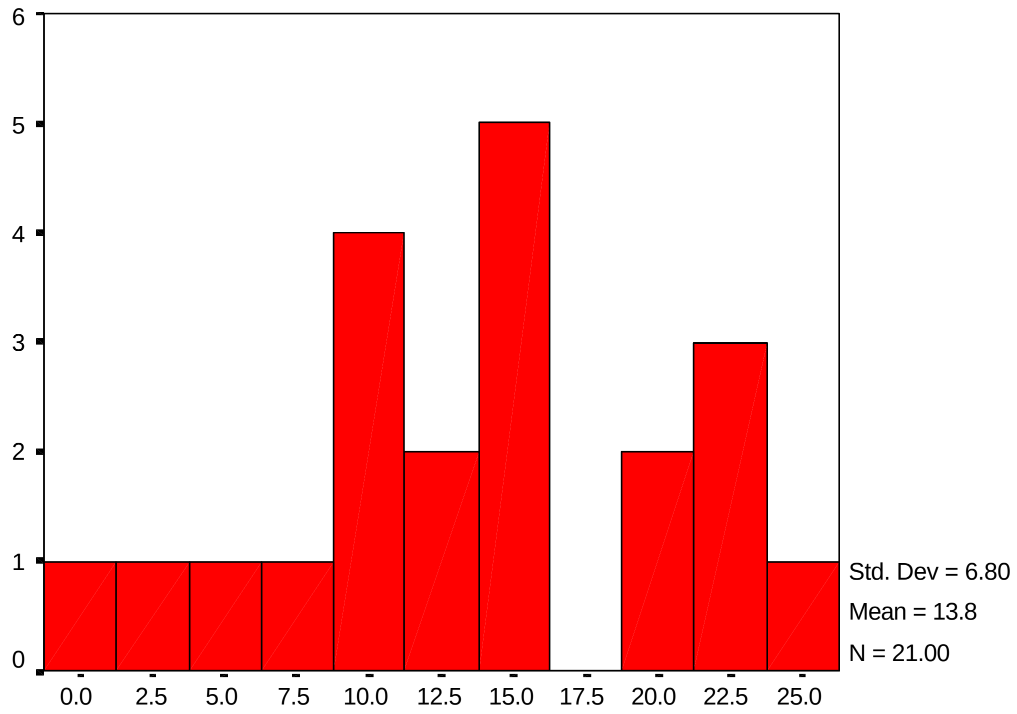
Operating Ratio



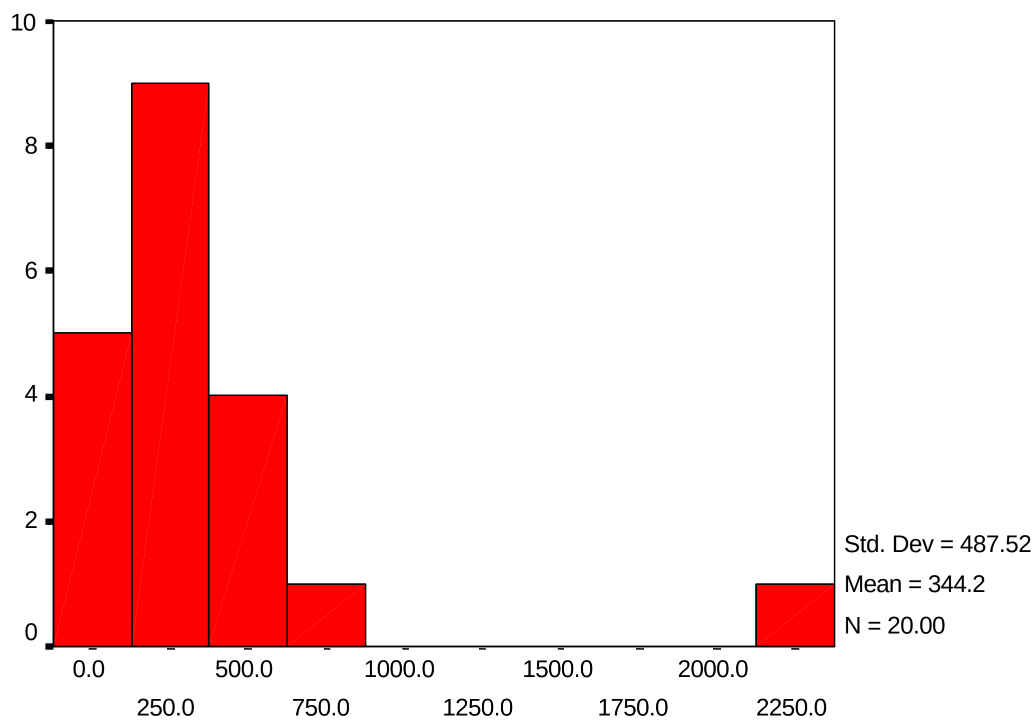
Net Profit Margin



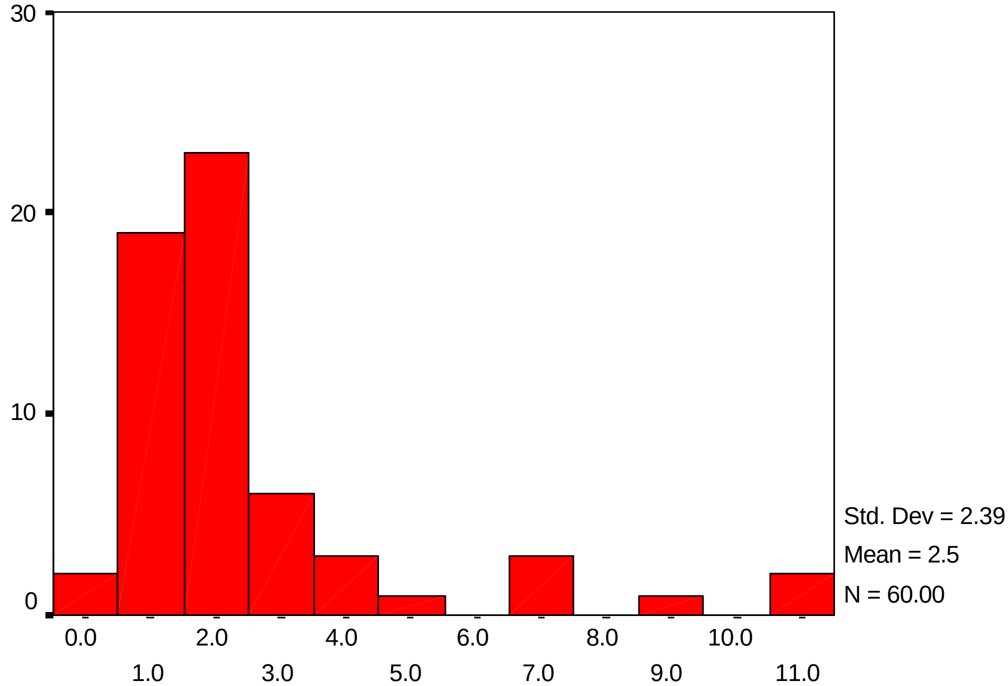
Return on Equity



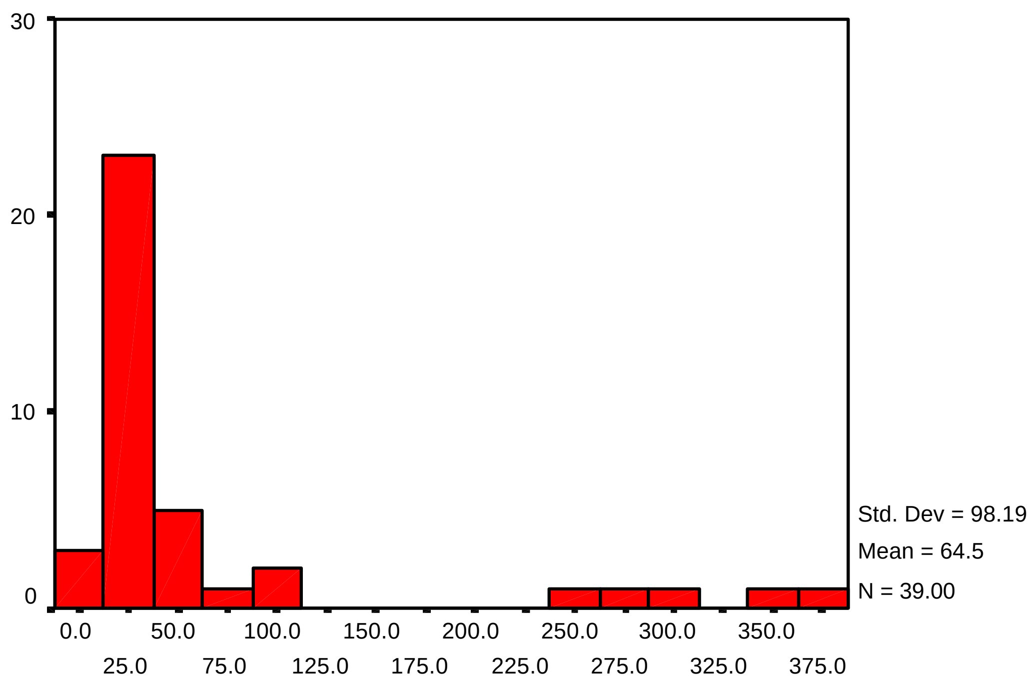
Average Load (Tons)



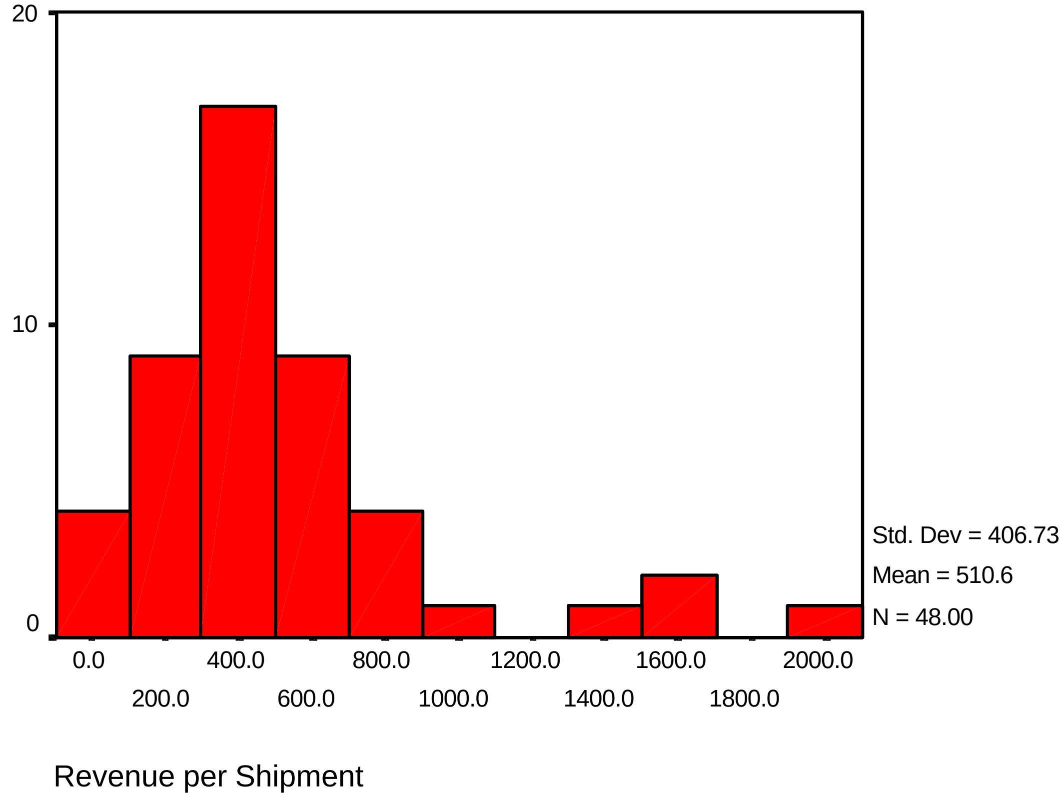
Average Haul (Miles)



Revenue per Mile



Revenue per Ton


20
10
0
0.0
200.0
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1200.0
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1800.0
2000.0
Std. Dev = 406.73
Mean = 510.6
N = 48.00
Revenue per Shipment

Summary Data for Other Small Carriers

Other Small Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	76	34,902	5,593,547	4,185,907	1,086,238
Expenses	76	-	5,474,009	4,005,300	1,023,246
Operating Income	76	(973,699)	1,638,670	180,620	380,572
Net Income	76	(1,703,050)	853,151	108,598	319,459
Total Assets	75	147,627	22,701,420	2,167,147	2,853,048
Total Liabilities	75	12,600	19,754,040	1,076,416	2,401,053
Total Equity	75	(2,975,206)	7,723,342	1,090,718	1,494,430
Operating Ratio	75	67	152	97	11
Net Profit Margin	74	-12%	39%	3%	7%
Return on Equity	72	-39%	282%	21%	49%
Individual Expense Items					
Drivers and Helpers Wages	76	-	61,846,553	1,505,107	7,042,965
Insurance	73	18,303	529,559	168,903	111,583
Outside Vehicle Maintenance	65	(1,853)	792,772	176,517	178,482
Purchased Transportation	76	-	5,034,044	732,391	959,340
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	32	0%	100%	83%	36%
Trucks Leased	31	0%	100%	14%	33%
Tractors Owned	65	0%	100%	62%	42%
Tractors Leased	65	0%	100%	38%	42%
Trailers Owned	68	0%	100%	78%	36%
Trailers Leased	68	0%	100%	22%	36%
Operating Statistics					
Total Units in Fleet	76	-	438	97	68
Total Highway Miles	69	-	170,189,000	4,455,073	20,292,058
Total Tons Carried	50	-	4,987,276	230,682	698,270
Total Ton-Miles	52	-	95,375,750	12,325,401	21,449,129
Total Shipments	53	-	2,500,000	74,462	356,683
Revenue per Mile	60	$0.02	$11.45	$2.55	$2.39
Revenue per Ton	39	$1.09	$379.22	$64.53	$98.19
Revenue per Shipment	48	$2.05	$2,000.31	$510.64	$406.73
Revenue per Ton-Mile	20	$0.05	$1.14	$0.25	$0.26
Average Load (Tons)	21	1	25	14	7
Average Haul (Miles)	20	20	2,257	344	488
Outside Vehicle Maintenance per Truck/Tractor	63	(39)	26,782	6,010	6,176
Valid N (listwise)	3				

XIV. OTHER MEDIUM SIZED CARRIERS

Overview of Carriers

A total of 235 firms in the Other Specialized Commodities (Truckload) industry segment reported $4.35 Billion in annual revenues for 1997 (Table 90). This segment includes firms handling a wide variety of different types of commodities in non-van trailers. Dividing this segment into three groups, based on total revenues, we find that the middle third of the carriers generates $638 Million in revenues. This subtotal accounts for 14.7% of the total revenues in the Other Specialized Commodities industry segment. The remainder of this section focuses on the medium-sized Other Specialized Commodities firm tier.

The revenues for the five largest firms in this sub segment account for 8.2% of the sub segment's total revenue. The largest firm in this sub segment, Rex "N" Don Van Lines, generated 1.7% of the segment's total revenue. The five largest firms in this industry sub segment account for 1.9% of the sub segment's total assets and 12.3% of the total units in the segment's fleet (Table 94).

The information summarized above suggests that there is a low level of concentration in this industry segment. In fact, across all firms in this sub segment, annual revenues varied from a minimum of $5.7 Million to $10.9 Million. Despite this high level of disaggregation, the five largest firms in the sub segment reported positive net incomes. The average net income among these four firms is $359,823, resulting in an average net profit margin of 3.4% (Table 95). In addition, the five smallest carriers in the sub segment reported positive net profit margins. The highest profit margin among the five smallest firms in the sub segment was 6.28% (Table 97).

Overall, the average net profit margin for firms in this sub segment was 2.9%. In addition, the average return on equity was 19.9% (Table 91). The five firms with the highest return on equity ratios had an average of 117.7% (Table 93). This indicates that these firms were almost 6 times more effective in returning value to their shareholders with respect to the average firm in this industry sub segment. These firms are 1.14 times smaller than the five largest firms in the sub segment. Indeed, the total revenue of the 5 largest firms in the sub segment is $52.6 Million (Table 94), while the total revenue of the 5 most profitable firms is $46.2 Million (Table 92). Thus, carriers in this industry sub segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this sub segment handled on average 23,143 shipments and 539,186 tons of freight and produced 25 Million ton-miles on average. Their average load was 14 tons and 20 firms reported an average length of haul of 251 miles (Tables 90 and 91). Among the five largest carriers in the sub segment, Summers, generated approximately 2.5 times the average ton-miles carried by firms in the sub segment.

On average, carriers in this sub segment owned 87% of their trucks; 56% of their tractors; and 73% of their trailers (Table 90). Four of the five largest carriers in this sub segment reported tractor ownership information. Three carriers, Rex "N" Don Van Lines, Coin Depot Corporation, and Summers, owned 100% of their tractors, while another carrier, Thom's Transport, owned 65% of its tractors (Table 94). Thus, it appears that large firms in this sub segment have a heavy reliance on their own tractors.

Four of the five most profitable firms in the sub segment varied widely in their tractor ownership patterns. Two firms owned 100% of their tractors (Plainfield Trucking and J&S), while a third firm, Baker Truck Lines, owned 83% of its tractors. In contrast, Packard Truck Lines, owned none of its tractors. This suggests that a wide variety of tractor ownership strategies are being employed successfully in this sub segment. (Table 92). Furthermore, there is variation among four of the five smallest companies in the sub segment in their truck-tractor ownership patterns. Two of the four smallest firms in the sub segment reporting tractor ownership relied on 80% or more of their own company drivers. A third firm, Leoni Motor Express, relied on 64% of their own tractors. In contrast, Dennis Truck Lines owned none of its tractors (Table 96).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this sub segment, the average operating ratio is 96% (Table 91). Among the five most profitable firms in the sub segment (Table 93), based on return on equity, operating ratio ranged from a low of 81.9% (J&S) to a high of 97.8% (American Motor Line). Among the five largest carriers (Table 95), the largest, Rex "N" Don Van Lines, had an operating ratio of 97.8%. Among this group of carriers, the one with the lowest operating ratio (Coin Depot Corporation) had a ratio of 76.2%. The five smallest carriers in the sub segment (Table 97) had operating ratios below 100% and the firm with the lowest operating ratio had a ratio of 81.6% (Leoni Motor Express). Clearly, firms in this sub segment of other specialized commodities had a strong operating performance regardless of their operating size.

Table 90--Other Specialized (Truckload) Medium-Sized Carriers' Average Size and Operating Performance

	Number of Companies Reporting	Total
Revenue	82	$638,069,008
Units in Fleet	78	13,442
Assets	81	$248,544,549
Tons Carried	49	26,420,126
Ton-Miles	58	1,450,876,016
Shipments	50	1,157,135
		Average
Size of Load (Tons)	21	13.92
Length of Haul (Miles)	20	251
		Average
Revenue Per Mile	66	$1.84
Revenue Per Ton	44	$24.74
Revenue Per Ton-Mile	22	$0.22
		Average
% of Trucks Owned	21	87%
% of Tractors Owned	72	56%
% of Trailers Owned	69	73%
Outside Vehicle Maintenance per Truck/Tractor	67	$6,358

Table 91--Other Specialized (Truckload) Medium-Sized Carriers' Average Financial Performance

Operating Income	$327,288
Net Income	$233,830
Operating Ratio	95.95
Net Profit Margin	2.86%
Return on Equity	19.87%

Table 92--Other Specialized (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Plainfield Trucking	Plainfield, WI	$9,641,597	468	$2,379,607	719,393	89,907,523
Packard Truck Lines	Harvey, LA	$8,287,735	157	$1,421,538	123,530	N/A
American Motor Line	Wayne, MI	$9,820,357	N/A	$823,074	N/A	N/A
Baker Truck Lines	Lewiston, ID	$9,845,715	209	$5,025,751	606,480	81,875,696
J & S	Indianola, PA	$8,559,167	156	$2,628,877	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Plainfield Trucking	31,973	12.70	125	$301.55	$1.36	$13.40	$0.11
Packard Truck Lines	15,600	N/A	N/A	$531.27	$1.58	$67.09	N/A
American Motor Line	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Baker Truck Lines	21,660	14.00	135	$454.56	$1.68	$16.23	$0.12
J & S	N/A	N/A	N/A	N/A	$5.79	N/A	N/A

Table 92--Other Specialized (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Plainfield Trucking	N/A	100%	100%	$11,603
Packard Truck Lines	N/A	0%	0%	$184
American Motor Line	N/A	N/A	N/A	N/A
Baker Truck Lines	N/A	83%	100%	$11,351
J & S	N/A	100%	100%	$5,858

Table 93--Other Specialized (Truckload) Medium-Sized Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Plainfield Trucking	$670,882	$578,038	93.04	6.00%	182.31%
Packard Truck Lines	$694,323	$657,051	91.62	7.93%	129.37%
American Motor Line	$219,539	$201,524	97.76	2.05%	104.82%
Baker Truck Lines	$1,517,325	$1,467,020	84.59	14.90%	100.86%
J & S	$1,546,699	$1,166,906	81.93	13.63%	71.50%

Table 94--Other Specialized (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Rex "N" Don Van Lines	Charleston, IL	$10,856,667	N/A	$2,638,159	N/A	N/A
Anderson Armored Car Service	Anderson, SC	$10,637,579	N/A	$4,360,054	N/A	N/A
Coin Depot Corp.	Elizabeth, NJ	$10,479,408	70	$13,622,119	N/A	N/A
Summers (Lester R.)	Ephrata, PA	$10,409,947	272	$5,990,194	N/A	61,529,439
Thom's Transport Co.	Blackshear, GA	$10,252,189	274	$3,995,909	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Rex "N" Don Van Lines	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Anderson Armored Car Service	N/A	N/A	N/A	N/A	$1.09	N/A	N/A
Coin Depot Corp.	N/A	N/A	N/A	N/A	$6.95	N/A	N/A
Summers (Lester R.)	31,850	11.49	N/A	$326.84	$1.94	N/A	$0.17
Thom's Transport Co.	N/A	N/A	N/A	N/A	$1.06	N/A	N/A

Table 94--Other Specialized (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Rex “N” Don Van Lines	N/A	100%	N/A	$7,155
Anderson Armored Car Service	N/A	N/A	N/A	N/A
Coin Depot Corp.	100%	100%	100%	$316
Summers (Lester R.)	N/A	100%	100%	$2,469
Thom’s Transport Co.	N/A	65%	98%	N/A

Table 95--Other Specialized (Truckload) Medium-Sized Carriers' Average Financial Performance: Five Largest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Rex “N” Don Van Lines	$236,722	$265,946	97.82	2.45%	13.80%
Anderson Armored Car Service	$618,805	$183,836	94.18	1.73%	7.67%
Coin Depot Corp.	$2,488,611	$680,468	76.25	6.49%	9.31%
Summers (Lester R.)	$893,568	$480,286	91.42	4.61%	16.91%
Thom’s Transport Co.	$422,325	$188,583	95.88	1.84%	45.09%

Table 96--Other Specialized (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Dennis Truck Lines	Vidalia, GA	$5,709,808	150	$1,483,587	429,949	N/A
Cowley	Elizabethtown, KY	$5,713,748	177	$1,766,393	700,000	N/A
Echo Trucking Company	Benson, AZ	$5,722,221	42	$2,242,014	N/A	N/A
Leoni Motor Express	Chicago Heights, IL	$5,748,380	115	$1,055,727	212,588	N/A
Rouse Motor Express	Canaan, NY	$5,762,619	101	$1,783,137	310,000	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Dennis Truck Lines	N/A	N/A	N/A	N/A	$1.08	$13.28	N/A
Cowley	24,836	N/A	N/A	$230.06	$0.97	$8.16	N/A
Echo Trucking Company	N/A	N/A	N/A	N/A	$1.53	N/A	N/A
Leoni Motor Express	19,780	N/A	N/A	$290.62	$3.25	$27.04	N/A
Rouse Motor Express	12,400	N/A	N/A	$464.73	$1.65	$18.59	N/A

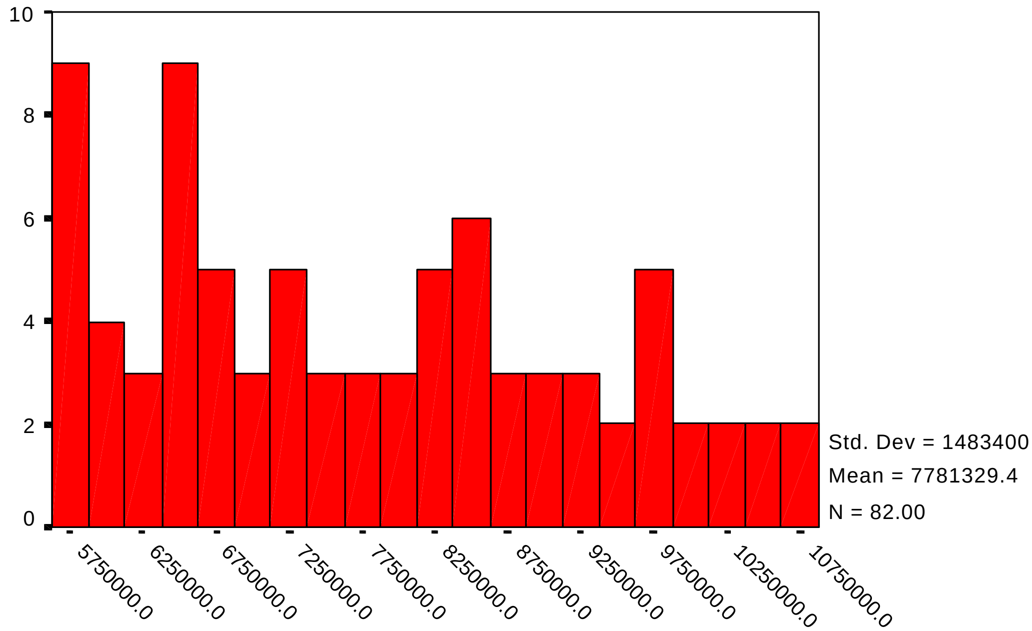
Table 96--Other Specialized (Truckload) Medium-Sized Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Dennis Truck Lines	N/A	0%	0%	N/A
Cowley	100%	80%	100%	$10,236
Echo Trucking Company	100%	N/A	N/A	N/A
Leoni Motor Express	100%	64%	100%	$2,010
Rouse Motor Express	N/A	97%	69%	$755

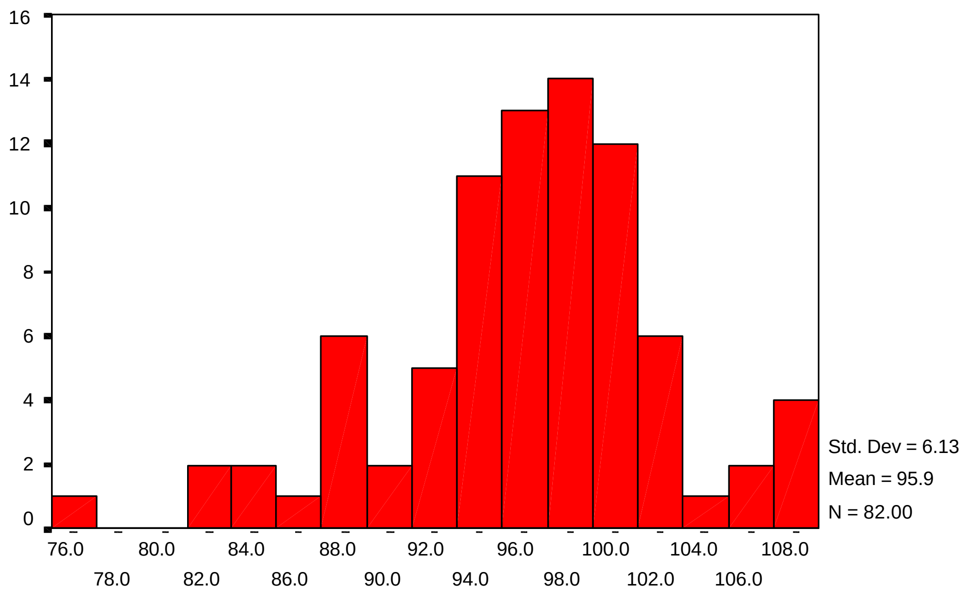
Table 97--Other Specialized (Truckload) Medium-Sized Carriers' Average Financial Performance: Five Smallest Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Dennis Truck Lines	$115,083	$39,460	97.98	0.69%	3.14%
Cowley	$399,539	$359,103	93.01	6.28%	23.10%
Echo Trucking Company	$21,868	$38,575	99.62	0.67%	2.30%
Leoni Motor Express	$1,058,281	$107,113	81.59	1.86%	N/A
Rouse Motor Express	$233,040	$77,424	95.96	1.34%	28.04%

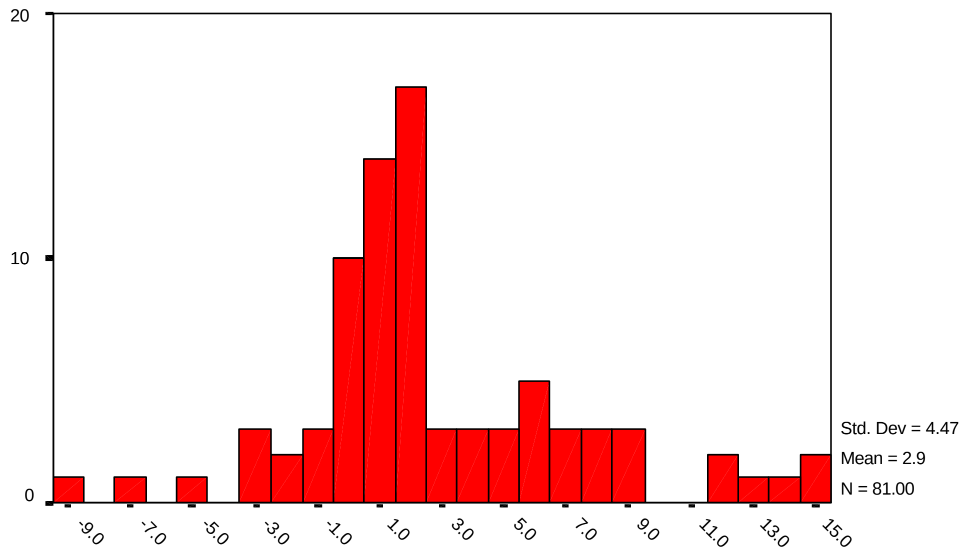
Summary Charts and Graphs for Other Medium Sized Carriers



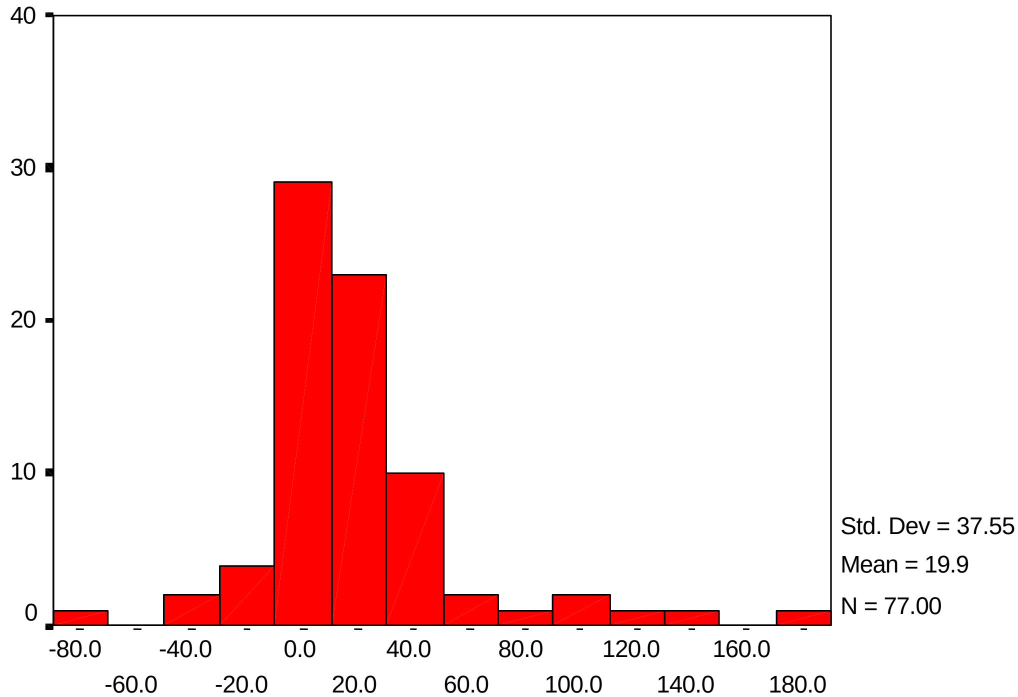
Revenue



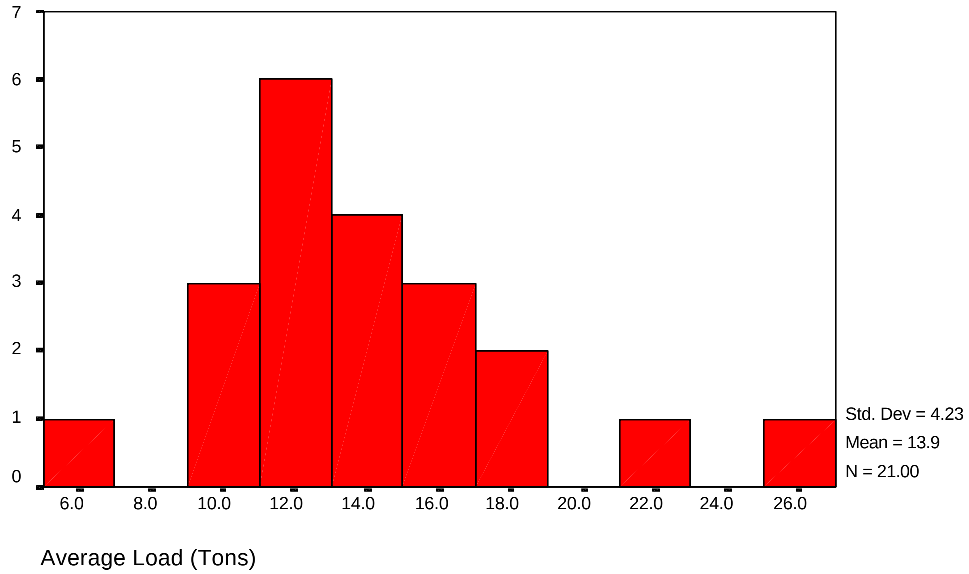
Operating Ratio



Net Profit Margin



Return on Equity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6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
22.0
24.0
26.0
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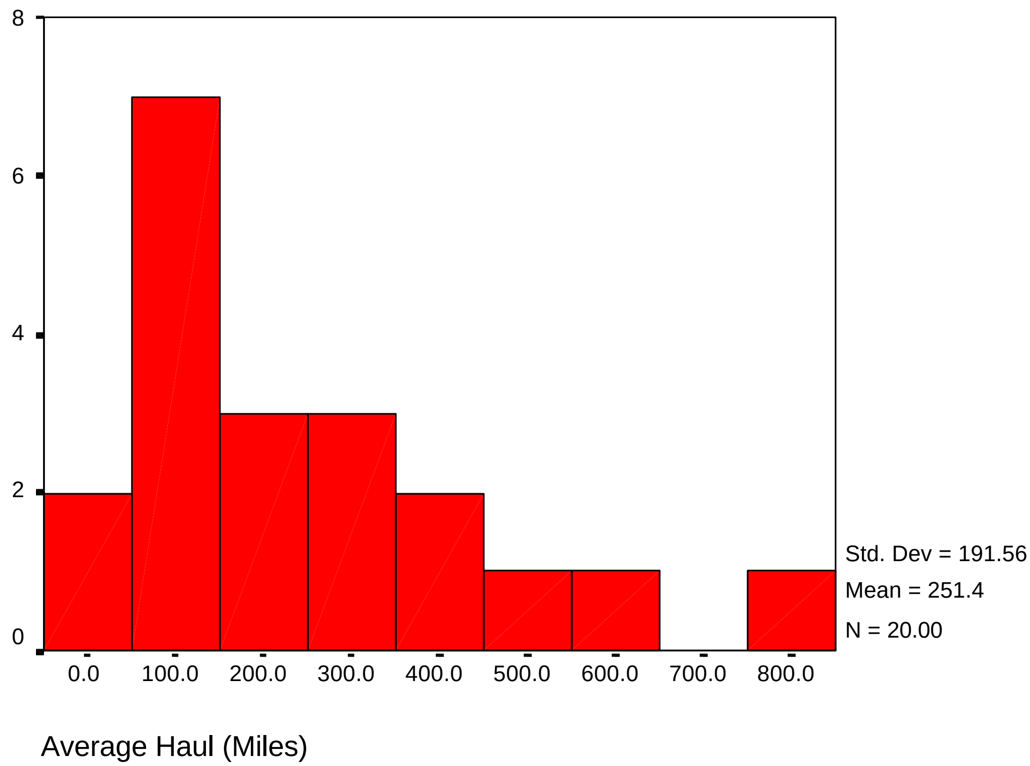
Mean = 13.9
N = 21.00
Average Load (Tons)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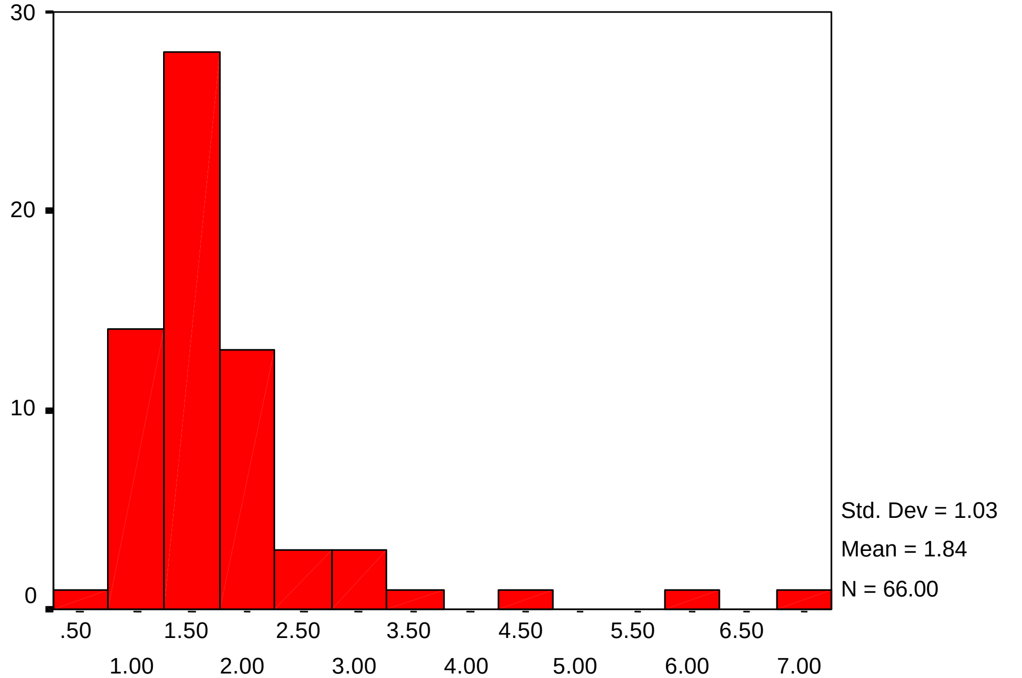
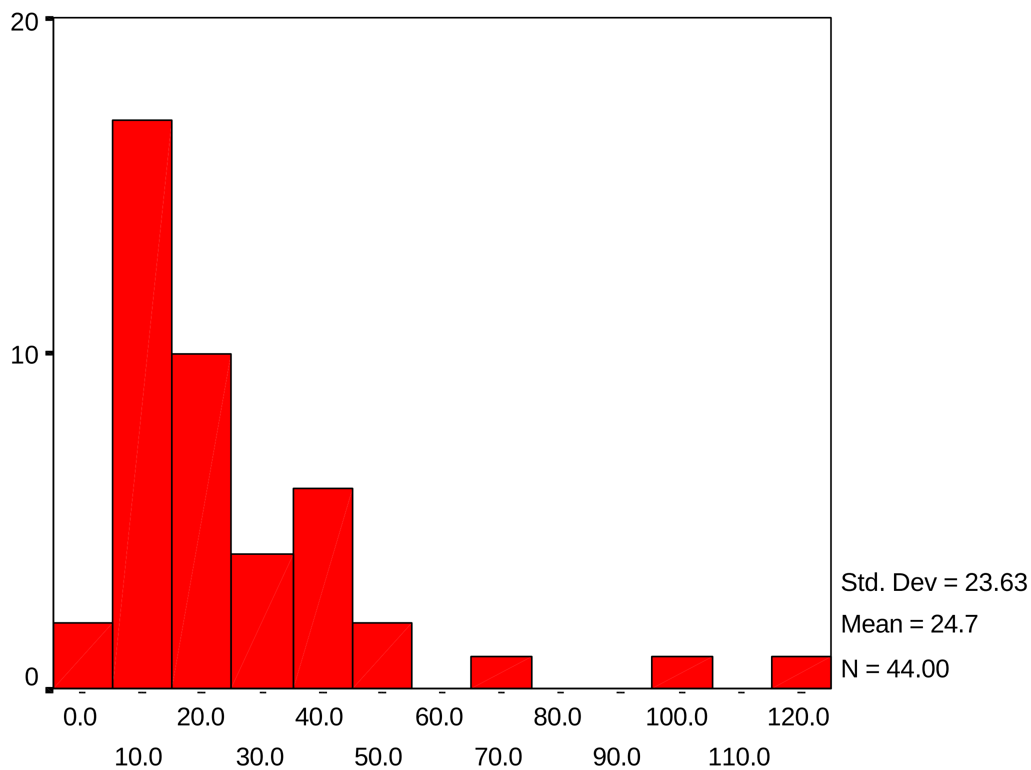
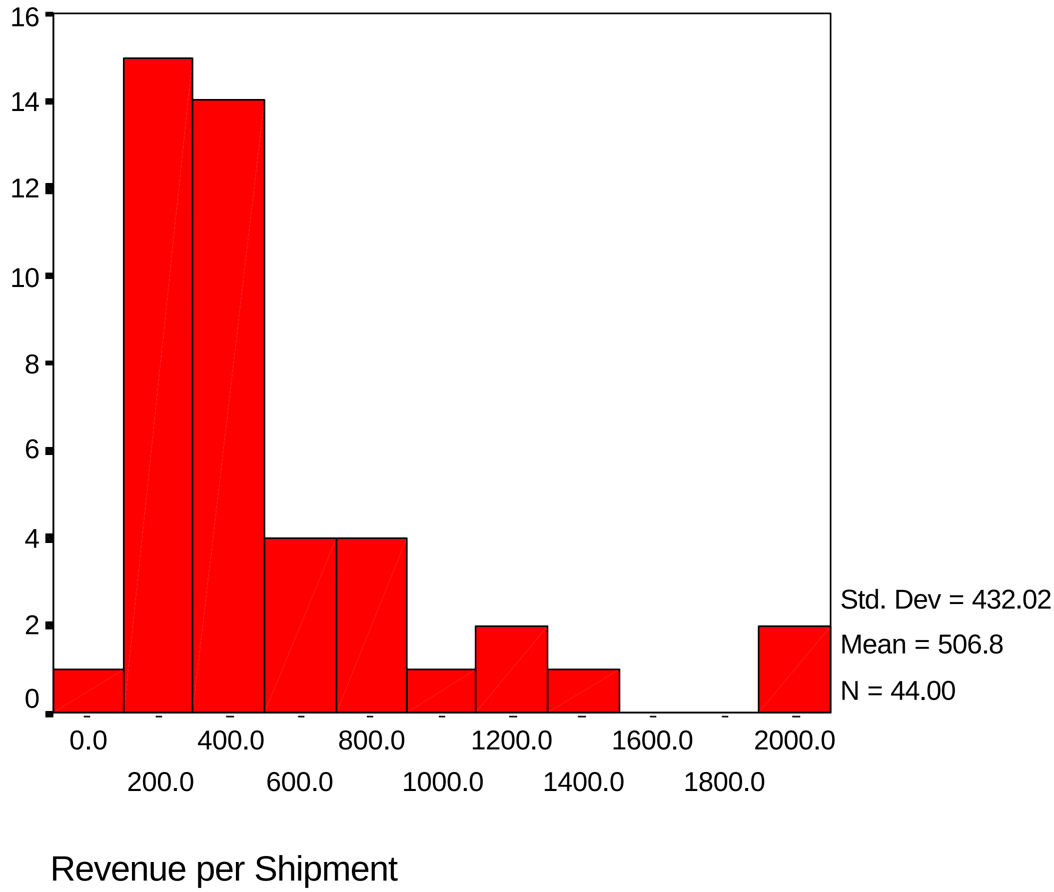
Average Haul (Miles)



Revenue per Mile



Revenue per Ton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400.0
600.0
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1000.0
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1800.0
2000.0
Std. Dev = 432.02
Mean = 506.8
N = 44.00
Revenue per Shipment

Summary Data for Other Medium-Sized Carriers

Other Mid-Size Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	82	5,709,808	10,856,667	7,781,329	1,483,400
Expenses	82	4,690,099	10,619,945	7,454,041	1,437,756
Operating Income	82	(809,633)	2,488,611	327,288	520,966
Net Income	81	(798,784)	1,467,020	233,830	372,105
Total Assets	81	509,201	13,622,119	3,068,451	2,179,363
Total Liabilities	81	(358,860)	6,561,489	1,512,144	1,312,998
Total Equity	80	(983,846)	7,311,759	1,533,502	1,600,416
Operating Ratio	82	76	109	96	6
Net Profit Margin	81	9%	15%	3%	4%
Return on Equity	77	79%	182%	20%	38%
Individual Expense Items					
Drivers and Helpers Wages	79	-	3,614,851	1,242,556	993,952
Insurance	80	19,785	1,022,283	242,708	157,895
Outside Vehicle Maintenance	71	-	1,055,915	268,701	272,951
Purchased Transportation	79	-	8,376,311	1,799,970	1,983,970
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	21	0%	100%	87%	28%
Trucks Leased	21	0%	100%	13%	28%
Tractors Owned	72	0%	100%	56%	41%
Tractors Leased	72	0%	100%	44%	41%
Trailers Owned	69	0%	100%	73%	39%
Trailers Leased	69	0%	100%	27%	39%
Operating Statistics					
Total Units in Fleet	78	-	756	172	123
Total Highway Miles	75	-	11,190,088	4,360,987	2,458,299
Total Tons Carried	49	-	2,500,000	539,186	539,849
Total Ton-Miles	58	-	123,427,081	25,015,104	36,462,969
Total Shipments	50	-	90,909	23,143	21,106
Revenue per Mile	66	$0.72	$6.95	$1.84	$1.03
Revenue per Ton	44	$2.40	$121.33	$24.74	$23.63
Revenue per Shipment	44	$65.91	$1,923.86	$506.80	$432.02
Revenue per Ton-Mile	22	$0.07	$1.91	$0.22	$0.38
Average Load (Tons)	20	38	780	251	192
Average Haul (Miles)	21	6	25	14	4
Outside Vehicle Maintenance per Truck/Tractor	67	-	65,442	6,358	9,520
Valid N (listwise)	2				

XV. OTHER LARGE CARRIERS

Overview of Carriers

A total of 235 firms in the Other Specialized Commodities (Truckload) industry segment reported $4.35 Billion in annual revenues for 1997 (Table 98). This segment includes firms handling a wide variety of different types of commodities in non-van trailers. Dividing this segment into three groups, based on total revenues, we find that the largest third of the carriers generates $3.39 Billion in revenues. This subtotal accounts for 77.9% of the total revenues in the Other Specialized Commodities industry segment. The remainder of this section focuses on the largest Other Specialized Commodities firm tier.

The revenues for the five largest firms in this sub segment account for 35.6% of the sub segment's total revenue. The largest firm in this sub segment, Trism, generated 9.1% of the segment's total revenue. Four of the five largest firms in this industry sub segment account for 33.6% of the sub segment's total assets and 25.8% of the total units in the segment's fleet (Table 101).

The information summarized above suggests that there is a low level of dominance by the largest carriers in this industry sub segment. However, three of the five largest firms experienced positive profit margins with the largest of the three firms having a net income gain of $11.1 Million, resulting in a net profit margin of 3.8% (Table 103). In addition, all of the five smallest carriers in the sub segment reported positive net profit margins. The highest profit margin among the five smallest firms in the sub segment was 7.6% (Table 105).

Overall, the average net profit margin for firms in this sub segment was 3.7%. In addition, the average return on equity was 24.1% (Table 99). The five firms with the highest return on equity ratios had an average of 99.1% (Table 101). This indicates that these firms were more than 4 times more effective in returning value to their shareholders with respect to the average firm in the industry. Furthermore, these firms are almost 14 times smaller than the five largest firms in the industry. Indeed, the total revenue of the 5 largest firms in the sub segment is $1.2 Billion (Table 102), while the total revenue of the 5 most profitable firms is $88.7 Million (Table 100). Thus, carriers in this industry sub segment do not necessarily enjoy profitability advantages associated with the size of their operations.

Carriers in this sub segment handled on average 19,071 shipments and 333,485 tons of freight and produced 208 Million ton-miles on average. Their average load was11.5 tons. Only 14 firms in the sub segment reported an average length of haul of 330 miles (Tables 98 and 99). Among the five largest carriers, Trism, generated approximately seven times the average ton-miles carried by firms in the sub segment (Table 100).

On average, carriers in this sub segment owned 60% of their trucks; 52% of their tractors; and 91% of their trailers (Table 98). Four of the five largest carriers in this sub segment reported tractor ownership information. Two carriers, Allied Systems and Cassens

Transport, owned 100% of their tractors, while one other carrier, Trism, owned 53% of its tractors. In contrast, Customized Transportation, owned 2% of its tractors (Table 102).

Based on reported information by four of the five most profitable firms in the sub segment, there is almost exclusively company ownership of equipment. The only deviation from this pattern is Trailer Transit, who owns none of its tractors. This suggests that an all company driver strategy could be a key factor in devising a profitable business approach (Table 100). In contrast, there is variation in tractor ownership patterns among the five smallest companies in the sub segment. Two of these carriers (Forbes Transfer Co. and Clark Transfer) own all of their tractors, while two other own a significant portion. Indeed, Jones Feed & Grain owns 69% and Campbell & Associates owns 48%. In contrast, Roeder Cartage Company owns none of its tractors (Table 104).

One important performance dimension in the transportation sector is firm operating ratio, which compares operating expenses to operating revenues. Among all firms in this sub segment, the average operating ratio is 94.8% (Table 99). Among the five most profitable firms in the sub segment (Table 101), based on return on equity, operating ratio ranged from a low of 84.7% (Hodges Trucking) to a high of 98.3% (Armored Motor Service of America). Among the five largest carriers (Table 103), the largest, Trism, had an operating ratio of 97.8%. Among this group of carriers, the one with the lowest operating ratio (Allied Systems) had a ratio of 94.4%. Among the five smallest carriers (Table 105), all had operating ratios below 100% and the firm with the lowest operating ratio had a ratio of 93.8%. It appears that the largest firms in this sub segment have a somewhat poorer performance than the smallest carriers in the sub segment.

Table 98--Other Specialized (Truckload) Large Carriers' Average Size and Operating Performance

	Number of Companies Reporting	**Total**
Revenue	77	$3,387,804,017
Units in Fleet	75	45,694
Assets	75	$1,471,968,903
Tons Carried	64	21,343,087
Ton-Miles	57	11,900,337,669
Shipments	58	1,106,175
		Average
Size of Load (Tons)	40	11.48
Length of Haul (Miles)	14	330
		Average
Revenue Per Mile	65	$2.15
Revenue Per Ton	16	$58.85
Revenue Per Ton-Mile	40	$0.97
		Average
% of Trucks Owned	31	60%
% of Tractors Owned	62	52%
% of Trailers Owned	62	91%
Outside Vehicle Maintenance per Truck/Tractor	70	$2,444

Table 99--Other Specialized (Truckload) Large Carriers' Average Financial Performance

Operating Income	$1,892,045
Net Income	$1,085,540
Operating Ratio	94.78
Net Profit Margin	3.68%
Return on Equity	24.11%

Table 100--Other Specialized (Truckload) Large Carriers' Average Size and Operating Performance: Five Most Profitable Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Hodges Trucking	Oklahoma City, OK	$12,212,621	272	$6,267,518	N/A	N/A
Boyle (T.F.) Trptn.	Billerica, MA	$14,502,361	308	$5,651,313	N/A	29,828,520
Trailer Transit	Porter, IN	$27,128,667	232	$4,436,272	N/A	318,603,690
Tonyan Bros.	McHenry, IL	$15,045,290	9	$3,650,196	N/A	N/A
Armored Motor Svc. Of America	Rochester, NY	$19,822,149	306	$15,459,143	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Hodges Trucking	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boyle (T.F.) Transportn.	N/A	4.67	N/A	N/A	$2.27	N/A	$0.49
Trailer Transit	N/A	12.30	N/A	N/A	$1.05	N/A	$0.09
Tonyan Bros.	N/A	N/A	N/A	N/A	$3.70	N/A	N/A
Armored Motor Svc. Of America	N/A	N/A	N/A	N/A	$7.65	N/A	N/A

Table 100--Other Specialized (Truckload) Large Carriers' Average Size and Operating Performance: Five Most Profitable Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Hodges Trucking	N/A	100%	100%	N/A
Boyle (T.F.) Trptn.	100%	100%	100%	$1,967
Trailer Transit	N/A	0%	N/A	N/A
Tonyan Bros.	N/A	100%	N/A	$882
Armored Motor Svc. Of America	100%	N/A	100%	N/A

Table 101--Other Specialized (Truckload) Large Carriers' Average Financial Performance: Five Most Profitable Carriers

Carrier	Operating Income	Net Income	Operating Ratio	Net Profit Margin	Return on Equity
Hodges Trucking	$1,866,255	$859,689	84.72	7.04%	130.63%
Boyle (T.F.) Trptn.	$1,850,873	$2,079,562	87.24	14.34%	101.33%
Trailer Transit	$2,688,882	$2,667,953	90.09	9.83%	96.80%
Tonyan Bros.	$475,695	$359,652	96.84	2.39%	90.98%
Armored Motor Svc. Of America	$344,340	$2,811,562	98.26	14.18%	75.71%

Table 102--Other Specialized (Truckload) Large Carriers' Average Size and Operating Performance: Five Largest Carriers

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles (in thousands)
Trism	Kennesaw, GA	$309,880,265	6,697	$218,824,918	N/A	1,437,800
Customized Transportn.	Jacksonville, FL	$296,172,450	1,315	$113,023,697	N/A	N/A
Allied Systems	Decatur, GA	$256,900,471	2,583	$119,693,118	N/A	521,429
Cassens Transport	Edwardsville, IL	$176,211,766	1,189	$43,121,157	N/A	132,590
Anderson Trucking Service	Saint Cloud, MN	$165,812,000	N/A	N/A	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Trism	N/A	7.58	N/A	N/A	$1.63	N/A	$0.22
Customized Transportation	N/A	N/A	N/A	N/A	$5.22	N/A	N/A
Allied Systems	N/A	6.42	N/A	N/A	$3.16	N/A	$0.49
Cassens Transport	N/A	1.84	N/A	N/A	$2.44	N/A	$1.33
Anderson Trucking Service	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 102--Other Specialized (Truckload) Large Carriers' Average Size and Operating Performance: Five Largest Carriers (Continued)

Carrier	% Trucks Owned	% Tractors Owned	% Trailers Owned	Outside Vehicle Maintenance per Truck/Tractor
Trism	N/A	53%	100%	N/A
Customized Transportation	0%	2%	N/A	$8,085
Allied Systems	N/A	100%	100%	$4,814
Cassens Transport	N/A	100%	100%	$5,719
Anderson Trucking Service	N/A	N/A	N/A	N/A

Table 103--Other Specialized (Truckload) Large Carriers' Average Financial Performance: Five Largest Carriers

Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Trism	$6,915,167	-$5,605,023	97.77	-1.81%	-24.22%
Customized Transportation	$14,605,342	$11,131,827	95.07	3.76%	27.85%
Allied Systems	$14,304,080	$6,292,498	94.43	2.45%	10.43%
Cassens Transport	-$1,088,791	$276,126	100.62	0.16%	3.65%
Anderson Trucking Service	N/A	N/A	97.00	N/A	N/A

Table 104--Other Specialized (Truckload) Large Carriers' Average Size and Operating Performance: Five Smallest Carriers

:

Carrier	Location	Revenue	Units in Fleet	Assets	Tons carried	Ton-miles
Forbes Transfer Co.	Wilson, NC	$11,275,730	245	$6,715,537	566,717	136,705,225
Jones Feed & Grain	Cumming, GA	$11,319,341	387	$3,455,127	N/A	N/A
Campbell & Assoc.	Industry, CA	$11,353,802	318	$2,802,197	N/A	N/A
Roeder Cartage Co.	Lima, OH	$11,412,889	287	$1,559,175	N/A	N/A
Clark Transfer	Harrisburg, PA	$11,530,247	170	$2,512,061	N/A	N/A

Carrier	Total Shipments	Average Load (Tons)	Average Haul (Miles)	Revenue Per Shipment	Revenue Per Mile	Revenue Per Ton	Revenue Per Ton-Mile
Forbes Transfer Co.	26,925	14.96	241	$418.78	$1.23	$19.90	$0.08
Jones Feed & Grain	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Campbell & Assoc.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roeder Cartage Co.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clark Transfer	N/A	N/A	N/A	N/A	$3.00	N/A	N/A

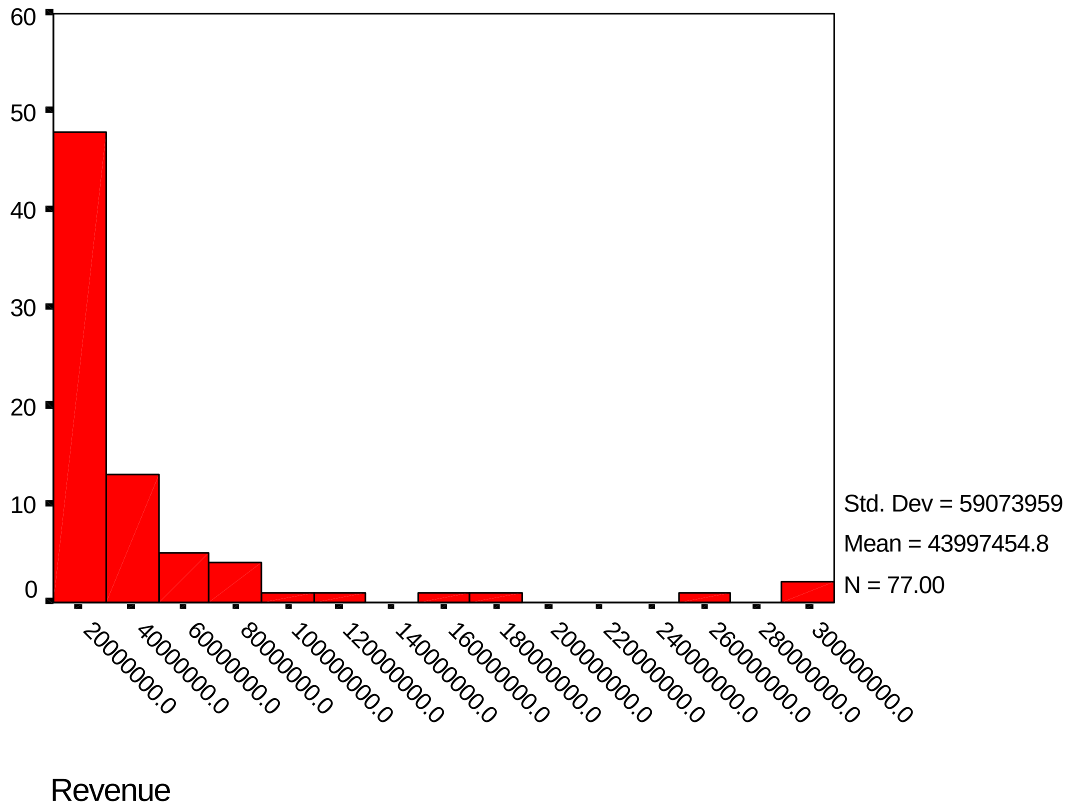
Table 104--Other Specialized (Truckload) Large Carriers' Average Size and Operating Performance: Five Smallest Carriers (Continued)

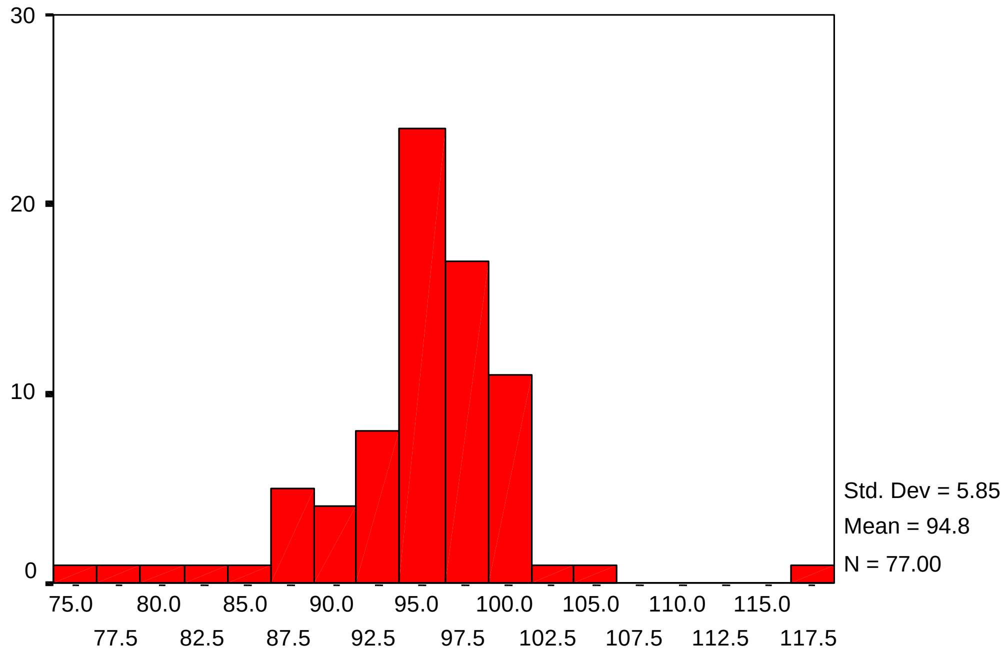
Carrier	**% Trucks Owned**	**% Tractors Owned**	**% Trailers Owned**	**Outside Vehicle Maintenance per Truck/Tractor**
Forbes Transfer Co.	N/A	100%	100%	$747
Jones Feed & Grain	N/A	69%	10%	$701
Campbell & Assoc.	N/A	48%	18%	N/A
Roeder Cartage Co.	N/A	0%	0%	$14,177
Clark Transfer	N/A	100%	100%	$2,280

Table 105--Other Specialized (Truckload) Large Carriers' Average Financial Performance: Five Smallest Carriers

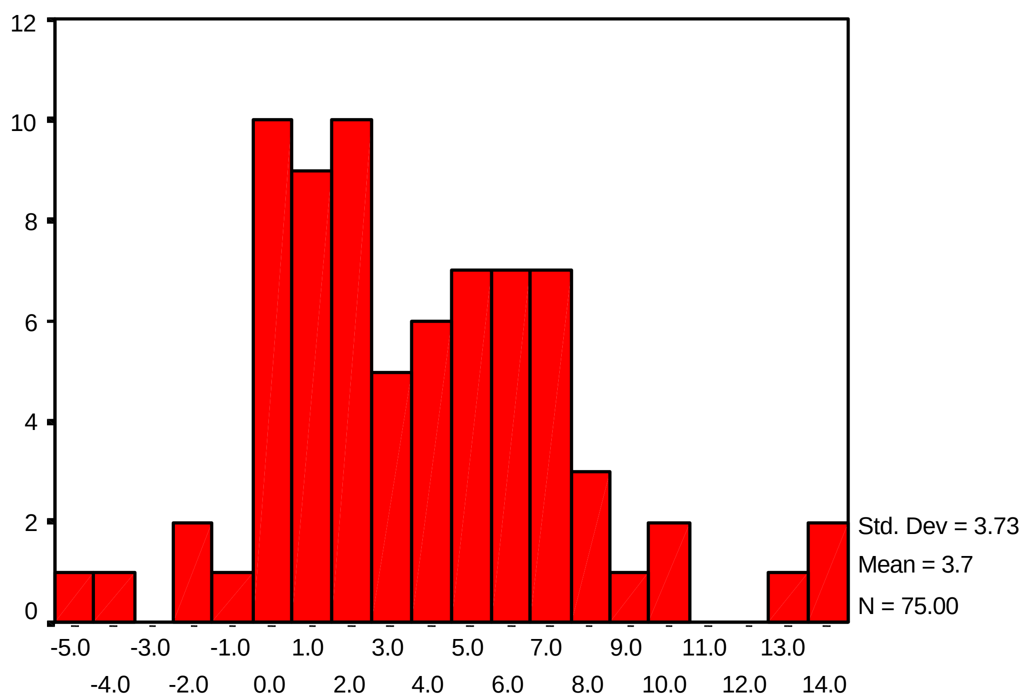
Carrier	**Operating Income**	**Net Income**	**Operating Ratio**	**Net Profit Margin**	**Return on Equity**
Forbes Transfer Co.	$656,457	$817,986	94.18	7.25%	15.24%
Jones Feed & Grain	$512,712	$860,335	95.47	7.60%	35.58%
Campbell & Assoc.	$706,562	$711,553	93.78	6.27%	47.34%
Roeder Cartage Co.	$572,520	$33,172	94.98	0.29%	5.41%
Clark Transfer	$430,596	$419,426	96.27	3.64%	48.75%

Summary Charts and Graphs for Other Large Carriers

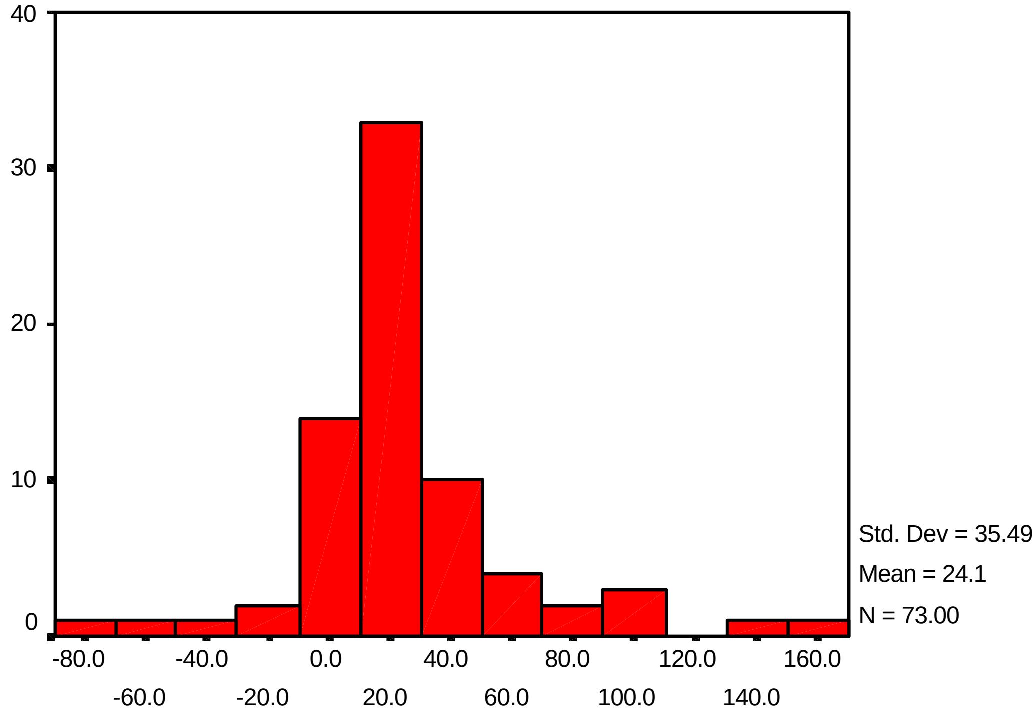




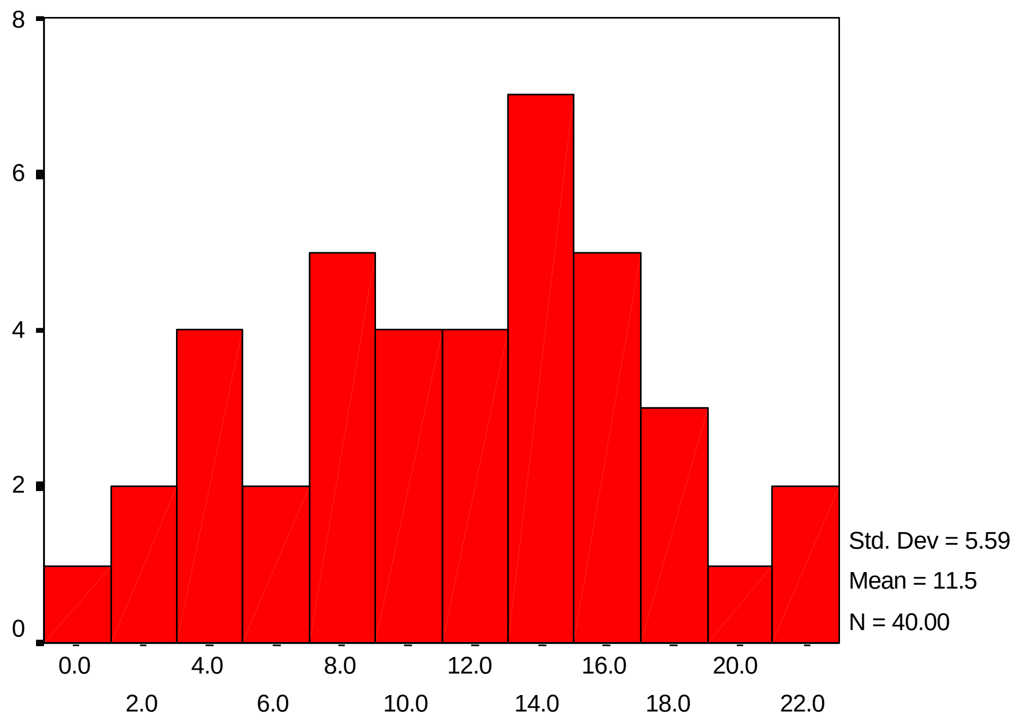
Operating Ratio



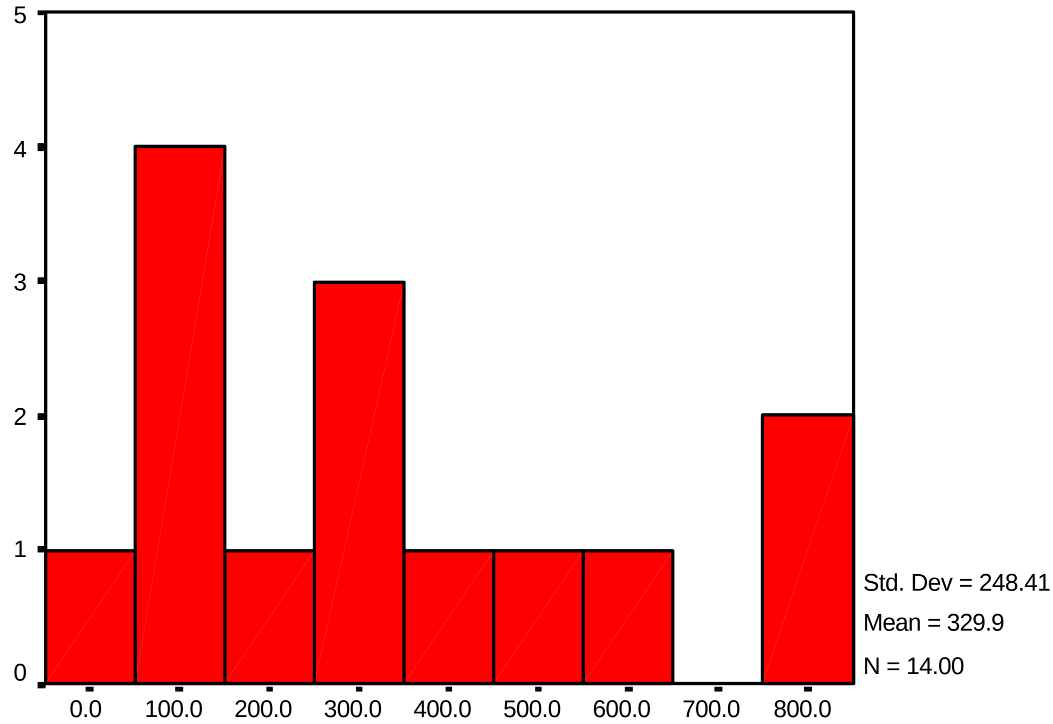
Net Profit Margin



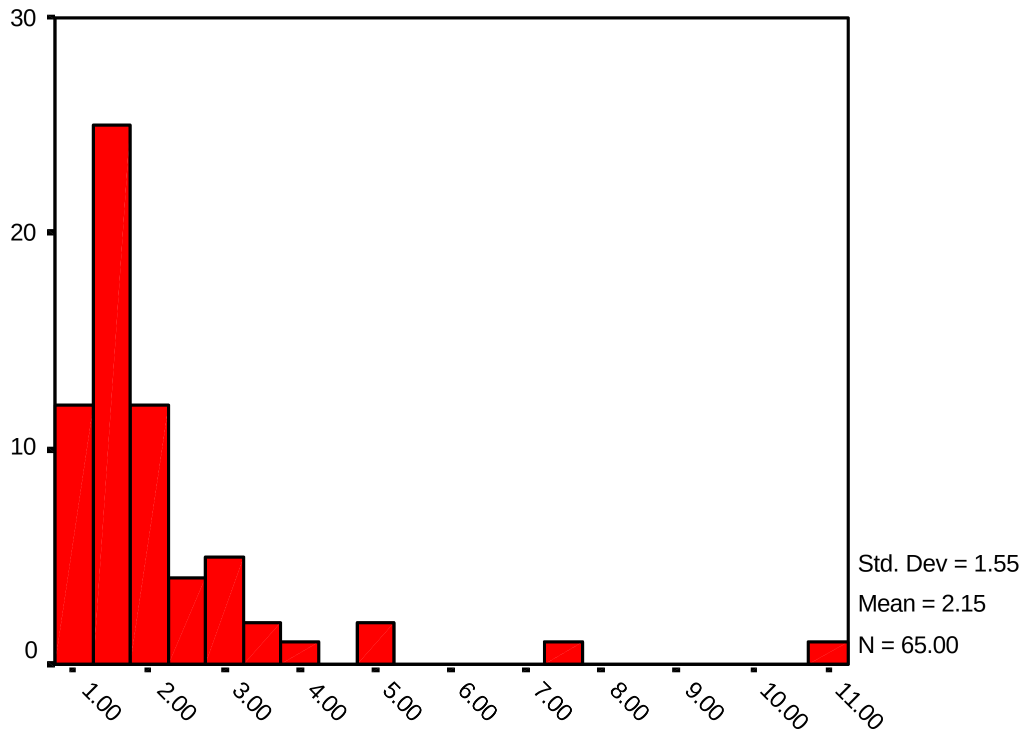
Return on Equity



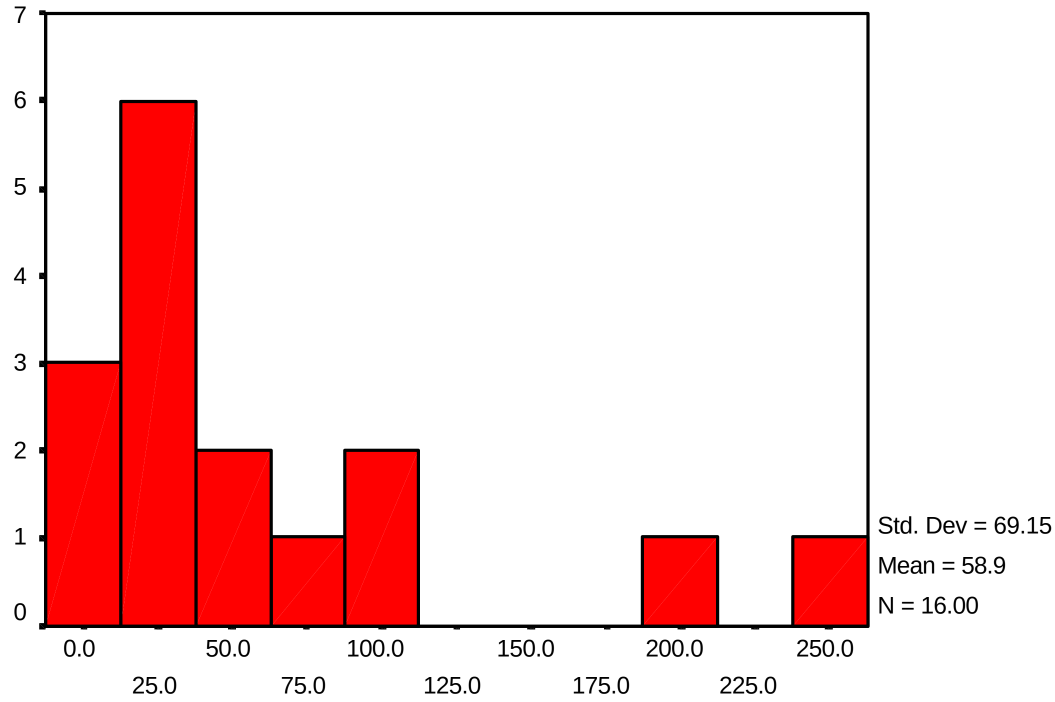
Average Load (Tons)



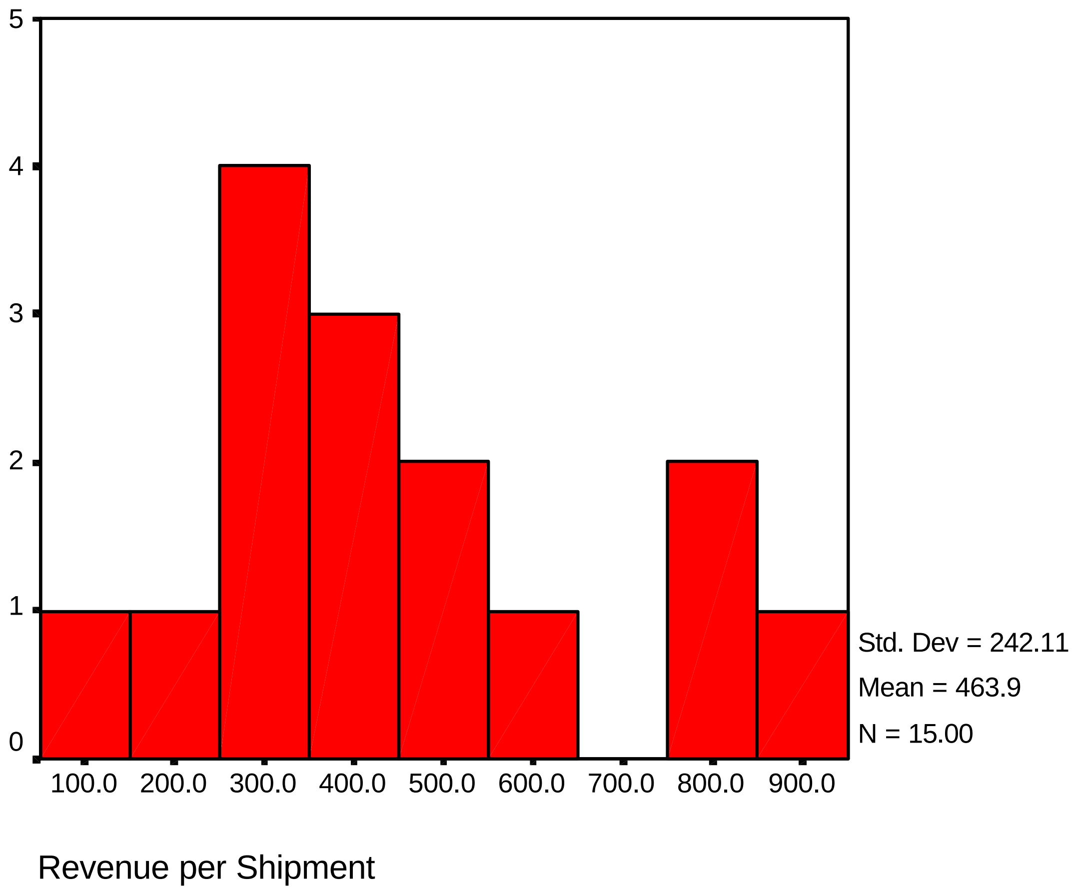
Average Haul (Miles)



Revenue per Mile



Revenue per Ton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4
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100.0
200.0
300.0
400.0
500.0
600.0
700.0
800.0
900.0
Std. Dev = 242.11
Mean = 463.9
N = 15.00
Revenue per Shipment

Summary Data for Other Large Carriers

Other Large Carriers					
Descriptive Statistics					
	Number of Companies	Minimum	Maximum	Mean	Std. Deviation
Financial Summary					
Revenue	77	11,275,730	309,880,265	43,997,455	59,073,959
Expenses	77	9,066,109	302,965,098	42,007,696	56,988,792
Operating Income	75	(2,083,186)	14,605,342	1,892,045	2,877,037
Net Income	75	(5,605,023)	11,131,827	1,085,540	1,836,240
Total Assets	75	958,979	218,824,918	19,626,252	34,663,486
Total Liabilities	75	(1,899,564)	195,679,905	12,942,931	28,648,958
Total Equity	75	(2,869,057)	60,339,529	6,683,321	9,727,969
Operating Ratio	77	75	117	95	6
Net Profit Margin	75	-5%	14%	4%	4%
Return on Equity	73	-82%	155%	24%	35%
Individual Expense Items					
Drivers and Helpers Wages	20	-	6,042,942	1,997,438	1,852,388
Insurance	74	-	12,187,101	1,308,876	2,132,620
Outside Vehicle Maintenance	71	-	6,433,749	544,719	1,169,665
Purchased Transportation	20	-	14,295,135	3,482,694	4,626,900
Fleet Composition					
(Items as a percent of total)					
Trucks Owned	31	0%	100%	60%	47%
Trucks Leased	31	0%	100%	40%	47%
Tractors Owned	62	0%	100%	52%	43%
Tractors Leased	62	0%	100%	48%	43%
Trailers Owned	62	0%	100%	91%	28%
Trailers Leased	62	0%	100%	9%	28%
Operating Statistics					
Total Units in Fleet	75	-	6,697	609	867
Total Highway Miles	71	-	189,696,383	21,728,253	28,185,203
Total Tons Carried	64	-	9,599,512	333,486	1,300,053
Total Ton-Miles	57	-	1,476,448,102	208,777,854	302,945,504
Total Shipments	58	-	369,212	19,072	53,490
Revenue per Mile	65	$1.05	$10.77	$2.15	$1.55
Revenue per Ton	16	$6.12	$247.24	$58.85	$69.15
Revenue per Shipment	15	$88.44	$915.09	$463.95	$242.11
Revenue per Ton-Mile	40	$0.06	$29.13	$0.97	$4.57
Average Load (Tons)	40	0	22	11	6
Average Haul (Miles)	14	30	778	330	248
Outside Vehicle Maintenance per Truck/Tractor	70	-	15,255	2,444	3,592
Valid N (listwise)	-				